ANALYSIS OF THE TERRITORIAL EVOLUTION OF THE GROSS DOMESTIC PRODUCT

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Abstract

The gross domestic product, as the most complete indicator of results, is relevant in the way both at national level and in the territorial structure, on the counties and development regions of the country, how it participates in the realization of the domestic product crude. Certainly, Gross Domestic Product per capita, and in particular gross domestic product per capita expressed in 1995 purchasing parity prices, are the most relevant indicators that give a fair and complex relationship to the living standard of the population, a country. Realization of gross domestic product is influenced by a number of factors and this can be analyzed to identify to what extent they contribute to the change in gross domestic product. An important element is the way in which, in a territorial structure, each administrative component will contribute to the realization of the gross domestic product. From this point of view, the authors focus on identifying how each of the counties and regions of Romania's economic development contributes to the realization of the gross domestic product. The article makes reference to the contribution of the counties and this is relevant because we can identify how local resources are used, the capacity of using labor force through the existing economic agents and the perspective of creating other jobs through investments. From the point of view of the contribution of the counties, we can see that on development regions that include several counties, the ones in the central part have a high contribution and a level of growth that presupposes the existence of structural conditions and commercial companies, the valorisation of the human factor and the resources. In this situation, the Bucharest-Ilfov region or the North-East region, the South-West region have serious contributions. Other counties on the ability to make a more serious contribution to the formation of gross domestic product every year.

Keywords: *Gross Domestic Product, aggregates, territorial GDP, growth rate, territorial structure*

JEL Classification: E01, E64

Introduction

The analysis of gross domestic product achievement in the territorial profile is essential because it shows how each administrative unit (county or development region) can contribute to the gross domestic product. After defining the essential elements regarding the significance of the Gross Domestic Product Indicator per capita, some aspects related to the economic and social structure of the country in territorial terri- torial are mentioned, on which an analysis is presented which presents concrete data regarding the realization of the gross domestic product administrative regions of the country. Also, over a period of 11 years, for the 8 development regions of the country, data are presented which show the evolution of GDP in comparable prices per inhabitant expressed in euro on these coordinates. There are significant tables highlighting how gross domestic product evolved to the year for which we have definitive data, 2015, both on the country's total and development regions. Also, reference is made to the potential of some regions of the country to increase their participation in the formation of the Gross Domestic Product by making better use of the resources available to each region as well as the human potential, which each region has. In the sense of the above, it is clear that an intensive development of each administrative structure has the effect of increasing the total gross domestic product and, as a matter of course, gross domestic product per capita. Thus, if we calculate gross domestic product per capita, we can also determine the level of satisfaction of living needs, the quality of life in each region of the country. As a conclusion of the differentiated way of organizing the production, of the investments in each county, is also the internal migration, where part of the labor force moves to the counties with higher economic potential, or even abroad, where they can earn their income needed to meet everyday needs. It could be used in this structural analysis of Gross Domestic Product and how certain macroeconomic indicators evolve. We primarily look at unemployment, by administrative areas, which is closely correlated with the level of gross domestic product output in these regions.

Literature review

Agrawala and Matsab (2013) analyzed some aspects of unemployment risk and business financing decisions. Anghelache, Anghel, Marinescu, Mirea and Petre (Olteanu) A. (2018) conducted a study on the evolution of GDP in Romania. Anghelache, (2017) carried out a complex analysis of the factors of influence on the evolution of the Romanian Gross Domestic Product. Anghelache, Anghelache and Stanciu (2015) have developed a model for analyzing the correlation between the dynamics of the foreign direct investment balance and the evolution of the Gross Domestic Product in the territorial

structure. Anghelache, Mitruţ and Voineagu (2013) presented the role and mechanism of the National Accounts System. Anghelache (2008) a reference paper in the field of economic statistics. Bosker (2009) approached a series of elements on the spatial evolution of regional disparities in the regional gross domestic product in Europe. Michelis and Monfort (2008) presented ideas on GDP and regional convergence. Garin, Lester and Sims (2016) presented ways to target nominal GDP. Maza, Hierro and Villaverde (2012) examined the role of space in revenue distribution dynamics in European regions.
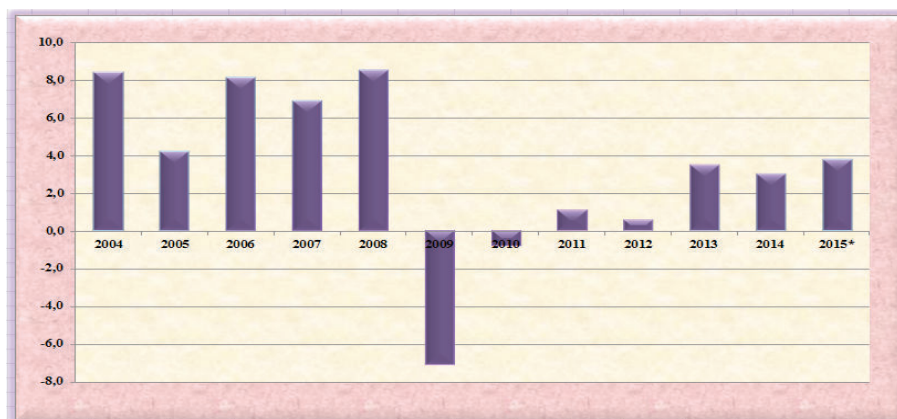
Methodology, data, results and discussions

• After a thorough study of the evolution of the world economy as well as of Romania's economy, we can see that the effects of the financial crisis that started in Romania in 2008 bring special and difficult to anticipate effects on the current and short-term evolution of our country's economy . Romania, with a questionable strategy regarding the way the macroeconomic priorities were placed, was unable to cope with the crisis that came as a rollercoaster for the whole of Europe, but especially for Romania's economy. The economic relations were uncoordinated, his plan, in other words, that the government's program was somewhat set on other conditions had the effect of bringing Romania into a rather delicate situation. Romania as a member of the European Union should have had a concrete action plan that also correlates with the strategies of the European Union at a time with such effects on the national economy. Romania has a long-term, medium and long-term sustainable economic growth program, but unfortunately it has not been sufficiently established, correlated at a macroeconomic level, which has caused a macrostability of Romania for the moment. We know that „in despair" in the face of such a wave of unpredictable effects, the Romanian leadership of that period resorted to bank loans contracted with the World Bank, the International Monetary Fund and the European Development Bank. At the same time unpopular social measures have been taken, such as 25% wage cuts, even reduced pensions even though they were small enough, 15%, but especially the delay in the implementation of social action programs . All this now requires, at the moment after the economic and financial crisis, the need to intensify the efforts to establish a program that will ensure the definite perspective through concrete measures of Romania's evolution. Unfortunately, for our country, the financial and economic crisis came shortly after Romania joined the European Union in 2007, so that the programs, some of them quite lenient, set by the European Union in order to standardize the Romanian economy and bring it to the level European standards have lagged behind, and there have been several delays or prolongations in terms of

action. For Romania, it is necessary to find a way, based primarily on internal possibilities, so that it can establish itself how the economy will evolve in the coming period.

• The economic and financial crisis has had a lot of effects, especially in the financial and banking field, in the economic field, in the field of investments and not least at the level of the possibility to implement programs of measures that will ensure the raising of salaries, this way to the standards of the Romanian economy. Romania, amid a crisis with effects from all sides, had a controversial evolution, in the sense that some macroeconomic results of indicators continued a slower growth path, in other circumstances, other indicators had a negative effect on the national economy and social-economic situation in general. The analysis of the results obtained by Romania during the economic and financial crisis immediately after this can be done by considering the evolution of the gross domestic product indicator, the evolution of gross domestic product per capita, the purchasing power parity, as well as the evolution of other indicators that give significance to the evolution economy.

Real GDP growth rate in Romania
(percentage change over the previous year)

Figure no. 1

Sursa: EUROSTAT (http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tec00115)

Gross domestic product had a growth trend after it had surpassed 2012. The year 2012 started with an increase, but sustained efforts must be made to cover all the losses so far. From a simple calculation based on the 2007 Gross

Domestic Product level, taking into account further developments, I believe that the subsequent recovery to reach the same level in 2007 should be at least 6-7 years, so that even if increases have started after 2013, they will decrease once the losses registered in that period are fully recovered.

The Quarterly Evolution of Gross Domestic Product

Table no. 1

		Trim. I	Trim. II	Trim. III	Trim. IV	An
- în % față de perioada corespunzătoare din anul precedent -						
Serie brută	2015	104,4	103,5	103,8	104,0	103,9
	2016	104,3	106,0	104,3	104,8	104,8
	2017	105,7	-	-	-	-
Serie ajustată sezonier	2015	104,0	103,7	104,0	104,2	-
	2016	104,0	105,7	104,5	105,0	-
	2017	105,6	-	-	-	-
- în % față de trimestrul precedent -						
Serie ajustată sezonier	2015	101,3	100,0	101,9	101,0	-
	2016	101,1	101,6	100,7	101,5	-
	2017	101,7	-	-	-	-

Source: National Institute of Statistics, Press release no. 58/8 March 2016

The structural analysis, in dynamics of gross domestic product, we performed both on total and on certain factorial characteristics. From this point of view, the structures are: territorial, by uses, by sources, temporal (quarterly), structure of consumption, structure of gross domestic product distribution for investments and income to cover consumption, etc.

• First analysis is the one after the territorial division. There is a disparity in the results obtained through gross domestic product by development regions and counties. Starting from Law 151 of 1991, modified by Law 315 of 2004, we tried to group the results obtained in GDP calculated on the 8 development regions. The national development strategy must not be based on the principle that existed before 1990 when it spoke of a national strategy to eliminate development disparities between the regions of the country. For example, we know that iron and steel plants were built at Calarasi, Hunedoara, Resita, or elsewhere, for the simple reason that they wanted a judicious allocation of labor forces. Local resources, supply means and the cost of transporting raw materials are not taken into account so that, if we do a thorough analysis, we will find that some of these results were simply unfavorable. In fact, going over the shortcomings of the privatization process of the industry in our

country, which was based either on deficiencies or on other interests, we will find that the whole Romanian industry was almost nothing. We are giving the example of the Galati steel mill, which has remained the only one in the field that still has a consistent activity, but which is facing the prospect of closing down. The reasons for such a process for the steel mill in Galați are two: one, the low-paying foreign investor's interest, has invested less and the second is a directive of the European Union which stipulates that for the elimination of some shortcomings, , will have to give up this combination that a large Italian company will take over. Turning to the regional structural analysis, we find that the interest of Europeans or other parts of the globe would contribute to the development by Romania's privatization had different results depending on each region. For example, according to some analyzes carried out by this forum, apart from three regions, Bucharest-Ilfov, the West Region and the Center region, the other five regions are having a particular difficulty in reorganizing and balancing economic development. In the meantime, there are some regions, Bucharest-Ilfov, West and Center, where due to three important factors the results are still good. This means that there were production capacities that could be reorganized and adapted to current needs.

Development of GDP by development regions

Figure 2

Source: National Institute of Statistics, „Romania in figures"

There were transport and other facilities and, last but not least, labor resources and even natural resources. Romania occupies 64% of the European average negative position regarding the situation of problem regions. Thus,

the Northwest region has the biggest problems, ie it represents 34% coverage of the needs and possibilities of industrial development. Other regions, namely South-West Oltenia, South-Muntenia and Northeast, with between 41 and 48%, are in the negative area of the economic development capacity. In order to make a more rigorous classification of production capacity and income, the GDP calculated for each region shows that in our country, in some regions the gross domestic product per capita, calculated at purchasing power parity, reaches only 50% of this last indicator. In Romania, there is only one region, Bucharest-Ilfov, which is above the European Union average by 129%, ie 29% above the European average, while only two other regions, the Western region and the Center region exceed eight or two percent respectively European average. GDP per capita calculated in the counties of the country reflects the same hierarchy at county level this time, according to production capacity. From the point of view of the regional structure, we find that many of Romania's regions categorized in terms of gross domestic product index calculated at purchasing power parity are much behind the other regions of the European Union. Of course, the data we have available also highlights the evolution over time of each region and we only took the 2005-2015 period to highlight gross domestic product in comparable per capita and development regions, this indicator being calculated in euro per capita. We will again find out from the study of this table that the Bucharest-Ilfov region registered not only the highest level - 19,070 euro / inhabitant in 2005 - but also had substantial increases, reaching 44,154 euro / inhabitant in 2015. The same trend also in the following years, until 2017. Another region with possibilities is South Muntenia, which started from 10,178 euro / inhabitant in 2005, of course, also calculated in comparable prices and reached 20,204 euro / inhabitant in 2015. Regions with the worst results are the South-West Oltenia region, which had in 2005 a gross domestic product per capita, calculated in comparable prices of 6561 euro / inhabitant, reaching in 2015 only to 11,382 euro / inhabitant. It is the region with the most sensitive results. Thereafter, it follows the West Region which in 2005 recorded a gross domestic product in comparable prices per capita of EUR 7,142, with somewhat uniform growth except in 2009, which is after the economic crisis, which is almost a decrease for all regions, but after the level of evolution reaches 14,655 euro / inhabitant calculated in comparable prices in the year 2015.

Evolution of GDP in comparable prices per capita, by development region EUR / inhabitant

Table no. 2

GEO/TIME	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Northwest	9407	11675	15143	16080	13876	14294	14541	15146	16232	17250	18267
Center	9057	11335	14590	15779	13691	14224	14617	15152	15941	16454	17368
Northeast	8964	10787	13630	15030	12977	13332	13503	13746	14792	15107	15864
South East	9089	11051	13328	14698	12598	13492	14032	14523	16321	16925	17772
South - Muntenia	10178	12482	15472	17639	15575	15872	16509	15916	17612	19532	20404
Bucharest - Ilfov	19070	22946	30440	37846	30118	32534	36278	35487	38652	40277	44154
South-West Oltenia	6561	8138	10126	11074	9537	10080	10518	10384	10875	10891	11382
West	7842	9940	12562	14128	11934	12764	13189	13050	13712	13815	14655

Data source: EUROSTAT (http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do)

So, on the basis of the data provided by Eurostat, which are undisputable, we have come to this situation which may be extended if necessary, but we limit ourselves to saying that there are enough regions of Romania in great suffering from the point of view of the results determined by the calculated output indicators, respectively the gross domestic product in comparable prices, at purchasing power parity.

Conclusion

A series of conclusions emerges from this article which reveals, first of all, that the management of administrative structures is an important element that can lead to the growth of gross domestic product in the considered administrative entity. Local budgets can also be used to a greater extent for local investment to launch competitive projects receiving approvals in order to access Community funds. But at the same time, each county or economic development region can contribute to the growth of gross domestic product in that area, attracting foreign investments to develop existing companies to expand them by setting up new companies. In the sense of the above, it is clear that an intensive development of each administrative structure has the effect of increasing the total gross domestic product and, as a matter of course, gross domestic product per capita. Thus, if we calculate gross domestic product per capita, we can also determine the level of satisfaction of living needs, the quality of life in each region of the country. As a conclusion of the differentiated way of organizing the production, of the investments in each county, is also

the internal migration, where part of the labor force moves to the counties with higher economic potential, or even abroad, where they can earn their income needed to meet everyday needs. It could be used in this structural analysis of Gross Domestic Product and how certain macroeconomic indicators evolve. We primarily look at unemployment, by administrative areas, which is closely correlated with the level of gross domestic product output in these regions.

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