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# COMPARATIVE STUDY OF THE EVOLUTION OF THE GROSS DOMESTIC PRODUCT INDICATOR

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## Abstract

*In this paper, the authors realize a comparative study on the dynamics of the Gross Domestic Product of Romania. This indicator reveals the qualitative and quantitative results that characterize the economy of a country. In the paper, time-based and space-based comparisons are realized, with emphasis on the evolutions recorded in the European Union countries. The interpretation of the indicators analyzed is completed by a coherent set of measures proposed for the development of the Romanian economy.*

**Key words:** *economy, gross domestic product, evolution, comparison, quantitative*

**JEL Classification:** *B22, N10*

## Introduction

GDP is calculated for all countries and it is form synthesized înregis-trată quantitative and qualitative evolution of a country in a given period of time.

If we compare this indicator obtained by our country in recent years with the developed European countries, the situation would be clearly negative, our country being on one of the last places, but would find an explanation through the gap in development social-economic development. But the situation is not any different if we compare the GDP achieved by Romania with the same indicator achieved by countries in central and eastern Europe, who once walked the path of transition with our country. In this context, comparisons are more enlightening because it highlights certain developments that occurred in roughly similar circumstances and, if the sharp drop in this indicator in our country oblige us to seek real causes of such developments.

From this point of view, I consider that the objective is to compare the GDP of our country achieved the same levels recorded indicator of Cyprus, Estonia, Latvia, Lithuania, Czech Republic, Poland, Hungary, Slovenia, Slovak Republic and Bulgaria. We find that, since 1990 and until 1995, these indicators differentiated developments in these countries, in most producing a downward trend before macro-sta-bilizării. From 1995 until the end of 1999, this process of substantially reducing GDP continued especially in Romania, the country remained one of the aforementioned situation of having a low GDP indicator.

## Literature review

Anghelache and Sacală (2016) are preoccupied with the usefulness of the multiple linear regression model in the analysis of the factors that influence the

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evolution of the Gross Domestic Product, Dumitrescu, Anghel and Anghelache (2015) take into account the influence of structural variables on GDP, Huang, Hwang and Yang (2008) study the energy consumption as GDP growth factor. Anghelache, Manole and Anghel (2015) approach, by simple regression, the correlation between the dynamics of the indicators final consumption and public consumption. Anghelache and Anghel (2015) analyze the Gross Domestic Product through statistical-econometric methods. Anghelache, Anghel and Sacală (2013) describe the evolution of the principal macroeconomic indicator. Anghelache and Manole (2012) overview the study, through econometric methods, of the correlation between the Gross Domestic Product and foreign direct investments, Cicak and Soric (2015) develop on a similar topic. Beck et.al. (2007) analyze the link between finance, inequity and poverty. Bhandari and Frankel (2015) focus on the nominal GDP target for developing countries, a close topic is treated in the work of Sumner (2014). Faust, Rogers and Wright (2005) are preoccupied by the GDP at the level of the G7 states. Fleurbaey (2009) takes into account the opportunity of a measure for social welfare, in addition to the GDP. Greenwood, Sanchez and Wang (2013) study the quantification of the impact of financial development on the economic. Jeong and Townsend analyze the relation between growth and inequality through a model-based approach. Mazurek (2013) realizes a comparative analysis of GDP growth in the European countries. Nalewaik (2012) is preoccupied with the use of GDP as instrument in the estimation of the recession probability. Panagiotis and Pantelis (2013) study the relation between economic growth and cultural changes.

#### **Methodology and data**

• After 2000, GDP registered a growth process. It is significant that in 2007 GDP was by 6.0% higher than in 2006, but in absolute numbers is still far from its potential Romania. In 2005, GDP was in absolute numbers and 287 186 300 000 lei current prices, over 100 billion dollars at the rate of 2.85 lei / \$ on 31.12.2005. In 2006 the GDP level of 342.2 billion lei, ie approx. US \$ 142.7 billion at the rate of 2.40 lei / USD, representing an increase of 7.7% compared to 2005. In 2007, GDP was in absolute and current prices 404,708.8 million, or more than 169.4 billion dollars at the rate of 2.4564 lei / \$ on 31.12.2007, which represents an increase of 6.1% over the previous year. In 2008, GDP reached 514.654 million lei. Compared to 2007, GDP grew by 7.1% in 2008. In 2009, due to a lack of proactive programs, the „election budget” in 2008 and 2009 and under the devastating effect of the crisis, GDP fell to 491,273.7 lei, registering a decrease in data deflated by -7.1% . In 2010 the GDP reached 522,561.1 million lei, and in 2011 was 578,551.9 (deflated wages are not registered are expressed in current prices of each period). In 2012, the GDP was 587,494.4 million. In 2013, the GDP was 637,583.1 million, ie 3.4% higher than in 2012. In 2014, GDP reached 668,143.6 million, an increase of 3.1% over 2013 . In 2015, GDP registered a value of 712,832.3 million. In 2016, GDP in the first half amounted to 325,572.9 million lei, the level which is higher than that registered in the same period in previous years comparable to the present, in Hungary, a country with which we can compare, there was a fluctuating trend GDP growth from 1.3% in 1996, 4.6% in 1997, 5.1% in 1998, 5.9% in 1999, 7.7% in 2000 and 3.5% in 2002 3.7% in 2003, 2.1% in 2004, 4.1% in 2005, 3.9% in 2006, 3.7% in 2007, 0.5% in 2008, 1.1% in 2009 and - 1.6% in 2010. in 2010, GDP fell by -1.0%, but 522,561.1 million lei.

Hungary and Poland are countries which, although they also encountered a number of difficulties over time, they switched to an improvement in which he allowed a quantitative increase in the GDP.

In our country, if in 1996 this indicator show a 3.9% increase compared to 1995, the next period of 1997 there was a decrease of 6.6% in 1998, a decrease of 7.3% and in 1999, a decrease of 3.2%. Since 2000, GDP registered a steady upward trend, increasing by 3% in 2001 to 5.3% with 4.8% in 2002, 4.9% in 2003, 8.4% in 2004, 4, one in 2005, 7.7% in 2006, 6.0% in 2007 and 7.1 in 2008. the calculation is carried out over the previous year. In 2009 he began the real rebound, registering a decrease of -7.1% over the previous year. The percentage of GDP decline continued in 2010, when GDP was reduced by -1.6% and for 2011 the GDP increased by 2.5%. In 2012 also it was a slight increase (1.1%), and in 2013 was registered a comparable increase of 3.4% in 2014 to 3.1% and 3.8% in 2015. In the first six months of 2016, gross domestic product was 325,572.8 million lei.

**The evolution of GDP in the period 2001- 2016  
(Corresponding period of previous year = 100)**



\* Provisional data, the estimated 2016

Data source: National Institute of Statistics, Statistical Bulletin no. 7/2016.

• GDP, the leading indicator for characterizing the evolution of the national economy in 2010 recorded a decrease of -1.6% compared to 2009 and an increase of 2.5% in 2011 compared to 2010. In 2012, GDP grew by 1.1% compared to 2011 and 2013, the increase is 3.4%, ie 637,583.1 million.

In 2014 to 2013 the increase was 3.1%, GDP reached 668,143.6 million and in June 2016 was of 325,572.8 million.

In terms of absolute numbers the PIB, the categories of resources and uses, we can mention that agricultura, forestry and fisheries have a reduced contribution, in industry and construction fell moderately, while production related services and banking services registered a negative rate. GDP structure analysis on supply and use has been presented and analyzed in detail in chapter one, resumption and no longer appropriate in this chapter.

An assessment must also be made of the situation stocks which highlights that a large part of consumption in the economy has been fueled by stocks accumulated in previous periods and that generally occurs on the stock, as the economic cycle of production - selling - Consumer it is strangled or lack of income and financial resources exist in the economy or, sometimes poor quality of products, so as to avoid

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unemployment and to obtain indicators on which is wages in many companies with capital State or produce any major state, regardless of the final statement of the „what” product.

Hopefully that will be conducted at the level of decision makers, realistic analysis outlining these impairments macroeconomic indicators, and thereby evolu-ției depreciation of the Romanian economy. Without such an analysis, it is certain that there would be stagnation in key macroeconomic indicators.

### **Gross Domestic Product had an oscillating trend in 2009-2016**

Analysis of socio-economic development of our country can not be made only on the basis of data covering the study and highlight, macroeconomic development stage of the country, resulted in the evolution of GDP. Individual analysis of the evolution of this indicator, although it is likely to highlight the macroeconomic situation which it traverses Romania is not sufficiently eloquent, can there opinions and viewpoints leading to the conclusion that perhaps the concrete conditions in our country are private , or, at any cost analysis seeks to identify only the negative aspects.

Therefore, we will conduct a comparative analysis of how evolved this indicator, GDP between 2001-2016 and 1997-2000 period, based on indexes based chain (comparing the level of the current year to the previous year) and into a context that suits us at the central and eastern European countries.

This opportunity analysis is more enlightening to an analysis raid, which could be „affected” by the interpretation that may be insufficiently relevant due to internal conditions or to a comparison exhaustive of all European countries would also generating interpretations, such that a number of European countries have social, economic, etc. quite different from those in our country.

The only way to concrete analysis of these elements on the GDP evolution is a comparative study of developments in Romania and cele-lalte central and eastern European countries such as Czech Republic, Hungary, Poland, Slovenia, Slovakia, Bulgaria, Latvia, Lithuania, Estonia and Cyprus.

These ten countries considered, along with Romania, the core countries of Central and Eastern European countries which have embarked on the same path roughly similar conditions.

Not included in this analysis of the situation of European states that emerged from the disintegration of the former USSR nor entirely those resulting from the dismantling of the former SFRY.

Also Albania, which currently rapor-tează not essential and accurate data about the socio-economic development can not be discussed.

This item appears as essential in analyzes conducted by economists, who started from the fact that such macrosta-bilizare, amid changes in the context of credibility propuselor electoral programs will be hopeful.

Compared with Latvia, Lithuania, Hungary, Poland, Slovakia and the Czech Republic, Romania registered during 2001-2015 some increase average annual GDP growth rate, although in 2009-2011 has manifested decrease under the impact of the crisis and inefficiency program governance.

I conclude that, in terms of economic level, Romania was in a good situation to 2008, it is alarming pace insignificant fall of 2009-2010 and 2011-2012. 2013 shows a revival, with growth of 3.4% and 2014 growth was 3.1% over the previous year, and in 2015 the increase was 3.8% compared to 2014.

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How it has evolved GDP from 2005 to date is inconclusive, given that this indicator covers and scope, so all activities in the sphere of the national economy. It means that they have achieved those transfers of activities from one sector to another which is likely to stimulate the strengthening of market economy, but only to the extent that will increase the desire to invest in specific economic sectors României accepted quantitative and qualitative level of costs and domestic and international market. Deficiency crisis of 2009-2012 programs is precisely the lack of proactive anti-crisis measures that would have certainly positive effects. The period 2013-2016 marked a reversal based on a more realistic allocation of resources.

#### **Suggestions regarding measures that can be taken**

To justify that assessment and that although we reported in 2011 the need for such measures has not taken any conclusive render further, briefly, some of these measures stood and still stand the reach of government from Romania.

a) Taxation of ownership amid arable (agricultural) and forestry with an amount of 400 lei / year, payable in four installments of 100 lei / quarter. Property tax fund agricultural / forestry mentioned amount is theoretical (exemplary) it will be determined according to the tax currently practiced and correlated with the EU grant. Following such a measure will be achieved:

- annual collection of an amount of about 7-8 billion lei;
- determining landowners / forest pass their rational exploitation;
- determination of lacking financial and agro-technical knowledge to lease properties agricultural / forestry;
- determining the agricultural owners decide to sell these properties;
- in situations referred to in paragraphs c and d will rebuild lotizării agricultural areas that can then be exploited by methods agro-technical education (mechanization, chemical processing, control pests, fertilization, irrigation, crop rotation, etc.) because only through allotments from about 200 hectares above may apply agri-technical methods specified.

b) To restore livestock animal owners should be encouraged to become more active, and for this it is necessary:

- active subsidies only for those who have a number of animal species;
- tax exemption on property taxes animals or practicing modest;
- support for owners to implement measures in European Directives concerning this sector;
- encouraging the development of processing industry of agricultural and food products;
- supporting agricultural owners by providing expert assistance to initiate projects for accessing EU funds for rural development included in the program.

c) The tax exemption on profits from exports of goods and services, which would have the effect:

- repatriation of foreign currency amounts earned from export;
- development of direct exports of goods and services and giving up speculation for export (export transit export on commission, re-export to another country etc.);
- intra and international export growth of Romanian products and services with immediate effect on the development of production for export.

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d) Encourage foreign direct investment in the following:

- lower ceilings (investment own - itself) to just 1 million Euro, provided to locate areas of interest and employment of manpower for granting facilities (tax exemption on profits for a period If investment in productive tax exemption for export, reduction of contributions to the labor force employed in unemployment etc);

- simplified authorization procedures for such investment;
- developing a legal framework flexible and time-consuming because frequent changes in this legal area blurs the enthusiasm of foreign investors.

e) The initiation of major infrastructure projects to attract foreign investors and accessing funds. In the field of transport could initiate a national project for the development and modernization using the facilities of the agreements with the IMF, World Bank and European Bank for Reconstruction and Development in order to obtain loans on more favorable conditions. To achieve such a project would require the following measures:

- designing the national infrastructure (highways, bridges, overfly sites etc.), say about 1500 km;

- geographical plotting of the network in packets of about 150-200 km;

- Predefined specific to each batch so determined;
- preparing specifications for each lot (which is a project), with the following major elements: Domestic and international participation in the auctions being organized; Submission of bank guarantees solid; Guaranteeing a lead time of up to two years; Providing initial funding by the winner of each auction; Recovery of funds invested in each case, the quota rules and limits set out in European Community funds; Ensuring co Romanian government by any officer of internal / external or agreements with the winners of auctions for repayment of the amounts owed to them in credit conditions (when committed loan of over 20 billion euros from the IMF, World Bank and European Union investment and development, it should be the destination of the sums received and not pay salaries and pensions!); Recovery of expenses incurred by investors by exploiting a period that can be calculated networks built.

f) The advantages of such a project would consist of:

- attracting foreign funds, Community and non-Community;
- absorption of labor, especially among unemployment which reduces unemployment and unemployment benefit funds;

- revitalization of manufacturing companies in the realization of infrastructure projects necessary for these materials (cement, brick, timber, iron, concrete, etc.);

- increasing the tax base as a result of employment of such jobs and supply budgets and special funds with additional revenue;

- the substantial improvement of infrastructure and transport network Romanian.

All these projects should be organized only through international tender to attract, in particular, construction companies specialized in countries with rich experience (France, UK, Germany, Holland, Belgium etc.), given that these countries have fewer projects their. Such projects provide the benefits accruing from Community funds and they provide a rebound in the Romanian banking system. After the simplified model shown above can be initiated and the like in areas where Romania has expertise and that are of relevance to all European.

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- g) Re-launch activity in housing construction and industry through:
    - practicing a reduced rate, even zero, for such projects;
    - exemption for a period of time to tax on profits from these projects;
    - engaging in advantageous mortgage loan.
  - h) Boosting regional directorates for the initiation of projects that can access EU funds grants (providing co-financing rates, providing expert assistance etc.).
  - i) Other measures on the application of differentiated taxes in order to protect those on low incomes / cash income precarious situations and progressive condition in people with financial / economic good.

The above is not presented in an articulated program; it's just a suggestion that could be envisaged to try, at least, out of the crisis. We do not think the whole cavalcade of debates, from one side or another of the political spectrum, was heard anything concrete suggestions from all the above measures. It was limited to „scalpel” that is „cut” right „do not cut” on the left.

We need a „national thinking unaffected”, ie a group of experts, which is not inhibited and say honestly where we went „election years 2008-2009”, 2012-2013 and more recently in 2016. It takes a retrospective look lucid, made the jump to continue from 2013 onwards.

### Conclusions

The year 2012 was a difficult analyzed and interpreted mainly due to the fact that successive governments have not had three coherence and continuity in the programs implemented. The last government, said right, tried to mend some strategy, however, affected by previous commitments, restrictions imposed by the IMF program, embezzlement, and more. At the end of 2012, the situation had improved. Crop year 2012 was weak, and in 2013, 2014 and 2015 marked a turnaround. European funds were accessed or lesser extent, the access has not been used properly. Tourism recorded a satisfactory course. Domestic investment shrank or were used inefficiently, not to use another expression, and the foreign virtually disappeared. In these circumstances, the development has become chaotic. It reduced wages, increased unemployment, increased inflation, it has reduced the number of jobs, all with a negative effect on the living standards of the population, so the quality of life. In fact, in previous volumes (resumes and therein), I presented very clearly that mistakes were triggered immediately after 1989, when, foolishly, have triggered inflation and unemployment, the effects of their devastating effects on the economy and denied passage at the first step, privatization correct, based on existing shares even superetatizată economy. Throughout the nineteen years old pulled a lot of signals based on the analysis of real data recorded in economic development, but nothing, absolutely level, not even in question was taken. I do not think I'm the only such analysis that we performed. There have been others whose testimonies written historical evidence remain for another generation.

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