

# Romanian Macroeconomic Indicators during 2008-2015

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## *Abstract*

*Still trying to recover from the austere impact of the recent global financial crisis, Romania continues to fight in order to achieve a steady economic growth by using prudent macroeconomic management.*

*Romania's situation in the last years is shown by means of macroeconomic indicators such as gross domestic product, average gross income, unemployment rate, inflation rate, average earning, workforce and consumer price index.*

*The analysis of these indicators is needed to see the current state of the state's economy, according to a particular economic area.*

**Keywords:** *economy, macroeconomic indicators, national economy, economic growth*

**JEL classification:** E21, E24

## **Introduction**

Economic activities conducted within a national economy are reflected in a wide range of goods and services. Their evaluation under the physical form or value is performed using economic indicators. The economic indicator is a numerical expression of quantitative side of economic phenomena and processes under certain conditions of space and time. It allows highlighting these phenomena and processes in quantitative, qualitative and structural aspect, as interdependencies between certain subsystems of the national economy.

The article is based on a descriptive research and explores a series of macroeconomic indicators that can reflect in a more realistic manner the Romanian economy.

## **1. Romanian Macroeconomic Indicators**

The macroeconomic indicators are statistics data that indicate the current state of the economy of a state, depending on a specific economic sector (industry, employment, trade, etc.). These data are published regularly at a particular time by government agencies and the private sector. With this data can follow the pulse of

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the economy, its permanent status and its response following the impact of several external factors.

The most important macroeconomic indicators analyzed in this article are:

#### *Gross Domestic Product (GDP)*

Gross Domestic Product (GDP) – represents the value of all goods and services made for final consumption achieved within a country in a given period (usually one year). The higher the present value of GDP is, the better the economic situation is in the respectively state. Optimal growth is 3% per year. If growth is too strong, usually the Central Bank decision is to raise the benchmark interest rate (with a positive effect on the national currency).

Since from a single observation on the indicator we cannot draw the necessary conclusions about the competitiveness of the national economy, to understand the dynamics and perspectives of development, we must analyze the components, to compare with previous data and those of other countries.

To calculate GDP, the most commonly used is the cost method, for example:

$$\text{GDP} = \text{consumption} + \text{investment} + \text{government spending} + (\text{exports} - \text{imports})$$

The quarterly report of US GDP is updated monthly on the 3rd or 4th week of the month. American GDP is approx. 29% of the overall, the European approx. 22%, the Japanese 13%. It's important to track components. For example, for US domestic consumption represents more than 65% of GDP.

Gross domestic product rose during those 8 years from 514.7 billion to 712.8 billion, which means a positive difference of 198.1 billion lei. This was due to the fact that also consumption, fixed capital, import and export of goods and services, and total gross value added which includes industry, agriculture, forestry, fisheries, construction and not least services have increased. Final consumption in 2015 reached 534.2 billion lei, with an increase of 113.3 billion lei compared to 2008. Gross fixed capital formation increased from 164.3 billion to 176.1 billion lei. Exports of goods and services has evolved with almost double the amount in 2015 compared with 2008. Imports also rose, not so much as exports, but with a significant difference of 72.9 billion lei from 2008 to 2015. Lastly, gross value added in 2008 was 458.5 billion lei, amounting to 625.8 mdl lei, ie. an increase of 167.3 lei mdl, as it can be seen in table 1, where we can find gross domestic product alongside with its components as follows:

**Table 1. Level and structure of gross domestic product in Romania  
in 2007-2013**

-mld lei, current prices -

	2008	2009	2010	2011	2012	2013	2014	2015
Final Consumption	420,9	404,3	419,8	437,4	461,9	476,1	512,5	534,2
- Effective individual final consumption of households	381,1	360,4	382,4	402,1	424,5	435,3	461,7	484,2
- Effective collective final consumption of public administration	39,8	43,9	37,4	35,2	37,4	40,8	50,8	49,9
Gross fixed capital	164,3	122,4	129,4	145,2	154,3	158,3	153,4	176,1
Exports of goods and services	156,6	153,4	185,5	222,9	238,5	252,3	274,1	292,9
Imports of goods and services	223,7	183,6	215,5	252,6	266,1	265,9	273,6	296,6
<b>The gross domestic product</b>	<b>514,7</b>	<b>501,1</b>	<b>523,7</b>	<b>557,3</b>	<b>586,7</b>	<b>625,6</b>	<b>666,6</b>	<b>712,8</b>
Total gross value added, of which:	458,5	451,0	466,4	487,7	512,1	549,9	589	625,8
- agriculture, forestry and fishing	34,1	32,3	29,9	36,3	28,6	35,1	31,5	29,78
- industry	118,2	120,6	148,6	160,6	165,7	184,0	160,6	165,5
- constructions	56,1	52,8	47,8	45,0	50,3	51,5	41,9	52,8
- services	250,0	245,2	240,2	245,8	267,4	279,3	355	377,7

Source: National Institute of Statistics

#### *The Unemployment Rate*

The unemployment rate was 6.8%, identical to the previous year. By gender, the difference between the two unemployment rates was 1.7 percentage points (7.5% for men compared with 5.8% for women) and by residential 0.4 percentage points (7.0% compared to 5.3% for urban areas). The unemployment rate was the highest (21.7%) among youth (15-24 years).

**Table 2. Unemployment rates by age and sex in Romania in 2015**

- % -

	Women	Men
15-24 years	23,4	20,6
25-34 years	6,6	9,1
35-44 years	4,6	5,8
45-54 years	4,3	5,8
55 years +	1,7	4,0

Source: National Institute of Statistics

**Table 3. The unemployment rate by age and area of residence in Romania in 2015**

- % -

	<b>Urban</b>	<b>Rural</b>
15-24 years	26,9	18,5
25-34 years	8,1	8,1
35-44 years	4,9	5,8
45-54 years	6,0	4,1
55 years +	4,5	1,9

Source: National Institute of Statistics

The unemployment affected to a greater extent the graduates of medium and low education for which the unemployment rate was 8.1%, respective 7.2%, higher than the rate recorded for unemployed university graduates. Long-term unemployment rate (unemployed for a year and over) was 3.0%. Long-term unemployment incidence (percentage of people unemployed for a year and more in total unemployed) was 43.9%. Long-term unemployment was manifested stronger in men (41.8% versus 40.0% for women) and urban area (42.1% versus 39.2% in rural areas). For young people (15-24 years), long-term unemployment rate (unemployed for six months and over) was 13.1% and the incidence of long-term unemployment among youth was 60.6%.

The Gross National Income (GNI)

The Gross National Income is becoming an increasingly important macroeconomic indicator since the European Commission's decision to use it in assessing the financial contributions of member countries to the Community budget. As is known, gross national income is, on the one hand, the indicator used to designing total contribution of each Member State to the Community budget, and on the other hand is the indicator on which it is assessed the contribution of each Member State's VAT.

The Gross National Income is the gross domestic product adjusted with the difference between revenue inflows resulted from external activity of national inputs and the revenue outputs of different nationality inputs.

For example, the profit made by a company from France that is operating in Romania is included in Romania's GDP and is not included in Romania's GNI, but is included in France's GNI. The profit made by a company from Romania working in France is included in France's GDP and in Romania's GNI. Romanian citizens working under contract in Italy obtained a remuneration which is included in Italy's GDP and in Romania's GNI

As a conclusion, the clear difference between the two indicators is that GDP summarizes total revenues within countries (ex. Romania) and GNI summarizes the total revenue of all citizens of a nation (ex. Romanian) as in the following table:

**Table 4: Romania's Gross National Income in 2008-2015 period**

- mill eur-

	2008	2009	2010	2011	2012	2013	2014	2015
<b>GDP</b>	139.749	115.940	120.656	129.317	143.316	158.517	175.041	159.041
<b>GNI</b>	135.683	113.988	117.481	125.362	138.736	153.567	169.226	196.787

Source: National Institute of Statistics

According to data retrieved from the National Statistics Institute, Romania's gross national income reached EUR 135 million euro in 2008, after which experienced a decline of nearly 22 million euro in the next year because of the financial crisis. But then again it began to grow, reaching in 2012 to exceed the 135 million euros in 2008 and to reach 138 million euros. In 2015, the gross national income, is still growing and it has reached more than 196 million euros.

*Average earning*

Average salary in Romania in the last 8 years is shown in Table 5 as follows:

**Table 5. The evolution of average salary per total economy in Romania during 2008-2015**

	2008	2009	2010	2011	2012	2013	2014	2015
The average monthly gross earnings - lei	1.761	1.845	1.910	2.022	2.125	2.232	2.338	2.415
- percent change from previous year	26,1	4,8	3,5	5,9	5,1	5,0	4,7	3,2
Average net monthly earnings - lei	1.309	1.361	1.393	1.472	1.546	1.622	1.697	1,751
- percent change from previous year	25,6	4,0	2,4	5,7	5,0	4,9	4,6	3,2
Share of net average earning in the gross - %	74,3	73,7	72,9	72,8	72,8	72,7	72,6	72,5
The real earnings index- %	16,5	-1,5	-3,6	0,4	1,5	1,7	1,8	1,4

Source: National Institute of Statistics

The average monthly gross earning has a significant increase from 2008 to 2015 so from the the amount of 1,761 lei in 2008 it reached up to 2,415 lei in 2015. The most it changed in 2011, when it grew 5.9% from the previous year.

Average net monthly earnings also increased over this 8 years, but not so much, having an increase of 442 lei compared to the average gross salary per month, respectively 654 lei. Also in 2011 was the highest growth of 5.7% therefore increasing the amount of 1,393 lei lei in 2010 to 1,472.

The share of net average earning in the gross was growing smaller. Thus in 2008, it was represented in proportion of 74.3%, reaching only 72.5% in 2015.

Real earnings have generally positive, but in 2009 and in 2010 went into reverse.

### *The Workforce*

Of great importance in the evolution of a country is the labor force. Employment indicator are those indicators that reflect the health of the economy in terms of employment of labor. So we have to mention what percentage of the labor force works actively and how many citizens are unemployed. At the same time we want to see how wages have evolved.

Thus in the following table, it is presented Romania's labor force for period between 2008 and 2015.

**Table 6. Labor indicators in Romania during 2008-2015**

- thousands persons -

	2008	2009	2010	2011	2012	2013	2014	2015
Population aged 15 years and over	18.244	18.229	18.290	18.310	18.320	18.330	18.340	16792
Total working-age population (15-64 years)	15.042	15.028	15.021	15.009	14.989	14.974	14.959	13404
Economically active population	9.944	9.924	9.886	9.925	9.980	10.045	10.125	9.159
Working-age economically active population (15-64 years)	9.458	9.485	9.486	9.555	9.584	9.652	9.734	8856
Working-age inactive population (15-64 years)	5.584	5.543	5.535	5.454	5.405	5.322	5.225	4548
Total employed persons	9.369	9.243	9.150	9.210	9.280	9.360	9.455	8.535
- employees	6.317	6.213	6.125	6.150	6.180	6.220	6.270	6.062
- other categories of employed persons	3.052	3.030	3.025	3.060	3.100	3.140	3.185	2.473
Working-age employed population (15-64 years)	8.882	8.805	8.750	8.840	8.884	9.967	9.064	8236
Unemployed persons	575	681	736	715	700	685	670	624

Source: National Institute of Statistics

From the total population aged 15 years and over of about 16 thousand people, only 13 thousand are part of the working age population (15-64 years). Of the total working age population, the active one is of 9000 people, and the inactive one is about nearly 5000. From 2012 the working age total population came under the threshold of 15 thousand people, but the active one risen ascending until 2014, dropping in 2015. Even the inactive population has decreased in the 2008-2015 period. The employees represent the largest part of the total employed population, the rest being part of other categories.

What can be seen it is that the working-age employed population is less than the total employed population. During the years 2008-2015 the total working age population and the inactive one fell. The number of unemployed from 2008 to 2014 increased from 575 000 to 624 000 people, so an increase of 95 thousand people during the seven years, managing to drop by 46 thousand people in 2015.

#### *Consumer price index*

The annual consumer price index measures changes of prices for purchased goods and tariffs for services used by the population in the current year over the previous year (or another year chosen as the reference period).

The annual consumer price index is a key economic figure and by analysis, measurement and interpretation is one of the most used measurement of inflation at a national level. Most of the developed countries use the consumer price index as one of the most common way to assess the inflation level.

The consumer price index is calculated as a ratio, expressed as a percentage, between the average price index for the current year and the average index of the previous year (or another year chosen as the reference period).

**Table 7. Annual consumer price index (CPI) in Romania during 2008-2015**

<b>Current Period</b>	<b>Reference Period</b>	<b>Total CPI (%)</b>	<b>CPI Food (%)</b>	<b>CPI Non-Food (%)</b>	<b>CPI Services (%)</b>
Year 2008	Year 2007	107,85	109,22	106,36	108,57
Year 2009	Year 2008	105,59	103,25	106,22	108,97
Year 2010	Year 2009	106,09	102,33	109,78	104,78
Year 2011	Year 2010	105,79	106,02	106,15	104,45
Year 2012	Year 2011	103,33	101,89	103,77	105,07
Year 2013	Year 2012	103,98	102,96	105,19	103,19
Year 2014	Year 2013	101,07	98,37	102,45	103,16
Year 2015	Year 2014	99,41	96,20	100,93	102,04

Source: National Institute of Statistics

The annual consumer price index is set for foodstuff, non-foodstuff products and services. Their evolution is decreasing overall, ranging from 107.85% in 2007 to 99.41% in 2015.

### *The Inflation Rate*

The inflation can be defined in many forms, usually representing the declining purchasing power of a currency unit. The inflation rate is usually expressed as a percentage and determines inflation in a given period of time.

The inflation rate is calculated as the ratio of the average price index from a year and the one of the previous year minus 100. The inflation rate at the end of the year represents the increase in consumer prices in December of the current year compared to the same month last year. It is represented in Table 8.

**Table 8. Romania's Inflation Evolution during 2008-2015**

Year	Consumer Price Index-%	Inflation Rate-%
2008	107,85	7,85
2009	105,59	5,59
2010	106,09	6,09
2011	105,79	5,79
2012	103,33	3,33
2013	103,98	3,98
2014	101,07	1,07
2015	99,41	-0,6

Source: National Institute of Statistics

During those eight years included in these statistics we can see that the inflation rate is does not have only an increasing or decreasing trend in relation to consumer price indices, but it increases and decreases from one year to another. If in 2007 the inflation rate was 4.84% in the next year increased by 3.01%. Then it decrease with 2.26% and again increased. However since 2011 it managed to decrease, reaching in 2015 to -0.6%, the first year of negative inflation.

### **Conclusions**

After analysing the most important macroeconomic indicators above we can definitely state that Romania is on the right path after the big shock suffered during the financial crisis.

In 2015, Romania recorded, for the fifth year in a row a positive economic growth and Romania's economic growth is expected to remain positive also in 2016, mainly driven by domestic demand and accompanied by a stable labor market.

The labor market narrows down due to the firm economic growth. The unemployment rate it has been generally stable, situated below 7%, and it is expected to decrease to some extent in the next two years.

However, the strong emigration including high qualified workers, combined with an aging population represents a continuous challenge for supporting a competitive economy.



Another challenge for a competitive economy is the lack of an efficient education system and not connected to real life together with labor market policies that we can consider insufficient and also with a very low mobility of the working-age population that will led to a very high number of unemployed.

The year 2017 seems to be a very difficult year for economic growth if the authorities will not take measures to stimulate production, not only the consumption. Also it is necessary to reduce migration, to reduce the unemployment rate of the graduates of medium and low education.

Another hot issue for economic growth is represented by exports which appear not to have the necessary conditions to increase, although exports together with increased investments are one of the key factors of a growing Gross Domestic Product.

### References

1. Badea, G.S. (2016), „Politici și strategii macroeconomice”, Bibliotheca, Târgoviște
2. Băcescu-Cărbunaru A., Băcescu M. (2008), „Dicționar de macroeconomie”, C.H.Beck, Bucharest
3. Dornbush R., Fisher S. (2007), „Macroeconomie”, Economica, Bucharest
4. Krugman P. (2009), „Întoarcerea economiei declinului și criza din 2008”, Publica, Bucharest
5. Roubini N., Mihm S. (2010), „Economia crizelor”, Publica, Bucharest
6. <http://www.insse.ro>
7. <http://www.cnp.ro>
8. <http://www.mdm.ro>
9. <http://www.corso.ro>
10. <http://www.ipe.ro>
11. <http://www.wall-street.ro>