COMPARATIVE STUDY ON THE STAGE FOR THE FULFILMENT OF THE CONVERGENCE CRITERIA BY ROMANIA AND THE COUNTRIES OF CENTRAL AND SOUTH-EASTERN EUROPE

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Abstract. *Through this article we aim to make a comparative analysis on the degree of achievement of the five nominal convergence criteria laid down by the Treaty of Maastricht, by the following member of Central and South-Eastern Europe (ECSE): Bulgaria, Poland, the Czech Republic and Hungary.*

The convergence criteria to be analyzed are the following: the criterion of sustainable stability of prices, the criterion of the budget deficit, the criterion of the public debt, the criterion of convergence of the interest and the criterion in the exchange rate.

In the second part of the study, we have examined the extent to which the Member above, (to which we add and Romania) have fulfilled the convergence criteria. The criteria to be analyzed are: the level of per capita GDP/ calculated in purchasing power parities, labor productivity, the degree of the opening of the economy, the share of the main economic sectors in GDP and the share of the bilateral trade with the EU in total trade.

Keywords*: convergence criteria, criterion of the budget deficit, criterion in the exchange rate,criterion of the public debt*

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Introduction

The European Union is a significant actor on the world stage, changing the way Europeans live and how the rest of the world perceives Europe. The main objective of the European Union is to promote balanced economic and social development by creating an area without internal borders by strengthening economic and social unity and by setting up an Economic and Monetary Union (EMU) with the ultimate goal of a single currency.

Romania is part of the European project in 2007, officially. The monetary revolution embodied in the euro involves more than the elimination of national currencies and the distribution of colored banknotes and coins across Europe. It brings about the unification of the EU common goods and services market, major structural changes in tax-impartiality countries and the reorganization of monetary policy in some of the world's most advanced industrialized economies. At first, the trans-European currency seemed to have little significance outside the banking and tourism circles.

At present, out of the 28 Member States of the European Union, only 19 countries have adopted the euro as their single currency, meaning that they fully participate in the third stage of economic and monetary union

The idea of this work came up against the background of the advanced training of the states in the Eastern bloc of the European Union for admission to the higher integration stage. The Euro Area Admission Process (EE) raised a series of questions about meeting the convergence criteria for the Economic and Monetary Union.

The paper also contains a larger case study, presented in chapter four. Here we performed a comparative analysis of the fulfillment of the five nominal convergence criteria established by the Maastricht Treaty by the following CEECs: Bulgaria, Poland, the Czech Republic and Hungary. The convergence criteria analyzed are as follows: the criterion of sustainable price stability, the budget deficit criterion, the public debt criterion, the interest rate convergence criterion, and the exchange rate criterion.

By consulting the Eurostat database and the convergence reports published by the European Central Bank and the European Commission, we have obtained the information needed for the case study. This information was organized in such a way that it allowed me to analyze the evolution of the nominal convergence criteria for the period 2006-2016 for each state.

In the second part of the case study, we also analyzed the extent to which the above states (to which we add Romania) have fulfilled the real convergence criteria. The criteria analyzed are: GDP per capita calculated at purchasing power parity, labor productivity, economic opening degree, share of the main economic sectors in GDP and the share of bilateral trade with the EU in total trade.

1. Stages of introduction of the euro

The single currency was introduced only after three different stages:

• *The first phase* (2 May 1998 - 1 January 1999) took place at the European Council meeting in Brussels when the 15 EU countries were selected to meet the convergence criteria. As a result of the selections, only 11 countries have moved to the next stage, due to the fact that three of them (Denmark, Great Britain and Sweden), although they have been set up in the required requirements from the start, considered it appropriate to be in outside the euro area.

• *In the second phase* (January 1, 1999 - December 31, 2001), the euro existed only as an account currency. Although at this stage the European Union has stated, as regards the use of the euro as a currency, that it is not an obligation but has not specifically banned it, it has begun to be used on the financial markets, the foreign exchange markets and compensation.

• *The third stage* (initially set to run between 1 January 2002 and 1 July 2002, then reduced until 28 February 2002) involved the emergence of euro banknotes and coins and the withdrawal of national currencies in the 12 participating countries euro area at that time. Since 1 March 2002, the euro has remained the only legal means of payment for euro area countries.

2. The Maastricht criteria and their fulfillment by Romania

The Maastricht Treaty details the formal criteria to be met by an economy in order to be eligible for membership of the Economic and Monetary Union. The main objective pursued by this Treaty is: "Promote economic and social progress, which is balanced and sober, through the existence of an area without internal borders, through economic and social cohesion, and by establishing an Economic and Monetary Union having as the final stage of adopting a single currency ".

The Maastricht Treaty pursues through established objectives the imposition of precise standards for achieving a stable and sustainable economic and monetary union. Elements that were considered to be key indicators that highlight the performance of an economy are inflation, debt, interest rate, budget deficit and exchange rate level.

2.1 Nominal convergence criterion on price stability

The price stability criterion prefers that the inflation rate should not exceed by one year before the average inflation rate in the top three Member States that have achieved the best price stability performance by more than 1.5%;

In Romania over the last 10 years, this indicator fluctuated within a relatively wide range, ranging from -1.1% to 7.9%, and the average of the period was at a high level, ie 4.3%.

2.2 Nominal interest rate convergence criterion

The definition referred to in the fourth indent of Article 140 (1) TFEU states: "The interest rate convergence criterion during a one year period prior to the examination means that a Member State had a long-term average nominal interest rate which may not exceed by more than 2 percentage points that of not more than three Member States which have achieved the best results in price stability. Interest rates are calculated on the basis of long-term government bond yields or comparable securities, taking into account the differences in national definitions "

Analyzing retrospectively, the nominal long-term interest rate in Romania recorded an upward trend until 2009, followed by a downward trend, reaching 3.6% in 2016. Thus, from the 7.2% recorded in 2006, it reached 9.7% in 2009. Long-term interest rates have been on a downward trend since 2009, with 12-month average rates falling from around 10% to below 4% .

2.3 The nominal convergence criterion on the budget deficit

The government budget deficit (planned or actual) should not exceed 3 percent of GDP; if this value is exceeded, the budget deficit has to be substantially and continuously reduced to a value close to the benchmark or the excess over the reference value has to be exceptional and temporary.

In 2009, Romania recorded a budget deficit of 9.5% of GDP, well above the 3% reference value. With the support of the measures implemented under the three consecutive EU / IMF financial assistance programs, the budget deficit has been progressively reduced and in 2014 Romania has reached its medium-term budgetary objective, ie a deficit of 1% of GDP in structural terms. This happened a year earlier than planned. In 2015, strong economic growth and better compliance with tax obligations contributed to high revenues. At the same time, savings from low-cost public investment and less co-financing of EU-funded projects compared to the budget have led to lower spending. Consequently, it is estimated that in 2015 the budget deficit reached 1.1% of GDP in nominal terms and 1% of GDP in structural terms, and therefore remained at the level of the medium-term budgetary objective.

2.4 The nominal convergence criterion on public debt

According to Maastricht, the public debt should not exceed 60 percent of GDP, and if it records higher values, it should decrease significantly and approach the benchmark at a satisfactory pace. Government debt, according to EU methodology, was at the end of 2016 at 37.6% of GDP, well below the 60% ceiling set by the Maastricht Treaty. At the end of February 2017, government debt was 37.5% of GDP, of which domestic debt accounted for 19.6% of GDP and external debt was 17.9% of GDP

2.5 Nominal convergence criterion on exchange rates

The exchange rate must be kept within the range of the exchange rate fluctuation margins (ERM II) over a period of at least two years without severe tensions, in particular without initiating the devaluation of the national currency on its own initiative compared to the euro. The exchange rate stability depends on the fulfillment of the inflation rate criterion. The national currency must fall within a narrow fluctuation band of ± 2.25% and a wider range of ± 15% for two years before entering the ERM II European Exchange Rate Mechanism. In practice, the European Commission and the ECB can tolerate a band of -2.25% / + 15%, with a narrow bandwidth violation, but only in the sense of appreciation.

The low short-term volatility of the leu reflects the positive effects associated with the EU-IMF international financial assistance to Romania by the end of 2015, the favorable world market conditions as well as the NBR's operations on the interbank and foreign exchange markets. Compared to April 2014, the exchange rate of the RON against the euro was virtually unchanged in April 2016.

3. Comparative analysis of real convergence in ECSE countries

Alongside the nominal convergence criteria, but without being subject to the Maastricht Treaty, a number of criteria have emerged at the initiative of the European Commission and the European Central Bank to ensure the convergence and cohesion of the economic structures of the Member States and the candidate countries. These criteria are also called the real convergence criteria, regarding:

- *the degree of opening of the economy*, calculated as a share of external trade in GDP;
- *the share of bilateral trade with the EU Member States in the total foreign trade;*
- *the structure of the economy in the three main branches* (industry, agriculture and services);
- *per capita GDP*, calculated on purchasing power parity;
- *work productivity*

Even though the Maastricht Treaty does not refer to the real convergence criteria between the EU Member States, the European Commission has implemented a set of measures by ensuring a high degree of similiarity and cohesion of the member states' economies.

The European Commission and the European Central Bank have warned on many occasions about the risks that may arise in the adoption of the euro by a country whose real convergence with Western European structures is insufficient.

3.1 GDP per capita

Table IV.6- Gross Domestic Product Level / Per capita at purchasing power parity

Țări /ani	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Bulgaria	38	41	43	44	45	45	46	46	46	47	48
Polonia	51	53	55	60	62	65	67	67	68	69	69
Rep. Cehă	79	82	84	85	83	83	83	84	86	87	88
România	39	43	49	50	52	52	54	55	55	57	59
Ungaria	61	60	62	64	64	66	65	67	68	68	67
ZE-19	110	109	109	109	108	108	107	107	107	106	106
UE-28	100	100	100	100	100	100	100	100	100	100	100

Source: Eurostat database

In Romania, between 2006 and 2016, economic growth was spectacular, reaching from 39% of GDP per capita in PPS in 2006 to 59% of the EU-27 average in 2016. In 2016 , GDP per capita at purchasing power parity compared to the EU-28 average is 59% (see Table 4.6 and Chart 4.6), lower than that of the Czech Republic (88%), Poland (69%), Hungary (67%), but higher than that of Bulgaria (48%).

Analyzing the candidate countries for EMU in ECSE, we note that Romania is at GDP per capita at the penultimate position before Bulgaria, with a value of 59 percent of the EU-28 average in 2016. Difference between CEE countries and our country in terms of GDP per capita, is due to the significant advantage that these countries have benefited from investment flows registered since the 1990s.

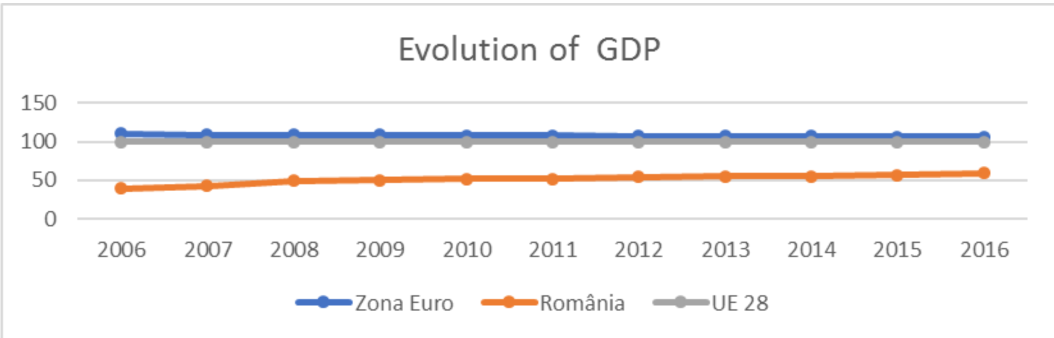

Chart IV.5 Evolution of GDP per capita in Romania compared to the average EU and EU27 (% of purchasing power parity)

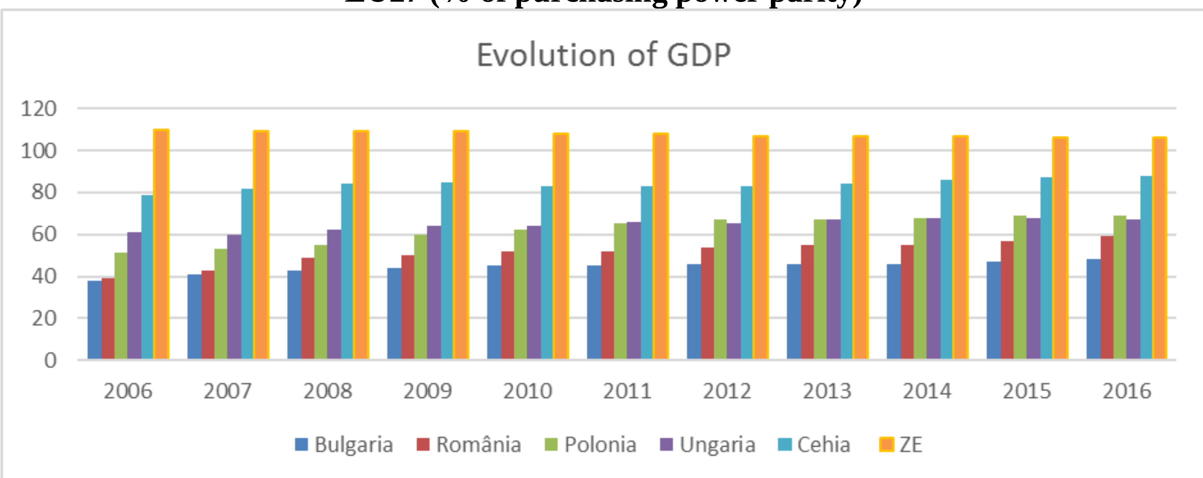

Chart IV.6 Evolution of GDP per capita in ECSE countries compared to average ES (% of purchasing power parity)

3.2 The degree of opening of the economy

The degree of opening of the economy can be analyzed in several dimensions: the level of trade integration (the ratio between exports plus imports and GDP), the share of tradable goods versus non-distributable goods in production and consumption, or the marginal propensity to import. Table 4.7 and Chart 4.7 show a compre hensive evolution of the degree of economic opening in ECSE countries from a commercial integration point of view.

Table IV.7- Economic opening in ECE countries (export + import / GDP -% -)

Țări /ani	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Bulgaria	111,8	123,6	124,8	92,9	103,2	117,8	124,8	129,8	131	128,1	124,1
Polonia	77,8	80,7	80,8	75,2	82,2	87,1	89,3	90,7	93,7	95,9	100,7
Cehia	127,8	130,7	124,6	113,7	129,3	138,8	147,6	148	158,7	159,8	153,3
România	*76,1*	*72,5*	*67,1*	*61,2*	*70,7*	*79,2*	*79,9*	*80,2*	*82,8*	*82,8*	*83,7*
Ungaria	149,7	155,9	158,9	145,5	159,1	168,2	166,9	165	170,4	172,5	174,7
ZE	75,5	77,6	78,8	68,4	76,7	82,4	84,8	84,7	85,9	87,7	86,8
UE-28	74,1	75,3	77,7	68,6	76,3	81,8	83,3	83,1	83,5	84,5	84,4

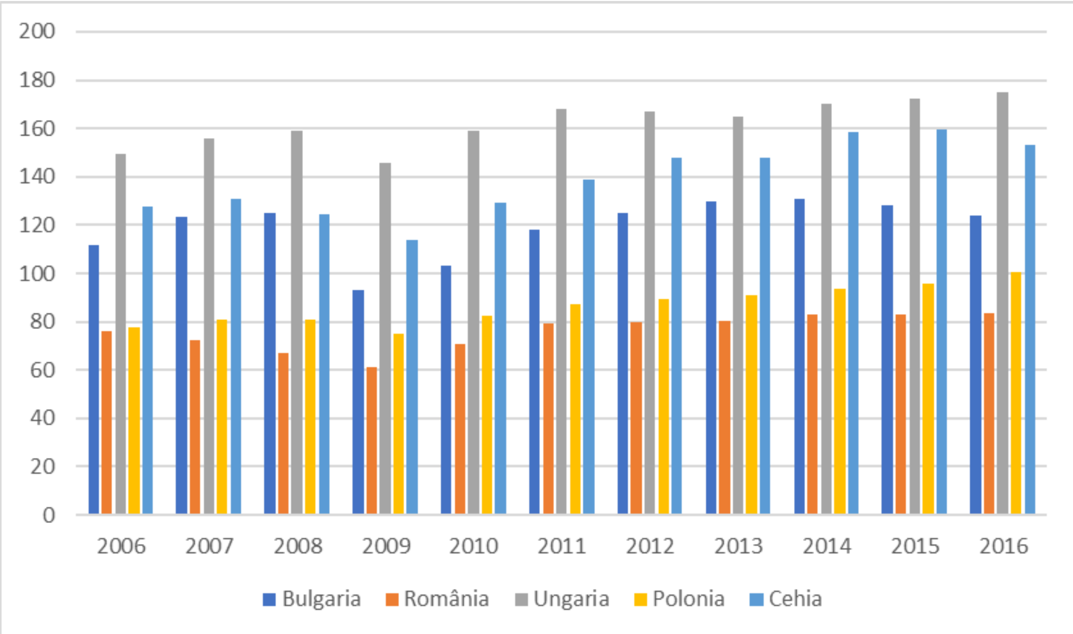

Chart IV.7- Opening of the national economy (%) in the period 2006-2016, comparison Romania-ECSE countries

It can be seen that Romania's economy is less economically open than all the other economies of the analyzed countries. The degree of openness was relatively stable but reduced compared to other countries of similar size, because economic opening is less sustained by exports. Starting with 2007, the degree of opening of the economy follows a downward trend, in 2009 the lowest value of economic opening (61.2%) was due to the financial crisis and the recession in the national economy.

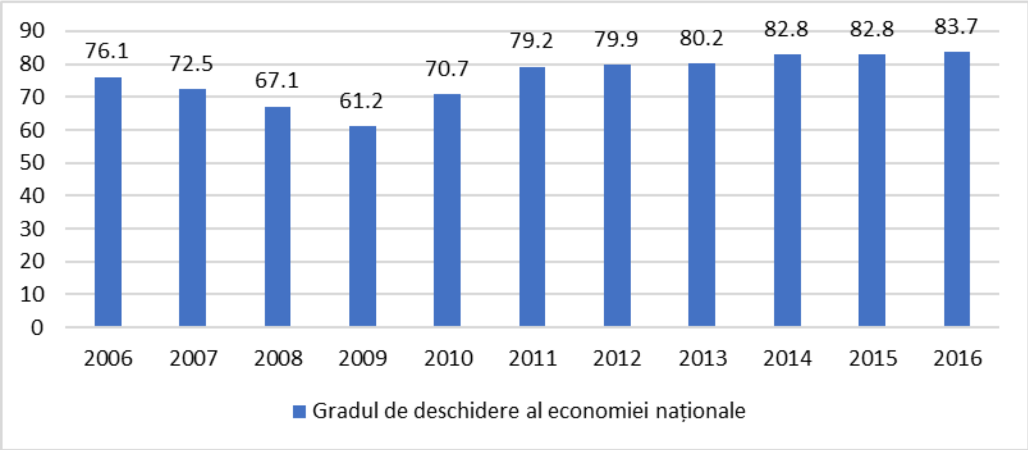

Chart IV.8- Opening of the national economy (%), 2006-2016

Source: based on Eurostat data, BNR, INS

3.3 Structure of the economy by branch of activity

Another element to measure real convergence is the structure of the economy or the contribution of the main sectors to GDP formation.

Table IV.8 Evolution of the structure of GDP per branch (%)

Sector/year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Services	54,4	57,8	55,7	56,3	56,1	51,2	53,2	57	59	60,3
Industry	39,9	36,7	37,8	37,7	37,6	41,5	41,5	37	36	35,6
Agriculture	8,7	5,5	6,5	6	6,3	7,3	5,3	6	5	4,1

Source: Eurostat database

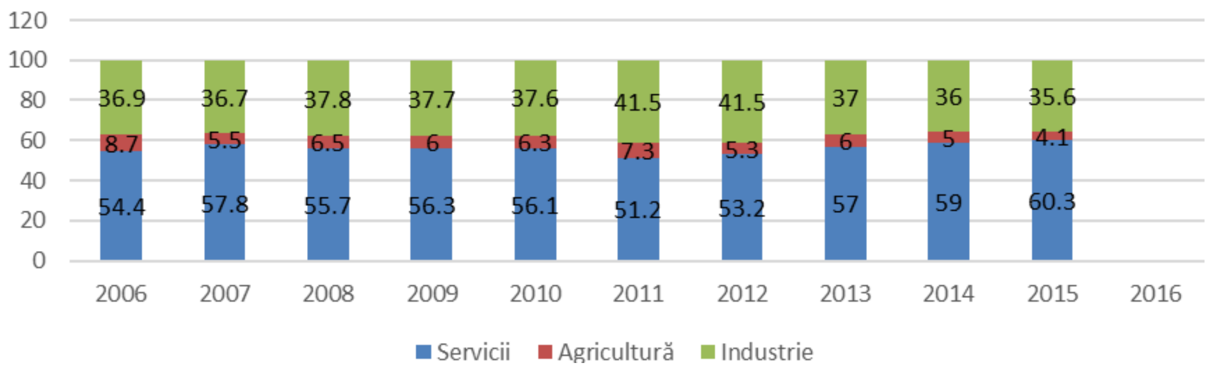

Chart IV.9 Breakdown of GDP by industry in Romania in the period 2006-2016

Analyzing the structure of the Romanian economy by sector shows that it has not changed substantially, the contribution of agriculture to GDP has halved in the analyzed period, while the share of services increased by 6%.

3.4 Productivity of work

Another criterion of real convergence is labor productivity. The speed of convergence of Romania towards developed European states can be explained by the level and evolution of labor productivity. Indeed, many studies show that the index of structural convergence with the EU can increase mainly by increasing labor productivity, which depends on better organization, education, new technologies, innovations. This can increase wages, increase the rate of economic growth, increase the standard of living.

Table IV.9 Productivity of labor per person employed (%, UE28 = 100)

Țări /ani	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bulgaria	36,1	37,7	39,4	39,5	41,3	42,2	43,6	43,0	43,5	44,1
România	40,3	43,6	50,0	49,9	51,1	51,9	55,7	56,3	56,9	59,4
Cehia	73,9	76,6	77,6	79,1	77,0	77,4	76,2	76,7	79,3	79,9
Ungaria	66,4	65,9	70,3	72,2	72,7	73,8	72,6	72,9	71,0	70,2
Polonia	60,4	61,4	62,1	65,4	70,2	72,7	74,1	74,0	73,8	74,3
UE- 28	100	100	100	100	100	100	100	100	100	100
ZE- 19	108,9	108,9	108,6	108,7	107,9	107,8	107,2	107,3	107,3	107,2

After a period of post-crisis stagnation, labor productivity began to improve in 2012. "Labor productivity has grown considerably in the period before the economic crisis (2005-2008), to stagnate between 2009 and 2012, due to the economic downturn and low economic growth, coupled with a reduction in the number of employees at national level. Starting in 2012, labor productivity has improved in the context of strong economic growth, but its pace is slower than before the crisis.

Labor market conditions were generally stable, but the employment rate is still below target targets. The situation on the Romanian labor market is generally better than in previous years. The unemployment rate remained broadly stable, slightly below 7% and well below the EU average of 9.5%. It is projected to fall further by 2017 as a result of sustained economic growth (53). The employment rate followed an upward trend over the past 10 years (reaching 67.8% in the third quarter of 2015), but remains below the EU average and the national target of the Europe 2020 strategy (both 70%). The labor market was quite resilient during the crisis, subsistence farming employment often acts as a buffer in times of recession. "

3.5 Share of bilateral trade with the European Union in total foreign trade

The level of bilateral trade with the EU in total foreign trade is another indicator of real convergence. The analysis of the evolution of exports and imports at national level during the period 2006-2016 indicates a growth trend, but marked by the current crisis (see Chart 4.10)

The rising level of our country's exports to the EU shows Romania's high dependence on the intra-Community market in terms of sales. The high values of the two indicators in 2007 and 2008 are justified by the accession of our country to the EU along with Bulgaria, a country with which Romania already had close trade relations and before joining the EU. Against the backdrop of the economic crisis, we note that both imports and exports have fallen in 2009 and have resumed their upward trend in 2010, which is a sign of recovery and recovery of our country's economy.

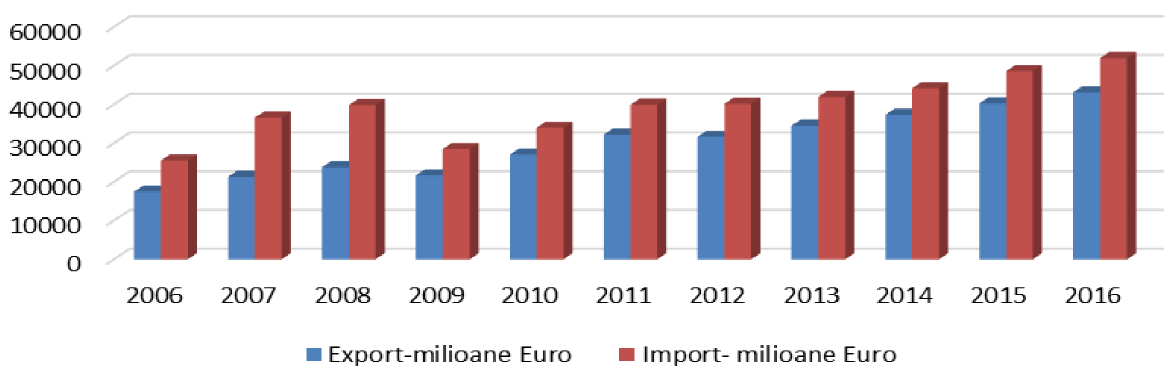

Chart IV.10 Evolution of the volume of exports and imports of Romania to and from the EU

From Chart 4.11. it can be seen that the share of trade with the EU in total trade has, in the long run, an upward trend. Until 2011, the evolution oscillated due to the international financial crisis. Starting in 2012, the trend was only upward, reaching 76.2% in 2016, indicating a high degree of commercial integration into the single European market.

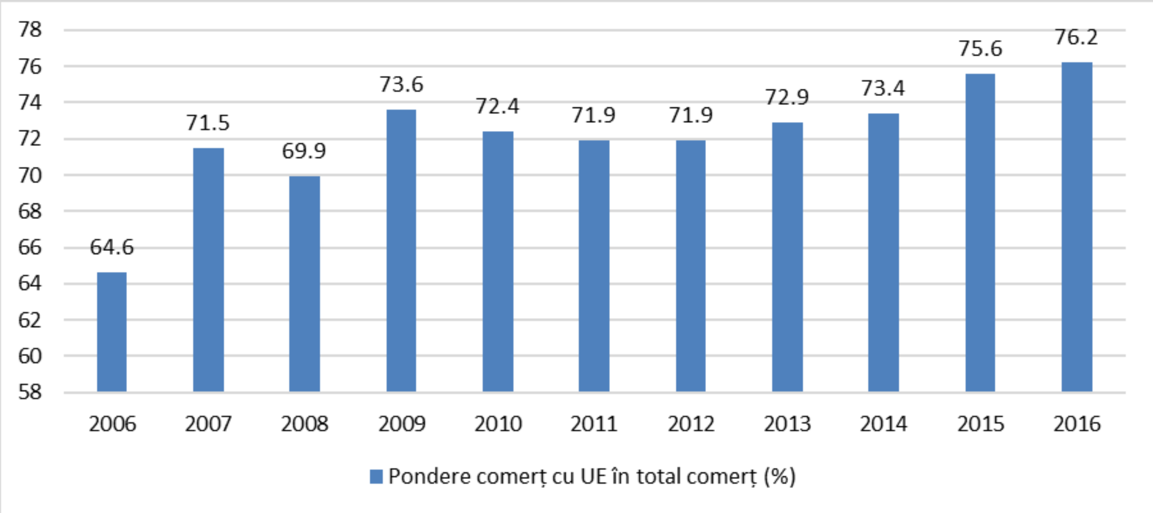

Chart IV.11 Share of trade with the EU in total trade (%)

The share of intra-EU exports in total exports was 75.6 percent, up 2.2 percentage points compared to 2014. Also, the value of imports from the EU in the same period increased by 1.3 percent, a share of 77,09% in total imports. As for the direction of exports and the source of imports, we have seen their orientation to / from developed countries and less to emerging countries, with preferences ranging from Germany, Italy, Hungary, France, the United Kingdom , Poland, Spain.

Conclusions

The Economic and Monetary Union was grounded in the Maastricht Treaty, where the strategy for launching the single currency was outlined and the institutional arrangements related to the functioning of the Union were clearly established.

The entry ticket to the Economic and Monetary Union is obtained by reaching five nominal convergence criteria by one EU member country. By introducing these criteria, the European Union wanted to give the signals of a true cult of macroeconomic stability. Another advantage of introducing these criteria under the Maastricht Treaty was clarity. Thus, the candidate states know precisely and precisely the limits imposed by these criteria, which must not be exceeded in order to ensure entry into the EE. Since the launch of the euro, on January 1, 1999, by 11 European Union Member States, another 8 countries have joined the Eurozone. Currently, 19 Member States have adopted the euro, the most recent case being Lithuania on 1 January 2015. This means that 9 Member States are not fully participating in the Economic and Monetary Union and have not yet adopted the euro.

The Romanian economy is not yet ready to cope with the pressure of the competitive forces in the European Union. We can do the same for the other states. Even though these countries have met almost all the nominal convergence criteria, this is not enough.

Also, the nominal convergence process is achieved in a shorter time than real convergence. It can be said that the substance of an advantageous integration is represented by a high degree of real convection with the European Union.

Following the analysis of the indicators that characterize the real convergence of Romania with the European Union, we can state that our country still has much to accomplish, especially in terms of reducing the gaps in the real economy. Thus, Romania needs to stimulate the increase of labor productivity at a higher rate than the appreciation of the exchange rate against the euro, in order to increase competitiveness and exports. In order to increase labor productivity, Romania should be involved in stimulating the permanent training of force work through continuous and professional education. Our country has to promote a strong current of brain training by creating an environment conducive to innovation, entrepreneurship, improving economic incentives.

The financial crisis has shown that the mere fulfillment of nominal criteria is far from sufficient for a country to benefit from entry into EE. Sustainable real convergence is a key condition for economies that want to adopt a common currency and be resistant to adverse shocks. The big gap between Romania and the EU is the main obstacle to the adoption of the single currency.

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