

# The Analysis of the Real Convergence of the Countries from Central and Eastern Europe

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**Abstract.** *This thesis treats extremely present aspects regarding the evolutions of the emerging economies within the new member states of the European Union insisting on the analysis of the convergence process from a real perspective. Beside the achievement of a monetary union, one of the fundamental objectives of the European Union is represented by the reducing of the disparities regarding the level of development among the member states. One of the ways of appreciating the reduction of the disparities between the economies involve a reduction of the gap as far as the GDP level/inhabitant is concerned or in other words, a real convergence. A series of statistic data are analysed in order to point out the extent to which the central and East-European states have managed to reduce the gap in report to the developed member states of the EMU, using indicators for the appreciation of the real convergence: the GDP per inhabitant, the monthly average salary, the poverty rate, the contribution of the main sectors of the economy in the formation of the GDP and the unemployment rate. From the analysis of the statistic data one can observe that the highest degree of real convergence is held by Slovenia, which distanced a lot from the other EEC states, followed by the Czech Republic. Regarding from the point of view of the evolution of the EEC countries during the entire analysed period, based on the dynamics of the indicators and of the speed of catching up the gaps we can also notice the performance of the Baltic countries. Unfortunately, Romania and Bulgaria are way behind the other EEC countries.*

**Key words:** real convergence, the evolution of the GDP per inhabitant, the poverty rate, the contribution of the main sectors to the formation of the GDP.

**JEL classification:** G15, E01, E60, E63.

## 1. Introduction

The convergence criteria set by the Maastricht treaty caused in time a series of controversies due both to the theoretical approaches and also to the empirical analysis. Thus one formulated a series of questions regarding their role in ensuring the macroeconomic stability and also the connection which is set between these criteria and the economic growth of a country. Complementary to these criteria, an increased attention must be paid to a particular category of indicators of which the GDP/inhabitant stands out as importance. This indicator is part of what is known as real convergence.

Although these criteria do not have a substantiation set by means of some treaties, as the one of Maastricht, the officials of the Central European bank supported the introduction of these criteria, in addition to the ones regarding the nominal convergence for the states of Central and Eastern Europe which adhered to the EU in 2004 and 2007.

In order to enter the Euro area the Central and Eastern Europe countries will have to fulfil the convergence criteria set in Maastricht. In the economic literature one

uses two common terms to assign convergence to the economies of the countries from the European Union: the nominal convergence and the real convergence.

The economic literature deeply analysed the relation between nominal and real convergence, most of the theses reaching the conclusion that the two must be achieved concomitantly. The community institutions insist on the priority which must be given to the real convergence, while the authorities of the Central and Eastern countries are oriented towards the fulfilment of the nominal criteria, considering that the achievement of the real convergence is not a condition, but a result of the adhering.<sup>1</sup> This situation can also be explained by the lack of some explicit convergence criteria that should condition the adhering of the countries which are candidate to the MEU.

## 2. The analysis of the real variables from the Central and Eastern European countries

In order to reach the real convergence at the level of the European Union the less developed countries must have growth rates higher to the Euro area as a whole, so that the level of the productivity and of the prices get as closest as possible.

Although during the years before the crisis the Central and Eastern European Countries have known a rapid and sustained development, the process of the real convergence of their national economies to the European Union economy is far from being achieved.

Table no. 1

### GDP (expressed in PPC)/Inhabitant (EU=100)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bulgaria	34	34	36	38	41	46	45	45	46	46	47	46
Estonia	57	62	65	69	67	62	63	69	74	75	76	74
Latvia	46	49	52	56	57	52	52	56	60	62	64	64
Lithuania	50	53	55	59	62	56	60	65	70	73	75	74
Poland	51	51	52	54	56	59	62	64	66	67	68	69
Czech Republic	75	76	77	80	80	83	81	83	82	83	84	85
Romania	34	35	38	42	42	49	50	51	54	54	55	57
Slovakia	57	60	63	68	72	71	71	73	73	74	76	77
Slovenia	86	88	88	89	89	85	83	82	81	80	82	83
Hungary	63	63	63	63	64	64	65	65	65	66	68	68

Source: Eurostat, *European economic statistics*, pag.143

One can observe that none of the Central and Eastern European countries does not have a GDP/inhabitant at least equal, if not higher to the EU average. The Czech Republic distances itself from the other EEC countries reaching in 2015 a level of the GDP/inhabitant of 85% of the GDP/inhabitant of the EU. It is followed by Slovenia, Slovakia, Estonia, Poland and Hungary, a higher growth being registered in Estonia which started from a lower level. The lowest level is registered by Romania and Bulgaria, but an encouraging side is represented by the fact that in these two countries also there was a increase by 23, 13 percent respectively, which indicates a quite rapid catching up the gaps.

Table no. 2 reveals the massive impact the world economic and financial crisis had on the GDP of the Central and Eastern countries. Only Poland's economy continued to grow, although in a very low percent, al the other member states registered contractions of the GDP. Hungary, Romania, Slovakia and Slovenia have been quite difficult to be affected, and Estonia, Lithuania and Latvia suffered the most,

<sup>1</sup> Steinbuka I., *Latvia on the way to the European Union: economic policy convergence*, 2001, pag 130

registering levels between -14% and -18, although their comeback was quite fast in the following years. Thus, we can consider that the present world economical-financial crisis represented a true obstacle in the catching-up process especially in the new member states of the EU. At the level of 2015 the Czech Republic and Romania registered the highest level of the GDP as compared to the previous year, while Estonia and Latvia registered the lowest levels.

**Table no. 2**  
**The evolution of GDP (in percents in report to the previous period)**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bulgaria	6,6	6,2	6,3	6,2	6	-5	0,7	1,6	0,2	1,3	1,6	3,0
Estonia	7,2	9,4	10	7,2	-3,6	-14,1	3,1	7,6	5,2	1,6	2,9	1,1
Latvia	8,7	10,6	12,2	10	-4,6	-18	0,4	6,2	4,0	3,0	2,4	2,7
Lithuania	7,4	7,8	7,8	9,8	2,8	-14,8	2,9	6,0	3,8	3,5	3,0	1,6
Poland	5,3	3,6	6,2	6,8	5	1,7	3,7	5,0	1,7	1,2	3,3	3,6
Czech Republic	4,5	6,3	6,8	6,1	2,5	-4,2	2,1	2,0	-0,8	-0,5	2,0	4,3
Romania	8,5	4,2	7,9	6,3	7,3	-7,1	-1,1	1,1	0,6	3,5	3,0	3,8
Slovakia	5	6,7	8,5	10,6	6,2	-4,7	3,8	2,8	1,5	1,4	2,5	3,6
Slovenia	4,3	4,5	5,8	6,8	3,5	-7,8	0,9	0,7	-2,7	-1,1	3,1	2,9
Hungary	4,9	3,5	4	1	0,6	-6,3	1,4	1,8	-1,7	1,9	3,7	2,9

Source: Eurostat

Because the average values of some indicators regarding the incomes per inhabitant can hide great divergences between different categories of the population, part of the population registers high incomes, while a much greater part deals with poverty. That is why we consider it necessary to analyse the *at risk of poverty rate* in the EU.

**Table no. 3**  
**At-risk-of-poverty-rate**

	2007	2008	2009	2010	2011	2012	2013	2014
UE 27	16	17	16,4	16,5	16,8	16,8	16,7	17,2
Bulgaria	20	21	21,8	20,7	22,2	21,2	21	21,8
Estonia	20	15	19,7	15,8	17,5	17,5	18,6	21,8
Latvia	21	26	26,4	20,9	19	19,2	19,4	21,2
Lithuania	18	20	20,3	20,5	19,2	18,6	20,6	19,1
Poland	15	17	17,1	17,6	17,7	17,1	17,3	17
Czech Republic	9	8	8,6	9,0	9,8	9,6	8,6	9,7
Romania	23	23	22,4	21,1	22,2	22,6	22,4	25,4
Slovakia	9	11	11,3	12,7	13,6	13,5	14,5	14,5
Slovenia	11	12	11	12	13	13,2	12,8	12,6
Hungary	10	12	12,4	12,3	14,1	14,3	15	15

Source: Eurostat

As it can be observed from the table, the countries with the highest poverty risk are Romania, Latvia, Bulgaria and Estonia, having a risk level of the poverty rate higher to the EU 27 average. On the opposite side stand Romania, Latvia, Bulgaria and Estonia, the officials explaining that these are the results of the protection measures from the communism period.

**Table no. 4**

**The contribution of the main sectors to the formation of GDP (2013)**

	Agriculture	Industry	Constructions	Services
EU 28	1,7	19,1	5,7	73,5
Bulgaria	4,9	25,2	5,6	64,3
Estonia	3,6	21,5	7,6	67,3
Latvia	4,9	18,7	6,4	70
Lithuania	3,8	24,5	6,5	65,2
Poland	3,8	24,7	6,5	59,8
Czech Republic	2,4	31,8	6	59,8
Romania	6,4	34,3	9,2	50,1
Slovakia	3	26,7	7,6	62,7
Slovenia	2,9	25,7	5,7	65,7
Hungary	4,8	26	4,1	65,1

Source: Eurostat

From the point of view of the GDP structure, the contribution of the main three sectors of the economy in the formation of the GDP in the EEC countries is similar to the one in the EU – with some difference, being EEC countries where the contribution of agriculture is more important, countries like Romania, Bulgaria, Hungary, Latvia or where the services sectors is less developed, the greatest difference being registered by Romania and being determined, mainly by the reduced level of development of the financial services (only 16.8% as compared to 29.1% in EU 27). From the occupation on sectors point of view, one notices that is some EEC countries a more significant weight of the population employed in agriculture (Romania, Bulgaria, Poland, Latvia, Lithuania, Slovenia), respectively a more reduced weight of the population employed in the tertiary sector (Romania, Bulgaria, Poland) – however the situation of these countries is similar to the one of Portugal and Greece, where such differences are registered in report to the EU average.

From the unemployment point of view, the situation of the countries from ECE does not seem much different from the one of the countries from the euro area. As average the unemployment rate in the EEC countries is 2.5% lower than the EMU average, but there are also EEC countries which register greater rates than the EMU average: Slovakia.

**Table no. 5**

**The unemployment rate in the EEC countries**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bulgaria	12,1	10,1	9,0	6,9	5,6	6,8	10,3	10,4	11,5	11,8	10,7	10,0
Estonia	9,7	7,9	5,9	4,7	5,5	13,8	16,7	12,3	10,0	8,6	7,3	6,2
Latvia	10,4	8,9	6,8	6,0	7,5	17,1	19,5	16,2	14,9	11,9	10,9	9,9
Lithuania	11,4	8,3	5,6	4,3	5,8	13,7	17,8	13,9	13,2	11,4	10,1	8,8
Poland	19,0	17,8	13,9	9,6	7,1	8,2	9,7	12,5	13,4	13,4	11,4	9,8
Czech Republic	8,3	7,9	7,2	5,3	4,4	6,7	7,3	6,7	6,8	7,7	7,7	6,5
Romania	8,1	7,2	7,3	6,4	5,8	6,9	7	7,1	6,9	7,1	6,8	6,8
Slovakia	18,2	16,3	13,4	11,1	9,5	12,0	14,5	13,7	14,0	14,2	13,2	11,5
Slovenia	6,3	6,5	6,0	4,9	4,4	5,9	7,3	8,2	8,9	10,1	9,7	9,0
Hungary	6,1	7,2	7,5	7,4	7,8	10,0	11,2	11,1	11,0	10,1	7,7	6,8
UEM	9,0	9,0	8,3	7,5	7,5	9,4	10,1	10,1	11,4	12	11,6	10,9

Source: Eurostat, European Economic Statistics, pag. 207

On a more careful analysis, one can observe however that, in some EEC countries, the weight of the population dealing with agriculture is very great, while the contribution of the agriculture in the formation of GDP is very reduced, which indicates the existence of a hidden unemployment, many persons considered working in agriculture are, in fact, unemployed people who practice only a subsistence agriculture.

### 3. Conclusions

One can observe from analysing the presented data that the countries from EEC managed to achieve a certain process of real convergence, however this process is less visible than in the case of the nominal convergence. The highest degree of real convergence at the end of 2015 was held by Slovenia, which had distanced a lot from the other EEC countries, followed by the Czech Republic. Regarding from the EEC countries evolution point of view during the entire analysed period, based on the dynamics of the indicators and the speed of catching up the gaps we can notice the performance of the Baltic countries. Unfortunately, Romania and Bulgaria are way behind the other EEC countries. It is true also that the convergence process started later in these countries, after coming out of the recession.

Because the European Central Bank does not suggest a unique strategy to follow in order to adopt the unique currency, there is no single strategy that can be considered adaptable to all the countries. Thus, among the objectives of monetary policy and the way of prioritising these objectives there are considerable differences between the countries remaining outside the euro area, as it can be seen from the comparative analyses made. No matter the adopted monetary policy the mutual problem of these states is the one of maintaining the stability of the prices in the conditions of some economies with sustained growth rates and significant structural reforms. Entering and successfully participating in the ERM II depend on the capacity of each state to previously proceed to structural reforms, liberalisation and most of all to fiscal consolidation.

Beside the stated differences between the countries from EEC and the other countries in the EU regarding the GDP level we must also take into account in considering the period of time needed for the achievement of the real convergence factors like: the physical and human capital stock and their capacity, the scientific and technological stock, the institutional and cultural framework. These differences require great investing efforts that the less developed countries cannot sustain. At the same time, the market liberalisation process and the globalisation can determine the mobility of the production factors and their involvement in providing the economic growth, but this time also, especially in the countries with greater economic, scientific and technological potential. That is why the decision factors at the level of the European Union have understood that the real convergence cannot be achieved only by the simple integration of the markets and they introduced the concept of economic and social cohesion achieved by means of the structural funds. This aims the development of the regions, the reorientation of the areas affected by industrial decline, the fight against unemployment, the vocational development of the youth and the promotion of the rural development.

The Central and Eastern Europe countries dispose of the experience of the older member states of the union, in the field of the real convergence, which previously benefited from funds for cohesion such as: Spain, Portugal, Ireland and Greece, in order to ensure the economic success and the integration in the Economic and Monetary Union. A very good example is represented by Ireland, which achieved an optimum combination between its own efforts, Direct Foreign Investments and the Structural Instruments and managed a rapid catching up of the differences with

positive effects on the unemployment. At the same time, we must not overlook the example of Greece which did not find the capacity necessary to ensure the full and efficient use of the structural funds nor the attraction of funds from the public and private sector for development purposes.

## References

- Bădîrcea Roxana, Identifying the risk factors of the Romania integration in the EMU, Universitaria Publishing House, Craiova, 2013.
- Backe, P., Thimann, C. (2004), "The acceding countries strategies towards ERM II and the adoption of euro: an analytical review", European Central Bank Occasional paper no.10.
- Bruggemann, R., Trenkler, C., (2007), "Are Eastern European Countries Catching Up? Time Series Evidence for Czech Republic, Hungary and Poland," Applied Economics Letters, Taylor and Francis Journals, vol. 14(4).
- Călin D. (2004), PhD Thesis - Implications of the European monetary unification on Romania, West University of Timișoara.
- Darvas, Z., (2010), "The case for reforming euro area entry criteria", Institute of Economics, Hungary Academy of Sciences Discussion Papers 22.
- Halmi, P., Vasary, V., (2010), "Real convergence in the new Member States of the European Union (Shorter and longer term prospects)", The European Journal of Comparative Economics, Vol. 7, no. 1.
- Iancu A. (2008), Real Convergence, Working Paper no.1, National Institute of Economic Research, Bucharest.
- Kattel, R. (2010), "Financial and economic crisis in Eastern Europe", Journal of Post Keynesian Economics, Vol. 33, no 1.
- Sebea M., Ionescu Al. (2006), Making of the Economic and Monetary Union and the necessity of convergence, IER, nr.18, Bucharest.
- Steinbuka, (2001) „Latvia on the way to the European Union: economic policy convergence”.
- IER (2005), Economic and Monetary Union, Bucharest.
- ECB (2014), Convergence Report.
- Eurostat, <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/hom>.