# Harmonization Process of Economic Convergence within European Union

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*Abstract:* In the European model of economics, the analysis stage to fulfill the convergence criteria and their sustainability, is of particular importance. Widening currency area - the euro is an irrevocable process, with all the difficulties arising from economic and financial crisis faced by countries in Europe and beyond. Perhaps because of crisis on countries in the euro area appears necesar ever achieve in a truly sustainable convergence process through greater attention of governments, especially in terms of price stability and reduction of large budget deficits accumulated during the economic crisis. We believe that the plan needed some adjustments in economic policies of the aspiring countries, taking into account the interdependencies between certain convergence criteria, and real. For this, however, must know how the internal mechanisms of the economic system, generating economic factors of convergence or divergence.

*Key-Words:* economic convergence, economic divergence, nominal criteria, economic growth, inflation, budget deficit, public debt, marketable goods.

## 1 Introduction

As is known in economic literature, the concept of convergence is to reduce differences between countries of different economic indicators of a geographical area. Is there a process of economic convergence if poor countries reduce their gap with developed countries by making certain indicators (such as real, fiscal, monetary, institutional) or, conversely, there is a process of economic divergence when the gap between the two categories of countries increases.

One of the central objectives of the Treaty of Maastricht (Article 2) is to "promote social and economic progress and a high level of employment, and to achieve balanced and sustainable development, notably by creating an interior space without borders, by strengthening economic and social cohesion by creating an economic and monetary union ...".

Thus, economic and social cohesion are fundamental policy objective of the European Union and its importance is reflected in the creation of implementation of structural instruments (Structural Funds and Cohesion Fund), aimed at accelerating convergence of less developed, member states.

In the EU there are some aspects of territorial balance negative impact on the harmonious development of the European economy in the future. In this respect, the EU there is a high concentration of economic activities and population in the central area and at national level remains an imbalance between metropolitan areas and the rest of the country, leading to a high rate of growth nationally, but accompanied by an increase in regional disparities.

Bridging regional and a structure more balanced spatial development requires coordination of development policies so that they are coherent and viable. Current debates in connection with convergence and divergence in EU economic type are closely related to regional policy should help the objective of cohesion and the tendency to revise the neoclassical growth theory.

The concept of economic and social convergence comes from the real in the sense that the objectives of convergence nominal can not be achieved only if that regions with a lower level of development economic gap recovers to the most advanced

The effects of policies that promote economic, social and territorial cohesion is assessed through specific instruments of economic convergence process, namely reduction of income dispersion among the regions, reducing the gap with the more

developed regions and the impact of structural funds and public policies on growth rate economic.

## 2 Interdependence nominal and real convergence processes

The prospect of adopting a macroeconomic regime, appropriate monetary integration of EU member countries, involves harmonizing the two fundamental processes of convergence, namely the nominal and real. Towards fulfilling the Maastricht criteria have assumed real economic variables change, but also the mutual relationship valid. The two processes should be monitored and analyzed in their interdependence as they are somewhat complementary, influencing each other.

Need to meet the nominal convergence criteria will lead to positive influences on the process of real convergence, and the braking effect of it, as follows:

- respect both the monetary criteria (inflation rate and reducing long-term interest rate) increases the investment and the multiplier effect of the GDP. Also, low inflation rates usually lead to increased economic performance and increasing competitiveness in the companies.
- compliance with the specified limits of the budget deficit and public debt may mean stopping the process but a real convergence of economies due to damage to the level of investment. Furthermore, budget deficits exceeding 3% of GDP, but sustainable, can help a faster structural adjustment requirements of emerging economies monetary area.

By corollary, the achievement of specific quantitative criteria of real convergence is reflected in nominal variables, both favorable and unfavorable, as follows:

- real growth of GDP per capita, following the structural reforms undertaken, it is equivalent to a non-inflationary growth in wages, which causes an increase in tax revenues and therefore a consolidation with positive effects on the budget deficit and public debt.
- lowering unemployment means lower social public expenditures, which implies less pressure on public finances, with beneficial effects for the budget deficit.
- increases productivity in the tradable goods sector relative to those of non-tradable goods sector leads to wage growth in both sectors, which will generate an increase in inflation throughout the economy. In other words, an uneven productivity growth in both sectors corresponds (due to certain conditions) a uniform wage increase. At the same time, showing the same phenomenon involves nominal appreciation of domestic currency, where productivity gains in the tradable sector in a country will be higher than the same sector in other partner countries. The phenomenon is called the Balassa - Samuelson and refers to the existing tendency for countries with higher productivity in the tradable goods than non-tradable goods sector, to record higher levels of inflation and real exchange rate appreciation of national currency .

This development is associated with the convergence process by the developed and emerging economies is driven by competition in international trade and the infusion of capital and modern technology made by foreign investment.

Specifically, countries with higher productivity differences between the two sectors have higher inflation rates. Therefore, the general price level usually increases more rapidly in emerging countries compared with developed countries, and leading to a real appreciation of the exchange rate.

In its original version, Balassa-Samuelson model trying to explain real exchange rate in developing countries. Currently, this model is also used to explain the structural component of inflation. The fundamental theory assumes that the economy is divided into two sectors - tradable and nontradable and is based on two economic realities:

- First, prices of tradable sector are determined on the international market due to market integration, which means that the version of absolute and relative PPP (purchasing power parity) is valid for the sector.

- Second, wages will tend to equalize between the two sectors due to labor mobility and bargaining power of trade unions in the nontradable sector. Thus, wages in this sector will rise, although productivity levels are not justified. As a consequence, nontradable sector prices will increase.

Therefore, some objections can be made on the system of nominal criteria required for full convergence, because of the contradictory character of achieving some of them. For example, Romania is currently facing a crucial process of fiscal consolidation, which will probably lead to reduced private sector evicțiunii money market, which will increase demand for bank loans. The money multiplier effect will increase money supply in the

economy, and this will mean an additional inflationary pressure. Thus, here as efforts to reach a criterion (in our case the budget deficit) have the effect of adverse affect of another criterion in the system (that inflation).

Moreover, even by the Balassa-Samuelson effect, which I referred, a criterion can be improved (exchange rate appreciation) while worsening others (price stability).

## 3 Convergence or divergence of European economies?

Neoclassical growth model assumes real convergence exclusively by market forces. In it, real convergence is viewed as a natural process, which relies solely on market forces and that is both safer and faster, how the market is larger and less distorted.

Hypothesis from which leave is that the higher rate of return of capital in poorer countries or regions to the rich provide converging long-term growth. This of course happens if several conditions are met (elements) essential and common to all countries covered in this process: equal rates of saving and capital depreciation, population growth rates close, so similar breakthrough (see growth model Solow-Swan).

At the same time, rich countries with high capital accumulation, there is decreasing its efficiency, while yields in poor countries are at least consistent. This would happen due to enlargement of the European internal market through integration and economic reform measures in countries aspiring to membership (eg application of the acquis communautaire). The ultimate goal is that the new economy to become functional and provide high level economic competitiveness.

A functioning market and wider and deeper economic integration imply the existence of real convergence automatic mechanisms without the need for economic policies to support this process.

In the last two decades, however, economic realities have invalidated the conclusions of the neoclassical model somewhat (although decreasing returns hypothesis is logical).

In a study conducted by academician Aurel Iancu [3], within the "economic convergence and the role of knowledge in terms of EU integration", check the veracity of the existence of decreasing returns by analyzing the correlation between marginal efficiency of physical capital (gross return on investment) and GDP per capita, a relevant number of countries in the world. From the research does not clearly show a trend of decreasing marginal efficiency of capital in all countries analyzed. The trend is more constant yields. In some cases, analyzing the compared groups of countries outside Europe, with GDP/capita lower than the groups of countries with GDP/capita increased, there is some tendency to increase capital efficiency in both cases. Indeed, in EU countries, there is a slight decrease in yield for the rich, but it might explain the application of EU cohesion policy (item not part of the neoclassical growth model ).

Thus, constant or increasing returns on all countries analyzed, leading more to a trend of *divergence*, ie the widening economic gap between countries.

In this context, theoretical contributions of F. Perroux, R. G. Myrdal and R. Prebisch bring some clarification and further analysis on the definition and interpretation of the action of production factors on the processes of growth, clearly identifying the sources of convergence su real difference. Moreover, their ideas and theses had a decisive influence on economic policy for the current european construction.

Cumulative causation theory [5], made by Gunnar Myrdal (1957) argues that the current market economic system institutions are ineffective in correcting regional imbalances. After the action of external factors that cause economic sources of divergence, the system is able to balance the effects of compensation, but will move in the same direction, but beyond the initial (circular causality tends to be cumulative).

G. Myrdal explained in the works "Asian Drama" (1968) and "world poverty Contempt" (1970), the origin of underdevelopment. Using the concepts of circular causality and cumulative process, he believes that the development depends on: production and its conditions, living standards, attitudes towards work, investment and government policy, which can generate, in their interdependence, cumulative effects or in the maintenance business at the same level or even decreasing (in which case "the vicious circle of underdevelopment") or for the purposes of their mutual involvement (in this case is generating development).

Internal conditions of the underdeveloped countries are crucial, but fundamental matter and the attitude of developed countries to underdeveloped and the role of international trade. "Uncontrolled market forces - Myrdal wrote - will not work towards any balance that might fuel a trend toward equalization of incomes. Because of circular causation with cumulative effects, a

country high in productivity and income tends to be better situated in these areas, while the low country will tend to remain at this level or even worsen as long as it development of market forces is left free to act. " As shown, Myrdal emphasizes the idea that in reality, international trade and capital movements tend to generate inequality that is increasing as this "game" between countries underdeveloped.

Also Myrdal analysis introduces two new concepts that complement, in his view, the shortcomings of the neoclassical model, namely: *congestion* and *flow of complementary factors*. Agglomerations to attract flows of technological, informational, financial, and flows of labor and capital. With no barriers to the movement of these complementary factors, some countries and regions form the poles of attraction, causing imbalances between countries with large differences in income per capita. Mobility of capital and labor become more scarce in the area of congestion, so that other regions do not have these essential flows faster development.

There is a multiplier - accelerator type mechanism, which produces revenue growth at higher rates in the so-called countries and regions, that is more developed, better equipped with modern infrastructure, scientific and technological ancestry and physical and human capital inflows (the latter just coming increasingly from less developed regions).

Somewhat contradicts the neoclassical approach, that the capital move in opposite labor to less developed regions respectively. Compensatory mechanism is replaced by another - that of polarization, where capital flows and migratory movements of population is moving towards more developed regions.

In 1965, Jeffrey G. Wiliamson [10] proposes the creation of regional tools to reduce development disparities, whose expression is explained by the action of the following factors: *labor migration, capital flows, government policies and inter-regional relations.* In early stages, the differences between developed regions and less developed a deepening trend mainly due to selective migration of labor, but in developed regions and major government to achieve a higher national growth rates.

Thus, national savings rate of growth in the period of catching development is influenced by the emergence of a limited number of growth poles. In time, the phenomenon non savings regions supporting national economic growth, resulting in a migration of capital to other regions where yields are higher factors and the cost of labor is lower. Reallocation of production factors tends to reduce regional disparities.

Paul Krugman [6], the creator of the *new geographical economy* (1991), develop the "center - periphery", making the process of economic convergence or divergence *condition of balance between centripetal and centrifugal forces of agglomeration.* Agglomeration of economic activities in the region - the center is actually the expression of a precarious balance between centripetal forces that determine economic polarization in the center and the centrifugal forces that influence the dispersion of economic activities to the periphery. " Overcrowding is a key business growth, allowing the accumulation of other factors of production, but does not lead to cohesion (mitigating regional disparities). Moreover, agglomeration phenomena created a tension between efficiency (real growth) and equity (economic cohesion).

Believe that the policies promoted at EU level should be oriented towards economic and social cohesion, because there is a tendency of polarization of economic activities due to internal components of centripetal forces with great overall balance and weight that can not be ignored (the existence of a network of superior services and infrastructure, research and development conducted in the center, highly skilled workforce, local dissemination of technological externalities, etc.)..

Finally, it should be noted that the chances of poorer economies on the path of real convergence is quite small when there is a wider single market and internal mechanisms that encourage rather economic divergence. Although there are market mechanisms that can promote convergence, they have "helped" by the EU cohesion policy and solidarity (as happened in fact, by establishing the EU of two categories of funds - the Structural Funds and Cohesion).

Applying and measuring the effectiveness of cohesion policies are not in the same way but in EU countries [2]. Thus, the cohesion countries is aimed at national economic performance, which allow recovery of the gap with the developed countries. Therefore, the most dynamic regions (agglomerations) are favored and are among the economic priorities at the expense of poorer regions. In developed countries with high GDP - per capita's emphasis is on equity, regional policy objective being to reduce disparities between regions. Thus arises a paradoxical phenomenon, the convergence of the divergence (between countries there is a slow convergence, while the poorer

regions of member is a process of economic divergence).

## 4 The potential for convergence of the Romanian economy in relation to emerging economies in the EU

Given the issues described in the second article, on real and nominal convergence of European countries, we considered useful and relevant to make an analysis of Romania in terms of nominal criteria (table no. 1) and the real (table no. 2).

To get a realistic picture of the stage where we are, where we placed our country along with four other major central and eastern Europe, aspiring to European monetary area (Bulgaria, Hungary, Czech Republic and Poland).

Also, the time horizon chosen coincides with the economic crisis that cross, this picture changing some variables compared to the economies concerned.

Table No. 1

| Countries | Year | Inflation rate | Surplus / Deficit | Dept | Interest rate |
|---|---|---|---|---|---|
| Romania | 2008 | 7,9 | - 5,4 | 13,3 | 7,7 |
| | 2009 | 5,6 | - 8,3 | 23,7 | 9,7 |
| | 2010 | 6,1 | - 8,0 | 30,5 | 9,4 |
| Bulgaria | 2008 | 12,0 | 1,8 | 14,1 | 5,4 |
| | 2009 | 2,5 | - 3,9 | 14,8 | 7,2 |
| | 2010 | 3,0 | - 2,8 | 17,4 | 6,9 |
| Hungary | 2008 | 6,0 | - 3,8 | 72,9 | 8,2 |
| | 2009 | 4,0 | - 4,0 | 78,3 | 9,1 |
| | 2010 | 4,7 | - 4,1 | 78,9 | 8,4 |
| Czech Republic | 2008 | 6,3 | - 2,7 | 30,0 | 4,6 |
| | 2009 | 0,6 | - 5,9 | 35,4 | 4,8 |
| | 2010 | 1,2 | - 5,7 | 39,8 | 4,7 |
| Poland | 2008 | 4,2 | - 3,7 | 47,2 | 6,1 |
| | 2009 | 4,0 | - 7,1 | 51,0 | 6,1 |
| | 2010 | 2,7 | - 7,3 | 53,9 | 6,1 |
| Reference value | | 1,0% | -3,0% | 60% | 6,0% |

Source: European Central Bank, Eurosistem (www.ecb.int)
* For 2010, interest rate data are partial

Table No. 2

| Countries | Year | Real GDP growth | GDP / capita | Unemployment |
|---|---|---|---|---|
| Romania | 2008 | 7,3 | 47 | 5,8 |
| | 2009 | - 7,1 | 46 | 6,9 |
| | 2010 | - 1,3 | 45 | 7,3 |
| Bulgaria | 2008 | 6,2 | 44 | 5,6 |
| | 2009 | - 5,5 | 44 | 6,8 |
| | 2010 | 0,2 | 43 | 10,2 |
| Hungary | 2008 | 0,8 | 65 | 7,8 |
| | 2009 | - 6,7 | 65 | 10,0 |
| | 2010 | 1,2 | 64 | 11,2 |
| Czech Republic | 2008 | 2,5 | 81 | 4,4 |
| | 2009 | - 4,1 | 82 | 6,7 |
| | 2010 | 2,3 | 80 | 7,3 |
| Poland | 2008 | 5,1 | 56 | 7,1 |
| | 2009 | 1,6 | 61 | 8,2 |
| | 2010 | 3,8 | 62 | 9,6 |
| UE - 27 | 2008 | 0,5 | 100 | 7,1 |
| | 2009 | - 4,3 | 100 | 9,0 |
| | 2010 | 1,8 | 100 | 9,6 |

Source: Eurostat (epp.eurostat.ec.europa.eu)

Looking to start *nominal variables*, we see that the inflation rate, the Czech Republic recorded positive trend, approaching the reference value (1.2% in 2010, after experiencing a strong disinflation in 2009, compared to 2008) . Best values of this indicator record and Poland (2.7% in 2010, after a constant show in 2008 and 2009 by about 4%). In this, Romania is in last place, with the highest inflation rate in 2010 (6.1%). Moreover, rising prices, the three consecutive years, is the largest in Romania (19.6%) and Bulgaria (17.5%) compared to Czech Republic (8.1%) and Poland (10.9%).

On the public finances, Bulgaria ranks first. Thus, the criterion of surplus / deficit, the country south of the Danube a deficit of 2.8% of GDP in 2010 (very close to the reference value of 3%) after the 2008 financial year ended even with a surplus of 1.8% of GDP. Values close to the reference value and a relative constancy deficit was and Hungary (3.8%, 4.0% and 4.1%). And this indicator Romania ranks last in the list with the highest deficits in the three years analyzed (5.4%, 8.3% and 8.0%). The criterion of public debt, also Bulgaria ranks first with an average of only 15.4% of GDP, while Romania ranks second with an average of 22.5% of GDP. Values are very good considering that the reference value of debt is 60% of GDP. Countries like the Czech Republic and Poland, which score highly on price stability, they mean much higher public debt (34.9% and 50.7%).

In the long-term interest rate, the Czech Republic has the lowest rates, below the reference value, the average for the three years is only 4.7%, and Poland had rates almost identical to the reference value, 6.1% annually reviewed. Bulgaria also registered an average rate of 6.5%, close to the reference value. In this case Romania is the last position, with an average interest rate of 8.9% per period, and Hungary by 8.5%.

Unfortunately, here that of the four nominal convergence criteria, three of them (inflation, budget deficit and interest rate) Romania is the last group of five countries aspiring to European monetary area.

Turning to *variables such as real economic convergence,* note that the dynamics of GDP, Romania had the highest rate of increase it in 2008 (7.3%), after which it declines of 7.1% and 1 , 3% in the two years 2009 and 2010. Moreover, in 2010 Romania is only country in the group of five who registered a decrease of GDP (1.3%). In other countries, real GDP increases, marking the beginning of the exit from recession. Noteworthy here is that Poland is the only country in this group that only slowed growth during the crisis, with no drop in GDP.

Regarding GDP per capita, Bulgaria and Romania have the lowest averages (43.6% and 46% of EU average, expressed in purchasing power standards). Czech Republic the highest average GDP per capita of 81% of the EU.

The unemployment rate indicator, Romania has similar values to other countries in 2010 with even the lowest unemployment rate, with the Czech Republic, 7.3% and topping well below the EU average of 9.6%.

It is noted that in the case of real variables, Romania has approximately the same economic picture - of the three indicators analyzed, only if one (unemployment) our country has a favorable position compared with other countries analyzed. Also, the group of five countries, the Czech Republic as the country emerges with the best chance of monetary integration in the near time horizon.

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