Real Convergence in the New Member States of the European Union. Case Study: Romania

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Abstract. *Real convergence is a fundamental pillar of the European Union and is referring to the poor economies catching up to the level of the developed ones. This process started to be studied in the second half of the 20th century and has become more debated with the foundation and the enlargement of the European Economic Community. The beginning of the 21st century was challenging for the European Union, as eleven countries from Central and Eastern Europe with modest economic performances compared with the countries from Western Europe joined the regional group. The main purpose of this paper is to study the real convergence within the New Member States from Central and Eastern Europe. In this respect, we have studied the β- and σ-convergence for all the Member States, also comparing the results of the New Member States with those recorded by the candidate countries. Moreover, we have tried to study the macroeconomic landscape of Romania, by taking into consideration the following indicators: real labor productivity, compensation of employees, trade openness and the real GDP growth rate. The results of our study suggest that both the New Member States and the candidate countries recorded a higher GDP growth rate than the Old Member States. Moreover, within the New Member States cluster, the divergences diminished between 2006 and 2017, the best performances being recorded by the Euro states. As far as Romania is concerned, it seems that starting with the 2000s, the macroeconomic determinants had a positive trend, mainly as a result of the preparations which resulted in the accession to the European Union. Overall, the New Member States, including Romania, are making important steps in terms of real convergence, in spite of the voices that argued that their accession to the European group will threaten its stability.*

Keywords: *Real convergence, New Member States, Romania, σ-convergence, β-convergence, Candidate countries*

Introduction

With the establishment and deepening of the European Union, the topic of real convergence gained more and more attention both from the academic environment and from the decision-makers. Although researchers haven't reached a consensus regarding the definition and the scope of the real convergence, the main determinants often taken into consideration by the analysts are the GDP per capita, the GDP growth rate, the labor productivity, the trade openness, the structure of the economy. The main purpose of this paper is to study the real convergence process within the European Union, mainly in the countries from Central and Eastern Europe (CEE). In this respect, we have studied the β- and σ-convergence, two concepts frequently used by the neoclassical growth model researchers. According to our calculation, the assumption that the New Member States grew faster than the developed Old Member States is true (β-convergence). Another purpose of this paper is to study the macroeconomic environment of Romania, mainly with the accession to the European Union. In this respect, we have studied four determinants: real labor productivity, compensation of employees, trade openness and the real GDP growth rate.

Literature review

An analysis of the real convergence process within the European Union

A fundamental objective of the EU is the convergence of economic performances. In this respect, Marelli and Signorelli (2010) pointed out that in the short term, the real convergence takes into consideration the equalization of the real economic variables such as output, income, employment rate, and productivity. In the long term, real convergence aims the reduction of the structural differences between economies by achieving similar performances in terms of real variable indicators.

Del Hoyo, Dorrucci, Heinz, and Muzikarova (2007) pointed out that the transition to the market economy and the effort to integrate the acquis communautaire have contributed more to the improvement of the real convergence indicators of the New Member States than entering the Eurozone. Like other authors, Franks, Barkbu, Blavy, Oman, and Schoelermann (2010) showed that the new Member States have a significantly higher real convergence compared to the old ones.

Zuk et. al. (2018) studied the institutional framework for the states from Central, Eastern, and Southern Europe. In this regard, analysts pointed out that the quality of the institutions is seen as a fundamental explanation of the disparities in economic growth and development between the Member States in the long term.

Vojinović, Acharya, and Próchniak (2009) analyzed the real convergence registered by the states that joined the EU in 2004, focusing their study on the σ and β-convergence. According to analysts' calculations, the convergence rate in the period 1992-2006 was 4.2%, but the highest performances were reached between 2002-2006, respectively 7.0% - 9.6%. Overall, Vojinović, Acharya, and Próchniak (2009) believed that the process of convergence would continue, as long as the cohesion-based community policies are maintained.

The evolution of the real convergence in Romania

The performances recorded by Romania in terms of real convergence have begun to be studied with the accession of the countries from Central and Eastern bloc to the European Union. In this respect, Goschin (2017) investigated the real convergence in Romania, taking into consideration the impact of the economic cycles on the GDP/per capita. In this regard, the analyst has found arguments in favor of a divergent regional development in Romania. According to Goschin, the expansion of the inequalities between regions derives from the excessive polarization of human capital, investments and European funds in Bucharest and large cities, to the detriment of other regions. Consequently, the results of the study conducted by Goschin are in line with the theory of divergence and the relation center-periphery.

Răileanu Szeleș and Marinescu (2010) studied the unconditional and conditional convergence in the countries from CEE based on the panel approach, trying to reveal the influence of some macroeconomic determinants on economic growth. In this respect, the researchers found evidence that supports both the unconditional and conditional convergence, also demonstrating that trade openness and labor productivity had a positive and significant influence on the economic growth in the CEE countries. Referring to Romania, the authors concluded that the conditional convergence hypothesis is true, while absolute convergence occurs as a result of the country's inclusion into the CEE group.

Albu (2012) identified the existence of the convergence process for the New CEE Member States and divergence in the case of the Old Member States. Moreover, Albu (2012) identified the existence of the structural convergence for the two clusters of countries. However, in the case of the share of employment in the industry sector, there are discrepancies between the EU member states. Consequently, in the CEE states, there is a process of reducing the gaps, while the developed states are dominated by divergences.

From another perspective, Miron, Dima, and Păun (2009) studied the convergence based on the cluster method, emphasizing the performances recorded by Romania at the beginning of the 21st century, in comparison with the Eurozone countries. According to the analysts, Romania recorded modest performances in terms of the real indicators (GDP growth rate, GDP per capita, exports to GDP, etc.). Consequently, it seems that despite the impressive economic growth, Romania should enhance its productivity and competitiveness.

Figuet and Nenovsky (2006) empirically studied the macroeconomic framework and the level of nominal and real convergence reached by Romania and Bulgaria. The analysts pointed out that Bulgaria is showing a fast integration of the macroeconomic variables, mainly in the field of the nominal indicators rather than the real ones. In the case of Romania, the researchers did not identify evidence in favor of nominal convergence, which could be explained by the recent relative application of the direct inflation targeting strategy (2015). In the case of the β-convergence indicator, Figuet and Nenovsky (2006) did not identify convergence in the case of the GDP growth rate.

Nikolova and Nikolaev (2016) studied the life satisfaction felt by the Romanian, Bulgarian and Croatian citizens during the period preceding and immediately following the accession to the EU, based on the data provided by the Eurobarometer. Analysts concluded that the accession to the EU enhanced life satisfaction in the case of Bulgaria, while in the case of Romania, the effects were statistically insignificant. According to analysts, the political turbulence that occurred within Romania immediately after the accession negatively influenced the potential satisfaction felt by its citizens. According to the study conducted by Nikolova and Nikolaev, the young people, the employed persons and those who have completed their education between 16-19 years were the main beneficiaries of the benefits deriving from the regional integration. Also, the analysts did not identify differences in terms of life satisfaction between women and men in Romania and Bulgaria.

From another perspective, Alexe (2012) studied the real convergence of the CEE states, noting that Romania and Bulgaria have divergent tendencies towards the Euro Zone. In this respect, Romania and Bulgaria had in 2000 the lowest level of convergence compared to the level of the Euro states. As a result of the economic and financial crisis, the distance between Bulgaria and Romania and, respectively, Eurozone persisted after 2010. According to Nikolova and Nikolaev, the economic crisis of 2000 had a negative influence on the GDP / inhabitant registered by most CEE states, except Poland and Slovakia.

Methodology and results

In order to test the hypotheses of this paper, mainly if the New Member States record better economic performances than the Old Member States, we have studied two key concepts: β- and σ-convergence. Moreover, we have studied the β- and σ-convergence in terms of GDP per capita for the EU (28) and the candidate countries. Convergence β refers to a potentially negative relationship between the growth rate and the initial level of income of a country. In contrast, the concept of σ-convergence implies that the international distribution of income decreases over time (Gligor & Ausloos, 2008). Consequently, β-convergence implies that the less developed economies will grow faster than developed ones. This process represents a necessary but not sufficient condition for diminishing disparities between them (σ-convergence). According to Gligor and Ausloos (2008), although low-income countries would grow faster than high-income countries, this might not be enough to lead to equalization of incomes. Another purpose of this paper was to study the economic performances of Romania, mainly on the background of its accession to the European Union. In this respect, we have studied the evolution of four indicators representative for its economy, namely: real labor productivity, compensation of employees, trade openness and the real GDP growth rate.

The analysis of the β- and σ-convergence within European Union and candidate countries

Figure 1 illustrates the β-convergence recorded by the New Member States from Central and Eastern Europe and the candidate countries (Montenegro, North Macedonia, Albania, Serbia, and Turkey). The negative slope of the trend line illustrates that poorer countries increased more rapidly than the rich ones. According to our calculations, the countries with the most impressive economic growth were those from Central and Eastern Europe, particularly: Romania (8.26%), Bulgaria (7.39%), Lithuania (7.43%), Latvia (7.1%), Slovakia (6.53%) and Estonia (6.66%). Moreover, the candidate countries recorded important increases in GDP per capita between 2006 and 2017: Serbia (5.33%), Albania (5.1%), and Turkey (3.95%). Modest performances were recorded by the group of Southern countries – Portugal (1.8%), Spain (1.37%) and Italy (0.89%). From all the Member States, Greece was the only country that recorded negative economic growth, representing 0.61%.

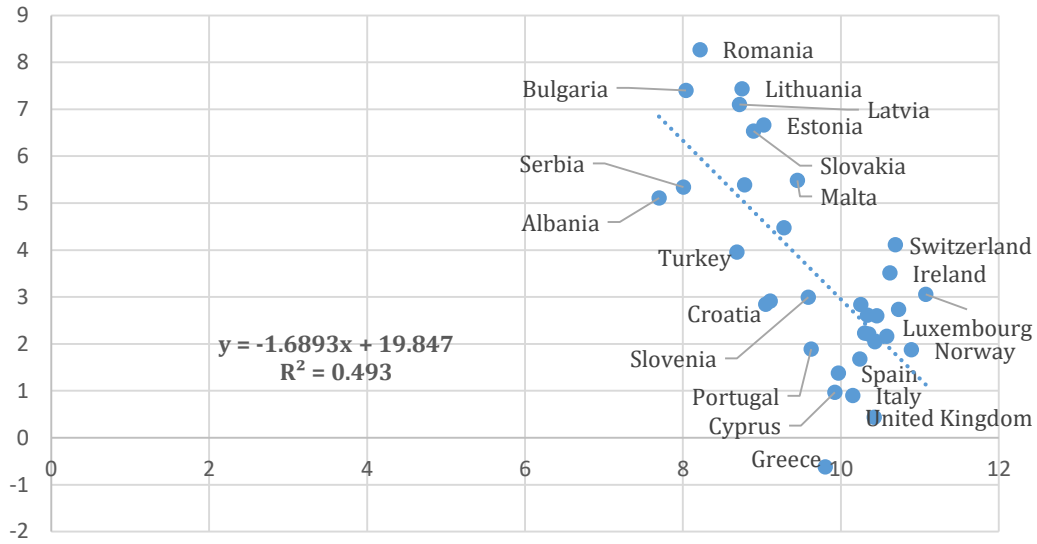

Figure 1. *The β-convergence of the GDP per capita*
(Authors calculations based on data provided by Eurostat)

The figure below shows the coefficient of variation for five clusters of countries – EU (28), New Member States, Euro New Member States, Non-Euro New Member States, and the candidate countries (Montenegro, North Macedonia, Albania, Serbia, and Turkey). According to our calculation, the discrepancies between the 28 Member States slightly decreased between 2006 and 2007 from 0.68 to 0.65. The group of countries from Central and Eastern Europe recorded a diminution of the coefficient of variation of 27%. Within this cluster of countries, the Euro states reduced the divergence between them with 52%, while the non-euro countries with 28%. As far as the candidate countries are concerned, the discrepancies between them decreased with 16%, so convergence in terms of GDP per capita had a slower pace comparing with the New Member States cluster.

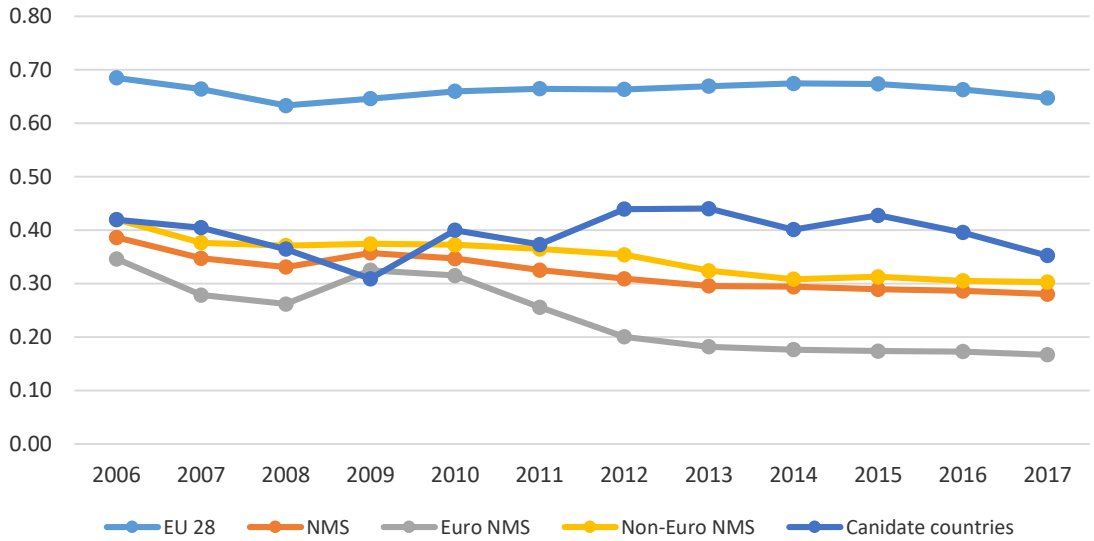

Figure 2. *The σ-convergence of the GDP per capita*
(Authors calculations based on data provided by Eurostat)

Overall, according to our calculation, the assumption that the New Member States grow faster than the developed Old Member States is true (β-convergence). Moreover, the disparities within the New Member States cluster diminished in the last years, validating the σ-convergence hypothesis. As far as the candidate countries are concerned, they recorded important GDP growth rates. Furthermore, the divergences within this group of countries diminished during the 12-years period, although at a slower pace than in the case of the New Member States cluster.

An analysis of the real convergence dimension within Romania

In this section, we tried to analyze the performances of Romania at the beginning of the 21st century, taking into consideration four indicators: real labor productivity, compensation of employees, trade openness and the real GDP growth rate. According to the data provided by Eurostat, real labor productivity increased with 153%, while the trade openness with 78%. The compensation of employees remained stable in relative terms, representing both in 2000 and 2018 39.4% from GDP. The GDP of Romania increased from 40,594.9 million euros to 202,883.6 million euros. The real GDP growth rate increased with 105% between 2000 and 2018. Consequently, the four indicators had similar positive trends, except the trade openness, that had a significant decrease in 2009, when the economic and financial crisis had the highest magnitude in Europe. Overall, it is obviously a significant improvement in terms of real convergence indicators for Romania. The preparations at the beginning of the 2000s and the accession to the EU in 2007 catalyzed the macroeconomic performance.

Figure 3. *Real labor productivity, compensation of employees, trade openness, and the real GDP growth rate in Romania*
(Authors processing based on data provided by Eurostat)

Overall, our analysis suggests that Romania recorded positive performances in terms of real convergence determinants. In this respect, Romania was the country from the European Union with the highest GDP growth rate between 2006-2017. Furthermore, the analysis of the coefficient of variation shows that the Non-Euro New Member States cluster, where Romania is included, recorded a reduction of discrepancies during the analyzed period. Lastly, the evolution of the four determinants suggests that the macroeconomic environment of Romania has continuously improved at the beginning of the 21st century. Part of these performances can be determined by the efforts to integrate into the national legislation the acquis communautaire and the accession to the EU in 2007.

Conclusions

In conclusion, the main purpose of this paper was to study the real convergence in the European Union, bringing to the forefront the performances of Romania. In this respect, we have studied the β- and σ-convergence for the Member States, also comparing the performances of the European Union group with those recorded by the candidate countries. The results of our study suggest that Romania recorded the most impressive economic growth between 2007-2017. In fact, the countries from Central and Eastern Europe cluster had notable performances in comparison with the old Member States. As far as the σ-convergence is concerned, the discrepancies between the 28 Member States slightly decreased in the analyzed period. The group of countries from Central and Eastern Europe recorded a diminution of the coefficient of variation of 27%. We have also tried to study the performances of Romania in terms of real convergence, taking into consideration four determinants: real labor productivity, compensation of

employees, trade openness and real GDP growth rate. The result of our study suggests that starting with 2000, the macroeconomic determinants significantly improved, mainly as a result of the accession to the European Union.

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