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Economic and social cohesion in the European Union: rhetoric and reality

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Abstract. *Analysts have many arguments to underline that the European integration project, which celebrates in March 2022 65 years from the signing of the Treaties of Rome, has passed the test of time, proving its capacity to fulfill many of its strategic goals. However, in spite of the numerous achievements, one of the objectives that has been only partially accomplished aims the economic, social and territorial cohesion. The aim of this paper is to study the convergence patterns in the European Union between 1995 and 2020, taking into consideration the economic and social dimensions. In this respect, we have tried to determine if the European Union can assure prosperity, as reflected by GDP per capita and also to enhance the citizens' welfare, as shown by households' consumption expenditure and actual individual consumption per capita. To compare the main trends in this respect for the period 1995-2020, we have used β-convergence, while the degree of economic and social homogeneity in the European Union was examined by σ-convergence. Estimating cross-sectional regressions, we have found evidence in favor of β-convergence, as the initially less developed Members experienced higher GDP per capita growth rates than the developed ones. The hypothesis is also confirmed for the social indicators, illustrating that the citizens' wellbeing has improved with a higher pace in the Central and Eastern group compared to the wealthy Western Europe. By determining σ-convergence based on the coefficient of variation, we have illustrated that income and wellbeing divergences generally had a downward trend between 1995 and 2019. However, the Covid-19 pandemic reversed the favorable trend and determined an increase of gaps, mainly in terms of GDP per capita.*

Keywords: European Union, economic and social cohesion, β-convergence, σ-convergence, COVID-19 pandemic

Introduction

As the process of European integration, based on the non-functionalist logic, has encompassed more and more segments of the European economy and society, the subject of economic, social and territorial cohesion has become increasingly debated in both academia and public institutions. The European Union's (EU) success in ensuring stability and prosperity across the European continent is partly explained by its ability to harmonize the interests of the Member States and to find the acceptable balance between cohesion and competitiveness. Given the new generation challenges that occurred at regional level, ranging from financial and sovereign debt crises to migrations and sanitary crises, promoting the convergence of economic performances between countries and regions was reaffirmed as a key objective of the EU and national public policies. Moreover, besides the economic-oriented objectives, it has become more important for the EU to assure the convergence of living standards in order to avoid the populist movements and to preserve the unity of this „ no identified structure". The main objective of the paper is to study the evolution

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of economic and social convergence in the EU (27), taking into consideration the interval 1995-2020. In this respect, we have tried to determine the level at which the EU can assure cohesion between all its Members, given the successive waves of enlargement from the beginning of the 21st century. The analysis is based on the methodological instruments proposed by Barro and Sala-i-Martin (1992) and expands the scope of the studies in the field of economic growth by taking into consideration additionally to the GDP per capita, which is representative for economic cohesion, the actual individual consumption and household consumption expenditure per capita, that provide useful conclusions linked to the wellbeing of the citizens. The analysis of β-convergence based on cross-sectional regressions led us to the conclusion that the initially less developed Member States from Central and Eastern Europe experienced higher growth rates compared to the developed ones. Moreover, the empirical study also confirmed that the Central and Eastern European group experienced a high convergence speed in terms of household welfare. In addition to β-convergence, we have illustrated that income and social disparities generally had a downward trend between 1995 and 2020, with the exception of 1999, 2009 and 2020. However, the Covid-19 pandemic eroded the progress achieved in the last decade, mainly in the field of income, widening the gaps between Member States to the pre-financial crisis levels. The paper is structured as follows: the literature review section provides a complementary perspective on the concepts of economic and social cohesion, also encompassing a comparative description of the currents of thought in the field of economic growth. Subsequently, we have presented the methodology and the results of the study. Finally, we have summarized the conclusions, also highlighting the limitations and future directions of study.

Literature review

The advancement of the integration process from the stage of customs union to Economic and Monetary Union has promoted collaboration, to the detriment of confrontation, bringing peace, stability and prosperity for EU member countries. The analysts stress the fact that we are witnesses of a deep paradigm shift from the sectoral evolutions towards more economic, social and territorial cohesion. The first reference to the economic cohesion was enshrined in the preamble to the Treaty of Rome (1957), the leaders of the founding Member States sending a message that one of the European Economic Community's main goal was to consolidate regional unity and to ensure harmonious development. Another important step was the allocation of the necessary competences and instruments to the Community's institutions in order to coherently implement a regional policy through the Single European Act (1986). The objective of ensuring economic convergence was much more clearly described in the Maastricht Treaty (1992), the newly established EU aiming to promote the harmoniously and balanced development of economic activities, as well as economic and social cohesion and solidarity between Member States.

Since the establishment of the EU, several conceptual models have emerged that have tried to explain the economic growth process. In the second half of the last century, based on the research previously conducted by Ramsey (1928), Solow (1956) and Swan (1956) developed the neoclassical growth model, which was based on the assumption that economies with lower incomes and capital stocks experienced higher growth rates than advanced economies. In accordance with the neoclassical theory, economies tend to reach the same state of equilibrium and the technological factor is an exogenous determinant. However, the landscape of the last part of the 20th century, characterized by the persistence of economic and social gaps between North and South, called into question the Solow-Swan model. Against this background, researchers as Lucas (1988) and Romer (1987, 1990) put the foundations of the endogenous theories, which included the perspectives of

polarization between economies. Conforming with the endogenous growth model, the capital no longer includes only the physical abilities, but also the intellectual capabilities of the workforce, and the decision-makers can stimulate the catching-up process. The shaping of the endogenous theories at the end of the last century, through the introduction of the technological driver in the model of economic growth, determined an intensification of the debates regarding the subject of economic convergence. Unlike the neoclassical exponents of neoclassical growth model (Solow, 1956; Swan, 1956), that emphasized the role of physical capital and assumed that all economies would achieve the same equilibrium in the long run, representatives of the endogenous model explained the upward trajectory of the developed economies by the increase of productivity, specialization and learning process.

Increasing the number of Member States from six to twenty-eight was accompanied by the emergence of an extended literature dedicated to the topic of economic cohesion. From an analytical perspective, the term of economic cohesion is considered synonymous with that of convergence, aiming the reduction of development gaps between Member States. From this perspective, cohesion mainly refers to income convergence or other variables that are representative for the economic performances. On the other hand, the broader concept of economic and social cohesion aims a common level of well-being between regions (Cuadrado-Roura et al., 2004). Despite the similar meaning, the experts of Eurofound (2018) tried to clarify these two dimensions, considering that the term of convergence refers to the process of reducing the gaps, while cohesion is a status. Moreover, the concept of cohesion is referring to the ability of the EU to hold the Member States together, but does not necessarily imply convergence. However, promoting the principles of convergence is necessary in order to achieve the cohesion status and maintain the unity between Member States (Eurofound, 2018). According to Jenson (2010) social cohesion has become a main objective for the EU, aimed to be achieved after 2000s through streamlined social policies, regional redistribution and new forms of governance, which involve the active participation of citizens. Another concept which is used in the literature is that of social convergence, which refers to the catching-up process in terms of wellbeing in the less developed EU's countries (Leitner and Römisch, 2015).

Based on the economic growth theories developed in the 20th century, a vast literature emerged in the last decades in order to take into consideration the new challenges the European landscape is confronted with. Particularly, researchers focused on the convergence patterns in Central and Eastern Europe (CEE), concluding that the New Member States experienced a higher catching-up speed than the Old Members (Rapacki and Próchniak, 2009; Stanišić, 2012; Dobrinsky, 2013; Dobrinsky and Havlik, 2014; Alcidi et. al, 2018; Rapacki and Próchniak, 2019). The majority of the studies in the field of convergence mainly focus on the economic dimension, by looking at the initial level of GDP per capita and the average growth rates (absolute β-convergence) and studying the determinants of the catching-up process (conditional β-convergence).

In spite of the attention granted to the economic cohesion, the failure of the resource-rich countries with high economic growth rates to improve the well-being of citizens has brought to the fore the social dimension of convergence. In this respect, cohesion has been studied from an economic perspective and taking into consideration variables related to the social dimension and quality of life (Giannias et al., 1999), some analysts also trying to determine the relationship between macroeconomic developments and the citizens' wellbeing (Di Tella et al., 2001; Hagerty and Veenhoven (2003). Di Tella et al. (2001) illustrated that the improvement of economic performance leads to a temporary or permanent enhancement in the well-being of the population,

identifying evidence in favor of both benchmarks. However, another representative finding of Di Tella et al. is that the welfare effects of increasing GDP per capita tend to diminish over time as citizens develop a sense of familiarity with increasing national prosperity.

Analysts identified a robust correlation between economic convergence, measured by GDP per capita and social convergence, reflected by the household income per capita (Leitner and Römisch, 2015). According to Leitner and Römisch, the catching-up speed in terms of income is faster compared to the social dimension. Similar conclusions were reached by Hagerty and Veenhoven (2003), who identified a positive correlation between income and the well-being of citizens in the case of 21 countries in the category of those with high, medium and low incomes. In the same line, Giles and Feng (2005) identified a positive relationship between the real convergence process, as measured by GDP per capita, and the well-being of the population, as reflected by the life expectancy at birth and the rate of participation in tertiary education. Based on the methodological instruments developed by Barro and Sala-Martin (1992), Neumayer (2003) tested the hypothesis of convergence in terms of social indicators such as average life expectancy, literacy rate, participation rate in the education system, the availability of television and telephony for the period 1960-1999. The study confirmed the hypothesis of σ- and β-convergence in the case of social welfare indicators, suggesting that this achievement was possible even in the absence of the access to foreign technologies and with limited know-how.

Analyzing the perspectives in the literature, it can be concluded that the well-being of the citizens should be a complementary vector of prosperity. The pan-European landscape provides evidence of the harmonious blending of strong economies and high quality of life (mainly the Nordic countries). However, capturing the benefits of the regional integration and economic growth and transposing them at individual level might be a difficult to achieve objective for the CEE new Member States. Furthermore, the Covid-19 pandemic, that negatively influences the economic activity and changes the consumption habits, is calling into question the perspective for the EU to achieve in the near future the objective of economic and social cohesion.

Methodology

The main objective of the paper is to capture the economic and social landscape of the EU, trying to explain if the regional group can assure convergence between its Members. In this respect, we have tried to have a complementary perspective between economic and social cohesion, focusing on the evolution that occurred between 1995 and 2020. We have selected the first year of analysis taking into consideration the data availability for the CEE countries and based on the perspectives from the literature. The year 1995 is considered to mark the transition from command to market economy for the ex-communist Member States, representing also the starting point for the empirical studies conducted by Dobrinsky and Havlik (2014) and Rapacki and Próchniak (2019). Given the interval under review, we have captured the impact of Covid-19.

The analysis is based on the methodological instruments developed by Barro and Sala-i-Martin (1992) and widely used in the study of economic growth and convergence process: β- and σ-convergence. The instrument β-convergence aims the relationship between the initial level of income and the subsequent growth rates of countries or regions. A negative relationship between variables confirms the convergence hypothesis and the neoclassical growth model assumptions, as the initially poorest economies experience higher growth rates than the rich ones. This instrument is complemented by σ-convergence, as reflected by the coefficient variation of the data sets, which illustrates whether divergences between economies reduce over time. Although these two instruments are usually used to study income convergence, we have expanded the analysis by

taking into consideration, besides the GDP per capita, which is representative for economic convergence, also the actual individual consumption and the household consumption expenditure per capita, variables which indicate the wellbeing of the European citizens.

We have studied the evolution in the field of economic and social convergence, by employing cross-sectional regressions and taking by turn, as dependent variables, the average growth rate of GDP per capita, actual individual consumption per capita and household consumption expenditure per capita between 1995 and 2020. The independent variable was the natural logarithm of the variable in the initial year (1995). The equation was computed as follows:

$$\frac{1}{T} ln[\frac{y_{i,t}}{y_{i,0}}] = a + a_1 ln(y_{i,0}) + u_i \quad (1)$$

$y_{i,t}$ = GDP per capita/actual individual consumption per capita/household consumption expenditure per capita in Member State "i" in 2020

$y_{i,0}$ = GDP per capita/actual individual consumption per capita/household consumption expenditure per capita in Member State "i" in 1995

T = number of years

a = constant

u = error term

The speed of convergence was computed based on the results of the cross-sectional regression illustrated in equation 1, as follows:

$$\beta = -\frac{1}{T} ln(1 + \alpha_1 T) \quad (2)$$

The analysis of β-convergence which compares the initial level with the average growth rates is completed by σ-convergence, computed for EU based on the coefficient of variation for each data set. Given the significantly higher values experienced by Luxembourg compared to the EU's average, we have excluded this Member State from the analysis of σ-convergence.

$$\sigma_t^2 = (\frac{1}{N}) \sum_{i=1}^{N} [(y_{i,t}) - \mu_t]^2 \quad (3)$$

y_{it} = GDP per capita of economy "i"

μ_t = the average income in the EU

$$\sigma_t = \sqrt{\sigma_t{}^2}, \quad CV = \frac{\sigma_t}{\mu_t} \quad (4)$$

The definition and sources of the variables are presented in Table 1:

Table 1. Variables, definitions and sources

Variable	Definition	Source
GDP per capita	GDP per capita computed as real expenditure per capita (in PPS_EU27_2020)	Eurostat
Actual individual consumption per capita	Actual individual consumption per capita computed as real expenditure per capita (in PPS_EU27_2020)	Eurostat
Household consumption expenditure per capita	Final consumption expenditure of households, current prices, euro per capita	Eurostat

Source: Authors' description

Results and discussions

In order to capture the economic and social landscape of the EU, we have focused on the methodology developed by Barro and Sala-i-Martin (1992) and expanded its scope by taking into consideration, besides the GDP per capita, two variables related to the wellbeing of citizens. First of all, we have studied the evolution in terms of GDP per capita, by looking at the interval 1995-2020. Generally speaking, the negative slope of the trend line confirms the Solow-Swan (1956) neoclassical growth model assumptions, as the initially poorest Members experienced higher GDP per capita growth rate than the developed ones. On the top of the ranking was placed Lithuania, with an average increase of 6.4%. Romania, the poorest country in the sample in 1995 was placed on the second place, with an average growth rate of 6%, being followed by the two other Baltic States – Estonia (5.9%) and Latvia (5.8%). The CEE group is placed in the upper part of the graph, with growth rates above the Community's average. The convergence speed in the EU was on average 2% between 1995 and 2020. The Old Member States, a group that comprises the countries that joined the EU before 2000, tend to be placed at the bottom of the graph, with the exception of Ireland, which recorded an average growth rate of 5.2%. In contrast, the Mediterranean countries recorded modest growth rates in the field of GDP per capita (Greece – 1.4% and Italy 1.5%). Overall, the analysis from this section confirms the income convergence hypothesis, suggesting that the EU has got closer to the objective of economic cohesion.

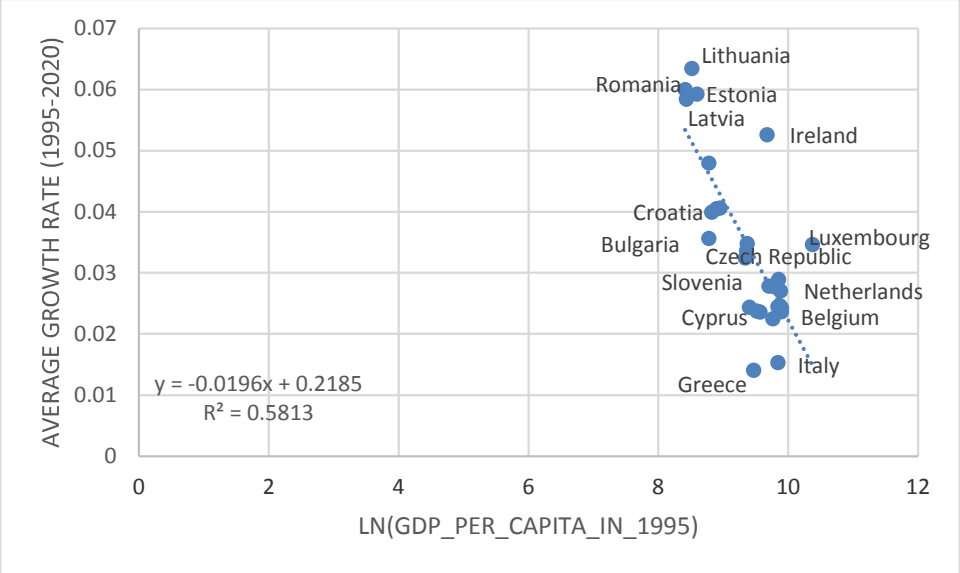


Figure 1. β-convergence (GDP per capita)

Source: Authors' computation

The analysis of income convergence is complemented by the social dimension, initially taking into consideration the actual individual consumption per capita. This indicator is computed by Eurostat, being representative for the households' welfare. Figure 2 compares the initial level of consumption with the average growth rates between 1995 and 2020. In addition, in this case, the negative slope of the trend line suggests that the countries with initially low values experienced a higher pace of improvement of the well-being. For example, Romania, which in 1995 had the worst standard of living in the sample, experienced an increase of 6% of the actual individual consumption per capita, a percentage that corresponded to the speed identified for the GDP per

capita. Similarly, the Baltic States were placed at the top of the ranking, with catching-up speeds above 5%, although the pace was slightly higher in case of income compared to the social dimension. As far as the Old Member States are concerned, the convergence speed ranged between 1.7% (Greece) and 3.1% (Finland). Surprisingly, Ireland, which deviated from the trend of the group to which it belonged in the case of GDP per capita (with an average growth rate of 5.3%), despite the high initial level, registered a slower pace of improvement of the wellbeing (average growth rate of the actual individual consumption of 2.3%). This particular case confirms that it is difficult to reflect the economic prosperity in the field of wellbeing.

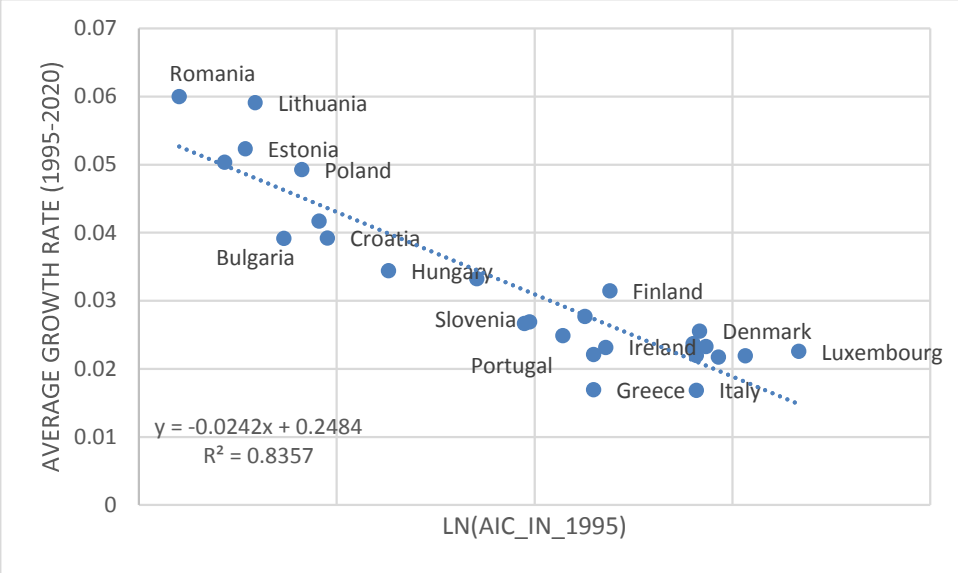


Figure 2. β-convergence (Actual individual consumption per capita)

Source: Authors' computation

Figure 3 illustrates the evolution of household consumption expenditure per capita compared to the initial level in 1995. As identified in the previous analyses, also in the case of the household consumption expenditure per capita, the negative slope of the trend line suggests that the countries with initial modest performances (the CEE group) experienced a higher pace of improvement of the wellbeing compared to the Western European countries. Moreover, it seems that the catching-up speed was higher for the household consumption expenditure per capita compared to the actual individual consumption and GDP per capita, the Baltic States being placed on the top of the ranking. However, this difference might be partly explained by the computation of the variables – based on data availability, GDP per capita and actual individual consumption are determined as constant prices, while the data for the household's consumption expenditure reflects current prices. Considering this limitation, the catching-up speed in the EU was on average 2.4%. The main winner of the convergence process tends to be the same for all three indicators. Consequently, the economic progress achieved by the CEE countries also reflects in the improvement of the standards of living. Surprisingly, the lowest improvement in the field of household consumption expenditure per capita was experienced Germany, while Ireland maintained its leading position in its group, with an average growth of 3.4%.

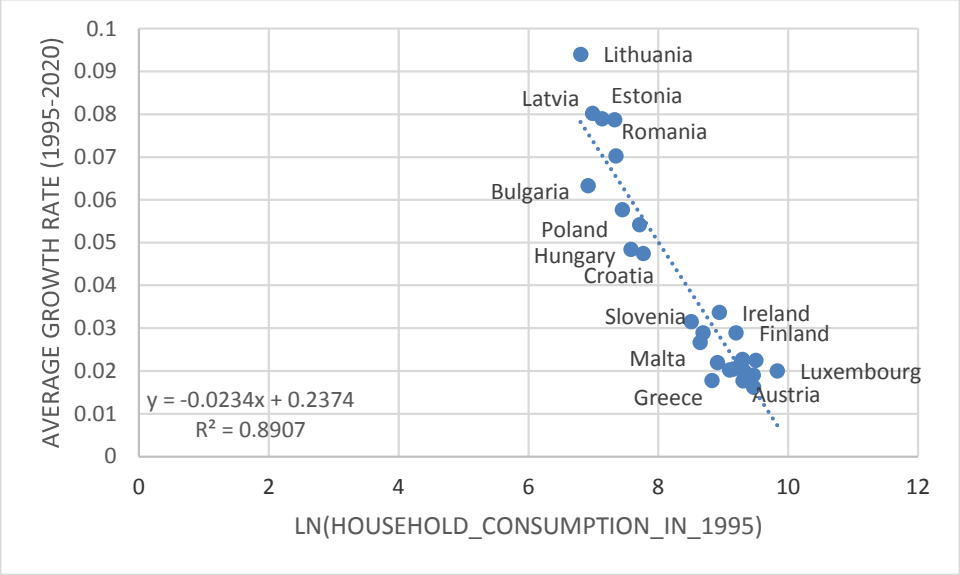


Figure 3. β-convergence (Household consumption expenditure per capita)

Source: Authors' computation

Table 2 illustrates the results of the cross-sectional regression presented in equation 1. As already confirmed in the graphs, there is a negative relationship between the initial level and the average growth rates for all three variables. Consequently, our study brings additional evidence in favor of the neoclassical growth model assumption, as the initially less developed Member States experienced higher growth rates compared to advanced economies from Western Europe. Moreover, by extending the scope of β-convergence, we have illustrated that this assumption applies not only for income per capita, but also when taking into consideration variables which are representative for the household welfare. Based on the values of the coefficient of determination, we have concluded that the variation of dependent variables is explained in a proportion of 58% by the initial level of income. Moreover, we have also found evidence in favor of the "iron law" of convergence (Barro, 2012), which implies that economies tend to convergence with a universal speed of 2% per year. As far as the actual individual consumption is concerned, we have identified based on the cross-sectional regression a convergence speed of 2.5%. Moreover, the average growth rate is explained in a high proportion, of 83% by the initial level of consumption. The results obtained for household consumption expenditure are similar, suggesting a strong relationship between variables and a convergence speed of 2.4% between 1995 and 2020.

Table 2. Regression output for β-convergence

Method: Ordinary Least Squares			
Dependent variable: Average growth rate between 1995 and 2019	**GDP per capita**	**Actual individual consumption per capita**	**Household consumption expenditure per capita**
No. obs.	27	27	27
a	0.2185* *(0.0312)* *(6.9933)*	0.2484* *(0.0192)* *(12.9128)*	0.2374 *(0.0139)* *(17.0023)*
$y_{i,0}$	-0.0203* *(0.0035)* *(-5.6931)*	-0.0241 *(0.0021)* *(-11.2745)*	-0.0234* *(0.0016)* *(-14.2717)*

Method: Ordinary Least Squares			
Dependent variable: Average growth rate between 1995 and 2019	**GDP per capita**	**Actual individual consumption per capita**	**Household consumption expenditure per capita**
R-squared	0.5812	0.8356	0.8906
Adjusted R-squared	0.5645	0.8290	0.8863
β (convergence speed)	2%	2.5%	2.4%

Source: Authors' computation

Note: * - p-value < 1%; robust standard errors and t-statistic in parentheses

Another objective of the study was to determine if the EU has succeeded to reduce the economic and social disparities between 1995 and 2020, promoting cohesion between its Members. In this respect, we have analyzed the evolution of σ-convergence based on the coefficient of variation for each data set. According to Barro and Sala-i-Martin (1992), *"β-convergence is a necessary, but not a sufficient condition for σ-convergence"*. Consequently, σ-convergence illustrates if the advance of the initially least developed economies was accompanied by a reduction of income disparities between reach and poor. We have tried to expand to scope of σ-convergence which has been widely used to study the evolution of income, by also taking into consideration the actual individual consumption and the household consumption expenditure per capita. In this respect, Figure 4 comparatively illustrates the trend of the coefficient of variation between 1995 and 2020. Generally speaking, the economic and social disparities had a downward trend during the period under review for all three variables. However, there were time intervals when the discrepancies increased: 1999, a year which is representative for the economic and social crises which occurred in the ex-communist Member States; 2009 which mark the highest amplitude of the global financial crisis; and 2020, when the Covid-19 pandemic and the lockdown measures imposed by public authorities had negative economic and social impact all over the world.

Another conclusion that derives from the graph is that social disparities – mainly in terms of the household consumption expenditure per capital – were in 1995 and remained at a high level compared to the other two variables. During the entire period, the disparities in the field of consumption expenditure decreased with 40%, while in terms of actual individual consumption the progress was higher – being experienced a reduction of almost 50%. However, as expected, the pandemic had negative consequences on social cohesion, marking an increase of gaps in 2020 compared to 2019 with almost 3.8% for actual individual consumption and 1.7% for the consumption expenditure. As far as income convergence is concerned, the gaps decreased with 25% between 1995 and 2020. However, when considering the final year 2019, the progress is higher, resulting a reduction of disparities with more than 30%. The values of the coefficient of variation suggest that the negative consequence of pandemic were higher for the economic dimension compared to the selected social variables. Consequently, we have identified a rise of income disparities of 10% in 2020 compared to 2019, the Covid-19 pandemic marking a regress in terms of convergences to the levels from 2007.

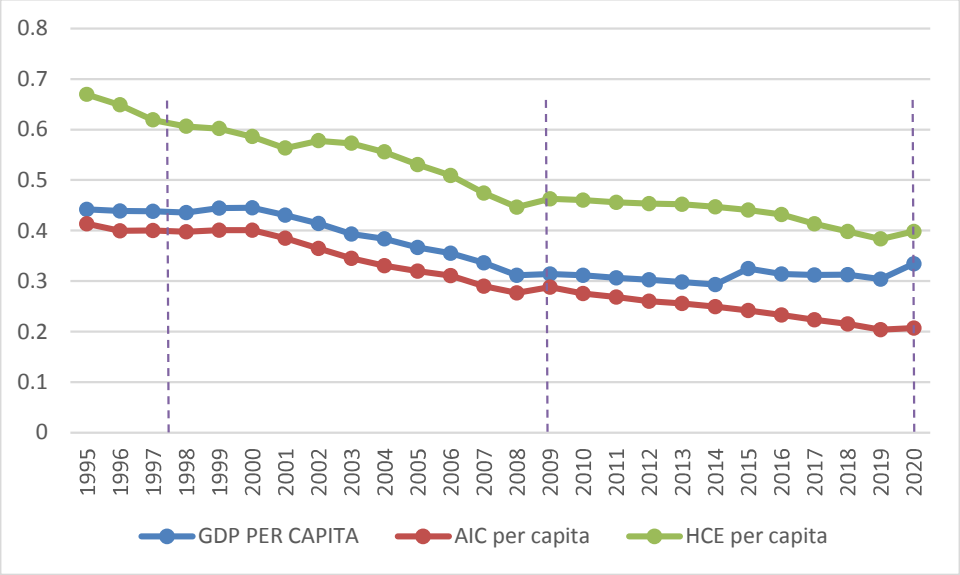


Figure 4. σ-convergence (coefficient of variation)
Note: AIC – Actual individual consumption; HCE – Household consumption expenditure.
Source: Authors' computation.

Overall, the study based on the methodological instruments developed by Barro and Sala-i-Martin (1992) led us to the conclusion that the European group made important steps in terms of reducing the income and social disparities between Member States. Out study consequently confirms that β-convergence was accompanied by σ-convergence. However, similarly to the global financial crisis, the Covid-19 pandemic eroded the progress achieved in the last decade, determining an increase of economic and social gaps, mainly in the field of GDP per capita.

Conclusion

Capturing under the same common values countries with different historical backgrounds, economic performances, social and cultural characteristics proved to be a difficult objective even for a global economic actor as the EU. However, the regional group succeeded to pass the test of time and to manage complex challenges, which threaten its stability, which ranged from economic, financial and migrant crises to separatist movements and more recently to sanitary crises. The aim of this paper was to study the convergence patterns in the EU, trying to respond to the question if the European group is capable to assure economic and social cohesion in these turbulent times. Taking into consideration the interval 1995-2020, we have illustrated that the initially less developed countries from CEE experienced higher GDP per capita growth rates compared to the Western Members, thus confirming the β-convergence hypothesis. Moreover, by comparing the initial levels of household consumption expenditure and the actual individual consumption per capita with the average growth rates between 1995 and 2020, we have demonstrated that the CEE group experienced a higher speed of improvement of living standards compared to the Western countries. Furthermore, the empirical analysis confirms that β-convergence was accompanied by σ-convergence, taking into consideration the reduction of economic and social gaps across EU. However, the Covid-19 pandemic reversed the favorable trend, determining an increase of economic and social disparities, but especially in the field of GDP per capita. Our paper has a number of policy implications. First of all, the findings suggest that convergence in the field of

income and living standards is a complementary process and cannot be decoupled. Moreover, in spite of the reluctance that accompanied the last waves of enlargement, the CEE group has taken major steps to reduce the economic and social disparities. However, continuing the efforts to strengthen the institutional framework in these countries is essential in order to capture all the benefits that derive from the EU membership. The main limitation of the paper derives from the limited set of variables taken into consideration to study the convergence process. Given the complexity of the topic, the paper could be expanded with the study of the relationship between economic and social cohesion, trying to determine the main determinants of economic growth and wellbeing in the EU.

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