The Evolution of Real Convergence within European Union: Progress, Disparities and Development Perspective

Marius Augustin Drăgănescu
Florin-Cornel Popovici
Alexandru Avram
West University of Timișoara, Romania
marius.draganescu@e-uvt.ro
florin.popovici71@e-uvt.ro
alexandru.avram@e-uvt.ro

Abstract

This article evaluates the evolution of real convergence within the European Union, focusing on the progress and disparities that have shaped economic development across member states. Real convergence, a process through which less developed economies improve their economic performance relative to more advanced counterparts, which is essential for achieving economic cohesion within the EU. From this perspective, real convergence plays a significant role in ensuring balanced economic growth and reducing regional disparities, which are essential for maintaining social cohesion and economic stability across the EU. By narrowing the income and development gaps among member states, real convergence supports the EU's broader objective of fostering an integrated and resilient economic union.

Key words: real convergence indicators, regional disparities, European Union, economic integration
J.E.L. classification: H00, H7

1. Introduction

Real convergence has become a central issue in the study of European Union economic integration. The concept refers to the process by which lower-income economies within the EU improve their performance to narrow the economic gap with more developed member states. This phenomenon is measured through real economic indicators such as GDP per capita, labor productivity, and inflation-adjusted income levels. Real convergence is fundamental to the EU's goal of reducing disparities among its member states, fostering economic and social cohesion, and ensuring long-term stability within the Eurozone.

Despite significant policy efforts since the establishment of the Structural and Cohesion Funds, achieving real convergence remains a complex and ongoing challenge. Divergences in economic growth rates, investment in human capital, and structural reforms have resulted in uneven progress across regions (Barro, 1981; Ahmed, 1986). Additionally, external shocks such as the COVID-19 pandemic have exacerbated existing disparities, particularly in Eastern and Southern Europe, according to Ashraf (2020) and Cheval et al. (2020). As such, this paper seeks to explore the dynamics of real convergence, highlighting the role of public policy in addressing regional inequalities and promoting sustainable development within the EU.

2. Literature review

The concept of real convergence, represented by the process through which relatively low-income economies improve their performance to reach the level of more developed economies, has become a subject of significant interest in the analysis of the European Union's economic policies.

Real convergence refers to the process by which countries or regions converge in relation to real economic indicators, such as GDP per capita, labor productivity, unemployment rate, current account deficit, and price levels. This concept is often associated with the idea of catch-up or convergence in terms of economic development.

The relationship between real convergence and nominal convergence is complex and may be influenced by various factors. In the context of a monetary union such as Euro Zone, real convergence can lead to nominal convergence, as countries with lower GDP per capita tend to experience higher inflation rates compared to countries with higher GDP per capita. This can result in a process of nominal convergence, as countries with higher inflation rates tend to experience a depreciation of their currency, which may help reduce inflation differentials.

The existence of real convergence among EU member states is of paramount importance in the process of economic integration, providing a mechanism for achieving economic and social cohesion among countries. Thus, Chang and Rowthorn (1995) mentioned that reducing income inequalities among members has long been a declared objective of the EU, with policies aimed at promoting economic convergence established in 1975 through the Structural Funds and in 1993 through the Cohesion Funds. The idea that European integration through the convergence of macroeconomic policies and increased capital mobility would lead to convergence in income growth rates motivated the implementation of those policies aimed at promoting cohesion.

2. Research methodology

The article employs a rigorous methodology for the collection and analysis of relevant literature. Primary sources include academic journals, books, and research papers published in high-impact journals. The research process involves a critical review of specialized literature, incorporating both quantitative data and information from official sources. The objective of this approach is not only to identify gaps within the field but also to formulate well-supported and coherent conclusions. To ensure a comprehensive evaluation, advanced techniques for synthesizing literature were applied. In addition, multidisciplinary perspectives were considered, highlighting the complexity and significance of the subject, thereby fostering a deeper and more nuanced understanding.

3. Findings

3.1. Evolution of real convergence

Figure no. 1. GDP per capita in 1938

Source: History Nutshell

Figure 1 that represents GDP per capita in Europe during the interwar period illustrates the significant economic disparities among European countries in 1938. These substantial differences in levels of economic development across various European states highlight a harsh economic reality that contributed to the social and political tensions of that era. These economic disparities were further exacerbated by the devastating impact of World War II, which affected European nations irrespective of their economic development. The war resulted in massive infrastructure destruction, considerable human losses, and a general destabilization of national economies, amplifying pre-existing economic crises. In this context, the formation of the European Union became a historical necessity, with its primary goal being the cohesion of European states and the creation of a common market to facilitate post-war economic recovery. Thus, the European Union emerged as a response to the need to prevent further major conflicts, ensuring long-term political and economic stability in Europe. Through the promotion of economic and political cooperation, European states were able to unify their efforts to rebuild war-torn economies and create a favorable environment resilient economic development within the region.

Figure no. 2. GDP per capita 1989 (socialist vs. capitalist)

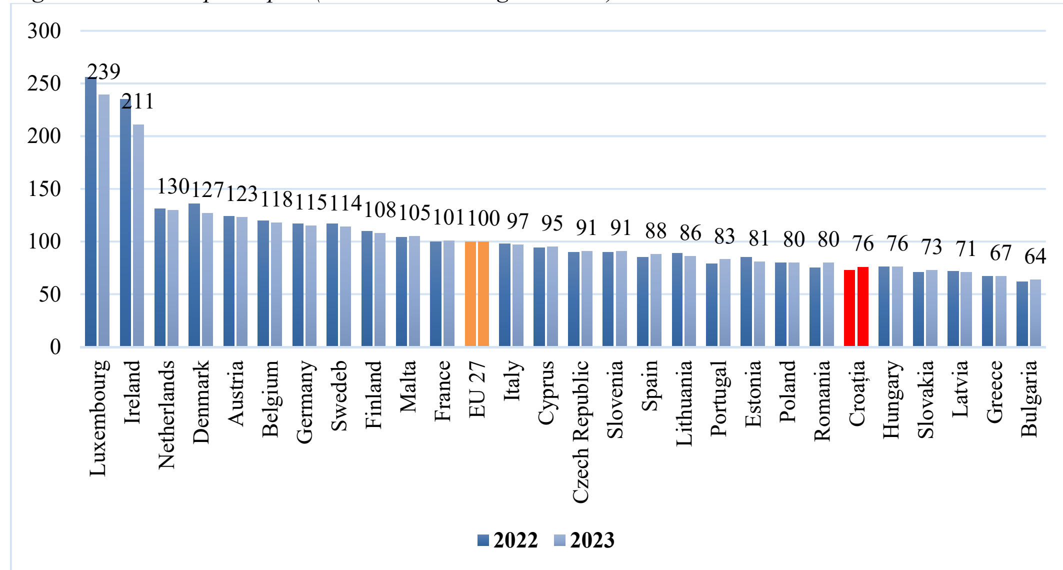
Source: Forummapping

The graphic of GDP per capita illustrates a comparison between various socialist and capitalist countries during the 1980s, with a focus on the inclusion of the Soviet Union and East and West Germany. A significant disparity is observed between the economies of Eastern Europe (represented by red bars) and those of Western Europe (represented by blue bars). The GDP per capita values for Eastern European countries are considerably lower than those of Western Europe. For instance, in Poland, Albania, and Romania, GDP per capita is below $3,000, in contrast to Luxembourg and West Germany, where values exceed $30,000. This disparity indicates major economic differences between the two regions, influenced by contrasting political regimes and economic models. Countries from the Eastern bloc, represented by red bars, had centralized, state-planned economies, which limited economic growth and the efficiency of the private sector. These economies, where investments were directed towards heavy industry while the services sector was neglected, generated unequal and insufficient economic development compared to the market economies of the West.

The Soviet bloc was isolated from international markets, limiting access to technology and innovation, unlike Western European states, which benefited from free economic exchanges and integration into global economic systems, such as the Marshall Plan. The progress of Western European countries, represented by blue bars, such as Luxembourg, West Germany, and

Switzerland, shows a GDP per capita of over $30,000, indicating a high level of economic prosperity. These economies are characterized by robust infrastructure, stable democratic institutions, and market economies that promote entrepreneurship and innovation. Their economic progress was accelerated by several factors, including access to capital, economic integration, the development of a strong services sector, and participation in international trade. The intermediate position of countries like Portugal, Greece, and Spain, with GDP per capita ranging between $6,000 and $10,000, reflects a less developed economic status during that period.

Figure no. 3. GDP per capita (Power Purchasing Standard)



Source: Eurostat

According to the chart on GDP per capita in 2022 and 2023, Austria, Belgium, and Germany exhibit high levels of GDP per capita, with Austria recording 123% in 2022 and experiencing a slight increase in 2023. Belgium and Germany remain steady, indicating economic stability. Bulgaria and Romania, positioned at the lower end of the chart with values of 64% and 80% respectively for 2022, show only modest increases in 2023. These figures suggest that both countries are still in the process of economic recovery, remaining far below the EU-27 average. Luxembourg and Ireland lead the rankings, with Luxembourg having a GDP per capita of 239% in 2023, while Ireland registers 211%. These high values reflect highly competitive and globally efficient economies. The Baltic states, such as Estonia and Lithuania, demonstrate significant progress, with Estonia reaching 127% in 2023, signaling rapid real convergence towards the EU average.

The structure of income in GDP for EU member states in 2023 reflects economic diversity and the varying policies of each country. Wages and salaries dominate in most countries, indicating labor-oriented economies and social welfare systems. Social contributions and taxes on production and imports vary, reflecting different models of social protection and fiscal policies. Gross operating surplus and mixed income emphasize the importance of the private sector and economic diversification in certain states. Thus, by analyzing these components, we can better understand the economic structure of each country and the impact of economic and fiscal policies on long-term development and economic stability.

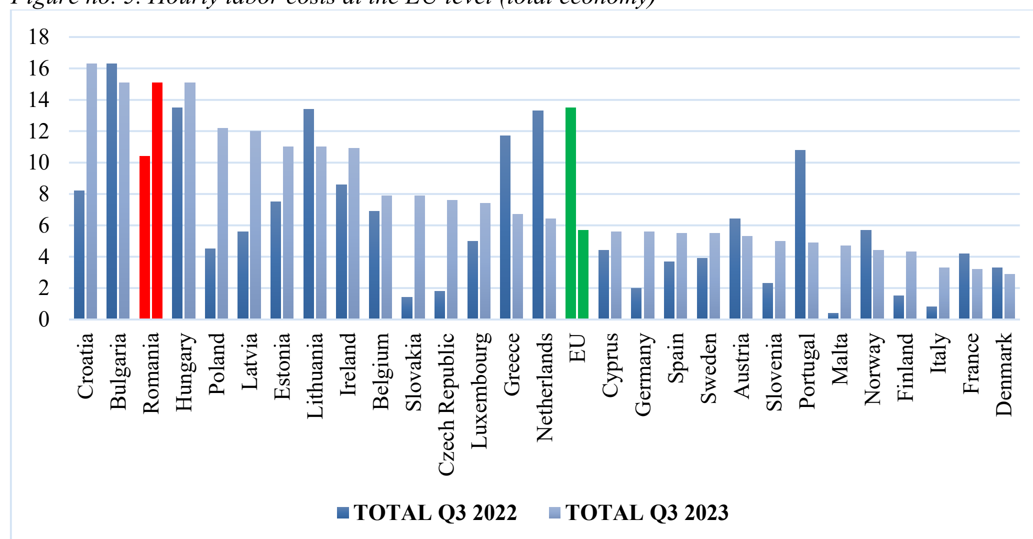
Figure no. 4. The share of income components in GDP 2023

Source: Eurostat

Compensation per employee at current prices is a fundamental economic indicator, reflecting the average income of workers and offering a clear perspective on a country's economic health. The growth of this indicator is crucial in the process of real convergence within the European Union, a process aimed at reducing economic disparities between member states.

In 2023, several countries recorded notable increases in compensation per employee, highlighting improvements in labor markets and contributing to the reduction of economic disparities. Romania, for instance, reported a remarkable rise in compensation per employee, from 250,000 euros in 2022 to 303,000 euros in 2023, a leap that signals a substantial improvement in labor market conditions and incomes, significantly contributing to real convergence. This development is an example of rapid economic progress, driven by foreign direct investment and accelerated economic growth. The rise in incomes directly impacts living standards and may help reduce the phenomenon of labor migration. However, to sustain this growth, it is essential for Romania to implement sustainable economic policies and to strategically invest in education and infrastructure. In other countries, such as Austria and Belgium, the increases in compensation per employee were also notable, though at a more moderate pace, indicating economic stability and well-established labor markets. Conversely, in Italy and Portugal, the declines recorded in 2023 reflect a slight deterioration in economic conditions and a slowdown in the convergence process.

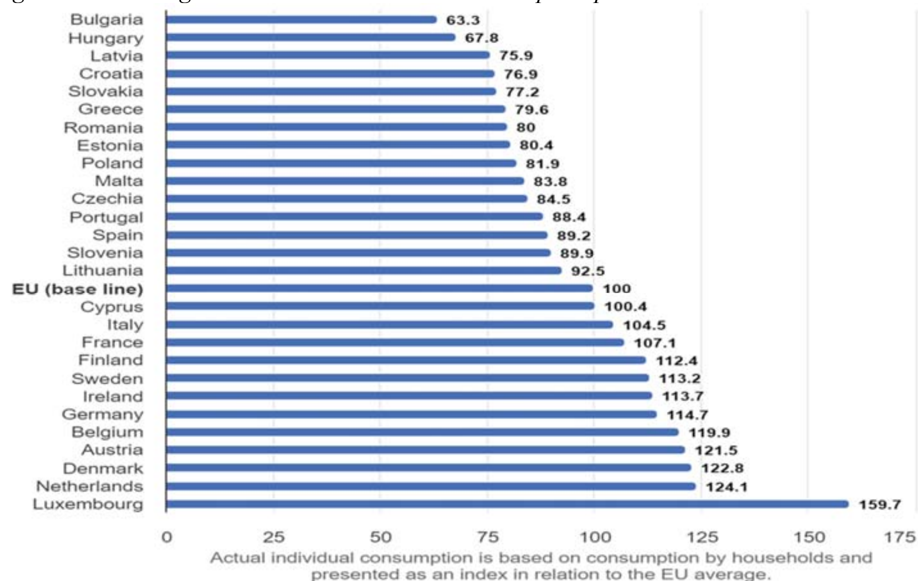
Figure no. 5. Hourly labor costs at the EU level (total economy)



Source: Eurostat

In Q3 2023, compared to the same period in 2022, the European Union recorded significant increases in hourly labor costs across several member states. These increases are crucial in evaluating real convergence. The largest increases in hourly labor costs were observed, in descending order, in Croatia, Bulgaria, Hungary, and Romania. These figures underscore the fact that emerging economies in Eastern and Southeastern Europe are making remarkable progress in improving economic conditions and living standards. The wage increases can be attributed to various factors, including productivity growth, foreign investment, and government policies aimed at fostering economic development. Additionally, other EU member states, such as Latvia, Poland, Lithuania, and Estonia, also registered notable increases in labor costs. These increases reflect ongoing improvements in economic performance and living standards, emphasizing that these economies are on a positive trajectory toward real convergence. The chart clearly highlights regional divergences in the growth of labor costs. Eastern European countries, particularly Romania, Hungary, and Bulgaria, show a faster growth trend compared to Western European states. This trend suggests that these economies are working to reduce economic disparities and align themselves with the higher economic standards of the more developed EU nations.

Figure no. 6. Living standards across the EU: consumption per inhabitant



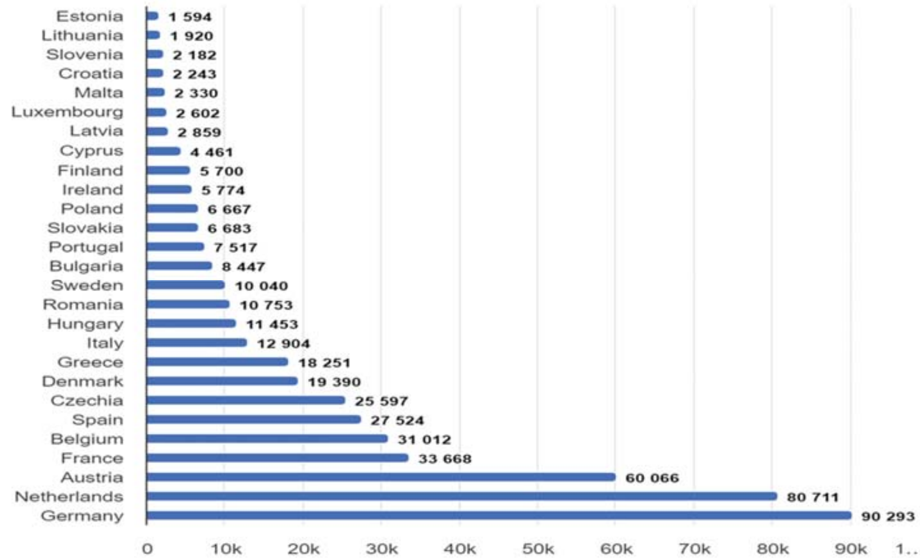
Source: Eurostat

Figure 6 presents the Actual Individual Consumption per capita across different EU countries, expressed as an index relative to the EU average, which is set as the reference point at 100. This serves as a critical indicator for assessing living standards, reflecting the goods and services available to citizens in each country. Countries in Central and Eastern Europe, such as Bulgaria, Hungary, Latvia, Croatia, and Romania, fall below the EU average in terms of AIC per capita. Bulgaria (63.3) and Hungary (67.8) are positioned at the lower end, indicating lower living standards compared to the rest of Europe. This situation reflects reduced consumption capacity, driven by factors such as lower wages, lower productivity levels, and persistent economic disparities between East and West, even after their accession to the EU. While gradual improvements are being made in these economies, the gap with Western Europe remains substantial. Luxembourg, with an index of 159.7, exhibits the highest level of individual consumption, underlining its exceptional standard of living, supported by a strong economy and high per capita income.

Other powerful Western economies, such as the Netherlands (124.1), Denmark (122.8), Austria (121.5), and Germany (114.7), exceed the EU average, reflecting high living standards and sustained economic well-being. These countries are known for their advanced infrastructure, high wages, and well-developed social systems, contributing to elevated individual consumption. Greece (79.6), Romania (80), Portugal (88.4), and Spain (89.2) rank in the lower range of the chart,

with values significantly below the EU average. Although integrated into the European Union and beneficiaries of structural funds for development, these countries continue to face economic challenges such as high unemployment and slower economic growth, which limit the population's purchasing power. Countries like the Czech Republic (84.5), Slovenia (89.9), and Cyprus (100.4) are nearing the European average, indicating a gradual convergence with more developed economies.

Figure no. 7. Students from one EU country studying in another, by host country



Source: Eurostat

Figure 7 shows the number of students from an EU member state studying in another EU country, categorized by host country. This indicator reflects academic mobility within the EU and serves as a crucial parameter in evaluating the attractiveness of educational systems and the opportunities offered to European students for studying abroad. Countries with the highest numbers of international students, such as Germany (90,293), the Netherlands (80,711), and Austria (60,066), attract the largest contingents of students from other EU countries. These nations are renowned for their well-developed educational systems, prestigious universities, and favorable policies for international students, including low or even free tuition fees in some cases. These three countries serve as regional educational hubs, not only because of the high quality of higher education but also due to their strong economies and infrastructure, which make them appealing to students both from an academic standpoint and in terms of post-graduation employment opportunities. France (33,668), Belgium (31,012), Spain (27,524), and the Czech Republic (25,597) are also significant destinations for international students.

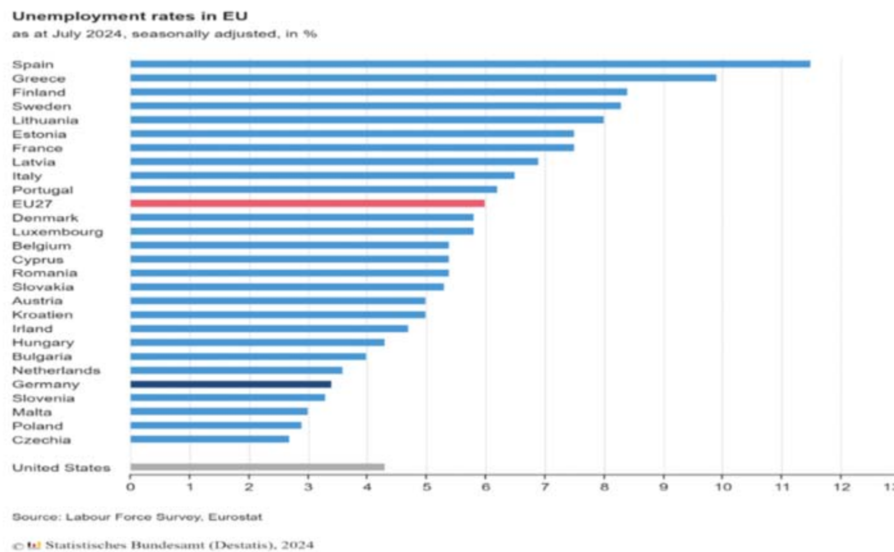
These countries combine prestigious universities with educational programs in multiple languages, including English, increasing their appeal. Spain, for example, is well-known for the popularity of the Erasmus program, offering a diverse and vibrant cultural experience. Belgium and the Czech Republic are also important educational destinations, benefiting from their central geographical location in Europe and high academic standards, particularly in fields such as political science and medicine. Smaller countries or those from Eastern and Southeastern Europe, such as Estonia (1,594), Lithuania (1,920), and Slovenia (2,182), attract a relatively low number of international students. This can be attributed to the smaller size of their university systems and limited resources dedicated to the internationalization of education. However, even in these countries, local universities are beginning to attract students due to educational programs in foreign languages, such as English, and alignment with European quality standards.

Romania occupies an intermediate position, attracting 10,753 students from other EU countries. This indicates growing interest in the Romanian educational system, particularly in fields such as medicine and engineering. However, compared to Western countries, Romania remains a

secondary destination for students, which may be correlated with educational resources and the attractiveness of the local labor market.

Countries with top-ranked universities globally, such as Germany and the Netherlands, naturally attract more students due to their academic prestige and research opportunities. International accreditations and the recognition of diplomas also enhance the appeal of these destinations. Countries with low tuition fees or accessible funding systems, such as Austria and Germany, hold a major competitive advantage. In contrast, countries with high tuition fees for international students, like the United Kingdom (prior to its exit from the EU), may face a decrease in student inflows.

Figure no. 8. Unemployment rates In EU (July 2024)



Source: Labour Force Survey, Eurostat

Figure 8 reveals significant disparities in unemployment rates across the EU as of July 2024. Southern European countries like Spain and Greece show the highest unemployment, indicating ongoing labor market struggles and structural issues. In contrast, Germany, Luxembourg, and the Netherlands demonstrate low unemployment, reflecting stronger economies and efficient labor policies. Emerging Eastern European economies, such as Romania and Hungary, also have relatively low rates, highlighting economic growth, although sustainability remains a concern. Overall, the chart underscores the persistent regional differences in labor market health within the EU.

4.2. NextGenerationEU Plan

NextGenerationEU (NGEU) is a comprehensive financial initiative by the European Union, aimed at supporting post-pandemic economic recovery. With a financial allocation of €806.9 billion, this plan seeks to address the socio-economic damages inflicted by the pandemic, while concurrently fostering long-term growth and resilience, the program is designed with key objectives: stimulating economic recovery, advancing the green and digital transitions, and fortifying the resilience of member states' economies. In the wake of the COVID-19 crisis, economic recovery has emerged as a paramount priority for member states.

By providing substantial financial support, the plan aims to revitalize economic activities and create new jobs, thereby mitigating the negative effects of the economic downturn triggered by the pandemic. This support is crucial for restoring confidence and stability in the affected economies. Another central pillar of the NGEU plan is the facilitation of the green and digital transitions. NGEU aims to enhance the capacity of European economies to withstand future shocks, whether economic, social, or environmental. Through these measures, the NGEU plan aims to ensure a sustainable economic recovery, accelerate the essential transitions for Europe's future, and bolster

the resilience of European economies, preparing them for future challenges. The key components of the NGEU plan include:

- The Recovery and Resilience Facility (RRF), the central element of NGEU, allocates €672.5 billion in grants and loans to EU member states. This facility is intended to support reforms and investments that enhance the resilience of national economies, with a focus on the green and digital transitions.
- REACT-EU, which provides an additional €47.5 billion to support regions most affected by the pandemic, ensuring a balanced recovery across the EU.
- Horizon Europe, a program that allocates €5 billion to support research and innovation, which are essential for stimulating economic growth and competitiveness in the post-pandemic landscape.
- InvestEU, with €5.6 billion, this initiative aims to stimulate investments in various sectors, promoting job creation and sustainable growth.
- The Just Transition Fund, with an allocation of €10 billion, supports the transition towards a carbon-neutral economy, ensuring that no region or community is left behind in this process of transformation.

5. Conclusions

Real convergence is vital for ensuring balanced economic growth and preventing economic and social tensions that could threaten the stability of the EU. In the absence of real convergence, persistent economic disparities may lead to political and economic fragmentation, endangering the entire European space. Public policies play a particularly crucial role in ensuring real convergence. These include fiscal and monetary policies, as well as investment policies in infrastructure, education, research, and development. National governments, along with European institutions, must necessarily adopt sustainable development strategies that support economic growth and reduce disparities among member states. Investments in education and vocational training are essential for enhancing productivity, while investments in infrastructure are necessary to ensure equal access to markets and stimulate economic competitiveness. Concurrently, structural reform policies are imperative for improving the competitiveness of national economies and fostering innovation and technological development.

The role of European institutions, such as the ECB and the EIB, is essential in supporting real convergence. These institutions provide the necessary framework for coordinating economic and financial policies among member states and play a key role in implementing policies that bolster macroeconomic stability. Through their interventions, European institutions significantly contribute to reducing economic disparities and promoting sustainable economic growth.

However, the process of real convergence is complex and protracted, facing numerous challenges. Recent economic crises have highlighted the economic vulnerabilities of the EU and underscored the necessity for adaptable and well-structured public policies. These crises disproportionately impacted the weaker economies within the EU, thereby emphasizing the importance of closer coordination and stronger solidarity among member states. Crisis response policies, including fiscal and monetary measures, have been decisive in stabilizing affected economies and maintaining the convergence process.

In conclusion, to underscore the sustainability and viability of real convergence indicators within the European Union, effective coordination of economic policies at the European level, supported by robust institutions and well-established public policies, is imperative. Only through such an approach can the European Union ensure successful economic integration and equitable development among the economies of member states. This will not only contribute to the economic and political stability of the Union but also enhance social cohesion, thereby ensuring long-term prosperity.

6. References

- Ahmed, S., 1986. Temporary and Permanent Government Spending in an Open Economy: An Empirical Analysis. *Journal of Monetary Economics*, 17(2), pp.197-224. https://doi.org/10.1016/0304-3932(86)90028-0
- Ashraf, B.N., 2020. Economic impact of the COVID-19 pandemic on financial markets. *Journal of Behavioral and Experimental Finance*, 27, pp. 1-5. https://doi.org/10.1016/j.jbef.2020.100371
- Barro, R. J., 1981. Output Effects of Government Purchases. *Journal of Political Economy*, 89(6), pp.1086-1121. https://doi.org/10.1086/261024
- CEIC, n.d. *European Union Labour Force Participation Rate.* [online] Available at: https://www.ceicdata.com/en/indicator/european-union/labour-force-participation-rate [Accessed 12 September 2024].
- Chang, H.-J. & Rowthorn, R., 1995. *The Role of the State in Economic Change*. Oxford: Clarendon Press. https://doi.org/10.1093/acprof:oso/9780198289845.001.0001
- Cheval, S., Mihai Adamescu, C., Georgiadis, T., Herrnegger, M., Piticar, A. and Legates, D.R., 2020. COVID-19 Lockdown: A Worldwide Survey of Atmospheric and Social Consequences. *Sustainability,* 12(14), pp.1-25. https://doi.org/10.3390/su12145638
- Cheval, S., et al., 2020. COVID-19 Lockdown: A Worldwide Survey of Atmospheric and Social Consequences. *Sustainability*, 12(14), pp.1-25.
- Destatis, n.d. *European Labour Market during the Crisis*. [online] Available at: https://www.destatis.de/Europa/EN/Topic/Population-Labour-Social-Issues/Labour-market/ExULabourMarketCrisis.html [Accessed 12 October 2024].
- Etzkowitz, H. & Brisolla, S., 1999. Failure and Success: Technology Development in Brazil and Latin America. *R&D Management*, 29(2), pp.167-172.
- EU Funding Overview, n.d. *React-EU: Recovery Assistance for Cohesion and the Territories of Europe.* [online] Available at: https://eufundingoverview.be/funding/react-eu-recovery-assistance-for-cohesion-and-the-territories-of-europe [Accessed 11 September 2024].
- European Commission, 2024. *Horizon Europe Performance.* [online] Available at: https://commission.europa.eu/strategy-and-policy/eu-budget/performance-and-reporting/programme-performance-statements/horizon-europe-performance_en [Accessed 12 September 2024].
- European Parliament, 2024. *The Just Transition Fund*. [online] Available at: https://www.europarl.europa.eu/factsheets/ro/sheet/214/fondul-pentru-o-tranzitie-justa/ [Accessed 12 September 2024].
- Eurostat, 2024. *People at risk of poverty or social exclusion*. [online] Available at: https://ec.europa.eu/eurostat/databrowser/view/ilc_peps01n__custom_11655562/bookmark/table?lang=en&bookmarkId=1fe5fbf6-51a6-4b4b-a0d5-b9e715618a34 [Accessed 15 September 2024].
- Eurostat, 2024. *Eurostat news: Decline in EU unemployment rate in 2024*. [online] Available at: https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20240612-1 [Accessed 10 October 2024].
- European Union, 2024. *Facts and figures on the European Unio*n. [online] Available at: https://european-union.europa.eu/principles-countries-history/facts-and-figures-european-union_en [Accessed 12 October 2024].
- Forummapping, n.d. *Comparison of GDP per Capita Between Socialist and Capitalist Countries in the 1980*s
- Gatrell, P., 1999. *A Whole Empire Walking: Refugees in Russia during World War I.* Bloomington: Indiana University Press.
- History Nutshell, n.d. *Historical Data on GDP per Capita During the Interwar Period*
- InvestEU, 2024. *InvestEU Programme*. [online] Available at: https://investeu.europa.eu/investeu-programme_en [Accessed 12 September 2024].
- Mazower, M., 1998. *Dark Continent: Europe's Twentieth Century*. London: Penguin Press.
- Ministry of Investments and European Projects of Romania, n.d. *The Just Transition Fund* [online] Available at: https://oportunitati-ue.gov.ro/program/programul-tranzitie-justa/ [Accessed 15 September 2024].
- PubAffairs Bruxelles, 2023. *EU to invest €13.5 billion in research and innovation for 2023-2024.* [online] Available at: https://www.pubaffairsbruxelles.eu/eu-institution-news/eu-to-invest-e13-5-billion-in-research-and-innovation-for-2023-2024/ [Accessed 11 September 2024].