

**Research. Innovation. Impact.** 



ANNIVERSARY SERIES OF THE HUN-REN CERS IWE

# Working paper

274.

April 2024

## Ádám Kerényi – Csaba Lakócai

TRENDS, TRANSFERS AND CONVERGENCE – THE IMPACT OF FINANCIAL ALLOCATIONS TO THE EASTERN MEMBER STATES OF THE EUROPEAN UNION IN THE LAST TWO DECADES HUN-REN Centre for Economic and Regional Studies, Institute of World Economics Working Paper Nr. 274 (2024) 1-21. April 2024

## Trends, Transfers and Convergence

The impact of financial allocations to the Eastern member states of the European Union in the last two decades

Authors:

## Ádám Kerényi

Junior Research Fellow, Institute of World Economics, HUN-REN Centre for Economic and Regional Studies

and

## Csaba Lakócai

Research Fellow, Institute of World Economics, HUN-REN Centre for Economic and Regional Studies

HUN-REN CERS, IWE Working Papers aim to present research findings and stimulate discussion. The views expressed are those of the author and constitute "work in progress". Citation and use of the working papers should take into account that the paper is preliminary. Materials published in this series may be subject to further publication.

The contents of this paper are the sole responsibility of the author and do not necessarily reflect the views of other members of the research staff of the Institute of World Economics, CERS HUN-REN.

ISSN 1215-5241

ISBN 978-963-301-731-9





## Trends, Transfers and Convergence

# The impact of financial allocations to the Eastern member states of the European Union in the last two decades

Ádám Kerényi<sup>1</sup> – Csaba Lakócai<sup>2</sup>

### Abstract

Following the collapse of the Soviet-style planned economies, the post-socialist region of Central and Eastern Europe has undergone a process of economic convergence after the initial shock of transition to a market economy. One stage in this process was accession to the European Union. Most of the countries in the region became members, making them eligible for further benefits and financial allocations. The extent to which these funds have been used effectively over the past decades varies from country to country, but overall, the convergence of these countries within the EU has continued. In this study, we examine the distribution of the net EU transfers to the post-socialist member states and their impact on macroeconomic and social indicators between 2004 and 2022. While these effects are clearly visible in terms of the formal economic and consumption indicators, they are less directly visible in terms of the informal wellbeing trends.

*JEL*: I31, O47, O52, P20, P27, Y10

*Keywords*: European Union, post-socialist countries, Central and Eastern Europe, financial transfers, convergence

### **1. Introduction**

Right after the collapse of the planned state socialist economies, the development gap in formal macroeconomic indicators between Western Europe (WE) and the transition countries of Central and Eastern Europe (CEE) continued to widen until the mid-1990s. Since the last years of the last millennium, most countries in the region have started to

<sup>&</sup>lt;sup>1</sup> junior research fellow, HUN-REN Centre for Economic and Regional Studies – Institute of World Economic, 1097 Budapest, Tóth Kálmán street 4. Email: <u>kerenyi.adam@krtk.hun-ren.hu</u>

<sup>&</sup>lt;sup>2</sup> research fellow, HUN-REN Centre for Economic and Regional Studies – Institute of World Economic, 1097 Budapest, Tóth Kálmán street 4. Email: <u>lakocai.csaba@krtk.hun-ren.hu</u>

catch up with the western part of the continent, albeit at different rates and sometimes at only moderate growth rates (Tomka, 2020). This catching-up was an implicit condition for the enlargement of the European Union towards eleven post-socialist countries in 2004, 2007 and 2013.

Vida (2015) examines the macroeconomic indicators of the four Visegrad countries (the Czech Republic, Hungary, Poland and Slovakia) and finds that the period between EU accession in 2004 and the global financial crisis in 2008 was characterized by divergence between these countries. Hungary was the least able to benefit from the EU's development funds in terms of gross domestic product (GDP) per capita, and was the country most affected by the crisis. In contrast, Poland had the highest growth rate and the impact of the crisis was relatively moderate in this country compared to the other three Visegrad countries. Nevertheless, the Czech Republic had the highest GDP per capita throughout the whole period.

Since 2010, the countries in the region have started to converge again. Pipień and Roszkowska (2019) find that in the second half of the decade, Central and Eastern Europe became a homogeneous region in terms of formal macroeconomic indicators. Aidukaite (2011) further argues that the post-socialist CEE countries represent a distinct welfare state model. In addition to the welfare similarities between the transition countries, literature also finds convergence between the western and eastern parts of the continent in terms of subjective wellbeing in the 2010s (Guriev - Melnikov, 2018; Helliwell et at., 2023; Želinský, 2022). However, empirical analysis by Carrasco-Campos and colleagues (2017) shows that in the long term, formal welfare systems have an impact on overall wellbeing; in countries with persistently weak social policies, the overall satisfaction with quality of life is lower than would be inferred from the formal macroeconomic indicators.

The countries of the region have a relatively long socialist economic history. In the three Baltic states that were once part of the Soviet Union (Estonia, Latvia and Lithuania), state socialism lasted for more than 70 years, and in Central and Eastern Europe for around 40 years. Although all of the countries under review have now moved from a socialist planned economy to a capitalist market economy model, it is debatable whether this transition, which has been underway for nearly three decades, can be considered a successful one. Financial resources from the European Union have been and continue to

be a crucial support in the transition, and their acquisition and maximization has been a consensual objective across political affiliations and governments even before accession (Kerényi, 2018).

According to World Bank economists, a so-called "convergence machine" has been created in Europe (Gill-Raiser, 2012). Several analyses have been carried out on the catching-up of GDP per capita in the CEE countries with the EU average (Oblath, 2013). There have also been comprehensive analyses and assessments of the first years and decade of EU membership (European Commission, 2009; Éltető, 2014; Éltető–Szijártó, 2018). In addition, specific reports have been published that have assessed the effectiveness of the use of EU funds over a given period (KPMG-GKI, 2017).

In this paper, we present the main macroeconomic indicators and the distribution of EU financial support over the last two decades. The data originate from Eurostat and the European Commission datasets. In the next section, we look at the distribution of net financial benefits in the eleven post-socialist member states of the EU<sup>3</sup> between 2004 and 2022. We then focus our analysis on how macroeconomic, consumption and wellbeing indicators in these countries have evolved over nearly two decades in the European Union. For comparison, we also consider these trends in five Western Balkan countries outside the EU. Finally, we summarize our main findings in the Conclusions.

# 2. Net allocations to the Eastern member states of the European Union from 2004 to 2022

The post-socialist countries are not a homogeneous bloc in all respects, but there are several converging trends (both positive and negative ones). The liberalization of transition economies of the eleven post-socialist countries, which account for about a quarter of the EU's population, has allowed the emergence of a capital-intensive, high-tech export structure in addition to economic growth (Kerényi, 2018). In this region, the inflow of foreign direct investment (FDI) and the institutional development due to EU accession have been the primary drivers of growth, complemented by allocations from the various EU funds. In the pre-crisis period, EU membership generated an average

<sup>&</sup>lt;sup>3</sup> These are Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.

annual incremental growth rate of nearly two percent for the new member states. Model simulations have shown that they enjoyed a 50–100 basis point advantage over other emerging economies with similar economic conditions (European Commission, 2009).

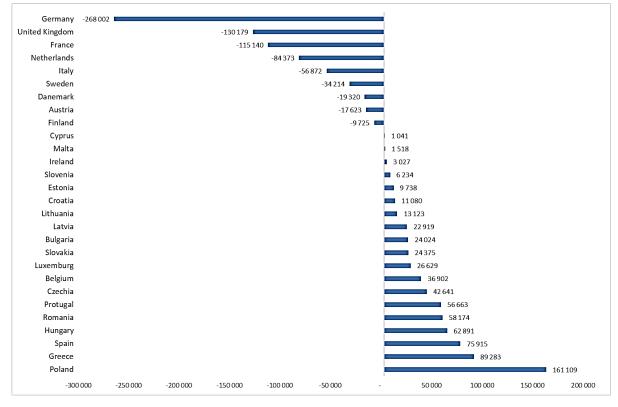
Perhaps the most popular achievement of the EU membership for the people in the region has been the ease of working in the WE countries. At the same time, higher wages abroad have also been a major disincentive, leading to increased emigration of skilled workers almost everywhere. For example, 10% of Latvia's population – 20% of the population in actively working age – left the country to work abroad (Kerényi, 2018).

Despite labor emigration, countries in the region have benefited from EU accession in terms of net subsidies. All the eleven post-socialist countries were net beneficiaries between 2004 and 2022 (Figure 1). Overall, Poland, with the largest size and population, received the most benefits, while countries with smaller populations received less (Figure 2). In contrast to the total net amount of financial benefits, the amount of net allocations per capita (Figure 3) better reflects the importance of the EU transfers for each country; the larger the amount per capita, the more significant the benefits were in proportion to population. Two Baltic countries with small populations (Latvia and Estonia) were the main beneficiaries in this respect. Hungary, which has a medium size of population by European standards, followed them closely. In proportion to population, Poland was only the sixth most subsidized country over the period.

The high levels of EU support to the three Baltic countries (Estonia, Latvia and Lithuania) – the first, second and fourth highest net amounts per capita – were due to the fact that the Baltic region is not only a post-socialist but also a post-Soviet area, therefore the need for an economic and social transition to catch up was particularly strong there. The fact that they could join the euro area in the 2010s demonstrates, among other things, that they have succeeded in the catching-up process. In the case of Hungary, the large amounts of EU support are partly because the transition process to a market economy after the change of regime hit the country's economy and society particularly hard, and partly because of the strong negative effects of the 2008 financial crisis. The three other Visegrad countries (Slovakia, Poland and the Czech Republic) were the fifth, sixth and seventh largest net beneficiaries in proportion to population over the period. In the case of Slovenia, second last in the ranking, the relatively low net benefits may be due to the

fact that the economic transition was smooth and successful in this country compared to the other CEE countries in terms of several macroeconomic indicators. Bulgaria, Romania and Croatia are also at the bottom of the ranking, which is linked to the fact that these countries joined the European Union later than the others, in 2007 and 2013 respectively.

Figure 1: Balance of payments and receipts of the EU member states 2004–2022 (in million euros)



Source: Own editing based on the European Commission database

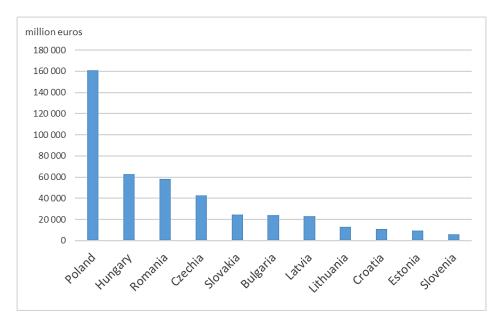
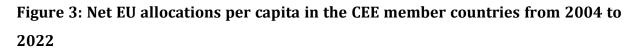
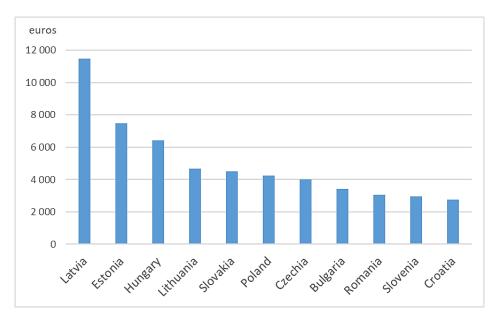


Figure 2: Net EU allocations in the CEE member countries from 2004 to 2022

Source: Own editing based on the European Commission database





Source: Own editing based on the European Commission database

It is worth dividing the period between 2004 and 2022 into sub-periods, in line with the EU budget cycles. On the one hand, aid allocations, which are renegotiated and planned every seven years, vary from period to period, and on the other hand, the total period under review, which spans almost two decades, has been marked by successive periods of economic booms and crises, which have affected resource allocations at EU level.

First, we look at the net allocations for the three-year period of 2004–2006 in the eight CEE countries that joined the EU in 2004. Overall, Poland received by far the largest net allocation (Figure 4), but was only the fourth most subsidized country in proportion to population, while the other three Visegrad countries were at the bottom of the league behind Slovenia (Figure 5). In terms of per capita allocations, the three Baltic countries were the most subsidized in the years following accession.

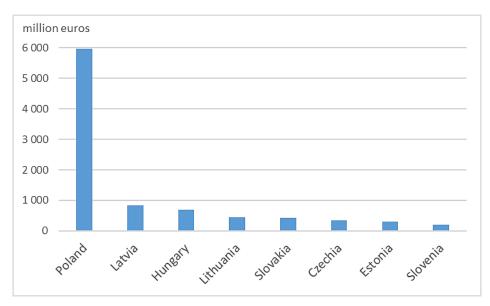
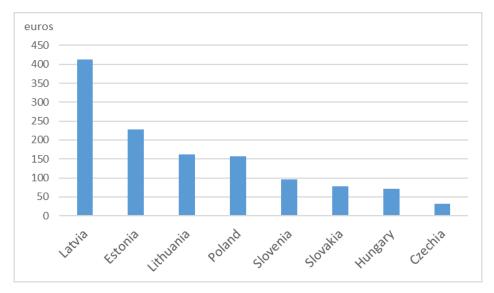


Figure 4: Net EU allocations in the CEE member countries from 2004 to 2006

Figure 5: Net EU allocations per capita in the CEE member countries from 2004 to 2006



Source: Own editing based on the European Commission database

Also during the 2007–2013 budget planning cycle, Poland received by far the largest share of net benefits, followed by Hungary (Figure 6). In proportion to population, Hungary was the third most subsidized country after two Baltic States, Latvia and Estonia (Figure 7). Bulgaria and Romania received the lowest net support per capita at this time, which may also reflect the fact that, as new member states, their negotiating position was weaker at the beginning of the programming period.

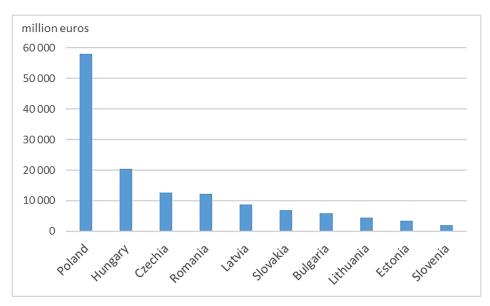


Figure 6: Net EU allocations in the CEE member countries from 2007 to 2013

Source: Own editing based on the European Commission database

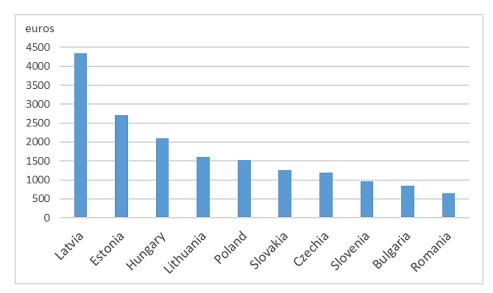


Figure 7: Net EU allocations per capita in the CEE member countries from 2007 to 2013

Between 2014 and 2020, Hungary was the second most subsidized country in terms of both total and per capita net support (Figures 8 and 9). In the case of the former, Poland continued to be the leader, and in the case of the latter, it was Latvia. Croatia, which was the last to join, was the least subsidized of the examined countries in proportion to population.

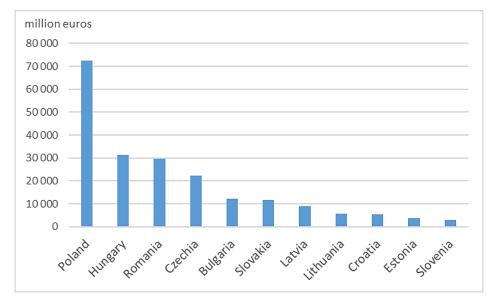
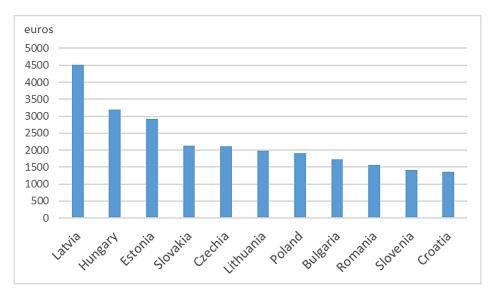


Figure 8: Net EU allocations in the CEE member countries from 2014 to 2020

Figure 9: Net EU allocations per capita in the CEE member countries from 2014 to 2020



Source: Own editing based on the European Commission database

The last period we are looking at is an incomplete period for budgetary planning, covering only two years. (At the time of writing this study, consolidated balance sheet data for 2023 is not yet available, so we cannot include this year in our analysis.) 2021 and 2022 were pandemic years, which, along with other aspects, affected the EU resource allocations. Poland remained the most subsidized country (Figure 10), but moved to penultimate place in proportion to population, while Hungary slipped to the fifth place (Figure 11). Croatia, on the other hand, has moved up to third place in terms of net support per capita.

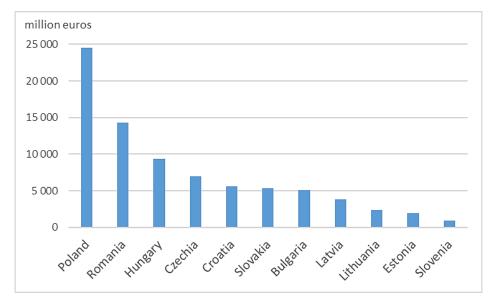
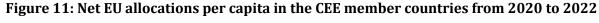
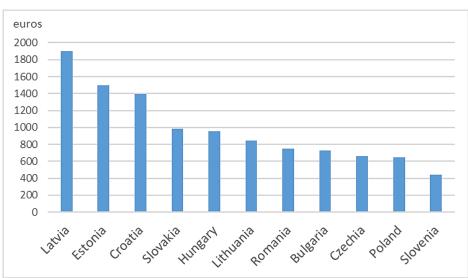


Figure 10: Net EU allocations in the CEE member countries from 2020 to 2022





Source: Own editing based on the European Commission database

#### 3. Trends of economic growth, consumption and wellbeing from 2004

The total net benefits of around 436.3 billion euros between 2004 and 2022, granted to the eleven post-socialist countries that joined the European Union in 2004 or later, are a large amount, but the question arises as to how much these benefits actually helped the eastern member states catch up with the western ones. Since this is a very complex question that can be quantified only to a limited extent, and which requires case studies that include legal and political aspects in addition to the economic ones, we cannot provide a comprehensive answer within the framework of this study. Instead, we now limit our examination to three indicators; first, we look at the development of gross domestic product (GDP) per capita, then consumption per capita, and finally life expectancy at birth. As a group of control countries, we also include other five postsocialist countries - Albania, Bosnia-Herzegovina, North Macedonia, Montenegro and Serbia – that are not members of the European Union, but provided data to Eurostat in the given period. It is important to examine these countries as a control group because a legitimate question arises whether the convergence of the eastern member states to the EU average is more a consequence of the benefits associated with membership or whether convergence would have taken place in the region even without membership.

GDP per capita measured at purchasing power parity is one of the most commonly used formal macroeconomic indicators. In the mid-2000s, the post-socialist countries differed significantly in terms of their GDP per capita, but by 2022, the new member states were closer both to each other and to the EU average than at the beginning of the period (Figure 12). The five Western Balkan countries converged only slightly with the EU average during this period, and did not exceed 50% of the EU average. If we exclude Bulgaria, which had the lowest GDP per capita among the member states, the convergence of the CEE countries compared to the five non-EU countries is even more striking.

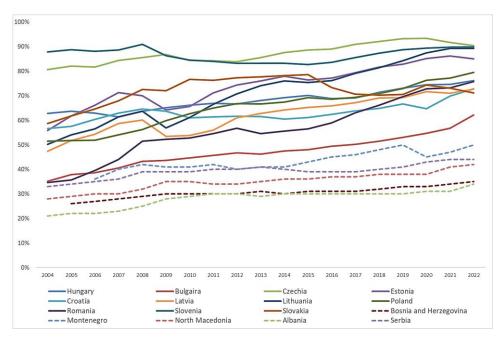
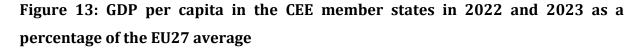


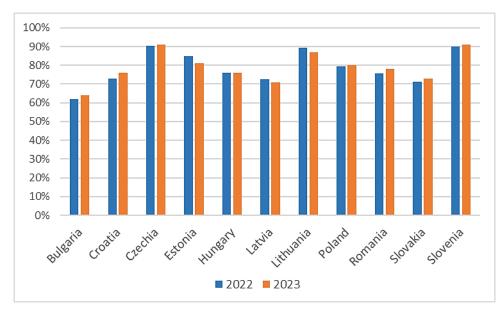
Figure 12: GDP per capita in the CEE member states and the Western Balkan control countries between 2004 and 2022 as a percentage of the EU27 average

Source: Own editing based on Eurostat database

At the time of writing our study, only provisional GDP data are available for the year 2023 on Eurostat and only for the EU member states. Based on these data, GDP per capita in CEE further converged to the EU average, compared to 2022, with the exception of the three Baltic states (Figure 13). In Estonia, Latvia and Lithuania, the drop of GDP per capita in 2023 may be attributed to the geopolitical and energy crisis resulting from the Russian–Ukrainian war, which had a more direct impact on the Baltic region than other parts of the continent.

Consumption can be considered as a proxy variable for economic welfare, albeit in a limited and non-linear way; beyond a certain income level, one unit of economic growth tends to imply a lower consumption growth than before, due to the limited capacity and expediency of consumption, as well as the conflicting goals of saving and consumption. Nevertheless, this indicator is useful to show the trends of the relative catching-up of the CEE countries with the WE member states, as these post-socialist countries are still lagging behind WE in terms of other formal macroeconomic indicators too.

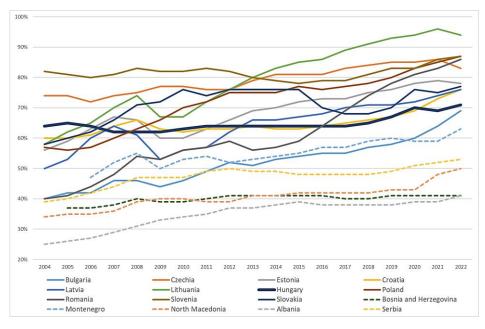




Source: Own editing based on Eurostat database

Figure 14 shows that consumption per capita in all of the eleven examined countries approached the EU27 average by 2022, although this catch-up process took place along different trend lines. For example, in the order of countries, Hungary slipped from the third place in 2004, behind Slovenia and the Czech Republic, to the penultimate place in 2022, ahead of only Bulgaria, but at the same time, the consumption per capita already exceeded 70% of the EU average in this country too. In the Czech Republic, Poland, Lithuania, Slovenia and Romania, the indicator exceeded 80% of the EU average by the end of the 2010s. In Lithuania, this value began to approach 100%. Among the control countries, only Montenegro moved somewhat along with the CEE member states, while the consumption indicator of the other four countries stagnated from the 2010s or increased only slightly compared to the EU average. It is hard to predict how long the trends will last, because the crises of the early 2020s – first the recession due to the pandemic situation, then the energy crisis related to the Russian-Ukrainian war – may show their effects in a longer term.

Figure 14: Consumption per capita in the CEE member states and the Western Balkan control countries between 2004 and 2022 as a percentage of the EU27 average



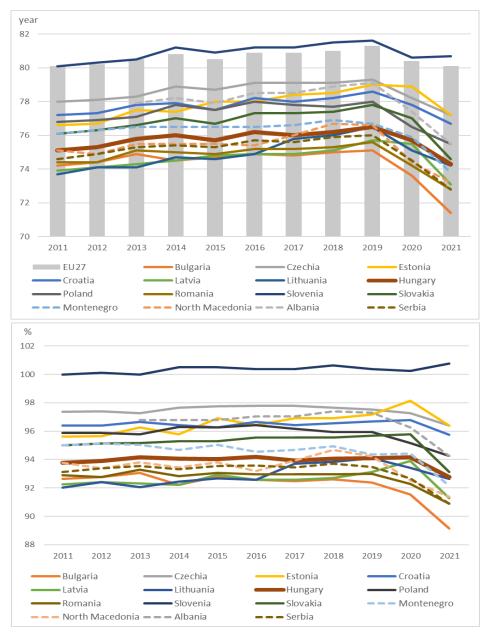
Source: Own editing based on Eurostat database

The average life expectancy at birth is often considered an objective but informal indicator of wellbeing, although, like consumption, it must be treated with reservations. It has been empirically proven that, in terms of formal macroeconomic indicators (such as GDP per capita), further economic growth in itself no longer results in higher life expectancy among the richest countries of the world (Walby, 2009). Yet, this indicator is still useful for comparing the member states of the European Union. This is because the life expectancy at birth is high in all WE countries in a global comparison (*Ibid*), while the macroeconomic performance of the Eastern member states have not yet reached the level at which economic growth no longer has any impact on social welfare.

We can examine country data on life expectancy at birth only for the decade 2011–2021. Data for 2022 are only preliminary for the time being, so we are not examining this year. Data before 2011 are not included in Eurostat's dataset, while data from other organizations, such as the United Nations, are calculated using a slightly different methodology, leading to (slightly, but nonetheless) different estimations, and therefore they are not suitable for a direct comparison with data from the European Statistical

Office. At the same time, Eurostat's data series include EU27 averages and are therefore suitable for comparing country data with the EU average.

Figure 15: Life expectancy at birth between 2011 and 2021 in the CEE member states and the Western Balkan control countries in years (top) and as a percentage of the EU27 average (bottom)



Source: Own editing based on Eurostat database

In the decade under review, life expectancy at birth exceeded 70 years in all of the eleven CEE countries (Figure 15). In Slovenia, life expectancy was consistently above 80 years, making the country the only one of the member states surveyed to be above the EU average. Up to 2021, life expectancy at birth was above 90% of the EU average in all countries, suggesting that, in terms of this indicator, the member states from CEE were closer to both each other and WE than in terms of consumption or GDP per capita. In 2020, the first year of the global pandemic, Estonia, Croatia, Latvia and Hungary were closer to the EU average than before, but in 2021, life expectancy fell sharply in all countries, except Slovenia, which moved upwards away from the EU average at that time. This is linked to the fact that the first wave of Covid19, which was mostly dangerous for the older age group, spared the region more than the western part of the continent, while subsequent waves hit the CEE countries harder the WE ones (Hajdu et al., 2024).

Among the control countries, Bosnia and Herzegovina is omitted this time due to lack of data. Interestingly, life expectancy at birth in the other four countries was similar to that of many of the EU member states. Furthermore, Albania, one of the poorest countries in Europe, had a higher life expectancy at birth than most of the countries. On the other hand, Latvia and Lithuania, with strong macroeconomic indicators compared to other post-socialist countries, had among the lowest life expectancies (together with Bulgaria and Romania). These results suggest two things:

1) some countries in the group have already reached a level of formal economic development where other factors, such as geo-climatic and environmental conditions, become more important than macroeconomic indicators, but have lacked those welfare institutions that could compensate for the external conditions;

2) the benefits of EU membership have not had any direct impact on life expectancy at birth over the period.

#### 4. Summary

In our study, we have examined the evolution of net subsidies to the post-socialist member states of the European Union, as well as the macroeconomic, consumption and wellbeing trends in these countries. Mainly the size and population of the countries influenced the absolute amount of net benefits, while the amount of net benefits per capita

was influenced by the economic conditions and political history. The primary objective of the grants for the member states lagging behind is to catch up with the EU average. During the period under review, all post-socialist CEE member states were included in the group of net beneficiary countries.

The EU's transfers to the transition member states have resulted in convergence towards the EU average in terms of GDP per capita and consumption in all countries, albeit in different ways. Life expectancy at birth in the 2010s was also close to the EU average in these countries. (In Slovenia, it even exceeded the EU average.) However, unlike the two economic indicators, the financial benefits did not have a directly detectable effect on life expectancy.

The early 2020s meant a breaking point in socio-economic trends, not only in the post-socialist CEE region, but also in Europe and even globally. This was due to the economic recession that accompanied the global pandemic and the energy crisis that followed the outbreak of the Russian–Ukrainian war. These events, together with the prospect of further enlargement in the near future, have left their mark on the current budgetary planning and resource allocations in the EU for the period 2021–2027. It is too early to assess the long-term impact of the recent events on convergence trends within the EU. This will be a challenging research objective for the coming years.

### References

- Aidukaite, J. (2011): Welfare Reforms and Socio-Economic Trends in the 10 New EU Member States of Central and Eastern Europe. *Communist and Post-Communist Studies* 44(3): 211–219.
- Carrasco-Campos, Á. Moreno, A. Martínez, L-C. (2017): Quality of Life, Well-Being and Social Policies in European Countries. In: A. A. V. Boas (szerk.): *Quality of Life, Well-Being and Social Policies in European Countries*. Rijeka: InTech Open. pp. 137–149.
- Éltető, A. (szerk.) (2014): *Mind the gap. Integration Experiences of the Ten Central and Eastern European Countries.* Centre for Economic and Regional Studies of the Hungarian Academy of Sciences, Institute of World Economics. Budapest.
- Éltető A. Szijártó N. (szerk.) (2018): *Változó Európai Unió a változó világban*. MTA Közgazdaság- és Regionális Tudományi Kutatóközpont, Világgazdasági Intézet, Budapest.
- European Commission (2009): *Five years of an enlarged EU Economic achievements and challenges*. Letöltés dátuma: 2024. február 24, forrás: http://ec.europa.eu/economy finance/publications/pages/publication14078 en. pdf
- Gulácsi G. Kerényi Á. (2023): Magyarország konfliktusokkal teli elfordulása az Európai Unió derékhadától és az unió válaszintézkedései. *Közgazdasági Szeml*e 70(10): 1131-1172.
- Gill, I. S. Raiser, M. (2012): *Golden Growth: Restoring the Lustre of the European Economic Model*. (Washington, DC: World Bank Publications)
- Guriev, S. Melnikov, N. (2018): Happiness convergence in transition countries. *Journal of Comparative Economics* 46(3): 683–707.
- Hajdu, T. Krekó, J. Tóth, C. G. (2024): Inequalities in regional excess mortality and life expectancy during the COVID-19 pandemic in Europe. *Scientific Reports* 14, 3835.
- Helliwell, J. F. Huang, H. Norton, M. Goff, L. Wang, S. (2023): World Happiness, Trust, and Social Connections in Times of Crisis. Chapter 2. In: J. F. Helliwell, R Layard, J. D. Sachs J–E. Neve L. B. Aknin S. Wang (szerk.): *World Happiness Report 2023*. [ismeretlen kiadó]. pp. 29–76.
- Kerényi Á. (2018): Posztszocialista tagállamok az Európai Unióban. In Éltető A. Szijártó N. (szerk): Változó Európai Unió a változó világban. MTA Közgazdaság- és Regionális Tudományi Kutatóközpont, Világgazdasági Intézet, Budapest. pp. 81– 107.
- KPMG-GKI (2017): A magyarországi európai uniós források felhasználásának és hatásainak elemzése a 2007-2013-as programozási időszak vonatkozásában – Makrogazdasági elemzések összefoglalása. Letöltés dátuma: 2024. Február 24, forrás:

https://www.google.hu/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja &uact=8&ved=0ahUKEwjw1rqZg73VAhUFvhQKHaGACCMQFggqMAE&url=https

<u>%3A%2F%2Fwww.palyazat.gov.hu%2Fdownload.php%3FobjectId%3D69501&</u> <u>usg=AFQjCNFCLtdT-tY2GrK7B9gblsxqdxHnEw</u>

- Lengyel, I. (2016): Competitiveness of Metropolitan Regions in Visegrad Counties. *Procedia Social and Behavioral Sciences* 223(10): 357–362.
- Oblath, G. (2013): Hány év múlva? A konvergencia természetéről és időigényéről. *Statisztikai Szemle* (91)10: 925–946.
- Pipień, M. Roszkowska, S. (2019): Heterogeneity of Convergence in Transition Countries. *Post-Communist Economies* 31(1): 75–105.
- Tomka, B. (2020): Austerities and aspirations: a comparative history of growth, consumption, and quality of Life in East Central Europe since 1945. CEU Press: Budapest, New York.
- Vida, K. (2015): Past, present and future macroeconomic trends of the Visegrad countries: heading towards more convergence?. In: Túry, G. (szerk.): *Prospects of the Visegrad cooperation. Identifying converging and diverging factors. Institute of World Economics*, Budapest. pp. 143–168.
- Želinský, T. Mysíková, M. Garner, T. (2022): Trends in Subjective Income Poverty Rates in the European Union. *The European Journal of Development Research* (34): 2493– 2516.