ECONSTOR
Make Your Publications Visible.

A Service of

ZBW Leibniz-Informationszentrum Wirtschaft
Leibniz Information Centre for Economics

Gulácsi, Gábor; Kerényi, Ádám

Article

The catching up of the Hungarian economy in the European Union and Hungary's falling behind among the post socialist member states

Journal of Government and Economics (JGE)

Provided in Cooperation with:
Elsevier

Suggested Citation: Gulácsi, Gábor; Kerényi, Ádám (2025) : The catching up of the Hungarian economy in the European Union and Hungary's falling behind among the post socialist member states, Journal of Government and Economics (JGE), ISSN 2667-3193, Elsevier, Amsterdam, Vol. 18, pp. 1-16,
https://doi.org/10.1016/j.jge.2025.100148

This Version is available at:
https://hdl.handle.net/10419/340762

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.


https://creativecommons.org/licenses/by/4.0/

WWW.ECONSTOR.EU

Mitglied der Leibniz-Gemeinschaft

Journal of Government and Economics 18 (2025) 100148

Contents lists available at ScienceDirect

Journal of Government and Economics

journal homepage: www.journals.elsevier.com/journal-of-government-and-economics

The catching up of the Hungarian economy in the European Union and Hungary's falling behind among the post socialist member states☆

Gábor Gulácsi [a], Ádám Kerényi [b,*]

[a] The Force of Thought" Public Foundation, Hungary
[b] The By Force of Thought Foundation, University of Szeged, Hungary

ARTICLE INFO

Keywords:
EU convergence machine
EU 11
Catching-up performance
Governance failure
Institutional and resource allocational symptoms
Work-based state
Orbán model

ABSTRACT

For decades Hungary, like the other post-socialist Central-Eastern European countries, followed a general policy of establishing and strengthening the institutions of democracy and a market economy. While Hungary initially benefited from the EU's convergence mechanisms, including access to the single market and cohesion funds, its long-term catching-up performance has lagged behind its regional peers. However, since the elections of 2010, when Viktor Orbán returned to power, Hungary has done dramatic changes. This study examines the complex interplay of factors that have shaped Hungary's economic trajectory within the EU, focusing on two distinct periods: before 2010 and 2010–2023. Through international comparative analysis and country-specific hypotheses, the paper identifies critical governance failures and institutional weaknesses as primary reasons for Hungary's faltering convergence. In the early stages of Hungarian EU membership, the country's economic development was hampered by a serious failure of governance of social-liberal parties which also triggered an excessive deficit procedure. After 2010 the functioning of the new illiberal government caused the country to lose ground in the economic catching-up process within the European Union. This setback has manifested through two institutional and two resource allocation-related symptoms, which can be traced back to a more fundamental explanation: the core institutional architecture and political objectives underpinning the Orbán model. Our findings underscore the ongoing tensions between Hungary's domestic political agenda and the principles underpinning EU integration, raising concerns about Hungarian EU membership.

1. Introduction

In the three waves of the European Union's Eastern enlargement, 11 post-socialist countries (henceforth EU11) joined the Union: in 2004 the Czech Republic, Slovakia, Poland, Hungary, Slovenia, Estonia, Lithuania and Latvia, in 2007 Bulgaria and Romania, and in 2013 Croatia. According to the World Bank's classification, in 2004 only Slovenia belonged to the high-income group of countries; the others were considered middle-income countries. By 2024, however, all the EU11 countries had joined the high-income group (Metreu et al. (2024).

However, the economic development of the EU11 has been significant not only according to the World Bank measures. . They have also come much closer to the Union average based on the Union's two basic measures of development: the average GDP per capita of the EU11 (in PPS) countries increased from 59.0 % of the EU27 average in 2004 to 78.7 % in 2024. Similarly, in terms of a secondary measure of development—actual individual consumption (AIC) per capita (in PPS)—their average rose from 60 % in 2004 to 80 % in 2024.

This has been a unique catching-up process of EU integration, driven by the EU convergence machine. However, the convergence machine functions only temporarily; furthermore, its power depends on the development of the Union as a whole.

Yet the Hungarian catching-up results fall short of what most EU11 countries have accomplished, as in terms of the two significant standards mentioned above, numerous other member states have not only caught up with, but even overtaken, Hungary.

In this article we will first carry out an international comparative statistical analysis to introduce the common driving forces of catching-up with the Union shared by the EU11 and the basic data on how Hungary fell behind during the catching-up process. Then we will

☆ The first version of this study Gulácsi and Kerényi, 2025 was written in Hungarian for inclusion in the *Társadalmi Riport* volume. We are grateful to the editors, István György Tóth and András Gábos, for their valuable comments and suggestions.

* Corresponding author.
E-mail address: kerenyi.adam@eco.u-szeged.hu (Á. Kerényi).

https://doi.org/10.1016/j.jge.2025.100148

Available online 5 July 2025
2667-3193/© 2025 The Author(s). Published by Elsevier B.V. on behalf of The Academic Center for Chinese Economic Practice and Thinking, Tsinghua University and the Society for the Analysis of Government and Economics. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

outline the unique features of the Hungarian catch-up. Finally, we will offer hypotheses which provide country-specific explanations for this poor performance among EU11 countries.[1] In this part of our essay we will narrow our analysis down to the Hungarian economy. We will be trying to identify the path dependencies and challenges linked to the arrogation of power that played a part in the government's losing its way between 2001 and 2010, as well as in how Hungarian governmentalism (the Orbán model) led the country astray and left it in a marginal position within the Union.

2. On the economic catching-up of EU 11 countries

2.1. Catching-up patterns - catching-up concepts

The international literature on the analysis of convergence paths, economic modelling, supported by economic historical and statistical analysis of technologically backward countries and of those with low or medium incomes is very extensive. According to the neoclassical growth model, the relatively higher returns on investment in lower-income countries serve as the main engine of convergence (Solow, 1956). In this framework, state interventions aimed at reducing technological backwardness and promoting capital accumulation play a crucial role. The role of state intervention in the industrialization and capital accumulation of European countries and of Japan in the 19th-20th centuries has been discussed in analyses of economic history (Gerschenkron, 1962). Then, inspired by the example of the success of 20th-century Eastern Asian catching-up, the economic model of convergence driven by the forces of the free market emerged (Abramowitz, 1986). Since the 1990s, a wide range of econometric studies have been conducted to compare the development trajectories of countries at different levels of development. These analyses have provided empirical evidence for the so-called beta-convergence of growth paths. Finally the comparative analyses of "convergence clubs" of states and regions showing similar catching-up patterns and the statistical assessment of convergence in development has become an independent branch of research (Galor, 1996). However, the catching-up of the EU11 is a very special convergence path, incomparable to anything else. This is because these 11 countries have displayed a great deal more than mere similar patterns of economic catching-up. Their development is driven by the common engines of the European Union's convergence machine, which reach across national borders.

2.2. How the countries that joined during the eastern enlargement exploited the opportunities offered by the EU's convergence machine

The EU's convergence machine has two engines: a market-based engine through the integrating effects of the EU Single Market, and a budget allocation-based engine via the net EU transfers (Common Agricultural Policy and cohesion funds).

The long-term prospect of joining the EU influenced the development of Central Eastern European countries as early as the beginning of the 1990s. Besides managing the crisis caused by the collapse of the socialist system – and in many countries by the establishment of new nation-state frameworks -, every country implemented the establishment of market economy institutions, opening up to the EU Single Market, the influx of capital, and rule-of-law harmonization with EU legislation. At the same time these countries have been received also some EU financial support through pre-accession development programs.

2.3. The dual effects of joining the EU single market on the economy of new member states

From the mid-1990s, the EU11 were announcing their intention of joining the EU one after another, and accession negotiations and the actual accession processes were launched before the end of the decade. As part of the process, the transposition of Union legislation into national legislation was initiated. As a result of the successful conclusion of the harmonization of law, each country adapted the EU's unified legislative framework. Following accession, the Commission oversees the harmonization of the domestic legislation of all member states with Union legislation. Besides making recommendations, the Commission has another effective means to promote the implementation of necessary corrections: the so-called infringement procedures. According to the EU's 2024 Annual Single Market and Competitiveness Report (European Commission, 2024), the member state conformity deficit with regard to the unified Union regulations was very low: only 1.2 % on average. The continuously improved unified Union regulations, which eliminate internal barriers, have tangibly boosted commerce, and the flow of capital, services and labor force.

The tangible prospect of joining the EU Single Market, and then from 2004 onwards their actual accession, resulted in the massive influx of Western European enterprises, capital, technology and know-how into the Eastern and Central-Eastern European countries. Consequently, in the member states that joined during the course of the eastward enlargement, foreign-controlled enterprises became economically inevitable. By the end of the 2010s, their share in the production of GDP approached 50 % of all enterprises, surpassing by far the proportions that had emerged in the old member states.[2] In the case of foreign-controlled enterprises, the majority of the immediate investors were from EU countries, but even investors from outside the EU (the USA, Switzerland, Japan, and especially South Korea and China in the 2020s) set up enterprises that produced mainly for EU markets as well. (Fig. 1)

A further very notable effect of joining the EU Single Market is the migration of employees from the less developed Eastern member states to the more developed Western member states.[3]

According to research by Ágnes Hárs based on the EU LFS database, at the end of the initial phase of accession to the Union, considering the proportion of citizens aged between 15 and 64 from new union member states who were employed in the EU and the EEA, in 2010 one end of the scale was represented by the Czech Republic (1 %) and Hungary (1.3 %), from where the rate of migration was minimal, while the opposite extremes were Bulgaria (6 %) and Romania (11.2 %). After the expiry of the labor market derogation, in the first half of the 2010s, the rate of migration from every country increased rapidly, only to fall again in the second half of the decade. By the end of the decade, the rate of migration from Romania had reached almost 20 % of the working age population, from Bulgaria it was well above 10 %, followed by the Baltic states. By this time, migration from Poland, Hungary and Slovakia had risen to

[1] There is a general theory of growth to explain the tendency for less developed countries to be able to grow faster than more developed ones. This is what is called the catch-up effect (Abramowitz, 1986). On the other hand, to explain why Hungary fell further and further back in the order of development, why it failed to keep its position in this order among the countries in the region, a country-specific explanation is required.

[2] The Union ranking of the production weight of added value by foreign-controlled companies is headed by the group of Central-Eastern European member states. Of the old member states only Ireland, which fulfils special economic functions as the gateway to Europe for American companies, and Luxemburg – the European centre of financial organizations - are to be found in this group.

[3] On the process of migration and its effects there is no generally quoted database. KSH (the Hungarian Central Statistical Office), for example, does not supply data on Hungarians actually employed abroad, but only on migration and return (KSH, 2024). Péter Bucsky compiled data files on Hungarian citizens living in European countries on the basis of the national statistics of the target countries of migration (Bucsky, 2021). These data publications, however, are not the products of a standardized methodology. Finally, it was Ágnes Hárs (Hárs, 2020) who, using the EU's LFS unified online statistics, researched those Hungarian citizens of active age (between 15 and 64) who lived in one of the EU or EEA countries, and we rely on this research as well.

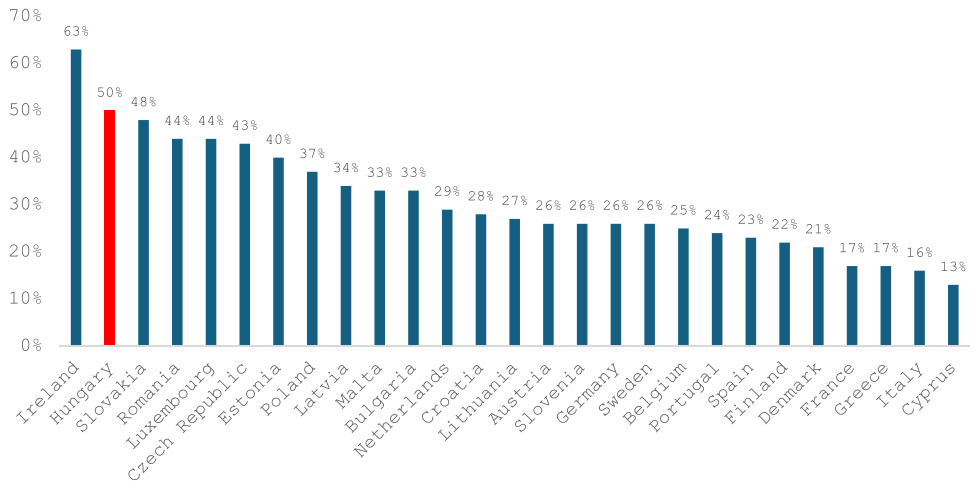


Fig. 1. Participation of foreign-controlled enterprises in the production of added value of all enterprises in EU member states at the end of the 2010s (%). Source: authors' own compilation based on Eurostat (2020).

about 5 %, while migration from the Czech Republic remained very low. (Hárs, 2020).

The effects of the significant levels of migration encouraged by the EU Single Market which accelerated economic catch-up (via reduction of domestic unemployment and social expenditure, as well as salaries being sent home from abroad) can exceed the negative effects of catching-up (loss of qualified work-force, worsening age structure) for as long as a generation, but by now the balance has begun to tip.

2.4. The catching-up role of net EU transfers

In the case of newly joined member states, the second engine of the EU convergence machine is the continuous net funding received from the EU budget (Fig. 2).

The funding received in proportion to their GDP by each country was determined by their eligibility for agricultural and cohesion support and the member state's efficiency of drawdown. As a result of the combination of these, up to 2022 Hungary received the second highest amount of funding. Union funds ensure resources to speed up economic growth without causing indebtedness. However, in order to use funds efficiently, well-functioning programming, executive and supervisory systems are also necessary, since without these 'the price of free money is corruption' (Tóth, 2021) and the senseless waste of funds.

2.5. The typical features of catching-up shared by the EU 11 countries

The best way for researchers to demonstrate the economic advantages brought about by the EU's individual steps and institutions promoting integration for member states is to suppose, counterfactually, the disintegration of these steps and institutions, and by applying 'gravitation models'[4] to quantify the fall in standards of welfare in member states that could be expected in the hypothetical absence of integrative measures.

The conclusions of model-based calculations are the following:

- the Union integration steps and agreements produce a welfare surplus even in those countries which are net contributors to the EU budget;
- 60 to 90 percent of welfare surplus can be linked to the EU Single Market;
- the smaller a member state (and its internal market), the more it profits from having access to the EU Single Market;
- in cases where catching-up member states also receive cohesion funds from the EU budget, the net Union transfers constitute an extra driving force, but only for a limited period of 20 to 30 years.

The development of member states which joined in the course of the Eastern enlargement does not imply the autonomous growth of a new sub-center of the world economy. The driving force behind the economic catch-up of Eastern and Central-Eastern European member state countries which joined from 2004 onwards was a convergence machine which guided their development along an upward path, partly through the integrating effects of the EU Single Market, and partly with the help of net transfers (especially cohesion funds).

The catching-up of the EU 11 is driven by two great common forces: the advantages of belonging to the Single Market and the cohesion funds. Important features of these driving forces include a self-limiting effect, the fact that the effects[5] of joining the Single Market surpass those of the cohesion funds, and that they do little to reduce disparities between the levels of development of various regions within countries:

[4] Numerous such model-based enquiries have been made. Of these, we use the results of the model proposed by Felbermayr et al. (2022), which examines the effects of the integration steps and agreements, as well as those of the EU transfers separately Fig. 3.

[5] E. g. although thanks to catch-up funding, since its accession in 2004 Hungary has received an annual net Union transfer equivalent to about 3.2 % of its GDP, it can be concluded on the basis of the afore-mentioned gravitation model calculations (replacing the exceptionally high net transfer impact of 2014 with this annual average effect)that the cumulative developmental effect of access to the single market on the economy is significant, even in the case of Hungary it is about 2.5 to 3 times that of the effect of net funds until the early 2020s. This ratio could have been sustained throughout the 2020s, based on the European Commission's estimates of the welfare effects of the Single Market and projected net transfers from the 2021–2027 Multiannual Financial Framework (European Commission, 2019), supplemented by expected Recovery and Resilience Facility transfers amounting to approximately 1.5% of GDP during the same period. However, following the launch of the rule of law procedure against Hungary, this balance has been significantly disrupted. Due to the suspension of a portion of EU funds and the minimal disbursement of recovery transfers, net EU transfers have dropped from the anticipated 4% of GDP to only 0.9%–1.2% as of 2023, while the welfare gains from the Single Market now exceed 10% of GDP.

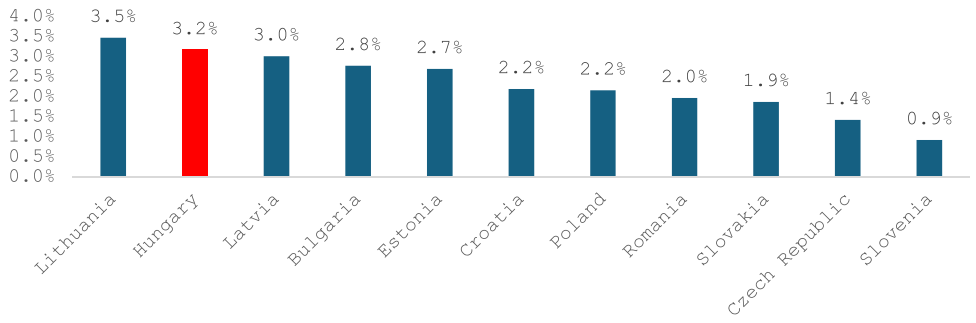


Fig. 2. Average annual net funding from the EU budget received by EU11 countries as a proportion of their GDP from their accession up to 2022. (%).
Source: authors' own compilation based on data by the European Commission and Eurostat: https://commission.europa.eu/document/download/45d0623a-529e-44d2-aae4–2ca9bac87ec3_en?filename=eu_budget_spending_and_revenue_2000–2023.xlsx; https://doi.org/10.2908/NAMA_10_GDP.

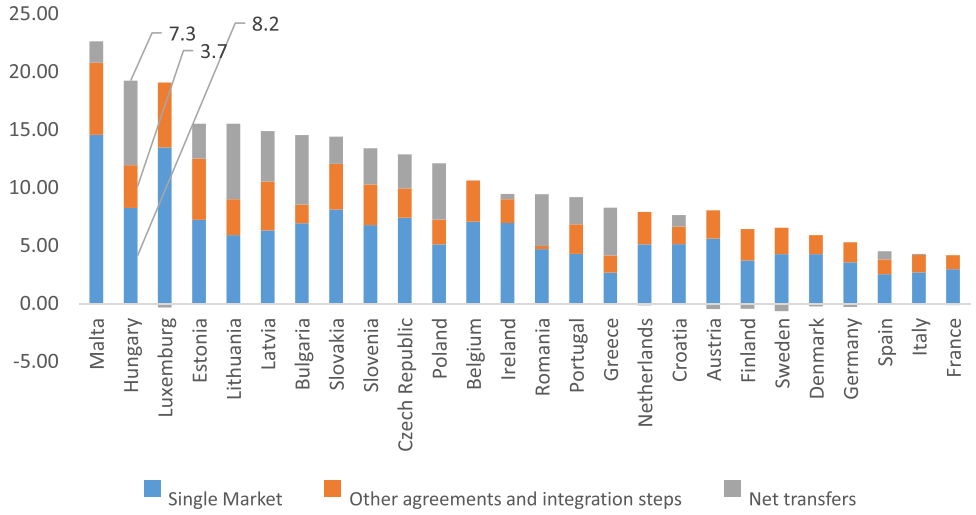


Fig. 3. The effects of (counterfactual) reversal of EU integration (gravitation model; cumulated decline in GNI; based on 2014 figures; %).
Source: own calculations based on Felbermayr et al. (2022).

- The effects of the Single Market in terms of the influx of capital and attraction of workforce can accelerate the growth of the EU 11 for as long as a generation. However, this growth-accelerating effect is reduced as technological catching-up advances; furthermore the emigration of the skilled labor force also begins to slow down growth.
- As more and more regions within the EU 11 countries reach 75 %, then 90 % and 100 % of the average level of EU development, their entitlement to EU cohesion funds is gradually reduced. The redistribution at Union level is negligible, but at member state level it is significant
- The catching-up effect of the Single Market surpasses that of the cohesion funds. As a result, growth poles emerge within the EU11; thus in most countries regional differences in development may even increase.

On the other hand, the effectiveness of the Union driving forces depends largely on changes in the EU's international competitiveness and rate of development. As in the wake of the 2008 global financial crisis the development of the EU has slowed down, the Union has lagged behind the global economy, and most of its member states must face grave demographic challenges. Thus the effect of these driving forces has weakened.

Table 1
GDP per capita of EU11 at union purchasing power parity as a percentage of the EU27 average in 2004, 2010 and 2023 (%).

2004		2010		2023	
Slovenia	87.8	Slovenia	84.6	Slovenia	91.8
Czechia	80.7	Czechia	84.4	Czechia	91.4
Hungary	***62.8***	Slovakia	76.7	Lithuania	86.6
Slovakia	58.6	***Hungary***	***66.1***	Estonia	79.9
Croatia	56.6	Estonia	65.6	Romania	77.9(p)
Estonia	55.9	Poland	62.7	Poland	77.3
Poland	51.5	Lithuania	61.1	***Hungary***	***76.7)(p)***
Lithuania	50.3	Croatia	61	Croatia	76.0(p)
Latvia	47.4	Latvia	53.8	Slovakia	73.8
Bulgaria	35.2	Romania	52.7	Latvia	70.4
Romania	34.7	Bulgaria	44.6	Bulgaria	63.8

Source: authors' own compilation based on Eurostat data; specific source of updated 2023 data https://ec.europa.eu/eurostat/databrowser/view/sdg_10_10/default/table last update 14/02/2025.
Note: Bulgaria and Romania have been members of the European Union since 2007, Croatia since 2013.

3. The Hungarian economy's catching-up performance in comparison to other EU11 countries

Following the Union's cohesion policy, we consider the main indicator of the relative economic development of member states in the Union, with reference to a given year: their GDP per capita as a percentage of the EU27's average GDP per capita at purchasing power parity.[6]

Hungarian GDP per capita as a percentage of the average GDP per capita in the EU27 member states at Union purchasing power parity in 2004 was 62.8 %, Following accession, in 20 years the country only came 12.6 percentage points closer to the Union average.

Table 2
Actual individual consumption (AIC) per capita of EU11 at union purchasing power parity as a percentage of the EU27 average in 2004, 2010 and 2023 (%).

2004		2010		2023*	
Slovenia	82	Slovenia	82	Lithuania	88
Czechia	74	Czechia	77	Romania	86(p)
Hungary	*64*	Slovakia	76	Slovenia	85
Croatia	60	Poland	70	Poland	83
Lithuania	58	Lithuania	67	Czechia	81
Slovakia	58	***Hungary***	*63*	Slovakia	77
Poland	57	Croatia	62	Croatia	76(p)
Estonia	56	Estonia	60	Estonia	75
Latvia	50	Latvia	56	Latvia	74
Bulgaria	40	Romania	56	***Hungary***	70(p)
Romania	40	Bulgaria	46	Bulgaria	*70*

Source: authors' own compilation based on Eurostat data: specific source of updated 2023 data: https://ec.europa.eu/eurostat/databrowser/view/sdg_10_10/default/table. Last updated 14/01/2025.
Note: Bulgaria and Romania have been members of the European Union since 2007, Croatia since 2013.

While prior to accession the Hungarian economy's catching-up rate was neck and neck with that of the region's other countries, following accession the rates diverged. The catching-up rates of the majority of the new Central and Eastern European member states overtook the results produced by the Hungarian economy, which lost ground: in the ranking of the 11 countries according to development, in 2004 Hungary was 3rd and in 2010 4th, while in 2023 it was only 7th (see Table 1).

Hungary's performance is even more disappointing if we consider the secondary index of Union development, that of actual individual consumption per capita (AIC) as a percentage of the EU27 average at Union purchasing power parity, *according to which in the EU11 group of countries by 2023 Hungary had fallen from the 3rd place in 2004 to the 10th and last but one place* (see Table 2).[7]Hungary's comparatively poor performance is also indicated (albeit not so strongly) by the measurement of other economic aggregates, such as differences in the changes in volume of member state GDP per capita.

In the following sections, we will first look at how the common features of catching-up within the Union are manifested in Hungary, then we will discuss the country-specific explanations of why Hungary is lagging behind in the process.

4. The manifestation in Hungary of the common features of catching-up within the union

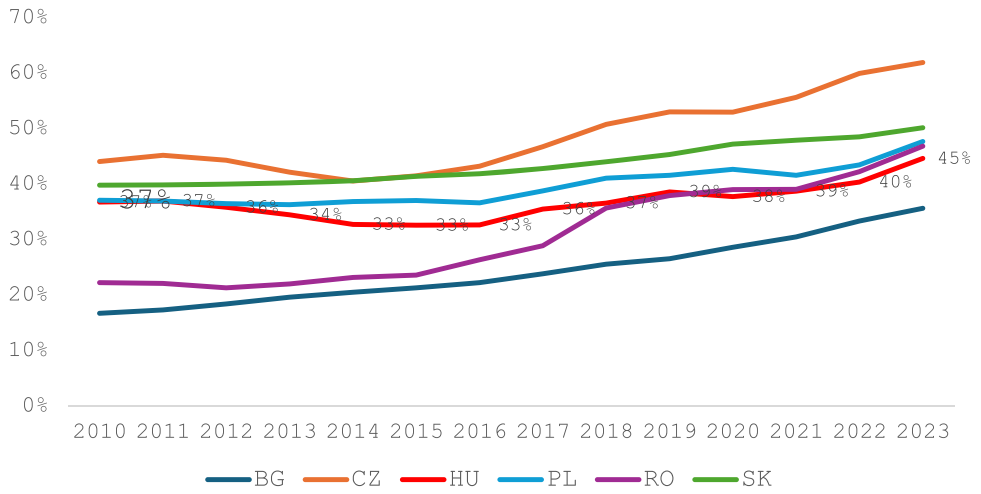
The main effects of access to the EU Single Market (free flow of goods, services and capital) in Hungary were, for a long time, identical to those experienced by the other newly admitted member states. After 2010, however, a few divergences can be observed:

- The unified EU regulatory environment which promotes the security of investors prevails in Hungary too: according to the latest EU competitiveness report, at the end of 2023 the rate of non-compliance in Hungary was 2.3 %, which, although it exceeds the EU average of 1.2 %, still does not bring the prevalence of the EU regulation into question.
- Low labor costs ensured wage arbitrage opportunities which promoted the transfer of labor-intensive production within the EU for foreign investors in Hungary as well. Furthermore, in the 2010s Hungarian wage levels, which were below the EU average, approached that average the most slowly in the region (Fig. 4).
- the Hungarian governments in power promoted the influx of capital, employing a variety of financial means.[8] After 2010, however, the government's policy on attracting investors became extremely contradictory. On the one hand, it offered industrial investors which it wished to invite exceptionally high direct state subsidies. On the other hand, it took measures to curb the expansion of foreign-controlled companies in certain sectors (energy, banking, telecommunications, building material supply, food retail),
- As a result of three decades of capital influx, by 2020 the economic weight of foreign-controlled companies in Hungary had become the second highest in the European Union. Investments by multi-national companies led to technological modernization and increased exports

[6] This is a cross-sectional indicator, which with reference to a given year shows a member state's GDP per capita as a percentage of the EU27's average GDP per capita by comparing the national GDPs at Union purchasing power parity (PPP) with the EU27 data. In order to mitigate the possible distortions of a comparison based on GDP (see, for example, GDP produced by non-resident employees), as a secondary indicator of member state development the real consumption per capita converted at purchasing power parity (AIC/head/PPS) and its value correlated to EU27 are used. Both indicators are only suitable to compare annual positions of development. A further weakness they share is that Eurostat can only modify the data of the last three years by applying data revisions (see Slovakian GDP/head PPT data).

[7] The in-depth analysis conducted by the Hungarian National Bank (MNB, 2024a) examines the Hungarian AIC data from various aspects. It does not, however, investigate the effect of three factors – the outstanding rate of taxation levied on consumption, the serious devaluation of the national currency, and the systematic reduction of welfare expenditure as a proportion of GDP.

[8] Direct foreign investments at the beginning of the 1990s were promoted with individual subsidy packages and offers of privatization, between 1994 and 2004 with tax breaks on normative corporate taxes, sometimes as high as 100%, and after the EU accession, and especially after 2010, with agreements to support investors based on so-called 'unique government decisions' [the Hungarian abbreviation is EKD], as well as with generally low corporate taxes.



. **4.** Average wage levels in a few EU11 countries in comparison with the EU27 between 2013 and 2022* (%). Source: Eurostat data:nama_10_fte_-custom_13,697,279 https://ec.europa.eu/eurostat/databrowser/view/nama_10_fte_custom_13697279/default/table?lang=en *Note: average wage levels in member states converted to Euros at the market exchange rate.

Table 3
Employees holding Hungarian nationality in EU and EEC countries in the 15–64 age group according to schooling, 2000–2023 (thousand people, %).

	2000	2005	2010	2013	2015	2018	2021	2023
Total (thousand people)	65	103,5	115,6	170	242,4	322,8	316,2	356,4
Primary (%)	18.2	16.8	14.9	13.3	14.0	13.8	16.8	19.1
Secondary (%)	52.0	57.0	50.2	52.0	50.7	52.9	44.7	43.4
Higher (%)	26.8	25.9	34.0	32.6	34.2	32.4	38.3	37.1

Source: authors' own compilation based on the relevant annual data from the EU LFS: https://ec.europa.eu/eurostat/web/microdata/european-union-labour-force-survey.

to the EU (Foreign-controlled companies were responsible for 80 % of Hungarian exports).

- At the same time, the integration of the economy's foreign-controlled corporate sector and progress beyond the assembly-workshop model had just started, when at the end of the 2010s even this process came to a halt. The government first promoted the establishment of a plant for Asian multinational tire manufacturing companies producing for the European market, then filled the country with battery assembly plants (also Asian-controlled), which produce the lowest added value in the value chain of electric cars. Finally, it granted an exceptional subsidy for the construction of a gigantic Chinese-owned electric car assembly plant.

As for the other effect of the EU Single Market, the free flow of individuals, the migration of Hungarian employees is considered to belong in the medium range compared to the other countries in the region. According to the findings of research by Ágnes Hárs (2020), the Hungarian trend differed from the other countries in the region not only in that it intensified only in the early 2010s, but also in that it was not the unskilled but the highly skilled employees who were overrepresented among migrants (Table 3).[9] The policy of creating new work places in the 2010s did nothing to reduce this tendency, as it was not intended to create 'good jobs', but rather strove to usher thousands of low-skilled workers into employment through 're-industrialization'.[10]

It is also possible to identify several country-specific characteristics of the way Hungary drew down and used the Union funds that it received. Between 2004 and 2023 Hungary was granted about 68 billion Euros of net Union funding, and after 2009 the net funds constituted 2.4–5.3 % of the annual GDP (see Appendix Figs. 8 and 9). The primary consequence of the transfers received was financial stability for Hungary, which was busy constructing the Orbán model. Since the Union transfers were paid in Euros, they boosted the Hungarian National Bank's foreign currency reserves, thus improving the country's liquidity. This was what enabled the exchange of foreign currency loans of households and the state into Forints between 2015 and 2017 and, through repayment of expiring foreign currency debts, the radical reduction of the net foreign debt. (see Fig. 6c).

Furthermore, Union funds reduced the burdens of the budget by an annual volume of a thousand billion Forints through EU financed agricultural funds and state investments.[11] Moreover, the extra income from VAT and personal income tax resulting from the completion of Union projects in itself played a crucial role in the termination of the Union excess deficit procedure in 2013.[12]

The most notable beneficiaries of Union funding were agricultural and rural developments in Hungary as well, which had access to about

[9] For comparison, the proportion of employees with higher education degrees in Hungary in 2010 was 25%, while in 2022 it was 32%.

[10] On 'creating good jobs', see Doshe et al. (2023) and for a Hungarian counter-example Weiler (2023).

[11] The received agricultural and rural development funds amounted to 500-800 billion Forints, while Union contributions to state investment expenditures relieved the burdens of the Hungarian budget by 2-3% of the GDP.

[12] See KPMG (2017) p.15.

30 % of funds (see Appendix Fig. 10). However, even this extraordinarily high non-repayable external fund, >20 billion EUR, was only enough to carry out the partial survival and limited modernization (large crop production estates) of this sector which, in the wake of the recession following the change of regime, failed to increase its output and employed a decreasing number of workers.[13]

70 % of Union funds, however, were intended to implement EU cohesion and structural policies in Hungary and thus promote directly and indirectly the growth and catching up of the Hungarian economy. Up to the beginning of the 2010s, the utilization of these funds was often characterized by difficulties of absorption in the other countries of the region as well (lack of projects, speedy centralization of the executive bodies in order to draw down the funds, developing national infrastructure instead of projects for less developed regions, low levels of efficiency and risk of corruption when supporting enterprises (Medve et al., 2022). After 2010, however, an essential difference emerged between the ways in which Hungary and the other new EU member states used funds: the corruption that characterized the Hungarian use of EU funds (e.g. in the scandalous cases of Elios Ltd., Közgép Ltd and the Felcsút Miniature Railway) and the over-charging revealed by the EU audit triggered widespread criticism. When faced with this as well, the representatives and advisors of the Hungarian government – besides implementing some of the changes required – started to transfigure the use of EU funds in the mass media, replacing the aims and standards of the common budget for member states with those of the Orbán governments.

The Orbán governments have always treated drawing down all available funds as a priority of its economic policy. However, while establishing its system, it was entering ever more deeply into conflict, in terms of both politics and values, with the 'core'[14] of the EU; eventually, the way Union funds were utilized in Hungary also triggered negative reactions in the EU:

- A series of warnings from member states and European parliamentary reports concluded that the autocratic changes taking place after 2010 were in conflict with the EU Charter of Fundamental Rights, especially with its state-of-law requirements (media, constitutional checks and balances, courts etc.) and required corrective measures,
- The Hungarian government, which had been successful in drawing down funds, was confronted in the middle of the decade by the EU's audit institution and net contributor member states with the fact that the risks of corruption in the use of EU funds in Hungary were unacceptably high,
- Finally, the non-inclusive approach to the migration crisis from 2015 onwards has resulted in sharp political confrontation between the EU and Hungary, then from 2022 the conflict between the Hungarian member state and the core members of the EU intensified and peaked in a series of vetoes in matters connected to the Russian-Ukrainian war.

The Hungarian member state's autocratic transformation and deliberate refusal to cooperate caught the EU completely off guard. It was not until the end of the 2010s that the EU developed a set of instruments stronger than mere reports and recommendations to use against member states that violated the rule of law and willfully refused to cooperate. With a qualified majority, the European Council adopted regulations making access to funds in the 2021–2027 budget (and Recovery and Resilience Facility (RRF)) conditional upon observance of rule of law. Furthermore, it enabled launching the rule of law conditionality mechanism for use against member states that systematically violate rule of law, in which certain funds are suspended and payment is made conditional on the implementation of the agreed corrective measures.

Such a procedure has so far been launched only against Hungary (on the initiative of the European Commission, in April 2022).

5. Hypotheses about the reasons why the Hungarian economy fell behind the economies of other EU11 countries

Having surveyed the ways in which the patterns of the Hungarian economy's participation in the Single Market and Hungary's use of EU funds differed from those of other countries in the region, let us move on to the main question of this study: what are the country-specific reasons why the Hungarian economy lost ground in the catching-up process during the period of its Union membership?[15]

As a result of differences in political structures, Hungarian membership of the Union, which started in 2004, can be divided into two periods: between 2004 and 2010, and from 2010 up to the present.

5.1. National indebtedness escalating as a result of serious 'governance failure', leading to austerity measures at the beginning of Hungary's EU membership

In the first decade of the 2000s, two changes of great importance were taking place in the Hungarian economy. On the one hand, the protracted EU accession negotiations were finally concluded in 2004: in the course of the European Union's eastern enlargement Hungary became an EU member, receiving a unique opportunity to join the community of developed countries from the semi-periphery of the global economy. However, the opportunities for development that came with EU membership were only partially exploited up to 2010. The Hungarian state administration found it difficult to cope with the challenges posed by accommodating to the EU's system of institutions, agricultural and cohesion transfers still arrived in limited quantities, and the deficit in the Hungarian budget was so high that at accession the Union's excessive deficit procedure came into effect against Hungary.

The Union's excessive deficit procedure, however, was the consequence of another Hungarian change of great significance. By the early 2000s, the need to raise the standard of living erupted with elemental force in a country that had overcome the recession caused by political and economic transformation and had achieved stability. This demand was channeled and amplified by the 2002 election campaign conducted by the Socialists, which focused on a 'welfare-oriented change of governance', and which brought them victory. From then on, the Socialist government found itself in a trap of their own making. The two successive 100-day programs of the Medgyessy government, which entered office in 2002, involved a 50 % increase in the salaries of state employees with immediate effect. Furthermore, the government proposed such an increase in expenditure on health, education and social services that the fiscal balance was seriously upset. Later, in the second half of the decade until 2010, the opposition Fidesz party also picked up on the demand for an improvement in the standard of living (HVG, 2017), when they first campaigned with the slogan 'we live worse now than we did four years ago', and then attacked certain symbolic stabilizing measures with so-called 'social referendums'.

The 100-day government programs rapidly led to a budget deficit

[13] Polish agriculture, which had access to a proportionately similar amount of funding, achieved much better results – see Gyévai, 2024).

[14] What we mean by the core of the EU is the grouping of member states which represent the motor of integration in the European Council, the party alliances constituting the majority in the European Parliament, the European Commission and the Court of Justice of the European Union.

[15] Having compared the economic development of the four Visegrád countries from the beginning of the 1990s to 2013, Gábor Oblath came to the conclusion that Hungary's slower development can be attributed to two causes: the stabilizing measures employed to correct the unsustainable growth that emerged in the first half of the 2010s, and the decline in the quality of economic governance (Oblath, 2014).

and unsustainable escalation of the national foreign currency debt. Pursuing a strict monetary policy, keeping Hungarian Forint interest rates high, the National Bank back-pedaled the budgetary easing, which led to the appreciation of the Hungarian Forint. The authorities further exacerbated this turmoil in governance by creating a loophole for retail lending, which had been drying up due to the high Forint interest rates: commercial banks were allowed to make foreign currency-indexed loans to private individuals as well. The result was an increase not only in the foreign debt burdens of the government but in those of households as well. Finally, in the autumn of 2008, the international financial crisis and the devaluation of the Forint closed the dual (government and household) debt trap, and the only escape lay in the introduction of a series of austerity measures and the reduction of household consumption. As a result of the unavoidable stabilizing measures taken in 2009–2010, the growth of the Hungarian economy ground to a halt.

According to our hypothesis, in the first period of Hungarian Union membership the country's economic development was hampered by misguided economic governance. Growth was halted by the austerity measures in the stabilizing programs intended to put a stop to the unsustainable indebtedness that had emerged, and that had pushed the country into a dual (national and private) debt trap (see Figs. 6a and 6c).

To sum up: economic governance went astray prior to 2010. The procyclical effects of fiscal policy were countered by the central bank through a tightening of monetary policy. Then, to make matters worse, the authorities lifted restrictions on foreign currency-indexed loans to individuals. The global fiscal crisis then closed the debt traps, and the unavoidable dire stabilizing measures halted growth for half a decade. However, the most serious consequence of the governance failures were not economic but political ones. The social liberal coalition lost the general election in 2010, and the Fidesz got overwhelming majority allowing them the adoption of a new constitution and the development of the Orban model.

5.2. Losing ground in the catching-up process under the illiberal governance of Viktor Orbán

In the period between 2010 and 2022 of Hungary's EU membership, the state's external fund-raising initiatives were exceptionally successful. The volume of non-refundable Union funds received exceeded 3 % of the annual GDP. At the same time, up to 2020 the booming international market greatly favored the country. Although up to 2012 the development of the Hungarian economy was hampered by the protracted stabilization, this was followed, up to 2019, by a development which fully capitalized on the exceptional opportunities for growth, without accumulating reserves. After this, however, from 2020 onwards, the Hungarian catching-up results, measured in GDP per capita and actual consumption, fell once again significantly behind the majority of the EU11 states.

Table 4
The utilization of internal resources of economic growth in EU11 countries between 2010–2023.

	Average annual change in employment rate (%)	Average annual investment rate (%)
Hungary	1,4 %	23,1 %
Poland	1,1 %	18,8 %
Latvia	1,0 %	22,9 %
Lithuania	1,1 %	19,9 %
Czechia	0,8 %	25,5 %
Bulgaria	0,9 %	19,5 %
Estonia	1,1 %	26,2 %
Slovakia	0,8 %	21,4 %
Romania	0,9 %	24,3 %
Slovenia	0,6 %	19,6 %
Croatia	0,6 %	20,2 %

Source: Eurostat (2025).

In order to explain how the country lost ground under the Orbán governance, we must identify factors which differed significantly between the Hungarian economy and those of most of the EU11, and which reduced Hungarian achievements, as measured by the Union's catch-up criteria.

As indicated by Mancur Olson „At the highest level of aggregation, there are only two possible types of explanations of the great differences in per capita income across countries that can be taken seriously. The first possibility is that…the poor countries are poor because they are short of resources. The second possibility is that national boundaries mark the borders of public policies and institutions that are not only different, but in some cases better and in other cases worse. Those countries with the best policies and institutions achieve most of their potential, while other countries achieve only a tiny fraction of their potential income." (Olson, 1996. p.5–6.)

Accordingly, first of all, it is necessary to examine whether Hungary's relative decline in position among the converging countries can be attributed to a lower utilisation of growth resources compared to other EU11 countries. As shown in Fig. 2, Hungary was among the leading recipients of net EU transfers as a percentage of GDP. In our earlier work (Gulácsi and Kerényi, 2023; Gulácsi and Kerényi, 2024), we demonstrated that even after adjusting post-2010 EU transfer data by the annual average change in the debt-to-GDP ratio, Hungary remained among the top-performing member states in terms of attracting external financial resources.

Table 4 presents a comparison of key indicators related to the internal utilisation of growth resources in the EU11 countries — specifically, employment rate increases and investment ratios. It can be observed that Hungary ranked in the top half of the group in both respects (1st in terms of employment growth and 4th in terms of the investment ratio).

Therefore, the explanation for Hungary's loss of position within the group of converging countries between 2010 and 2023 is not to be found in the volume of internal or external growth resources utilised, but rather in deficiencies in resource allocation and in the relatively low productivity and efficiency of resource use.

Consequently, in finding the explanation we shall move towards the differences in policies and institutions. In the period after 2010 we can identify two institutional components and two resource allocation components of the Orbán model's construction which are the symptoms of the Hungarian economy's failure to keep up with the catching-up of the Hungarian economy has not kept pace with the catching-up of most EU11 countries. These will be described in the following section of this paper.

5.2.1. The crippling of the institutionalized accountability of the government's economic decision makers

As a result of the excessive deficit procedure in effect since 2004 and the 2008 IMF-EU rescue package, in 2010 the Orbán government inherited a tight macroeconomic framework of conditionality, budgetary guardianship and rule-based economic governance. However, after the EU's rejection of the Orbán government's request to approve an increase in the deficit target sanctioned by the 2010 budget, on the one hand the government brought in unorthodox stabilizing measures, and on the other it launched a lengthy campaign aimed at getting rid of the EU-IMF guardianship. In this process, several provisions of the *Fundamental Law* adopted in 2011 were intended to reduce the national debt: this was regarded as the main aim. It was prescribed in the *Fundamental Law* that until the rate of national debt dropped under 50 % the National Assembly could only adopt a debt-reducing budget. Furthermore, until the target national debt was achieved, the possibility of normative constitutional control was reduced to a minimum in economic issues. Partly as a result of the maximization of the drawdown of the EU funds, the termination of the Union's excessive deficit procedure (in 2013) and the repayment of the IMF loan (in 2015) were completed, and as a consequence of the country's improving financial situation as well as the local IMF office was closed. .[16]

However, parallel with the termination of international guardianship over economic governance, economic constitutionalism and rule-based economic governance also declined. The special legal regimes first declared in March 2016, which have been extended at intervals ever since (first to deal with mass migration, then with the pandemic, finally the 'state of emergency' declared as a result of the war in neighboring Ukraine), have made it possible to depart from the annual budgets' aim of serving the reduction of the national debt, and most importantly for the government to rule by decree. Rule by decree took over the role of legislation and cleared the path for the abrupt adoption of measures which reached beyond the governmental sector, even with retrospective effect. And although these measures affected a wide range of citizens and companies, e.g. interim extra taxes with retrospective effect or expenses not included in the budget, their supervision by the constitutional court is not an option. The Fiscal Council was downgraded from a body with its own apparatus that carried out technical analyses and projections to a three-member advisory body. The State Audit and the Hungarian Competition Authority lost their independent supervisory authority and became bodies implementing government policy. In order to protect the independence of the Hungarian National Bank, the European Central Bank has had to intervene on several occasions (Benczes, 2024a). The decline of economic constitutionality brings about extra expenses, and raises the risk premium of investments in Hungary.

Debate on budgetary laws, which are repeatedly modified by government decrees when they are already in force, has become completely meaningless. Legislation and large-scale state projects (e.g. the construction of Budapest-Belgrade railway line financed by a Chinese loan and managed by Chinese companies) are implemented without prior professional and social consultation. The last time a comprehensive impact assessment on the use of EU funds was carried out was in 2017 (KPMG, 2017). Instead of giving explanations for its decisions, the government focuses on taking over more and more of the communication space.

Several economic disadvantages can also be linked to the crippling of the institutionalized accountability of decision makers. The politicians in charge of the economy keep quiet about the fact that as a result of the massive devaluation of the Forint after 2010 (among the EU11 it is the Hungarian national currency that has lost the most value during the country's EU membership). The decision-makers in the government bodies involved took no responsibility whatever for the fact that by 2023 the highest member-state inflation in the EU had appeared in Hungary, and by 2023–2024 the highest interest service as a percentage of GDP in the EU (Surányi, 2024). Finally, numerous individual government decisions were brought which led to wasted resources measurable as percentages of GDP, and where the decision makers strove to hold back information, rather than to give explanations.[17]

Nowhere else among the EU11 countries has rule by decree been introduced.

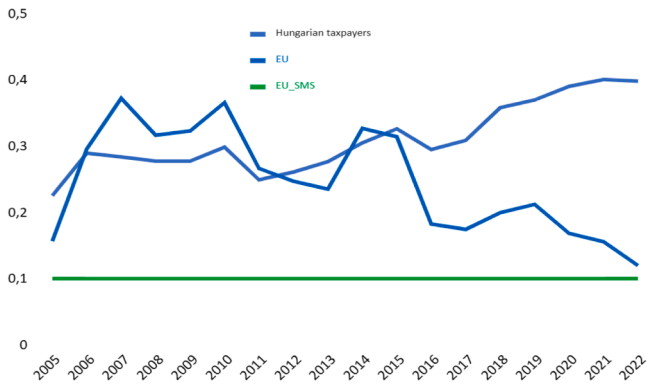


Fig. 5. Corruption risks of the public procurements financed by EU funds or Hungarian state budget (the proportion of public procurements with a single bidder; EU requirement: no >10 %). Source: CRCB (2022) Note: number of analyzed cases = 284,572.

5.2.2. The marginalizing of economic competition and the risk of systematic corruption affecting the use of budgetary development funds

The 2024 OECD country-by-country report highlights the inadequacy of economic competition as one of the reasons for the slower development of productivity in Hungary compared to that in neighboring countries. It accepts and makes use of the data provided by the World Economic Forum, which indicate that among OECD countries the dominance of a few companies over markets is most characteristic of Hungary (OECD, 2024. p.64). Among the negative consequences of the lack of competition are low levels of innovation, slow digitalization and stronger inflationary pressures. The illiberal governance of Viktor Orbán also restricts market competition directly when it treats economic segments as concessions (motorway maintenance and development, retail sales of tobacco), or when it announces the exclusion of foreign-controlled companies from certain sectors.[18] Nowadays, upcoming entrepreneurs do not aim at success through technological innovation, but through the establishment of fruitful links with the government. The ranking of the fastest growing technology companies testifies to this: Hungary has fallen behind the rest of Central Europe (Nyitrai, 2024).

It is the individual responsibility of Union member states to

[16] In mid-June 2024 the European Commission announced that after the post-Covid period of grace it recommended launching excessive deficit procedures against seven member states, including Hungary, in order to reduce budget deficit and the rate of national debt.

[17] To date, for example, no meaningful explanation has been published for the decisions to pour the profits of the Hungarian National Bank into a foundation, to prioritize the construction of sports stadiums, to implement the residency bond programme, to spend three hundred billion Forints on ventilators during the pandemic, to buy extra Russian gas, to carry on with the Bond Funding for Growth Scheme with very favourable interest rates for six more months after the National Bank launched a cycle of rate hikes, for the Hungarian Development Bank to finance the private capital funds of certain entrepreneurs close to government circles to the tune of five hundred billion Forints, or to purchase government property worth six hundred billion Forints.

[18] Previously, the government marked out energy, telecommunications and banking as sectors where Hungarian-owned companies could expand; nowadays it is large-scale retail companies and building material suppliers.

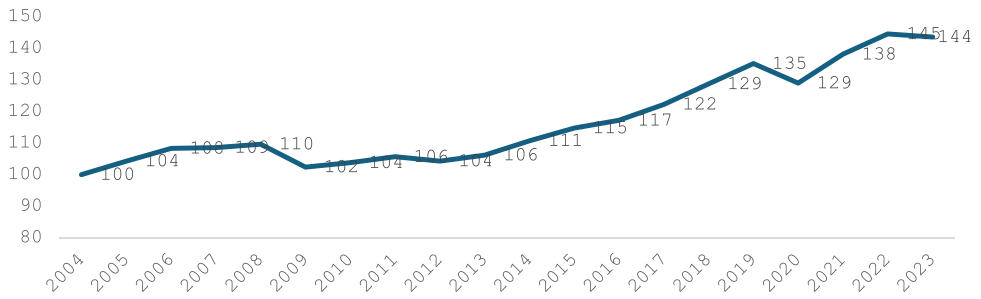


Fig. 6a. Changes in the volume of GDP in Hungary between 2004 and 2023 (2004=100). Source: authors' own compilation based on data by KSH (Hungarian Central Statistical Office) STADAT: https://www.ksh.hu/stadat_files/gdp/hu/gdp0004.html.

strengthen market competition and to reduce the risks of corruption when using non-refundable Union (and national) development funds. In this respect, however, the Hungarian government's performance is distinctly unsatisfactory. (TIM, 2021). Wherever it can, it operates through cronyism.[19] By the mid-2010s, even in the simplest corruption risk indicator – the proportion of single tenders – it was regularly reaching multiples of the 10 % threshold level that is considered acceptable in the EU. The increase in the income and profit rates of the specific contractors who were selected in public procurements without real competition, exceeded by far the average in the relevant sectors. Then, from the mid-2010s, but especially after 2022, thanks to pressure exerted by the Union, finally there was some change: the most easily checked corruption indices relating to public procurements involving EU funds improved. However, there was no improvement whatsoever in the use of Hungarian budgetary funds for public procurements (CRCB, 2022, see Fig. 5).

Moreover, a new, completely opaque channel for recapitalization has appeared: the financing of the private equity funds of entrepreneurs who belong to the inner circles of the government by the Hungarian Development Bank.

Nowhere else in the EU11 has competition been reduced and corruption risks increased to such an extent.

5.2.3. Economic strategy focusing on 're-industrialization' and on striving to increase the volume of exports, employment and investments

Unlike in the majority of EU11 countries, since 2010 there has been little change in the group of decision-makers within the government who are responsible for economic development in Hungary.[20] This, among other things, has made it possible for the government to persist in an economic strategy which is based not on the prerequisites of 21st-century international competitiveness, but on the unemployment crisis in the underdeveloped parts of the country. Instead of reinforcing the knowledge economy, they have supported 're-industrialization' with exceptional amounts of budgetary funding and with the devaluation of the currency. They have tried to make industry contribute the highest amount of value to the GDP in Europe, while the industrial investments were implemented in the low value-added parts of the value chain (establishment of assembly workshops instead of key component producing companies or R and D centers). They have disregarded the ongoing rapid growth of the service sector in swiftly developing economies, as well as the fact that by bringing in industrial operations under foreign control, they are creating capacities that require substantial imports, are wasteful and produce little added value. (see Bod, 2023; Csath, 2024; Győrffy, 2023). This strategy – following the 2011 Hungarian Development Plan and the 2016 Irinyi Plan - was stubbornly reinforced by the Ministry of National Economy (The Hungarian Government, 2024) and codified in a government document even in 2024. However, it elicited a negative response from the Hungarian National Bank, which published a very damning critique (MNB, 2024b).

Re-industrialisation in the EU11, focusing mainly on automotive assembly activities, has been a feature not only of Hungary but also of Slovakia, but by 2023 Hungary will have the lowest value added/gross value added ratio in the automotive sector.

5.2.4. Change of direction in economic policy: establishment of a 'work-based state' instead of a GDP-proportionate development of welfare-state functions

While between 2010 and 2022 Union funds which did not increase the national debt were pouring into the country, it became one of the main characteristic features of Hungarian budgetary policy for the state to spend less and less on social aims, education and health care in proportion to GDP every year – except for one (see Fig. 6b). The expenditure on health care in the Hungarian budget as a percentage of GDP remained at about 5 %, while that of the other countries in the region gradually rose above this level. Educational expenditure as a percentage of GDP – except for the temporary increase caused by the quickly depreciating pay rise linked to the "teachers' career path" program introduced in the middle of the decade – shows a falling tendency. Social transfers (among them pensions and family allowances) as a percentage of GDP declined massively throughout the period, but whatever funds were saved here were not spent on education and health care, but redirected to serve the purposes of company support, utility allowances and population policy.[21] What is more, this tendency to cut back and re-allocate did not change even when the budgetary balance was tipped at the beginning of the 2020s, although welfare expenses played no role in the fact that the budget deficit was yet again out of control. As a result of this process, considering both in-kind contributions and welfare allowances paid in money as a proportion of budgetary expenditure, Hungary has been trailing behind other EU member states. (Benczes, 2024b, p.13). Fig. 7 compares the welfare expenditures of the EU11 countries as a proportion of their GDP in 2010 and 2023, revealing the unprecedented fall in

[19] On the other hand, it must be added that while the risks of grand corruption are increasing, the authorities have successfully curbed various types of petty corruption, such the failure to issue invoices or the gratuities received by doctors.

[20] The head of government has not changed in Hungary since 2010. Moreover, the minister responsible for the budget has been the same since 2013, and so, since 2014, has the minister for foreign trade, who *de facto* manages industrial policy through investment incentives. In Romania, by contrast, there have been 15 different heads of government, 9 in Bulgaria, 6 in Slovakia and 4 in Poland, and there have been several changes among the government leaders responsible for budget and development policy.

[21] On what did the government spend the sums that were withdrawn from welfare budgets? First of all, on the highest proportion of company funding in the Union (granting investment subsidies to those who brought industrial investments and subsidizing the operations of public utility companies in order to reduce household expenses). Furthermore, to support the employment of public works employees, transfers for population and family policy, increasing the expenditure on sports, national identity policy and the churches. Finally in the 2020s, yet again on servicing the national debt.

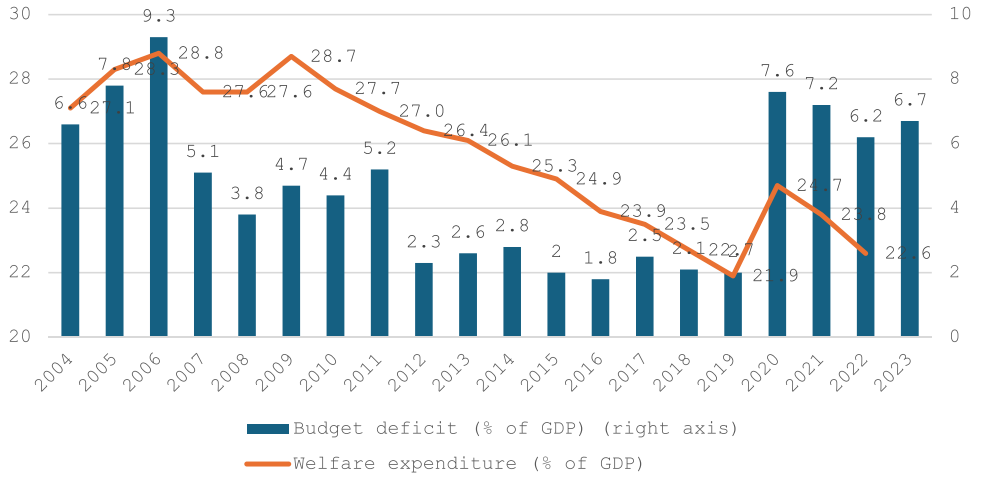


Fig. 6b. The (ESA) deficit of the budget according to union accounting, and welfare expenditure (social security, health care and education) as a percentage of GDP (%). Source: authors' own compilation based on data by Eurostat: https://doi.org/10.2908/GOV_10A_EXP; https://doi.org/10.2908/TEINA200.

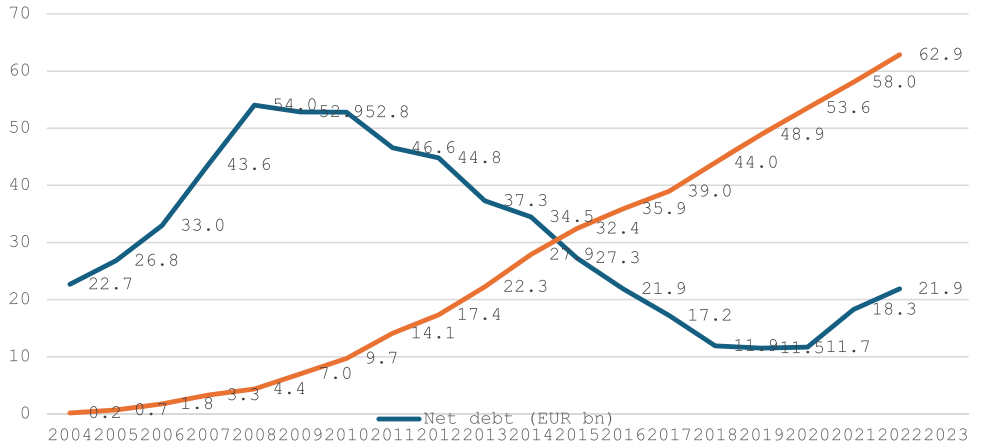


Fig. 6c. Changes in net external debt* and cumulative sum of net Euro transfers after 2004 (billion euros). Source: authors' own compilation based on data by the European Commission and the MNB: https://commission.europa.eu/document/download/45d0623a-529e-44d2-aae4–2ca9bac87ec3_en?filename=eu_budget_spending_and_revenue_2000–2023.xlsx; https://statisztika.mnb.hu/publikacios-temak/fizetesi-merleg-es-kapcsolodo-statisztikak/fizetesi-merleg_-kulfolddel-szembeni-allomanyok/eves-idosoros-adatok. *not including debt incurred by special purpose entities (SPE).

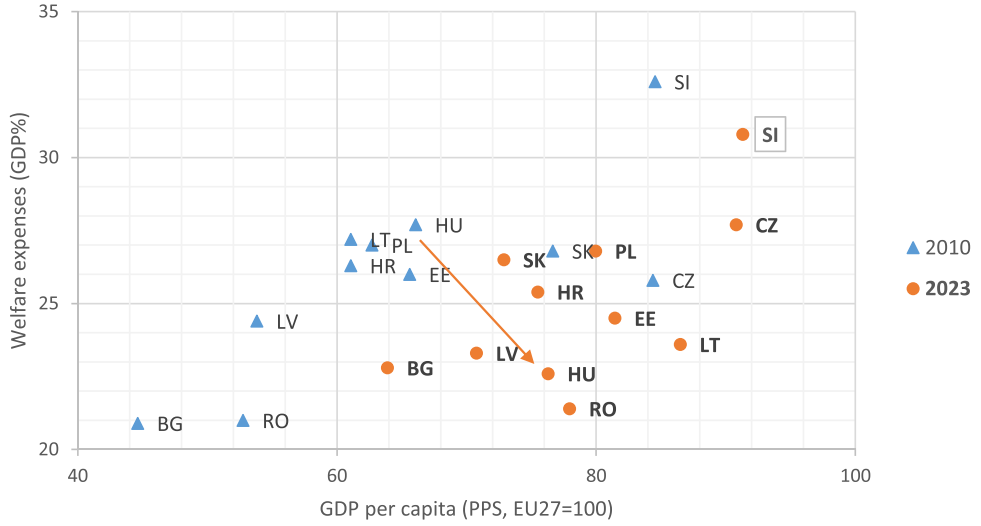


Fig. 7. Welfare (social, healthcare and education) expenses in the budget of EU11-countries as percentage of GDP and their GDP per capita compared to the average of EU27 in PPS in 2010 and in 2023. Source: authors' own compilation based on data by Eurostat: https://ec.europa.eu/eurostat/databrowser/view/sdg_10_10/default/table; https://doi.org/10.2908/GOV_10A_EXP.

Hungarian welfare expenditure.

Instead of developing welfare state functions in proportion to GDP, the Orbán government launched a new economic policy which focused on increasing employment[22] – and parallel with this, as early as 2010, a systematic and lasting shift in policy from improving the standard of living to promoting population growth. In order to achieve this, increasing employment became the primary aim of the economic policy (1 million more workplaces in 10 years): instead of benefits, unemployed people were offered paid community service work, progressive income taxes were replaced by flat-rate taxation, and the focus was shifted to taxes levied on consumption. At the same time, the separate ministries responsible for health care and education were abolished, local governments lost their health care and education institutions; many of these were transferred to the churches, while the rest were placed under centralized state management and financing. A uniform national curriculum was introduced in public education, offering little space for the development of young people's innovative abilities. Heads of the sectors helped to hold down salaries in social services, education and health care, union attempts to raise salaries were neutralized, then in order to deflate accumulated tensions compensatory increases in pay were implemented every half decade. The curtailment of public welfare services and transfers almost always involved three elements:(1) extreme centralization, (2) tight central standardization and (3) the reduction of funding to the bare minimum.

Partly due to the success of this 'work-based' economic policy, employment levels in Hungary in the 2010s surpassed those of the other countries in the region – which were themselves significant (although instead of the promised 1 million the number of workplaces only increased by 700,000 in 10 years). On the other hand, productivity barely changed in this period, rising less than it did in other countries and less than it had in the previous decade. Even in the 2020s, pro-government politicians campaigned under the slogan 'if there is work, there is everything; if there is no work, there is nothing.' This has come true inasmuch as the expansion of employment did significantly reduce dire financial deprivation.

However, reducing the welfare state, which is the foundation for the establishment of a 'work-based state', has a short-term negative effect on the rise in actual individual consumption as well and impedes the growth of GDP. Furthermore, its long-term effects are unambiguously disadvantageous: it leads to an increasing shortfall with respect to international standards of educational development and health care, to a lack of orientation towards innovation and enterprise, to very large numbers of doctors, teachers and social workers abandoning their professions and emigrating, and to slower improvements in qualification and health indices.[23]

5.2.5. *Tracing institutional causality*

A more profound causal account of the observed symptoms points to the fundamental institutional structures and political objectives of the Orbán model. Rather than aligning with any of the established variants of European capitalism,[24] the regime constitutes an Asian-inspired model within Europe—often described as a work-based state. At its core lies the autocratic restructuring of the political order, as theorized by Kornai (see eg. Kornai, 2015 and Kornai, 2016). In the domestically oriented segment of the economy, the Orbán government constructed a comprehensive patron-client network, while in the export-oriented segment, it sought to attract multinational corporations operating industrial assembly plants. In parallel with the consolidation of politically dependent domestic business elites, the government also aimed to broaden its electoral base—primarily through mass job creation targeted at low-skilled workers and through the introduction of administrative price controls.

The government's efforts to stimulate economic growth were not only facilitated by an exceptionally low international interest rate environment, but also by its ability to vastly exceed its own budgetary constraints. This was made possible by Hungary's EU membership, which provided the country with exogenous advantages and resources comparable only to the discovery of a major oil reserve. These included substantial EU transfers, access to the Single Market, and significant inflows of foreign direct investment—all of which were mobilized to their fullest extent, becoming a policy objective that superseded all others.

The result is an institutional setup that is politically nearly immovable, yet economically highly wasteful of resources. Entrenched political power builds supportive clientelist networks through the allocation of EU funds, providing monopoly profits to investment contractors selected outside of competitive procedures. Export-capable productive knowledge is imported via foreign direct investment, with the state offering cheap labour, distortionary subsidies, and tax haven–like conditions to attract firms. Agricultural and public utility investments are executed almost exclusively with EU funding, largely without regard to return-on-investment considerations due to soft budget constraints.[25]

The EU Single Market has also enabled the free movement of labour, leading to the outmigration of approximately 5 % of Hungary's working-age population to Western Europe. University-educated individuals are overrepresented among those who left, while the low-wage jobs created in large numbers within Hungary are increasingly filled, as of the 2020s, by Asian guest workers employed under tight state control.

According to Daniel Kelemen's concept of 'authoritarian equilibrium' (Kelemen, 2020), the EU's inability to stand up against the autocratisation of the Hungarian member state; what is more, the transfer of EU funds that reinforce the autocratic system, together with the emigration of citizens dissatisfied with their situation, created an equilibrium that favoured the autocratic member state.

However, this was only true in the first half of the 2010s; since then the series of conflicts between the EU and Hungary has escalated and has become impossible to resolve.

5.2.6. *Suspension of a significant part of EU funding destined for Hungary from 2022 onwards*

From April 2022, another obstacle made keeping up with the EU 11 more difficult: the launching of the rule of law conditionality procedure against Hungary brought about the suspension of a significant part of the funds destined for Hungary. The release of these funds was made conditional on measures being taken to address governmental breaches of rule of law.

However, the Hungarian government's corrective measures were found insufficient, in December 2022 the Council suspended 55 % of the funds earmarked for three operational programs of the 2021–2027 period. Moreover, the funding for Hungarian operations was suspended

[22] A speech delivered by the prime minister in 2014, which was to become famous, placed this economic-political change in an international perspective and gave it ideological status. He announced the new Hungarian vision for the future: the establishment of a 'work-based state' instead of a 'Western-style welfare state unfit for competition'. (Orbán, 2014).

[23] The decision-makers of the regime accept this loss of ground in order to expand their electoral support base. Thanks to the creation of large numbers of workplaces and the reduction of financial deprivation, the government has built up a very stable body of electors of 2-3 million people, consisting of entrepreneurs incorporated into the Orbán regime, employees anxious to keep their jobs, young people starting families and pensioners worried about their pensions as well as those with traditional religious and nationalistic inclinations. Thus, the system has successfully replaced those protesting urban voters who have stopped supporting them since 2010.

[24] For an overview of variants of the European capitalism model see Kuruczleki et al. (2022).

[25] About the concept of the soft budget constraint see Kornai at al. (2003).

in other Union programs (Reconstruction and Resilience Facility (RRF) and Erasmus+) as well. At the end of 2023 some of the suspended funds – in recognition of measures taken to improve the judiciary system, including the strengthening of judicial independence – were made available by the European Commission (Hungarian Helsinki Commission, 2024), but in 2024 no further progress was made concerning the question of suspended funds. By this time, the attitude of the Hungarian government, oscillating between pragmatic accommodation and confrontational response, had become completely schizophrenic.

A huge difference appeared between the cash-flow data on net funding for Hungary in 2023 issued by the European Commission in August 2024, and the data on the use of net EU transfers in the Hungarian National Bank's accrual-based Report on the Balance of Payments (MNB, 2024c) issued in April 2024. The former referred to 5.7 billion EUR, the latter to only 2.4 billion EUR. The difference involved cohesion funds and was caused by the receipt of large sums concluding the previous cycle of payments and of advance payments for the new cycle, but as yet there were hardly any approved drawdowns for the project accounts of the new cycle. According to a report by the National Bank, from 2023 net EU transfers, which had in previous years made up 2.5–3 % of GDP - although the possibilities for drawing down resources under the appropriations have been extended with the Recovery and Resilience Facility -, have fallen back to 0.9 % of GDP. It is increasingly probable that this loss of funds will be permanent, making it even more difficult to keep up with the EU11 in the catching-up process.

6. Hungary on the very edge of the European union - summary and conclusions

The driving force behind the economic catch-up of Eastern and Central-Eastern European member state countries which joined from 2004 onwards was a unique EU convergence machine.

The catching-up of the EU 11 is driven by two major common forces: the advantages of belonging to the Single Market and the cohesion funds. Important features of these driving forces include the fact that they have a self-limiting effect, that the effects of joining the Single Market surpass that of the cohesion funds and that they do little to reduce disparities between the levels of development of various regions within countries:

However, according to catching-up indices of EU (GDP/capita in PPS, and especially considering AIC/capita in PPS), Hungary has achieved weaker results than most Central and Eastern European member states.

In the early stages of Hungarian EU membership, the country's economic development was hampered by a serious failure of governance which also triggered an excessive deficit procedure. However, according to our hypothesis, after 2010 the functioning of the established Orbán regime caused the country to lose ground in the economic catching-up process within the Union through two institutional symptoms and two symptoms connected with the allocation of state resources or the state's structural policy:

- The loss of properly accountable governance
- The reduction of competition and the spread of corruption
- The prioritization of forced extensive growth and re-industrialization
- The establishment of a work-based state instead of the development of welfare functions

We have provided detailed empirical evidence for each of these four symptoms.

From an economic perspective, a more fundamental explanation for the observed symptoms can be found in the core institutional architecture and political objectives underpinning the Orbán model. Rather than aligning with any of the established and efficiency-enhancing varieties of European capitalism, the system represents a hybrid model inspired by certain East Asian developmental states—commonly referred to as a *work-based state*. This institutional setup is characterized by political entrenchment and rigidity, coupled with significant inefficiencies in resource allocation and systemic misallocation of capital.

The institutional factors that we focused on are essentially ways in which Orbán's political power is being reinforced, while the aforementioned state interventions in the field of resource allocation and economic strategy are intended to realize the regime's vision of a work-based state. Consequently, although it can be proved that this institutional setup hinders Hungary from keeping up with the EU 11, they constitute an irremovable element of the Orbán model. Nevertheless, this institutional configuration has been fundamentally misaligned with the institutional logic and expectations of the European Union. As a result from 2022 onwards, a new problem was added to the internal burdens of the illiberal governance of Orbán: the Union's rule of law conditionality mechanism was launched against Hungary.

The main source of conflict between Hungary and the core states of the EU is the ever-increasing discrepancy between the way the Orbán model functions and the member-state obligations that were undertaken when the country joined the Union. Being part of the EU Single Market is an essential element in maintaining the country's level of development. Furthermore, it is difficult to imagine how the Hungarian economy would be capable of achieving sustainable growth at an acceptable rate without the several billion Euros of annual net funding that it receives from the EU. However, the main political aim of the Orbán governments, which is to consolidate and perpetuate the power that it has exercised over the country since 2010, is ensured by an authoritarian political power which acts against the basic principles of the EU Charter of Fundamental Rights and which engages in a foreign policy that places it at loggerheads with the EU. In the Union as it now stands, this model is a foreign body that can only be accommodated for a limited period.[26]

And this casts an ominous light on Hungary's chances of catching up in the future, because it makes it likely that institutional characteristics that distort resource allocation and reduce efficiency, and the loss of some of the EU transfers which has been tangible since 2023 will become permanent.

In 2021, significant attention was drawn when a researcher from a think-tank affiliated with the ruling party suggested that it might be time to start considering a "Huxit" (Fricz, 2021). For now, the government has ruled out such a possibility. Instead of Huxit, the Prime Minister has advocated for "occupy Brussels"— referring to achieving a majority for Eurosceptic parties and dismantling integrative processes that go beyond intergovernmental cooperation. Meanwhile, some of his advisors have already begun envisioning the disintegration (collapse) of the EU.

CRediT authorship contribution statement

Gábor Gulácsi: Writing – original draft. **Ádám Kerényi:** Writing – original draft.

Declaration of competing interest

The authors declare no conflict of interest related to the content of The catching up of the Hungarian economy in the European Union and Hungary's falling behind among the post Socialist member states entitled paper. No financial, personal, or professional affiliations have

[26] According to Daniel Kelemen's concept of 'authoritarian equilibrium' (Kelemen, 2020), the EU's inability to stand up against the autocratisation of the Hungarian member state; what is more, the transfer of EU funds that reinforce the autocratic system, together with the emigration of citizens dissatisfied with their situation, created an equilibrium that favoured the autocratic member state. However, this was only true in the first half of the 2010s; since then the series of conflicts between the EU and Hungary has escalated and has become impossible to resolve.

influenced the research, analysis, or conclusions presented herein.

Appendix

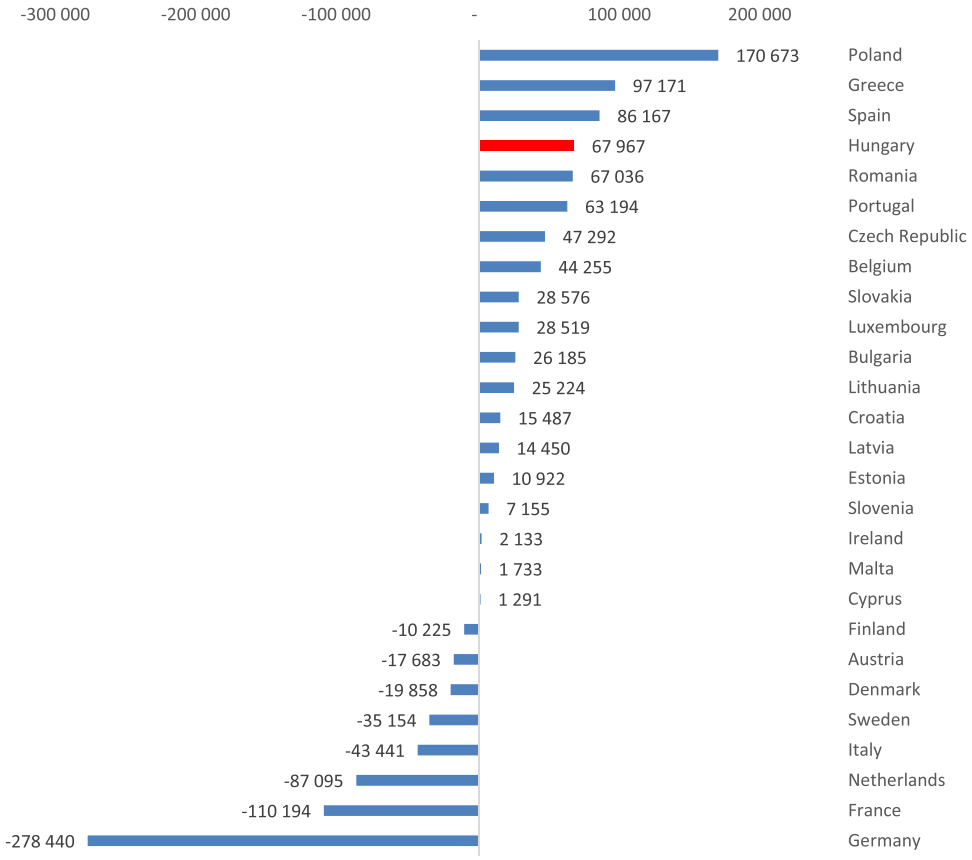


Fig. 8. Net contributor and net beneficiary member states of the EU budget between 2004 and 2023 (EUR M). Source: authors' own compilation based on data by Eurostat: https://commission.europa.eu/document/download/45d0623a-529e-44d2-aae4–2ca9bac87ec3_en?filename=eu_budget_spending_and_revenue_2000–2023.xlsx. Note: UK has exited the EU in January 2020. Between 2004 and 2019 UK was a net contributor of the EU budget by EUR 130,179 million.

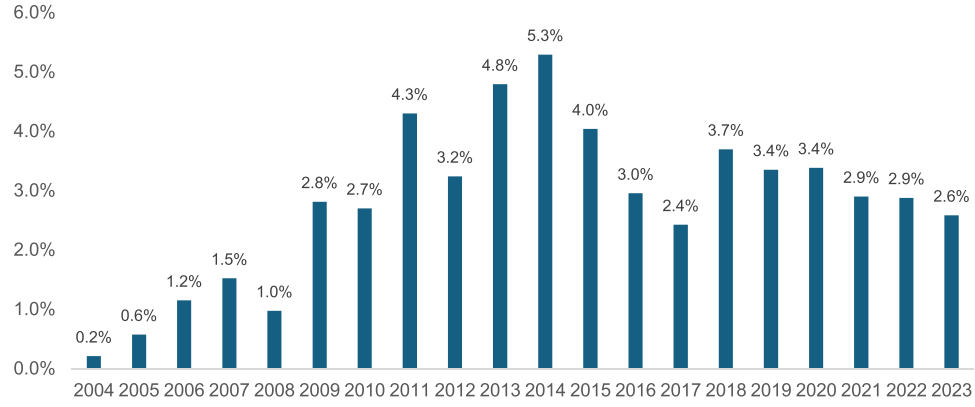


Fig. 9. Net transfers received by Hungary from the EU budget as a proportion of GDP (%). Source: authors' own compilation based on data by Eurostat and the Central Statistical office of Hungary https://commission.europa.eu/document/download/45d0623a-529e-44d2-aae4–2ca9bac87ec3_en?filename=eu_budget_spending_and_revenue_2000–2023.xlsx; https://www.ksh.hu/stadat_files/gdp/hu/gdp0079.html.

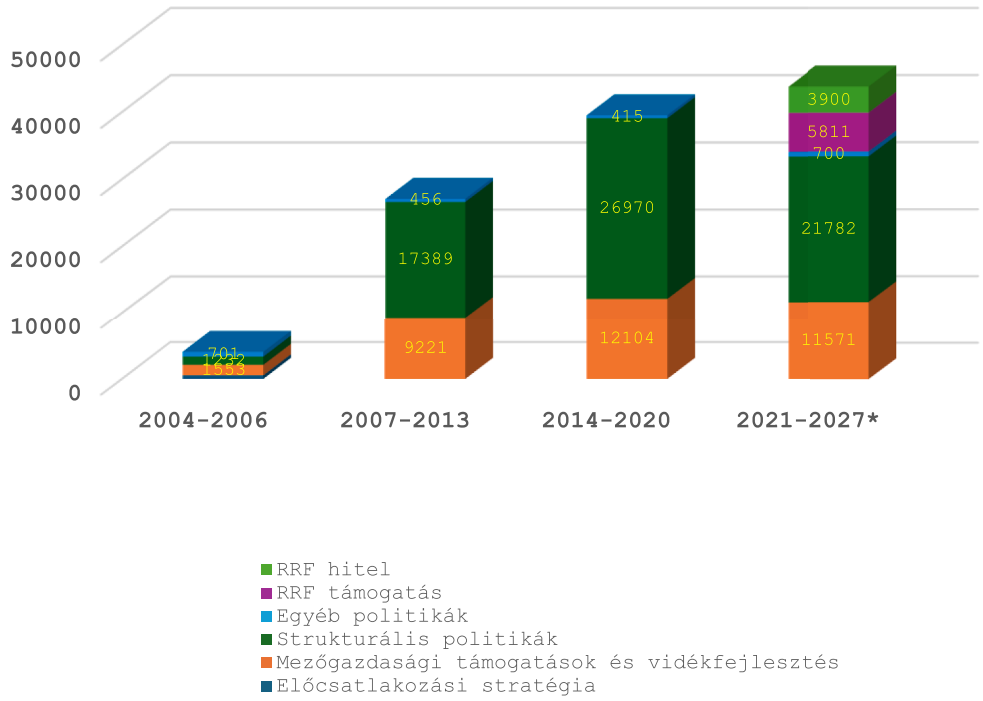


Fig. 10. Net EU transfers received by Hungary in the financial cycles between 2004 and 2020, and the budgeted net transfers between 2021 and 2027 according to the structure of the use of the funds. Source: 2004–2020 factual figures: authors' own compilation based on data by Eurostat; 2021–2027 budgeted figures: Heil (2024) *Note: budgeted2021–2027 figures updated in January 2024.

References

Abramowitz, M., 1986. Catching up, forging ahead, falling behind. J. Econ. Hist. 46 (2), 385–406.

Benczes, I., 2024a. Gazdasági kormányzás: válságban fogant, válságok foglya, [economic governance: conceived in crisis, captive of crises]. In: Bíró-Nagy, A., Medve-Bálint, G. (Eds.), (2024): 20 Év Az Európai Unióban – Magyarország Uniós Tagságának Közpolitikai Mérlege [20 Years in the European Union – Taking Stock of Public Policy During Hungary's Membership of the EU]. Osiris Kiadó – HUN-REN Társadalomtudományi Kutatóközpont [Centre for Social Sciences], Budapest, pp. 58–80.

Benczes, István, 2024b. Kelet-közép-Európa – Konvergencia az államháztartásban. Műhelytanulmányok [Eastern Central Europe – convergence in the state budget. In: Workshop Papers] 151, pp.1-21. Budapest: HUN-REN KRTK, Világgazdasági Intézet.

Bod Péter Ákos (2023): Régi idők mozija – újraiparosítás, energiaszuverenitás hiányában [back to the Good Old Days – *re*-industrialisation, loss of energy sovereignty]. Mfor. Hu. Nov. 3, 2023. https://mfor.hu/cikkek/benchmark/bod-peter-akos-regi-idok-mozija–iparositas-energiaszuverenitas-hianyaban.html.

Bucsky Péter (2021): Aki akart, már kiment [whoever wanted to leave has already left]; G7 (blog), Sept. 8 2021. https://g7.hu/kozelet/20210908/aki-akart-mar-kiment-csaknem-megallt-a-kulfoldon-elo-magyarok-szamanak-novekedese/.

Csath Magdolna (2024): A versenyképesség javításához növelni kell a termelékenységet [the key to improving competitiveness is to increase productivity]. Növekedés.hu.

CRCB - Corruption Research Center Budapest, 2022. Hungary: Corruption Risk and Competition in Public Procurement from 2005 to 2022. Anti-Corruption Day, Budapest cbrc.eu. Dec. 9, 2022.

Doshi, V., Spencer, H., Rodrik, D., 2023. Creating Good-Jobs Economy in the UK; The Economy 2030 Inquiry. Resolution Foundation & Centre for Economic Performance, London School of Economics, London.

European Commission (2019): EU budget for the future. Technical briefing on EU's next long-term budget, 5 November 2019; https://commission.europa.eu/system/files/2019-11/2019-11-05_eu_budget_technical_briefing_-_with_covers.pdf.

European Commission (2024): The 2024 annual single market and competitiveness report https://single-market-economy.ec.europa.eu/publications/2024-annual-single-market-and-competitiveness-report_en.

Eurostat, 2020. Foreign-Controlled Enterprises in EU: Value Added. Eurostat, 2020. https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20200414-1#:~:text=In%202017%2C%20foreign%20controlled%20enterprises%20accounted%20for%201.3%25%20of,it%20was%201.6%20pp%20higher%20than%20in%202016.

Eurostat (2025): Employment and activity by sex and age - annual data. lfsi_emp_a_custom_1600859.

Fricz Tamás (2021a): It's time to talk about huxit. This article was published online by the Magyar Nemzet (Hungarian nation) on 17, August 2021. https://visegradpost.com/en/2021/08/18/its-time-to-talk-about-huxit/.

Galor, O., 1996. Convergence? inferences from theoretical models. Econ. J. 106 (437), 1056–1069, 1 July 1996.

Gerschenkron, A., 1962. Economic Backwardness in Historical Perspective, a Book of Essays. Belknap Press of Harvard University Press, Cambridge.

Gulácsi, Gábor, Kerényi, Ádám, 2023. Magyarország elfordulása az Európai unió derékhadától és az unió válaszai. [published in english as Hungary and the European union: the drift towards disintegration]. Közgazd. Szle. 70 (10), 1131–1172. https://doi.org/10.18414/KSZ.2023.10.1131.

Gulácsi, Gábor, Kerényi, Ádám, 2024. A magyar gazdaság felzárkózása és pozícióvesztése az Európai unióban. [The Hungarian economy in the European union: catching up and losing ground]. Külgazdaság 68 (5–6), 40–75. https://doi.org/10.47630/KULG.2024.68.5-6.40.

Gulácsi, Gábor, Kerényi, Ádám, 2025. A magyar gazdaság az Európai unióban. felzárkózás, útvesztés, különút az unió peremén. Társadalmi Riport 2024. TÁRKI, Budapest, 2025.

Gyévai, Zoltán, 2024. Az EU tagság 20 éve a magyar mezőgazdaságban [20 years of EU membership in Hungarian agriculture]. In: Bíró-Nagy, A., Medve-Bálint, G. (Eds.), 20 Év Az Európai Unióban – Magyarország Uniós Tagságának Közpolitikai Mérlege [20 Years in the European Union – Taking Stock of Public Policy During Hungary's Membership of the EU]. Osiris Kiadó – HUN-REN Társadalomtudományi Kutatóközpont [Centre for Social Sciences], Budapest, pp. 237–255.

Győrffy, Dóra, 2023. Iparpolitika és akkumulátorgyártás magyarországon és svédországban [industrial policy and battery production in Hungary and Sweden]. Közgazd. Szle. 70 (3), 245–273. https://doi.org/10.18414/KSZ.2023.3.245.

Felbermayr, G., Groeschl, J., Heiland, I., 2022. Complex Europe: quantifying the cost of disintegration. J. Int. Econ. 138 (C). https://doi.org/10.1016/j.jinteco.2022.103647.

Hárs, Á., 2020. Elvándorlás, visszavándorlás, bevándorlás. jelenségek és munkaerő-piaci hatások [migration, return, immigration. phenomena and effects of the labour market]. In: Kolosi, T., Szelényi, I., Tóth, I.Gy. (Eds.), Társadalmi Riport 2020 [Social Report 2020]. TÁRKI, Budapest, pp. 115–145.

Heil Péter (2024): Az EU költségvetése magyar szemmel [the EU budget through Hungarian eyes]. Lecture at the event organised on Jan 8, 2024 at the Európa Klub.

HVG (2017): "A Kádár rendszer győzött" – volt fideszes vall első találkozásáról Habonnyal ['the Kádár regime has won' – an ex-Fidesz-supporter describes his first meeting with Habony]. HVG. hu April 18, 2017. https://hvg.hu/itthon/20170418_koromi_attila_publi_kadar_rendszer_habony_fidesz_gepezet .

KPMG (2017): Magyarországi európai uniós források felhasználásának és hatásainak elemzése a 2007-2013-as programozási időszak vonatkozásában - makrogazdasági elemzések összefoglalása [an analysis of Hungary's use of EU funds and the effect of these in the 2007-2013 programme period]; Magyarország Kormánya, Miniszterelnökség, Pályázati Portál, March 2, 2017. https://www.palyazat.gov.hu/magyarorszagi_europai_unios_forrasok_elemzese .

Kelemen, R.D., 2020. The European union's authoritarian equilibrium. J. Eur. Public Policy 27 (3), 481–499. https://doi.org/10.1080/13501763.2020.1712455.

Kornai, J., Maskin, E., Roland, G., 2003. Understanding the soft budget constraint. J. Econ. Lit. XLI (4), 1095–1136 dec. 2003.
Kornai, János, 2015. Hungary's U-turn. Capital. Soc. 10 (1–24) (2015).
Kornai, János, 2016. Még egyszer a rendszer paradigmáról. Közgazd. Szle. 63 (10), 1074–1119 (2016).
Kurucleki, É., London, A., Pelle, A., Végh, M.Z., 2022. The various European capitalism models: convergence and growth in the 2014–2019 inter-crisis period. Acta Oecon. 72 (4), 413–436 (2022).
Magyar Helsinki Bizottság, 2024. Eltékozolt lehetőségek. befagyasztott uniós források magyarországnak [Missed opportunities. Union funds for Hungary frozen]. Website Hung. Hels. Comm. Jan. 18, 2024 https://eufundshungary.helsinki.hu/.
Medve-Bálint, G., Martin, J.P., Nagy, G., 2022. Célellentétes következmények? Az uniós források hasznosulása Magyarországon [plans backfiring? consequences of the use of union funds in Hungary]. In: Kolosi, T., Szelényi, I., Tóth, I.Gy. (Eds.), Társadalmi Riport 2022. [Social Report 2022]. TÁRKI, Budapest, pp. 33–51.
Magyarország Kormánya, 2024. Magyarország nemzetközi versenyképességi stratégiája 2024-2030 [Hungary's strategy to achieve international competitiveness 2024-2030]. Nemzetgazdasági Minisztérium, Fehér könyv [Ministry for National Economy White Book]. Website of the Hungarian Government. April 15, 2024.
Metreu, E., Young, K.E., Eapen, S.G., 2024. World Bank Country Classifications By Income Level For 2024-2025. World Bank Blogs, 2024 June. https://blogs.worldbank.org/en/opendata/world-bank-country-classifications-by-income-level-for-2024-2025.
MNB (2024a): Miért alacsony a lakossági fogyasztás? Strukturális okok, ciklikus hatások [why is public consumption low? structural reasons, cyclical effects]. MNB Pareto Mélyelemzések, March 12, 2024. Online publication of the Hungarian National Bank https://www.mnb.hu/letoltes/mnb-melyelemzes-miert-alacsony-a-hazai-lakossagi-fogyasztas.pdf.
MNB (2024b): Magyarország nemzetközi versenyképességi stratégiája 2024-2030 - az Magyar Nemzeti Bank szakmai észrevételei [Hungary's strategy to achieve international competitiveness 2024-2030 – professional observations by the Hungarian national bank]. MNB, Pareto Mélyelemzések, May 14, 2024. Online publication of the Hungarian National Bank. https://www.mnb.hu/letoltes/mnb100-magyarorszag-versenykepessegi-strategiaja-2024-2030.pdf.
MNB (2024c): MNB Fizetési mérleg jelentés 2024. Április [Hungarian national bank report on the balance of payments, April 2024]. Online publication of the Hungarian National Bank, https://www.mnb.hu/letoltes/fizetesi-merleg-jelentes-2024-aprilis.pdf .
Nyitrai Tamás (2024): A versenyképességi reformok elmaradásával a hazai technológiai cégek teljesítménye is gyengülő tendenciát mutat [The lack of reforms promoting competitiveness tends to weaken Hungarian technology companies]. Online publication of the Hungarian National Bank. https://www.mnb.hu/letoltes/nyitrai-tamas-a-versenykepessegi-reformok-elmaradasaval-a-hazai-technologiai-cegek-teljesitmenye-is-gyengulo-tendenciat-mutat.pdf.
Oblath, Gábor, 2014. Gazdasági átalakulás, nekilendülés és elakadás. Magyarország makrogazdasági konvergenciája az Európai Unió fejlett térségéhez az 1990-es évek elejétől 2013-ig [economic transformation, upheaval and stalling. Hungary's macroeconomic convergence to the developed regions of the European Union from the beginning of the 1990s to 2013]. In: Kolosi, T., Tóth, I.Gy. (Eds.), Társadalmi Riport 2014 [Social Report 2014]. TÁRKI, Budapest, pp. 21–50.
OECD, 2024. OECD Economic Surveys: Hungary 2024. OECD Publishing, Paris. https://doi.org/10.1787/795451e5-en.
Olson Jr., M., 1996. Big bills left on the sidewalk: why some nations are rich, and others poor. J. Econ. Perspect. 10 (2), 3–24. Spring 1996.
Orbán Viktor (2014): A munkaalapú állam korszaka következik [the time of the work-based state is coming] (Speech, Tusványos 2014), Mandiner.hu, July 28, 2014. https://mandiner.hu/velemeny/2014/07/orban-viktor-a-munkaalapu-allam-korszaka-kovetkezik-beszed-tusvanyos-2014.
Solow, R.M., 1956. A contribution to the theory of economic growth. Q. J. Econ. 70 (1), 65–94. https://doi.org/10.2307/188451.
Surányi Gy. (2024): Magyarország útja a lejtőn [Hungary's downhill path], Portfolio.hu, Jan. 5, 2024. https://www.portfolio.hu/gazdasag/20240105/suranyi-gyorgy-magyarorszag-utja-a-lejton-660721.
Tóth I.J. (2021): Az ingyen pénz ára a korrupció [the price of free money is corruption]. G7, Oct. 3, 2021. https://g7.hu/kozelet/20211003/az-ingyen-penz-ara-a-korrupcio/.
TIM – Transparency International Magyarország, 2021. Fekete Könyv II. Korrupció Magyarországon [Black Book II. Corruption in Hungary], 2018–2022. Civitas Intézet – Transparency International Magyarország, Budapest. https://transparency.hu/wp-content/uploads/2022/01/Fekete_Konyv_II_2022.pdf.
Weiler Vilmos V. (2023): Csak robotként figyelem a futószalagot az akksigyárban [i'm like a robot: watching the assembly line in a battery factory]. Part IV. Telex, March 6, 2023. https://telex.hu/komplex/2023/03/06/akkumulatorgyar-12-ora-muszak-god-samsung-munkas-tarsadalmi-hatas-oktatas-vendegmunkas-szakszervezet-catl-fizetes.