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COMMISSION STAFF WORKING DOCUMENT

2025 Country Report - Hungary

Accompanying the document

Recommendation for a COUNCIL RECOMMENDATION

on the economic, social, employment, structural and budgetary policies of Hungary

{COM(2025) 217 final}

European Commission

Hungary

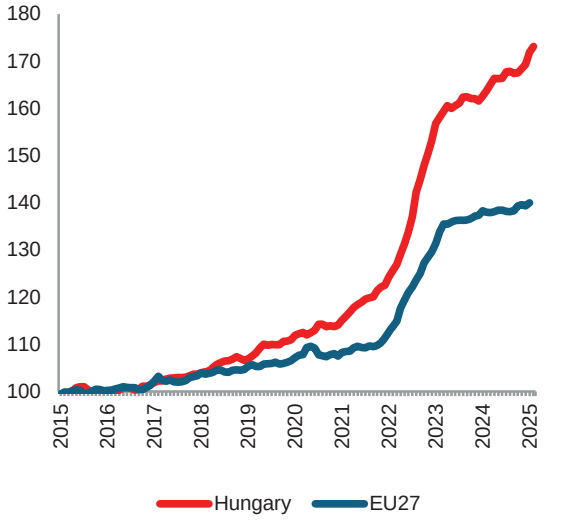
2025 Country Report

ECONOMIC DEVELOPMENTS AND KEY POLICY CHALLENGES

Growth is projected to rebound slowly in a context of high inflation

Economic growth was subdued in 2024. GDP grew by 0.5% in 2024 after a contraction of 0.8% in 2023. The sluggish GDP growth in 2024 was driven by weak external demand, a deterioration in business sentiment and lower investment. GDP growth is forecast to reach 0.8% in 2025 and to pick up to 2.5% in 2026, driven by improving demand and new capacities in manufacturing, notably in the electric vehicle industry. However, Hungary's economic outlook remains highly uncertain over the prospect of tariffs due to its high level of integration in global value chains.

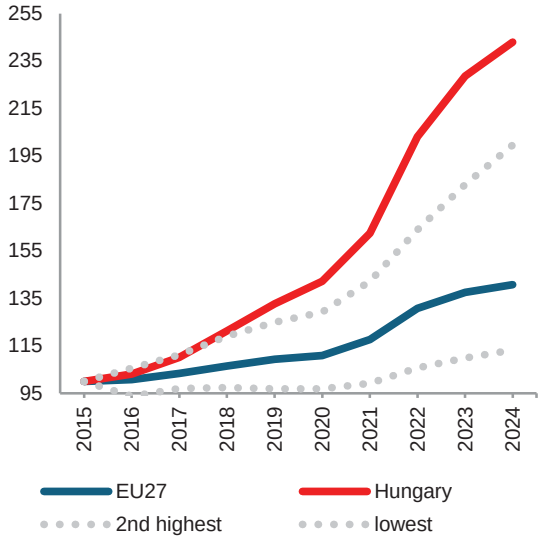
Graph 1.1: **Harmonised Index of Consumer Prices, 2015=100**



Source: Eurostat

Inflation picked up in early 2025 due to elevated underlying price pressures. Inflation declined significantly from a peak of 17.0% in 2023 to 3.7% in 2024, as the impact of earlier energy and food price increases and supply chain bottlenecks dissipated. However, inflation excluding food, energy, alcohol and tobacco remained high at 5.9% in 2024, while inflation picked up in the first quarter of 2025. Domestic demand and rising food prices are expected to keep inflation elevated in 2025. Inflation expectations also remained high, partly because Hungary went through the highest consumer price increase in the EU (Graph 1.1).

Graph 1.2: **Price index of construction investment, 2015=100**



Source: Eurostat

Investment dropped from a high level. Investment decreased by 7.7% and 11.1% in 2023 and 2024 respectively, the largest drop in the EU, while in 2024 the investment-to-GDP ratio was 23%. At the same time, Hungary registered the highest increase in construction prices in the EU

(Graph 1.2). A combination of high construction costs and an uncertain economic environment for firms have contributed to the recent investment underperformance. The decline in investment poses risks to medium-term growth perspectives.

Economic vulnerabilities remain

Hungary continues to face vulnerabilities, primarily over competitiveness and government financing needs. Policy action to tackle them has been limited. This finding was highlighted in the in-depth review that was part of the macroeconomic imbalance procedure Hungary underwent earlier this year ([1]). First, public debt increased in 2024, with debt-servicing costs and gross financing needs remaining at high levels. At the same time, the risk related to the high share of government bonds in banks' total assets has deepened due to tax incentives for domestic banks in return for purchasing government debt. Second, inflationary pressures have remained persistent, while rising labour costs have eroded cost competitiveness. Third, the economic recovery is slow and can be even slower as challenging external conditions and domestic policy uncertainty have continued to weigh on exports and investment. Fourth, while the trade balance improved in 2024, policies aimed at boosting domestic demand and substantial energy imports pose risks on the sustainability of the country's financial position vis-a-vis other countries. Finally, the in-depth review of Hungary highlighted that house prices accelerated in 2024. This was driven by strong demand, fuelled by easier financing conditions, generous housing policies and restricted supply.

Some government interventions are distorting the functioning of the financial market. As a way to boost domestic demand, Hungary makes widespread use of poorly targeted subsidised loans to households and corporations, as well as administratively controlled mortgage rates. The proportion of subsidised loans remains high compared to the pre-COVID level. These schemes can lead to capital being allocated in a suboptimal way, by financing projects with low returns and limited productivity gains. Such practices also limit the effectiveness of the central bank's policy to control interest rates.

With debt forecasted to remain high, debt-servicing costs and risks over the sustainability of government finances are elevated. Public debt rose slightly in 2024, to 73.5% of GDP, and is expected to decrease only gradually. At 7%, yields on Hungarian 10-year bonds remain high, reflecting expectations of persistent inflation. Hungary's debt-servicing costs are projected to remain among the highest in the EU, with the implicit interest rate on government debt close to 6% in 2025. Risks over the sustainability of government finances are low in the short term, but high in the medium term and medium in the long term, according to the Commission's debt sustainability framework (see more in Annex 1).

Hungary's achievement of budgetary targets is at risk. In 2024, the government deficit decreased to 4.9% of GDP, from 6.7% the year before, on the back of temporary cuts in public investment, revenue from taxes levied on companies in the energy, financial and retail sectors, and lower energy subsidies. However, in the absence of additional consolidation, the

([1]) SWD(2025) 127 final.

budgetary deficits are set to remain elevated, at 4.6% of GDP in 2025 and 4.7% in 2026, according to the Commission 2025 Spring Forecast. The 2026 budget law, submitted to Parliament on 6 May 2025, has revised the 2026 deficit target from 2.9% to 3.7% of GDP.

Net expenditure is set to grow strongly in 2025 but remain below the cumulative limit for 2024 and 2025 combined. In 2024, net expenditure([2]) in Hungary grew by 2.3% (see Annex 1). This increase was mainly driven by lower-than-expected growth in nationally-financed primary expenditure, as well as the partial phaseout of the windfall profit tax on the banking sector and special taxes on energy sector. In 2025, net expenditure is forecast by the Commission to grow by 6.1%, which is above the maximum growth rate recommended by the Council([3]). This increase is driven by the projected rapid growth in nationally-financed primary expenditure, in particular on public wages and operating expenditure. The cumulative growth rate of net expenditure in 2024 and 2025 taken together is projected at 8.6%, which is below the maximum rate recommended by the Council. The projected deviation is allowed under the conditions of the national escape clause on current projections for defence spending.

A realistic and stable medium-term budgetary framework would make Hungary's fiscal policy more credible and effective. As discussed in the 2023 and 2024 in-depth reviews and 2024 European Semester country report, Hungary's fiscal framework suffers from several weaknesses which reduce budget transparency while exacerbating the expansionary bias ([4]). The continued practice of adopting budgets early in the year (with one exception in 2024) and frequent revisions of the budgetary targets reduce reliability. In turn, this limits policy predictability and proper accountability. The introduction of the 'state of danger', in force since 2020 and extended repeatedly, lifted the requirement to publish a three-year budget plan, and increased the discretion in implementing annual budgets. Frequent changes to the annual budget law decrease predictability. Hungary's medium-term budgetary planning lacks multiannual spending ceilings that would make it easier for it to meet the requirements of the reformed EU economic governance framework. Two spending reviews on healthcare and housing- and family-related support were conducted in 2023-2024, but these have not been published and are not reflected in the budgetary planning so far. The mandate and operational capacities of the Hungarian Fiscal Council remain limited.

Budgetary oversight may be weakened further by new public fund management structures. In recent years, Hungary has set up an increasing number of funds (public interest trusts, central bank foundations,

([2]) Net expenditure is defined in Article 2(2) of Regulation (EU) 2024/1263 as government expenditure net of (i) interest expenditure, (ii) discretionary revenue measures, (iii) expenditure on programmes of the Union fully matched by revenue from Union funds, (iv) national expenditure on co-financing of programmes funded by the Union, (v) cyclical elements of unemployment benefit expenditure, and (vi) one-off and other temporary measures.

([3]) Council Recommendation with a view to bringing an end to the situation of an excessive deficit in Hungary (C/2025/5896) and Council Recommendation of 18 February 2025 endorsing the medium-term fiscal-structural plan of Hungary (OJ C, C/2025/1707, 18.3.2025, ELI: http://data.europa.eu/eli/C/2025/1707/oj

([4]) Fiscal policy is often called expansionary or 'loose' if it increases demand in the economy via higher spending and tax cuts.

etc.) to carry out public duties such as education and research. These bodies received substantial public assets and/or annual funding from the budget. However, they seem to operate without effective oversight and control mechanisms. Board members are nominated without transparent and objective selection criteria and without any need to demonstrate asset management experience. Moreover, they have significant discretion in investment decisions. As these funds are part of the general government sector, any management errors may impact government finances.

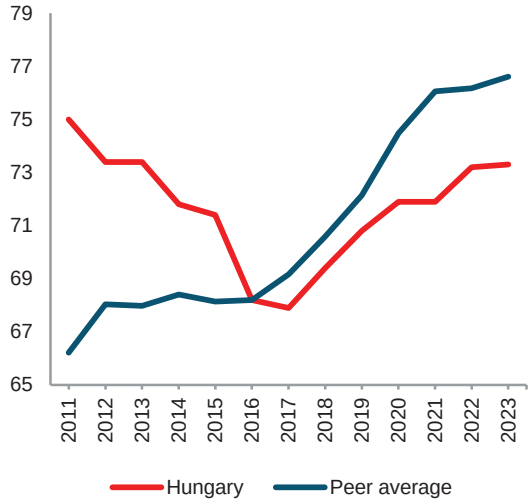
The impact of population ageing on government finances continues to be a challenge. The ratio of potential workers per person aged 65 or older is projected to drop from 2.9 in 2023 to 1.8 by 2070. Population ageing means Hungary's public spending-to-GDP ratio for pensions is facing one of the largest increases in the EU, set to rise 4.3 pps between 2022 and 2070 (see Annex 1). According to the Commission's projections, Hungary's public debt will also start to rise in a decade if ageing-related spending remains unaddressed. The design of the pension system also generates equity issues. These include large pension gaps between pensioners from different age cohorts and increasing expenditure on pensions for high-income individuals. As part of the reform roadmap included in Hungary's recovery and resilience plan, in July 2024 the OECD published a report, at the request of the Hungarian government, assessing the challenges and opportunities of the current pension system, and identifying policy options ([5]). However, Hungary's medium-term fiscal-structural plan states that the government does not plan any changes to the pension scheme in the near future.

Structural reforms are key to continuing income convergence

Labour productivity is one of the lowest in the EU and is at the same level as 15 years ago. This is in contrast with EU countries with similar income levels, whose productivity increased by 10 pps during the same period (Graph 1.3). While the income level has increased steadily, this has been driven by a significant increase in employment rather than an increase in skills and productivity levels. In 2024, the employment rate in the 20 to 64 age cohort was 81.1%, up 19 pps since 2010 (see Social Scoreboard in Annex 13). As a result, 720 000 more people are employed in 2025 than 15 years ago. The significant increase in employment largely came from low-skilled people entering the jobs market, which impacted average productivity. Further impetus to growth would need to come from innovation and investment in high value added activities, also taking into account regions' competitive advantages. However, future productivity growth may be held back by the weak quality of education, comparatively low levels of skills and lack of predictability in the business environment.

([5]) OECD (2024) Strengthening-the-Hungarian-Pension-System.pdf

Graph 1.3: **Labour productivity per person employed, EU-27=100**



(1) Peer countries: BG, EE, HR, LT, LV, PL, RO and SK
Source: Eurostat

A shortage of skilled labour continues to hamper growth prospects. As a result of strong employment performances in recent years, the issue of labour and skills shortages is becoming ever more pressing. The education system is not producing enough highly skilled workers to meet growing demand on the jobs market. Hungary's tertiary education attainment rate has not improved in the last decade and is now one of the lowest in the EU. Weak basic and digital skills among the disadvantaged and high early leaving from education limit employment prospects and skills development opportunities later in life. In addition, many highly skilled Hungarians leave the country, as the weak business environment fails to attract high value added investments. These factors hinder the establishment of high value added firms in Hungary.

The business environment remains a major barrier to innovation. Surveys regularly highlight obstacles such as unpredictable regulatory changes, an overwhelming presence of the State in domestic business transactions, hostility towards certain firms (foreign-owned in particular), limited government effectiveness, high perceived corruption and weak competition in key sectors.

Energy import dependence continues to weigh on the trade balance. Net energy imports decreased from 4.7% of GDP in 2023 to 3.4% of GDP in 2024, mainly due to a decrease in oil and gas prices. Net electricity imports as a percentage of domestic electricity supply also decreased, driven by increasing solar power generation. The national energy and climate plan sets a target to reduce the net import share of electricity to 20% by 2030; progress has been made towards this target. Nevertheless, to minimise the country's exposure to energy price shocks, more action is needed.

The benefits of economic growth have not been equally distributed. While the overall poverty indicators perform better than the EU average, poverty outcomes remained worse than the EU average among children in large families, low-skilled workers, older people, persons with a disability and the Roma population. The situation is relatively worse for the poorest parts of the population due to the low progressivity of the tax system, the decreasing impact of social benefits, unequal access to basic and social services and the poorly targeted tax, housing and energy subsidy schemes. By contrast, the highest income groups benefit from generous transfers. In addition, the benefits of economic growth are not evenly distributed across the regions, while the country's least developed districts continue to face multiple barriers to economic and social convergence.

Box 1: **Barriers to private and public investment**

Private investments in Hungary are supported by developed transport infrastructure, low corporate income tax, lax employment protection legislation, low labour costs and generous state subsidies. However, obstacles exist, in particular in the services sector:

- **Frequent regulatory changes** and **discretionary state intervention** make investment decisions less predictable. This impedes the growth of firms, in particular innovative and fast-growing ones. The high number of incorrectly transposed single market directives hinders the effective functioning of product markets.
- **Businesses face high costs** on energy and banking, sector-specific taxes and high interest rates. Access to finance is underdeveloped and firms heavily rely on state subsidies to make investments.
- **A shortage of skilled workers,** resulting from below-average performance in skills and education as well as a low tertiary graduation rate, acts as a barrier to high value added investments.

Public investment is facilitated by shorter authorisation and permitting procedures invoking the national interest. However, there are factors which hinder public investments:

- **Access to EU support** is limited mainly by the lack of effective mechanisms to protect the EU's financial interests.
- Persistent problems related to the **anti-corruption framework**, **weaknesses in control procedures**, **and competition in public procurement** (e.g. limited by framework agreements) result in ineffective allocation of public resources, higher prices and longer implementation timespans for investments.
- Budget constraints cause a **lack of clarity in investment objectives**, which results in uncertainty and delays in the implementation of investments.

The implementation of Hungary's RRP faces considerable challenges. At present, Hungary has fulfilled 0% of the milestones and targets in its RRP. It remains important to accelerate the implementation of cohesion policy programmes. The mid-term review offers opportunities to speed up progress and better address EU strategic priorities related to competitiveness, defence, housing, water resilience and the energy transition. While Hungary has signalled interest in leveraging the Strategic Technologies for Europe Platform under cohesion policy, Hungary can further support the development or manufacturing of critical technologies in the areas of digital and deep tech, clean and resource efficient technologies, and biotechnologies.

Box 2:

UN Sustainable Development Goals (SDGs)

Despite making progress on most of the SDGs, including all SDGs related to competitiveness (SDGs 4, 8 and 9), Hungary remains below the EU average on all SDGs apart from SDGs 1 (No poverty), 11 (Sustainable cities and communities) and 15 (Life on land). Moreover, Hungary is moving away from several SDGs on sustainability (2, 11, and 12).

Hungary is improving on most SDGs related to fairness (SDGs 1, 3, 4, 5, 7 and 8), but is moving away from SDG 10 (Reduced inequalities).

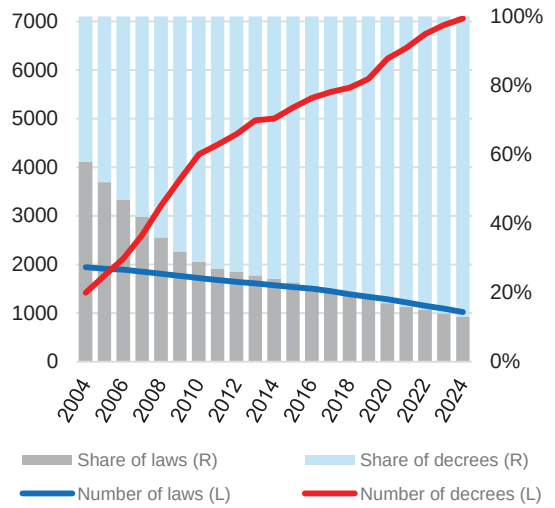
INNOVATION, BUSINESS ENVIRONMENT AND PRODUCTIVITY

Ineffective competition and high costs hamper innovation

The business environment in Hungary poses challenges for most companies. Several features of the business environment create an attractive location for investments, mainly for manufacturing. In particular, Hungary has a central geographical location, developed transport infrastructure, the lowest corporate income tax in the EU (9%), lax employment protection legislation, loose enforcement of environment protection rules and generous state subsidies. However, many industries face obstacles and the overall perception of the business environment is rather negative. According to the International Institute for Management Development's World Competitiveness Yearbook, Hungary ranked among the last in the EU in 2024. The 2024 European Investment Bank Investment Survey found that the most frequently mentioned barriers to investment are uncertainty about the future (72%), energy costs (60%) and the availability of skilled staff (51%). Other surveys mention the unpredictable and quickly changing regulatory environment, high inflation, tax rates, complex administrative procedures and corruption.

Businesses face a high level of regulatory volatility. Over the past two decades, the proportion of decrees compared to laws has surged (Graph 2.1). The frequency of legislative amendments increased as well, which makes long-term business planning increasingly difficult. While the volume of new legislation remained relatively stable, amendments doubled between 2004 and 2024 due to the increasing number of omnibus bills, including several draft laws on diverse subjects. This regulatory inflation forces businesses to dedicate more resources to legal monitoring and adaptation. For small and medium-sized enterprises this is even more burdensome.

Graph 2.1: **Legislation in force in Hungary**



Source: njt.hu

Regulatory unpredictability is further aggravated by limited stakeholder involvement. According to the OECD indicators of regulatory policy and governance, Hungary underperforms on public consultation and the evaluation of existing legislation. Since end-2022, public consultations on draft legislation have become regular, although stakeholders reported that there is no meaningful feedback. The public is not consulted on important draft laws, as they are often

tabled in Parliament by individual members instead of the government, thus circumventing the need to conduct a public consultation. In January 2025, the government introduced a new format for impact assessments. Summary impact assessment sheets are published for most draft legislation, but there is room to improve their quality and information content.

The government continues to widely use emergency decrees to regulate. The 'state of danger', which has been continuously extended for the last five years for various reasons, allows the government to amend laws through decrees. This bypasses parliamentary oversight and public consultation, introducing sudden, often major, policy shifts potentially disrupting normal business operations.

The ineffectiveness of the anti-corruption framework remains an obstacle to business. A far higher percentage of companies than the EU average consider corruption to be widespread and a problem when doing business. The Hungarian recovery and resilience plan includes several measures targeted at strengthening the anti-corruption framework. These include: (i) the establishment and operation of a truly independent and effective integrity authority; (ii) the adoption and implementation of a new medium-term national anti-corruption strategy and action plan; (iii) the strengthening of the rules on conflict of interest and asset declaration; and (iv) the possibility for judicial review of decisions of the prosecution service or investigating authority to dismiss a crime report or terminate criminal proceedings. It remains vital to ensure that these measures are timely and effectively applied in practice and in particular that the integrity authority can carry out its tasks effectively.

The lack of equal treatment of companies limits competition. According to the World Bank's Business Ready report ([6]), the market structure is concentrated and only a few firms compete in specific markets. Several services are entrusted to state-owned or private firms which operate without competition. Such services include textbook publishing, waste management, mobile payments, the cash-in-transit market, tobacco wholesale and retail trade, gambling, motorway construction and, from 2025, cybersecurity audits. The government discretionarily exempts mergers and specific investment projects from administrative procedures, creating an unequal playing field for firms and increasing the importance of connections with the state apparatus. The large-scale use of framework agreements in public procurement procedures also limits competition by locking in certain firms and helping them acquire a dominant market position. The number and value of framework agreements has increased sharply in recent years. In 2023, they exceeded the value of all other tenders and around 70% of them were concluded with a single tenderer.

The State is active in business transactions and crowds out private actors. In recent years, the State purchased an 80% share in Budapest airport (the transaction costs amounted to 2.5% of GDP) and a wide range of office buildings (1% of GDP). It also facilitated the purchase of several large companies such as the third largest telecommunications company (1.2% of GDP) and the creation of the second largest bank with subsidised financing. Various state interventions have been used to force – mostly foreign – owners to sell their firms, facilitating the creation of public

([6]) Business Ready.

or government-connected national champions.

The increasing presence of private equity funds creates new challenges. The number and size of private equity funds have increased significantly in recent years and reached more than 2.5% of GDP in 2024. This company structure is used in particular by individuals with links to the government as it ensures anonymity, similar to offshore companies ([7]). Private equity funds are increasingly behind companies winning public procurements and securing high value concessions, and have a strong presence in business transactions with the State. In addition, many private equity funds received public support through the national promotional bank. Currently, the Hungarian beneficial ownership register does not contain complete and accurate information on the ultimate beneficial owners of private equity funds. Banks and the Supervisory authority cannot rely on a verified central registry of ownership data to comply with prudential rules on loans to owners of the bank and company group loans if the borrower company or the bank is owned by a private equity fund. In November 2024, Hungary amended the legislation on private equity funds to complement the database on ownership. However, the database will contain data for already established funds only as of July 2026. Moreover, the tax authority cannot verify the data, and non-governmental organisations and investigative journalists with a legitimate interest do not have access to it.

Taxes targeting specific sectors increase the prices of services and goods. The cost of banking and energy for firms is one of the highest in the EU. Money transfers, except low value transactions, are taxed at a rate of 0.45% (up from 0.3% in August 2024). In the euro area, such transfers are free of charge. Banks can also pass on to customers the cost of the bank levy. These two taxes increased banking costs for households and businesses by 0.9% of GDP in 2024. Hungarian households spend 3% of their consumption expenditure on banking, compared with 0.8% in the euro area. A surtax amounting to 0.1% of GDP has been imposed on mobile telecommunication, which contributes to the relatively high cost of mobile telephone services in Hungary. From 2025, medium-sized and large firms in the services sector also have to pay a cybersecurity fee.

The retail sector operates in an unstable business environment. The tax burden in this sector disproportionately impacts larger, often foreign-owned companies. Conditions for opening and making changes to stores larger than 400 m^2 lack transparency. Retailers are also affected by administrative interventions in price setting, such as retail price caps, limits on sales margins and mandatory discounts. In September 2024, the European Court of Justice ruled that in 2022 and 2023 Hungary had breached single market rules by fixing a maximum price for the sale of certain agricultural products in the country and imposing an obligation to offer a specific quantity of such products for sale. In March 2025, the government introduced a 10% retailer profit margin cap for 30 food products to fight against inflation. A similar 15% margin cap was introduced in May 2025 for 30 personal hygiene and household cleaning products. Legislation on combating food waste contains a prohibits retailers from selling food products 48 hours before their expiry date, potentially disrupting the effective management of inventories. The mandatory online price reporting affecting food retailers (essentially the foreign-owned

([7]) See infringement case INFR(2023)2098.

ones) imposes an additional administrative burden.

Measures and high taxes in the retail sector decreased their competitiveness. After the highest food inflation in the last decade, the price of food almost reached the EU average in 2023. Country-specific factors accounting for high prices include large administrative burdens, the highest VAT rate in the EU (27%), a local business tax (1-2% of the retail margin) and a retail tax (amounting to 4.5% on turnover in 2024). The high tax burden is a competitive disadvantage, in particular for retail companies operating with low margins, such as food retail, fuel and e-commerce firms.

Inefficient R&D spending and limited access to finance hold back innovation

Stagnating R&D investment hinders Hungary's scientific and innovation performance. The 2024 European Innovation Scoreboard shows that while Hungary's innovation performance has improved over the years it is still performing poorly compared with the EU average. R&D intensity increased only marginally over the past decade and remains well below the EU average (1.4%, vs 2.2% of GDP in 2023). The main obstacles to innovation are the unstable public funding framework, the unpredictable business environment, high interest rates, insufficient access to market-based financing, the low level of high-skilled workers and low entrepreneurial skills among managers.

Low public R&D spending decreases Hungary's capacity for fundamental research. Public R&D spending, including in universities, is one of the lowest in the EU (0.4%, vs the EU average of 0.7%). The low public investment holds back scientific excellence. The ongoing reorganisation of research institutes, as well as unclear internal evaluation mechanisms, contribute to uncertain working conditions for researchers. Technology transfer offices are not yet sufficiently embedded in and accepted by academic circles, and spin-off channels are not yet well developed. As a response, the John von Neumann Program launched the renewal of the university technology transfer procedures. Cooperation between academia and businesses is mainly limited to incumbent firms with links to universities. While cooperation between innovative small and medium-sized enterprises has improved due to support programmes, in 2024 it was well below the EU average.

Business R&D benefits from generous government subsidies. Hungary provides the most generous subsidies to business R&D activity (0.3% of GDP in 2021) in the EU, through direct grants and tax allowances. However, the R&D spending of businesses decreased to 1% in 2023 from 1.2% in 2021. Moreover, design and patent applications as a share of GDP are one of the lowest in the EU and Hungary does not participate in the unitary patent system. Only a few, mainly large, companies innovate and benefit from the various subsidies. This is due to the heavy administrative burden and not always clear eligibility rules on innovation expenditure.

Entrepreneurship education is limited. There are several initiatives supporting the development of entrepreneurship skills. However, entrepreneurship education is used in a narrow sense in the national school curriculum, being limited to economic and financial literacy According to the Global Entrepreneurship Monitor, only a low proportion of respondents feel

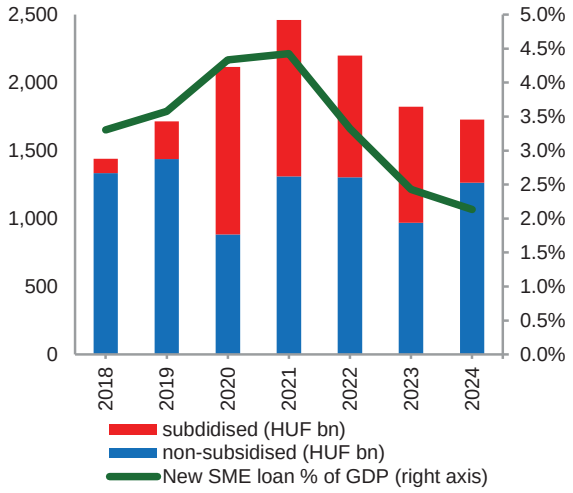
they have the skills and knowledge to start a business.

There is potential for better use of digital solutions by businesses. Digital infrastructure is well developed, enabling better connectivity than the EU average. Despite the significant increase in the take-up of advanced technologies, most businesses, in particular small and medium-sized ones, are not yet reaping all the benefits of these digital technologies. The proportion of small and medium-sized enterprises with at least a basic level of digital intensity is still lower than the EU average (53.2% vs 57.7%). As for digital public services for businesses, Hungary has not yet set up and notified eID schemes for legal entities. This means businesses cannot authenticate themselves to access public services provided by other countries.

The market-based financing of fast-growing small and medium-sized enterprises and start-ups remains limited. Venture capital funding amounted to 0.05% of GDP in 2023, below the EU average of 0.1%. 40% of venture capital investments came from state-owned funds drawing on national and EU funds. This is the highest proportion among EU countries in the OECD. While these programmes may temporarily boost venture capital financing, they cannot contribute to long-term market development. Moreover, high interest rates coupled with a frequently changing regulatory environment hinder the financing of innovative start-ups. Recent measures such as simplified approval procedures for lending by wealthy individuals who invest in early-stage companies and the use of convertible loans by start-ups may help make the market more dynamic.

The significant involvement of the State in business financing distorts the efficient functioning of the markets. In response to rising interest rates, the government has expanded subsidised lending schemes for firms. On average, the share of subsidised loans amounted to 38.5% of new loans for small and medium-sized enterprises in 2022-2024 (Graph 2.2). However, the effectiveness of these schemes is questionable, as they have not necessarily led to increased productivity ([8]) among loan recipients and create a cost to taxpayers. The overall state subsidies, including grants, to firms are also the highest in the EU, amounting to an average of 2.6% of GDP per year between 2017 and 2022 (EU average: 1.4%).

Graph 2.2: **New loans for small and medium-sized enterprises**



Source: MNB, Hungarian Central Statistical Office

Incentives skewed towards low-risk investments hamper the development of capital markets. Capital markets as channels for financing start-ups and highly innovative small and medium-sized enterprises are underdeveloped in Hungary. In 2023, the stock market capitalisation stood at 17.6% of GDP (EU average: 68%). Recent policy measures have further

([8]) Telegdy, Á. and G. Tóth (2024), A támogatott hitelezés hatásvizsgálata Magyarországon, Közgazdasági Szemle 71:113-130 (in Hungarian).

obstructed the development of capital markets. In 2022, the government began issuing tax-free long-term bonds for retail investors, while increasing the withholding tax on interest income from 15% to 28% (effective July 2023). Tax incentives on housing investment also allocate savings away from the capital market.

Complex administrative procedures and distortive sectoral taxes are further constraints

The regulatory burden imposed by certain procedures negatively impacts firms' investment decisions. For instance, administrative procedures for starting new businesses are complex and the minimum capital requirement can be an additional obstacle to start a business. Moreover, the World Bank's B-READY indicators suggest that there is potential to reduce the time required to obtain a property transfer, a construction-related permit, energy system connection and environmental licence. The requirement to register and pay fees to the Chamber of Commerce can also be burdensome for firms and could be made optional. At the same time, the government regularly simplifies administrative and tax procedures. For example, from 2025 the minimum net turnover threshold for audit purposes was raised from HUF 300 million to HUF 600 million, easing the requirements for smaller firms. The government is working with the Hungarian Chamber of Commerce and Industry to explore ways to reduce bureaucratic burdens, particularly regarding legal, tax and data reporting obligations for firms. Under the recovery and resilience plan, the government committed to reducing the number of taxes by 10% compared to 2023.

The increasing use of sector-specific taxes complicates the tax system and disproportionately impacts non-Hungarian firms. In 2023, revenues from sector-specific taxes accounted for 2.7% of GDP. This represents twice the revenue from corporate income taxation, despite the much narrower tax base of sector-specific taxes. The sectors most affected include banking, energy, retail, construction materials, insurance, telecommunication and utilities. These sector-specific taxes are often not levied on earnings and frequently target industries with significant foreign ownership ([9]) such as retail, cement, construction and ceramic materials. This leads to an uneven playing field that disrupts the functioning of the single market. In some instances, this additional tax burden contributed to foreign companies divesting their Hungarian subsidiaries. In a positive development, from 2025 some sector-specific taxes such as the surtaxes on telecommunication and air travel were phased out. However, this does not significantly reduce the overall distortive impact of sectoral taxes.

([9]) See infringement cases on retail tax (INFR(2024)4022) and on building materials (INFR(2022)4009).

DECARBONISATION, ENERGY AFFORDABILITY AND SUSTAINABILITY

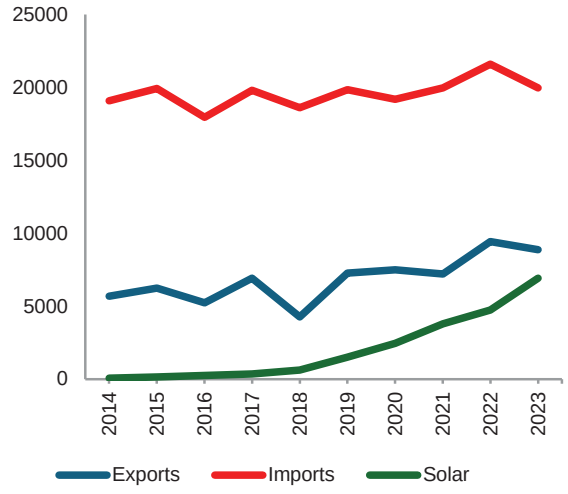
A well-functioning energy market is key for competitiveness

High dependence on Russian fossil fuel poses a security-of-supply risk. Hungary continues to heavily rely on Russia for fossil fuels (in 2024 more than 70% of natural gas and more than 80% of crude oil consumed was of Russian origin) and for nuclear energy, although some steps have been taken to diversify supply. As Hungary is a land-locked country, gas and crude oil arrive through pipelines. However, sanctions and interrupted commercial relationships between Ukraine and Russia and damage to infrastructure may make Russian fossil fuel products inaccessible. Despite these risks, Hungary's efforts to shift away from Russian dependence are slow. Hungary acquires significant quantities of natural gas from Russia, amounting to about 7 billion cubic metres in 2024, of which about 4.5 billion cubic metres under a long-term gas contract.

Without more system flexibility, fast deployment of renewables fails to reduce reliance on electricity imports. Domestic electricity generation by solar power increased from 0.2% to 25% in electricity production between 2014 and 2024, which is the highest share in the EU. This increased exports during sunny hours but cannot replace import needs during peak consumption periods. As a result, the energy balance has improved in the last decade, but gross imported electricity did not decrease (Graph 3.1). Moreover, the tax on energy producers makes import prices more competitive.

Generous subsidies were key in the expansion of solar energy generation. Solar energy generation capacity expanded due to: (i) the net accounting of residential solar energy generation and the electricity use of the same household; (ii) guaranteed feed-in tariffs for commercial solar power plants (KÁT and METAR); (iii) 100% grant support under the recovery and resilience plan for residential solar panels; and (iv) other subsidy schemes. The subsidised household energy prices (electricity is less than 10 eurocent/KWh, vs an EU average of 32 eurocent/KWh in 2024), and electricity feed-in tariffs (1.2 eurocent/KWh) are low. This makes households' renewable and energy-efficiency projects financially unattractive without generous subsidies.

Graph 3.1: **Electricity imports, exports and solar production in Hungary, in GWh**

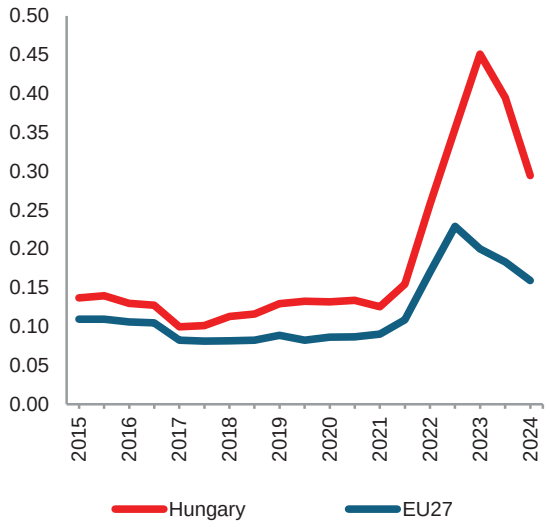


Source: Eurostat

The extreme volatility of the wholesale electricity price over the course of individual days points to a need for improved grid infrastructure, storage and flexibility solutions. There are more and more hours with negative prices during solar peaks and high prices at solar off-peaks, resulting in extreme price volatility over the course of individual days. The fast deployment of solar power plants was not supported by the necessary flexibility solutions.

Currently the electricity grid network lacks ample classic and smart grids, and storage infrastructure. The RRP and other EU programs include measures on grid development and storage, the implementation of which are crucial. The time taken to connect a utility-scale renewable energy source to the grid is six years on average, which is higher than the EU average of four years. The use of wind energy in electricity production is well below the EU average and is unable to adequately contribute to the electricity system's balance. Household consumers have limited access to dynamic pricing, and the roll-out of smart meters is low (below 10%), also impeding flexibility. The implementation of the reform on dynamic pricing and the measures increasing the use of smart meters included in the recovery and resilience plan should contribute to more flexibility. Decarbonisation measures and an expansion of electricity-based manufacturing (in particular batteries) are expected to massively drive up demand for electricity.

Graph 3.2: **Electricity price for firms, EUR per KWh**



(1) Excluding taxes and levies, in purchasing power standard (PPS), consumption from 500 MWh to 1999 MWh

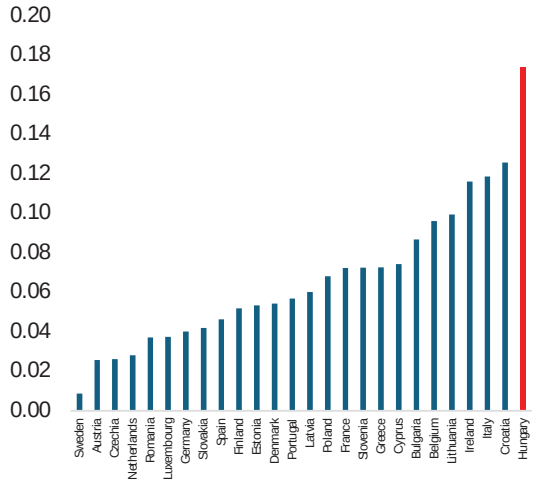
Source: Eurostat

The balancing energy market in Hungary relies heavily on gas-fired power plants. These companies need to cover their costs and earn their profit in a shorter period of time. With low competition on the Hungarian balancing market, they sell the energy they produce at a much higher price than before. Hungary is missing out on the benefits of cross-border balancing as it has delayed joining the European PICASSO platform.

The persistence of high energy prices for companies hinders their competitiveness. The energy price for businesses in Hungary is one of the highest in the EU (Graph 3.2) due to low competition, burdensome regulations and taxes, and protracted investments in the last decade. In addition, the regulated low energy prices for households also put an indirect burden on energy prices for businesses. The current system of guaranteed fixed feed-in tariffs ('KÁT') for a large part of industrial renewable energy producers creates significant extra costs that are passed on to business consumers

(0.2% of GDP in 2024) through the network transmission fee (Graph 3.3). The high energy windfall tax ('Robin Hood tax') drives up energy prices for businesses and hinders energy companies' investments in new energy generation infrastructure. It also reduces incentives for setting up power purchase agreements, whose penetration is at this stage very limited. The high electricity price compared to gas acts as a disincentive to decarbonisation.

Graph 3.3: **Network transmission cost for firms, EUR per KWh in 2023**



(1) In purchasing power standard (PPS), consumption from 500 MWh to 1 999 MWh
Source: Eurostat

Hungary has one of the highest figures in the EU for fossil fuel subsidies. These subsidies, which Hungary is not planning to phase out before 2030, amount to 1.01% of GDP. Scaling down and phasing out these subsidies is in line with EU commitments and can help Hungary to control government spending. Fossil fuel subsidies which do not target energy poverty nor genuine energy security concerns and which hinder electrification and are not crucial for industrial competitiveness include: (i) the utility cost reduction programme; (ii) a VAT reduction for district heating using natural gas; and (iii) excise tax refunds for agricultural use of diesel (see also Annex 8).

The path to a green economy is facing significant obstacles

Hungary faces challenges over water resilience, droughts and flash floods. Hungary is increasingly affected by climate risks, evidenced by the droughts it experienced in 2022 in particular but also in 2024, which led to significant losses in the agricultural sector. Moreover, water quality is poor due to pollution from agriculture, industry and human settlements, with only 11.3% of surface waters in good ecological status (EU average: 37.3%). Hungary's wastewater treatment remains a major concern, with poor compliance with EU standards, declining treatment capacity and significant pollution risks. The situation is expected to worsen with illegal water extraction from natural sources (such as rivers, lakes and groundwater) and the expected increasing demand for water from industry, which takes up 82% of total surface water abstraction. Hungary's water strategy focuses on providing more water to industry and agriculture, relying mainly on 'grey' infrastructure such as land drainage, water reservoirs and irrigation canals, with only a few measures promoting natural water retention. The low administrative price of drinking water prevents water utility companies from investing in infrastructure maintenance. 2024 saw improvements to the governance structure of water management due to increased centralisation of responsibility under the Ministry of Energy, although some responsibilities still remain under other ministries.

Progress is slow in embracing the circular economy. According to 2023 data, Hungary's resource productivity of 1.33 euro/kg and circular material use rate of 5.9% are substantially below the EU average (2.74 euro/kg and 11.8%) and no

convergence can be observed. Hungary is generating less waste than the EU average (429 kg/capita vs 511 kg/capita, in 2023), but has made no significant progress lately on waste management. While the recycling rate for municipal waste gradually improved until 2018, this positive trend came to a halt afterwards, standing at 33.4% in 2023 (EU average: 48.9%). The recycling rate for packaging and for construction and demolition waste remained well below the EU average. All this could be linked to scarce resource allocation, insufficient treatment capacities and gradually decreasing competition in the waste management sector. In 2023, Hungary introduced a single 35-year concession system for waste management, aiming to provide increased efficiency and stability in waste management. Hungary also extended producer responsibility the same year. A national circular economy strategy is under preparation to address remaining issues.

Hungary's industrial policy has potential to focus more comprehensively on net-zero industry while decreasing industrial emissions to the atmosphere. Hungary has emerged as a leader in electric vehicle battery manufacturing, but development of other net-zero technologies remains modest. Labour shortages and ineffective retraining programmes limit the potential growth of the battery value chain. Moreover, action is lacking to ensure a comprehensive regulatory framework on net-zero technologies e.g. on permitting, public procurement and the development of industrial clusters promoting innovation. At the same time, industrial emissions into the atmosphere in Hungary caused more damage to the environment than on average in the EU, while the number of deaths attributable to air pollution was one of the highest in the EU. These two statistics highlight the importance of Hungary taking action to ensure compliance with legislation on air quality and industrial emissions and to tackle pollution from all sources.

SKILLS, QUALITY JOBS AND SOCIAL FAIRNESS

Education and skills are not keeping pace with the needs of the economy

Skills shortages hinder Hungary's potential for innovation and competitiveness. Skills shortages in Hungary are mainly driven by weak basic skills among disadvantaged and vocational education and training students, low tertiary education attainment, and limited upskilling and reskilling for vulnerable groups. Despite recent increase in unemployment to 4.5% in 2024, the employment rate remained high. There is room to involve more people in the jobs market, in particular young and low-skilled workers, but Hungary also relies on foreign workers (ca. 80 000 in 2025).

Stronger basic skills are key if Hungary is to expand its productive workforce. Early school leaving remains above the EU average, particularly among persons with disabilities, in the least developed regions and in rural areas, and among the Roma community (see Annex 10). The 2022 PISA ([10]) survey shows one of the largest gaps in average maths performance between general and vocational programmes in the EU, largely due to socio-economic disparities. Without stronger basic skills, half of disadvantaged students struggle to access the jobs market.

([10]) OECD Programme for International Student Assessment.

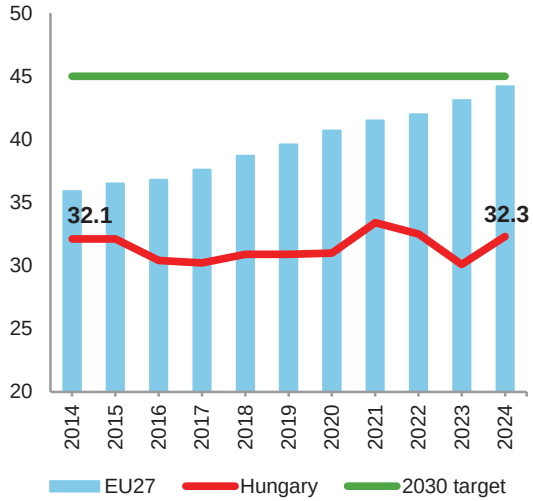
Structural inefficiencies in the education system make these challenges harder to address. Disadvantaged students are concentrated in some schools already from primary level, with particular issues in three-year secondary vocational schools, resulting in one of EU's highest levels of segregation. These schools also face severe teacher shortages, lowering educational quality. Over 10% of secondary students enrol in three-year vocational education and training programmes that do not provide direct access to higher levels of education, limiting upskilling and career progression. Expanding general education content in these schools could improve the system's permeability (smooth transition of learners within the entire education and training system, horizontally and vertically), resulting in more graduates continuing their studies and successfully passing the upper secondary school leaving examination (*matura)*. Additional resources to disadvantaged schools could help reduce performance gaps and segregation.

The government has taken several steps to make the teaching profession more attractive. In Hungary, teacher shortages are a pressing concern, especially in most disadvantaged regions and rural areas. This is mainly due to an ageing teacher workforce and insufficient number of highly qualified candidates. In 2024, Hungary started implementing a major reform of teachers' salaries, co-financed by the European Social Fund Plus. Continuing this reform, together with greater teacher autonomy and a teacher assessment system that rewards innovative and inclusive teaching approaches, could help

attract high-achieving candidates and keep young teachers in the profession.

Despite increasing demand for a highly skilled workforce, tertiary education attainment remains low. The employment rate of recent tertiary graduates (93.ö%) exceeds the EU average (86.6%), indicating high demand. However, tertiary education attainment rates among 25-34 year-olds have been decreasing in the past decade. In 2024 the figure had reached 32.3%, one of the lowest in the EU (Graph 4.1). Innovation potential is further constrained by the low number of science, technology, engineering and mathematics graduates, except in information and communications technology fields, reducing the country's ability to attract investment in high-tech sectors. The low participation of disadvantaged students in tertiary education is a missed opportunity to expand Hungary's high-skilled workforce.

Graph 4.1:**Tertiary educational attainment level (%)**



(1) Share of the population aged 25-34 who have successfully completed tertiary studies
Source: Eurostat

Low basic skills and limited lifelong learning among vulnerable adults hinder labour mobilisation. The OECD Programme for the International Assessment of Adult Competencies (PIAAC) 2022 survey shows that Hungarian adults (including 16-24 years old), especially those from disadvantaged backgrounds, perform below the EU average on basic skills. Vulnerable groups (the unemployed, low-educated adults and people aged 55 or older) also lag behind in basic digital skills and participation in lifelong learning (see Annex 10). While the government has launched initiatives such as 'micro-credential'([11]) training, individual learning accounts and an adult training fund, and has expanded measures to help the jobless find work, access for vulnerable groups remains limited.

Effective reskilling and upskilling opportunities, and appropriate support services are lacking. Measures to help the jobless find work are in place, but the 2021 legislation on public employment service further reduced access to upskilling and reskilling. The 2024 amendment now enables public employment service to play more prominent role in the provision of labour market trainings. Limited availability of quality training might appear as a challenge. Targeted skills development measures and comprehensive support services are crucial if in the long term these groups are to become employable and enter the jobs market. The three-month unemployment benefit limits the time for finding suitable employment or adequate upskilling opportunities and increases risks of low-quality jobs, long-term unemployment and poverty. To cover Hungary's labour force needs, the government set rules to allow non-EU nationals to temporarily work in Hungary.

([11]) According to the Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability, micro-credential means the record of the learning outcomes that a learner has acquired following a small volume of learning.

As of 2025 the number of countries from where foreign workers could come has been narrowed to only three, which makes measures to help the jobless find work all the more important. The 2024 job trial pilot programme offers some support, but more targeted measures are needed. Hungary has developed skills forecasting tools to better inform its skills development policies, but these remain fragmented, not interlinked and data is unavailable to the public.

Social dialogue between employers and trade unions remains weak, especially in the public sector. Although the private sector tripartite forum received a legal mandate for minimum wage negotiations in 2024, major economic policies proposed in 2024 and 2025 were adopted without consulting relevant employers and trade unions. The public sector forum has not met in recent years, and the introduction of separate employment status for some public employees (in healthcare, education, the cultural sector, etc.) has further weakened collective bargaining, voiding agreements for some groups. Recent skills and social policy initiatives were also developed without consulting employers and trade unions.

Poverty has started to rise, testing social policy

Poverty and social exclusion are on the rise, reversing long-standing positive trends. The rate of people at risk of poverty or social exclusion increased in 2023 and 2024, while still remaining below the EU average. This puts at risk Hungary's progress towards its national poverty target for 2030([12]). Educational attainment and employment status play an important role in determining poverty risks. The effects were significantly more pronounced for people with disabilities and people from the Roma community, who often have a low level of education and are under-represented on the jobs market. There are also signs of increasing poverty among the elderly. An EU-funded programme supporting housing, social services and education in the 300 most disadvantaged municipalities is a major step forward. This could benefit from further measures to improve access to mainstream social and basic services.

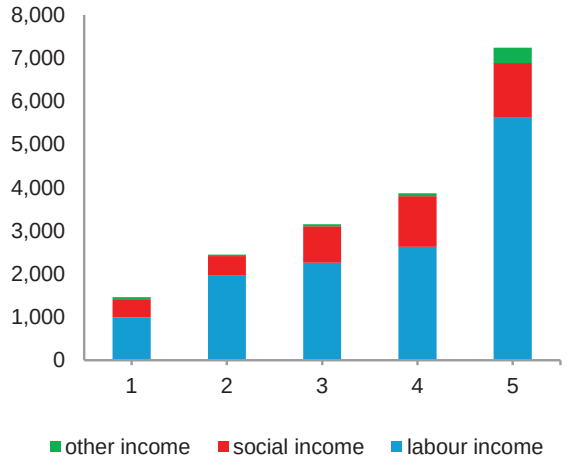
Poverty increased significantly among children. Despite Hungary's focus on family-friendly policies, more than one in five children and 28% of families with three or more children were at risk of poverty or social exclusion. Almost 7 out of 10 children whose parents have low levels of education are affected. Children also experienced an increase in the depth of their poverty. Free school meals and affordable transport for children help address some aspects of poverty, but further efforts to make it easier for children at risk of poverty and social exclusion to access quality early childhood education and care would aid their early development.

Redistribution policies hardly improve income inequalities. Income inequality (measured by the ratio of total income between the lowest and highest quintiles) stagnated in the last decade, against a higher but gradually improving EU average. Wealth inequality increased significantly

([12]) HU expresses its national poverty reduction target as a reduction in the material and social deprivation rate for families with children (to 13% by 2030) that can be translated into a reduction by 292 000 of people at risk of poverty or social exclusion by 2030.

and is among the highest in the EU, with the top 1% of the population holding 33% of the total wealth in 2023 ([13]). The tax and social benefit system provides significantly more monetary support to high-income households than it does to the lower income groups. The average social income per person among the top income group was almost 3 times that of the lowest income group in 2023 (Graph 4.2).

Graph 4.2: **Distribution of incomes among quintiles, 2023, annual income in HUF 1 000**



Source: Hungarian Central Statistical Office

The tax system disproportionately burdens lower-paid workers through the income tax rate and high consumption taxes. Due to the flat personal income tax, the taxation of earnings from labour is relatively high for low-income earners, and relatively low for high-income earners. Most of the social support is through tax credits, as a result of which high-income households get higher benefits than low-income groups. The tax exemption on holding government bonds alone provides a transfer amounting to 0.4% of GDP to high-income households in 2025. The income tax exemption for mothers with two or more children announced in February 2025 will result in higher household income among high earners, while the income among families with the lowest levels of income will provide only limited relief for families' living conditions. This also needs to be seen in the context of the continued high food and housing prices and limited access to quality public services locally. From 2025, pensioners will receive VAT refunds on certain food items, including fruit and vegetables. While this may improve the income situation of low-income pensioners, the measure is not targeted to them.

The adequacy of social protection further deteriorated. The impact of social benefits has declined significantly since 2021 in terms of reducing poverty (especially for children) and remained low in terms of reducing income inequality. The major sources of income for low-income households have not kept up with the cost of living in the last decade. The nominal value of the minimum income ('foglalkoztatást helyettesítő támogatás') has not increased since 2012, while consumer prices have increased by 75% since then. Consequently, the adequacy of minimum income benefits is one of the lowest in the EU. Pegging the minimum income to the inflation rate or the minimum wage could somewhat improve its adequacy.

High housing costs negatively impact living standards. The proportion of households who spend over 40% of their household income on housing costs increased between 2021 and 2024. The figure is particularly high among people living below the poverty threshold, especially among children. House prices increased by 230% between 2010 and 2024, the most in the EU, making home ownership less affordable in spite of the significant rise in wages. There are significant regional differences in house

([13]) World - WID - World Inequality Database.

prices, with the price level in rural areas only 13% of prices in the capital in 2024. The price rise was amplified by government measures targeting the demand side of the market and the regulatory environment (notably no heritage and gift tax, and a very low property tax and transaction fee). In parallel, rents increased by 108%, putting a large proportion of tenants under financial pressure. On housing quality, poor housing conditions are widespread among marginalised communities.

Low-income households have limited access to housing support. Various types of subsidised lending schemes have provided incentives for people to buy a home, especially for higher-income households. Most of these require own resources and taking out loans, which tends to exclude low-income households. Government support for home rental is available for young employees, but there are no larger-scale means-tested measures for people renting. The rental market is not regulated, which creates uncertainties both for tenants and landlords, and results in higher prices and lower supply. The social housing stock is small and decreasing, due to the lack of a clear government policy and a lack of resources in local authorities. The government announced that a housing capital programme would be launched in 2025 to expand housing market supply and make homeownership more accessible for people.

Low healthcare spending impacts health outcomes. Hungary's healthcare spending amounted to 4.1% of GDP in 2023, among the lowest in the EU. Chronic underfunding results, among others, in low availability of key diagnostic technology. Hungarians pay more on healthcare from their own pocket than people in other EU countries, particularly on pharmaceuticals.

The health system is hospital centric. A large proportion of health expenditure is allocated to hospital services, with high number of hospital beds and a low proportion of general practitioners among doctors. To improve accessibility, primary and ambulatory care needs strengthening. Hungary faces persistent shortages of health professionals, having one of the lowest numbers in the EU. The uneven geographical distribution of doctors is a major barrier to accessing care in outlying regions of the country. Policy measures to address these challenges remain limited, despite some commitments in the recovery and resilience plan.

Poor health outcomes negatively impact Hungary's workforce. Life expectancy at birth is among the lowest in the EU. This is due to the limited focus on disease prevention and limited accessibility of the health system. Premature mortality due to cardiovascular diseases and cancer is among the highest in the EU. Behavioural risk factors are a key driver of mortality, including above average alcohol consumption and smoking, low consumption of fruit and vegetables and low levels of physical activity outside working time. Air pollution causes more deaths in Hungary than the EU average.

There are significant regional disparities in education, social protection, housing and healthcare, and in measures to help the jobless find work. Four regions are particularly affected by high poverty and social exclusion and income inequalities. This is related to the high rates of early school leaving, large numbers of people not in education, employment or training and adults with low educational attainment. There is also higher unemployment in the South Transdanubia, North Hungary and North Great Plain regions. In these regions, the poorest part of the population lacks access to basic services such as education,

healthcare, social services, housing and a sufficient level of services to help the jobless find work.

These findings are consistent with the second-stage analysis in line with the Social Convergence Framework. The analysis points to challenges over the increasing share of people at risk of poverty or social exclusion and to weak education and jobs market outcomes for vulnerable groups. However, it does not point to overall social convergence challenges for Hungary, also in light of the measures implemented or planned ([14]).

([14]) European Commission, SWD(2025)95. The analysis relies on all the available quantitative and qualitative evidence and the policy response undertaken and planned.

KEY FINDINGS

To foster competitiveness, sustainability and social fairness, Hungary would benefit from:

- **urgently accelerating the implementation of the recovery and resilience plan,** including the REPowerEU chapter;

- **swiftly implementing cohesion policy**, taking advantage of the opportunities under the mid-term review and **making optimal use of EU instruments, including InvestEU and STEP,** to improve competitiveness;

- **pursuing effective policy coordination and improving economic policy to ensure the sustainability of government finances and foreign trade** including by strengthening the medium-term budgetary framework and annual budgeting, avoiding the tendency to expand government spending and removing distortive government interventions on the credit and product markets;

- **reforming the pension system** to improve medium and long-term sustainability of government finances while making sure pensions remain sufficient for people to live on in particular by addressing income inequalities;

- **improving the effectiveness of the anti-corruption framework** by tackling delays in implementing measures in the recovery and resilience plan and ensuring they are effectively applied in practice;

- **improving the quality of the business environment** by ensuring a predictable regulatory framework, a level playing field for all companies, the consistent application of single market rules, including avoiding arbitrary action by administrative authorities, market-distorting state-supported transactions and the use of distortive legislation, applying competition scrutiny systematically to business transactions and reducing the use of emergency legislation to what is strictly necessary, in line with the principles of the single market and the rule of law;

- **reducing costs for companies** by phasing out distortive taxes imposed on specific sectors and simplifying the administrative procedures, in particular in the retail sector;

- **improving access to finance for innovative and fast-growing small and medium-sized enterprises** by ensuring a level playing field for capital market development through regulatory measures and improving the effectiveness of existing support measures;

- **fostering innovation** through more predictable and efficient public R&D spending and a stronger involvement of small and medium-sized enterprises in knowledge and technology transfer channels;

- **accelerating the green transition further** by phasing out dependence on Russian fossil fuels and taking concrete steps to phase out fossil fuel subsidies in

particular those related to excise duties on diesel and those hindering electrification in the residential sector;

- **improving flexibility and competition in the electricity sector** by strengthening the balancing market, improving smart grid, storage and smart meters infrastructure, expanding solutions to manage energy demand, boosting cross-border electricity trading and reducing regulatory burden and taxes, while adjusting the current system of regulated energy prices;

- **investing in sustainable water management and climate adaptation** including increased natural water retention and through strengthened administrative capacities as well as further improvements to circularity by strengthening waste treatment capacities;

- **making further progress to decarbonise by supporting further expansion of the net-zero technology sector** with a comprehensive regulatory framework and addressing labour shortages;

- **to support upward social convergence, improving the participation on the jobs market** of vulnerable groups, including Roma and persons with disabilities by reskilling and upskilling and strengthening the capacity of the public employment service to provide training and comprehensive support services;

- **ensuring effective social dialogue between employers and trade unions** particularly in the public sector, and engaging effectively with employers and trade unions;

- **improving educational performance to strengthen labour productivity and innovation potential** by further increasing the attractiveness of the teaching profession and tertiary attainment rate, focusing on the development of basic skills, making different educational programmes available up to the highest education level and making it easier to transition between them and increasing participation;

- **increasing the proportion of upper-secondary graduates passing the *matura* school leaving exam** as well as of those **holding a tertiary diploma** in tertiary education;

- **providing more effective social assistance** by improving the adequacy of the minimum income and social benefits, including unemployment benefit;

- **increasing access to housing** through more targeted housing subsidies, and by regulating the rental market and introducing measures to increase housing supply including for social housing;

- **improving access to quality preventive and primary care services** by allocating more resources to preventive care and addressing shortages of healthcare staff.

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ANNEX 1: FISCAL SURVEILLANCE AND DEBT SUSTAINABILITY

This Annex contains a series of tables relevant for the assessment of the fiscal situation in Hungary, including how Hungary is responding to Council recommendations issued under the reformed Economic Governance Framework.

The reformed framework, which entered into force on 30 April 2024([15]), aims to strengthen debt sustainability and promote sustainable and inclusive growth through growth-enhancing reforms and priority investments. The medium-term fiscal-structural plans (hereinafter, MTPs or plans) constitute the cornerstone of the framework, setting the budgetary commitment of Member States over the medium term. The latter is defined in terms of net expenditure growth, which is the single operational indicator for fiscal surveillance.

Hungary submitted its plan on 4 November 2024 and subsequently submitted an addendum to the plan on 20 December 2024 reflecting more recent data. The plan covers the period until 2028, presenting a fiscal adjustment over four years. On 18 February 2025, the Council adopted the Recommendation endorsing Hungary's plan.([16]) On 18 February 2025, the Council also adopted a Recommendation under Article 126(7) TFEU to correct the excessive deficit in Hungary[17]. The corrective net expenditure path recommended by the Council under the excessive deficit procedure is consistent with the path set out in the plan.

The assessment of the implementation of the Council Recommendation endorsing Hungary's plan is carried out on the basis of outturn data from Eurostat and the Commission's Spring 2025 Forecast, and taking into account the Annual Progress Report (APR) that Hungary submitted on 30 April 2025. Furthermore, given Hungary's request to activate the National Escape Clause ([18]) following the Commission Communication of 19 March 2025([19]), the assessment also considers, as appropriate, the projected increase in defence expenditure based on the Commission Spring 2025 Forecast.

The Annex is organised as follows. First, developments in **government deficit and debt** are presented based on the figures reported in Table A1.1. Then, the assessment of the **implementation of the Council Recommendation to correct the excessive deficit and of the Council Recommendation endorsing the plan** follows, based on the relevant figures presented in Tables A1.2 to A1.9, including data on defence expenditure.

([15]) Regulation (EU) 2024/1263 of the European Parliament and of the Council (EU) on the effective coordination of economic policies and on multilateral budgetary surveillance, together with the amended Regulation (EC) No 1467/97 on the implementation of the excessive deficit procedure, and the amended Council Directive 2011/85/EU on the budgetary frameworks of Member States are the core elements of the reformed EU economic governance framework.

([16]) OJ C, C/2025/1707, 18.03.2025, ELI: http://data.europa.eu/eli/C/2025/1707/oj.

([17]) Council Recommendation with a view to bringing an end to the situation of an excessive deficit in Hungary, C/2025/5896.

([18]) On 30 April 2025, Hungary requested to the Commission and to the Council the activation of the National Escape Clause. On this basis, the Commission adopted a Recommendation for a Council Recommendation allowing Hungary to deviate from, and exceed, the net expenditure path set by the Council, COM/2025/608.

([19]) Communication from the Commission accommodating increased defence expenditure within the Stability and Growth Pact of 19 March 2025, C(2025) 2000 final.

The Annex also provides information on the **cost of ageing** and the **national fiscal framework**. Fiscal sustainability risks are discussed in the Debt Sustainability Monitor 2024.([20])

Developments in government deficit and debt

Hungary's government deficit amounted to 4.9% of GDP in 2024. Based on the Commission's Spring 2025 Forecast, it is projected to decrease to 4.6% of GDP in 2025. The government debt-to-GDP ratio amounted to 73.5% at the end of 2024 and, according to the Commission, is projected to increase to 74.5% at end-2025, reflecting a high general government deficit and a positive stock-flow adjustment due to large interest payments in cash terms accrued in the previous year. In the absence of additional discretionary measures and given the muted macroeconomic outlook that is dampening growth in tax revenues, the reduction of the deficit is forecast to stall in 2025 and 2026. The Commission forecast projects a higher deficit in 2025 than Hungary's Annual Progress Report due to significantly lower revenue from production and income taxes in line with a lower level of nominal GDP.

Table A1.1: **General government balance and debt**

	Variables		2024	2025		2026	
			Outturn	APR	COM	APR	COM
1	General government balance	%GDP	-4.9	-4.1	-4.6	n.a.	-4.7
2	General government gross debt	%GDP	73.5	73.1	74.5	n.a.	74.3

Source: Commission Spring 2025 Forecast (COM), Annual Progress Report (APR)

Developments in net expenditure

The net expenditure([21]) growth of Hungary in 2025 is forecast by the Commission([22]) to be above the recommended maximum, corresponding to a deviation of 0.7% of GDP. Considering 2024 and 2025 together, the cumulative growth rate of net expenditure is projected below the recommended maximum cumulative growth rate. The Commission forecast projects lower net expenditure growth in 2025 than Hungary's Annual Progress Report due to differences in the projections of nationally-financed expenditure.

([20]) European Commission (2025) 'Debt Sustainability Monitor 2024,' *European Economy-Institutional Papers* 306.

([21]) Net expenditure is defined in Article 2(2) of Regulation (EU) 2024/1263 as government expenditure net of (i) interest expenditure, (ii) discretionary revenue measures, (iii) expenditure on programmes of the Union fully matched by revenue from Union funds, (iv) national expenditure on co-financing of programmes funded by the Union, (v) cyclical elements of unemployment benefit expenditure, and (vi) one-off and other temporary measures.

([22]) Commission Spring 2025 Forecast *European Economy-Institutional paper 318*, May 2025.

Table A1.2: **Net expenditure growth**

	Annual			Cumulative*		
	REC	APR	COM	REC	APR	COM
	Growth rates					
2024	n.a.	2.3%	2.3%	n.a.	n.a.	n.a.
2025	4.3%	7.4%	6.1%	9.1%	9.8%	8.6%
2026	4.0%	n.a.	6.0%	13.5%	n.a.	15.1%

* The cumulative growth rates are calculated by reference to the base year of 2023.
Source: Council Recommendation to correct the excessive deficit in Hungary, Annual Progress Report (APR) and Commission's calculation based on Commission Spring 2025 Forecast (COM).

Source:

The assessment of the net expenditure growth and in particular the comparison with the recommended net expenditure path considers that Hungary has requested the activation of the national escape clause to facilitate transitioning to a higher level of defence expenditure. General government defence expenditure in Hungary amounted to 1.1% of GDP in 2021, 1.4% of GDP in 2022 and 1.9% of GDP in 2023([23]). According to the Commission 2025 Spring Forecast, expenditure on defence is projected at 2.0% of GDP in both 2024 and 2025. Based on current projections for defence spending, the deviation that is projected for Hungary is within the flexibility provided by the national escape clause.

Table A1.3: **Net expenditure (outturn and forecast), annual and accumulated deviations vis-à-vis the recommendation**

	Variables		2023	2024	2025	2026
			Outturn	Outturn	COM	COM
1	Total expenditure	bn NAC	37145.1	38209.9	40603.2	42859.8
2	Interest expenditure	bn NAC	3533.9	4039.9	3644.4	3658.8
3	Cyclical unemployment expenditure	bn NAC	-55.6	-44.9	-48.6	-48.3
4	Expenditure funded by transfers from the EU	bn NAC	582.9	489.2	1020.9	1524.5
5	National co-financing of EU programmes	bn NAC	193.4	193.8	419.3	694.9
6	One-off expenditure (levels, excl. EU funded)	bn NAC	0.0	0.0	0.0	0.0
7=1-2-3-4-5-6	**Net nationally financed primary expenditure (before discretionary revenue measures, DRM)**	**bn NAC**	**32890.5**	**33532.0**	**35567.3**	**37029.9**
8	Change in net nationally financed primary expenditure (before DRM)	bn NAC		641.4	2035.3	1462.6
9	DRM (excl. one-off revenue, incremental impact)	bn NAC		-116.6	-19.9	-665.0
10=8-9	**Change in net nationally financed primary expenditure (after DRM)**	**bn NAC**		**758.0**	**2055.2**	**2127.6**
11	Outturn / forecast net expenditure growth	%change		2.30%	6.1%	6.0%
12	Recommended net expenditure growth*	%change		4.6%	4.3%	4.0%
13=(11-12) x 7	Annual deviation	bn NAC		-754.9	613.3	704.9
14 (cumulated from 13)	Cumulated deviation	bn NAC		-754.9	-141.6	563.3
15=13/17	**Annual balance**	**% GDP**		**-0.9**	**0.7**	**0.8**
16=14/17	**Cumulated balance**	**% GDP**		**-0.9**	**-0.2**	**0.6**
17	p.m. Nominal GDP	bn NAC	75568.9	81514.2	86207.1	91529.7

* The growth rate for 2024 is not a recommendation but serves to anchor the base, as the latest year with outturn data when setting the net expenditure path is year 2023.
Source: Commission Spring 2025 Forecast and Commission's calculation

([23]) Eurostat, government expenditure by classification of functions of government (COFOG).

Table A1.4: **Defence expenditure and the national escape clause**

			2021	2022	2023	2024	2025	2026
1	Total defence expenditure	%GDP	1.1	1.4	1.9	2.0	2.0	2.2
2	*of which: gross fixed capital formation*	%GDP	0.2	0.3	0.6	1.0	1.0	1.0
3	Flexibility from increases in defence expenditure	%GDP					0.9	1.1
4	**Cumulated balance after flexibility**	**% GDP**					**-1.0**	**-0.5**

Source: Eurostat (COFOG), Commission Spring 2025 Forecast and Commission's calculation

Table A1.5: **Macroeconomic developments and forecasts**

	Variables		2024	2025		2026	
			Outturn	APR	COM	APR	COM
1=7+8+9	**Real GDP**	**% change**	**0.5**	**2.5**	**0.8**	**n.a.**	**2.5**
2	Private consumption	%change	5.1	3.5	3.4	n.a.	3.2
3	Government consumption expenditure	%change	-4.6	0.4	0.3	n.a.	1.5
4	Gross fixed capital formation	%change	-11.1	2.3	-1.5	n.a.	4.0
5	Exports of goods and services	%change	-3.0	3.0	0.2	n.a.	2.8
6	Imports of goods and services	%change	-4.0	3.6	1.1	n.a.	3.5
	Contributions to real GDP growth						
7	- Final domestic demand	pps	-1.2	2.7	1.4	n.a.	2.9
8	- Change in inventories	pps	1.2	0.0	0.0	n.a.	0.0
9	- Net exports	pps	0.6	-0.3	-0.6	n.a.	-0.4
10	Output gap	%pot GDP	-1.0	-3.8	-1.2	n.a.	0.0
11	Employment	%change	0.1	0.1	0.1	n.a.	0.3
12	Unemployment rate	%	4.5	4.3	4.4	n.a.	4.3
13	Labour productivity	%change	0.4	2.4	0.8	n.a.	2.2
14	HICP	%change	3.7	4.5	4.1	n.a.	3.3
15	GDP deflator	%change	7.3	5.2	4.9	n.a.	3.6
16	Compensation of employees per head	%change	12.6	7.8	8.7	n.a.	7.8
17	Net lending/borrowing vis-à-vis the rest of the world	%GDP	2.8	n.a.	2.6	n.a.	2.4

Source: Commission Spring 2025 Forecast (COM), Annual Progress Report (APR)

Table A1.6: **General government budgetary position**

	Variables (% GDP)	2024	2025		2026	
		Outturn	APR	COM	APR	COM
1=2+3+4+5	**Revenue**	**42.0**	**42.7**	**42.5**	**n.a.**	**42.1**
	of which:					
2	- Taxes on production and imports	17.1	17.2	17.2	n.a.	16.8
3	- Current taxes on income, wealth, etc.	7.6	7.6	7.5	n.a.	6.8
4	- Social contributions	10.4	10.5	10.7	n.a.	10.9
5	- Other (residual)	6.9	7.4	7.2	n.a.	7.5
8=9+16	**Expenditure**	**46.9**	**46.8**	**47.1**	**n.a.**	**46.8**
	of which:					
9	- Primary expenditure	41.9	42.9	42.9	n.a.	42.8
	of which:					
10	- Compensation of employees	10.3	10.4	10.8	n.a.	11.1
11	- Intermediate consumption	8.2	8.6	8.4	n.a.	8.4
12	- Social payments	12.0	11.9	11.9	n.a.	11.6
13	- Subsidies	2.1	1.9	1.7	n.a.	1.7
14	- Gross fixed capital formation	4.2	3.9	4.2	n.a.	4.2
15	- Other	5.1	6.2	5.9	n.a.	5.9
16	- Interest expenditure	5.0	3.9	4.2	n.a.	4.0
18=1-8	**General government balance**	**-4.9**	**-4.1**	**-4.6**	**n.a.**	**-4.7**
19=1-9	**Primary balance**	**0.0**	**-0.2**	**-0.4**	**n.a.**	**-0.7**
20	Cyclically adjusted balance	-4.5	n.a.	-4.0	n.a.	-4.7
21	One-offs	0.0	0.0	0.0	n.a.	0.0
22=20-21	**Structural balance**	**-4.5**	**-2.4**	**-4.0**	**n.a.**	**-4.7**
23=22+16	Structural primary balance	0.5	1.5	0.2	n.a.	-0.7

Source: Commission Spring 2025 Forecast (COM), Annual Progress Report (APR)

Table A1.7: **Debt developments**

	Variables	2024	2025		2026	
		Outturn	APR	COM	APR	COM
1	**Gross debt ratio* (% of GDP)**	**73.5**	**73.1**	**74.5**	**n.a.**	**74.3**
2=3+4+8	Change in the ratio (pps. of GDP)	0.5	-0.3	1.0	n.a.	-0.2
	Contributions**					
3	**Primary balance**	**0.0**	**0.2**	**0.4**	**n.a.**	**0.7**
4=5+6+7	**'Snow-ball' effect**	**-0.4**	**-1.4**	**0.2**	**n.a.**	**-0.3**
	of which:					
5	- Interest expenditure	5.0	3.9	4.2	n.a.	4.0
6	- Real growth effect	-0.3	-1.7	-0.6	n.a.	-1.8
7	- Inflation effect	-5.0	-3.6	-3.4	n.a.	-2.6
8	**'Stock-flow' adjustment**	**0.9**	**0.9**	**0.4**	**n.a.**	**-0.6**

* End of period.

** The 'snow-ball' effect captures the impact of interest expenditure on accumulated general government debt, as well as the impact of real GDP growth and inflation on the general government debt-to-GDP ratio (through the denominator). The stock-flow adjustment includes differences in cash and accrual accounting (including leads and lags in Recovery and Resilience Facility grant disbursements), accumulation of financial assets, and valuation and other residual effects.

Source: Commission Spring 2025 Forecast and Commission's calculation (COM), Annual Progress Report (APR)

Table A1.8: **RRF – Grants**

	Revenue from RRF grants (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
1	RRF grants as included in the revenue projections	n.a.	0.0	0.2	0.3	0.2	0.4	n.a.
2	Cash disbursements of RRF grants from EU	n.a.	0.0	0.0	0.0	0.1	0.0	n.a.

	Expenditure financed by RRF grants (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
3	Total current expenditure	0.0	0.0	0.0	0.0	0.0	0.0	n.a.
4	Gross fixed capital formation	0.0	0.0	0.1	0.1	0.1	0.2	n.a.
5	Capital transfers	0.0	0.0	0.2	0.2	0.1	0.2	n.a.
6=4+5	Total capital expenditure	0.0	0.0	0.2	0.3	0.2	0.3	n.a.

	Other costs financed by RRF grants (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
7	Reduction in tax revenue	0.0	0.0	0.0	0.0	0.0	0.0	n.a.
8	Other costs with impact on revenue	0.0	0.0	0.0	0.0	0.0	0.0	n.a.
9	Financial transactions	0.0	0.0	0.0	0.0	0.0	0.0	n.a.

Source: Annual Progress Report

Table A1.9: **RRF - Loans**

	Cash flow from RRF loans projected in the Plan (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
1	Disbursements of RRF loans from EU	n.a.	0.0	0.0	0.4	0.0	0.0	n.a.
2	Repayments of RRF loans to EU	n.a.	0.0	0.0	0.0	0.0	0.0	n.a.

	Expenditure financed by RRF loans (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
3	Total current expenditure	0.0	0.0	0.0	0.0	0.0	0.0	n.a.
4	Gross fixed capital formation	0.0	0.0	0.0	0.0	0.0	0.0	n.a.
5	Capital transfers	0.0	0.0	0.0	0.0	0.0	0.0	n.a.
6=4+5	Total capital expenditure	0.0	0.0	0.0	0.0	0.0	0.0	n.a.

	Other costs financed by RRF loans (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
7	Reduction in tax revenue	0.0	0.0	0.0	0.0	0.0	0.0	n.a.
8	Other costs with impact on revenue	0.0	0.0	0.0	0.0	0.0	0.0	n.a.
9	Financial transactions	0.0	0.0	0.0	0.0	0.0	0.1	n.a.

Source: Annual Progress Report

Cost of ageing

Total age-related spending in Hungary is projected to rise from about 16% of GDP in 2024 to about 18% in 2040 and 21% in 2070 (see Table A1.10**).** The overall increase is driven mainly by the projected rise in pension spending with a lower impact from rising healthcare, long-term care and education expenditure.

Public pension spending is projected to increase continuously over the next decades. The pension expenditure-to-GDP ratio would rise by 4.1 pps by 2070, the third highest projected increase of all EU Member States for 2024-2070. 1.2 pps of this increase is expected to occur by 2040.

Public healthcare ([24]) expenditure is projected at 4.3% of GDP in 2024 (below the EU average of 6.6%) and is expected to increase by 0.3 pps by 2040 and by a further 0.2 pps by 2070.

Public expenditure on long-term care ([25]) is projected at 0.6% of GDP in 2024 (below the EU average of 1.7%) and is expected to increase by 0.1 pp of GDP by 2040 and by a further 0.2 pps of GDP by 2070.

Table A1.10: **Projected change in age-related expenditure in 2024-2040 and 2024-2070**

	age-related expenditure 2024 (% GDP)	change in 2024-2040 (pps GDP) due to: pensions	healthcare	long-term care	education	total	age-related expenditure 2040 (%GDP)	
HU	16.1	1.2	0.3	0.1	0.0	**1.6**	17.7	HU
EU	24.3	0.5	0.3	0.4	-0.3	**0.9**	25.2	EU

	age-related expenditure 2024 (% GDP)	change in 2024-2070 (pps GDP) due to: pensions	healthcare	long-term care	education	total	age-related expenditure 2070 (%GDP)	
HU	16.1	4.1	0.5	0.3	0.2	**5.1**	21.3	HU
EU	24.3	0.2	0.6	0.8	-0.4	**1.3**	25.6	EU

Source: 2024 Ageing Report (EC/EPC).

National fiscal framework

The relatively small Hungarian Fiscal Council (HFC) has a narrow mandate and relies on support from other institutions. Two of three Board members head other institutions in parallel (the Central Bank and the Audit Office), which could affect the Council's independence, especially since it also draws on analytical support from these institutions. Members are also required to be Hungarian citizens, which limits the recruitment pool. While the HFC is free to communicate at any time and reports regular appearances in mainstream national TV/radio/daily papers, it has issued no press releases nor given any press conferences in recent years, and the English version of its website could be further developed.

Table A1.11: **Fiscal Governance Database Indicators**

2023	Hungary	EU Average
Country Fiscal Rule Strength Index (C-FRSI)	10.39	14.52
Medium-Term Budgetary Framework Index (MTBFI)	0.40	0.73

The Country Fiscal Rule Strength Index (C-FRSI) shows the strength of national fiscal rules aggregated at the country level based on i) the legal base, ii) how binding the rule is, iii) monitoring bodies, iv) correction mechanisms, and v) resilience to shocks. The Medium-Term Budgetary Framework Index (MTBFI) shows the strength of the national MTBF based on i) coverage of the targets/ceilings included in the national medium-term fiscal plans; ii) connectedness between these targets/ceilings and the annual budgets; iii) involvement of the national parliament in the preparation of the plans; iv) involvement of independent fiscal institutions in their preparation; and v) their level of detail. A higher score is associated with higher rule and MTBF strength.

Source: Fiscal Governance Database

([24]) Key performance characteristics, recent reforms and investments are discussed in Annex 11 'Health and health systems'.

([25]) The quality and the accessibility of the long-term care system are covered in Annex 9 'Social policies'.

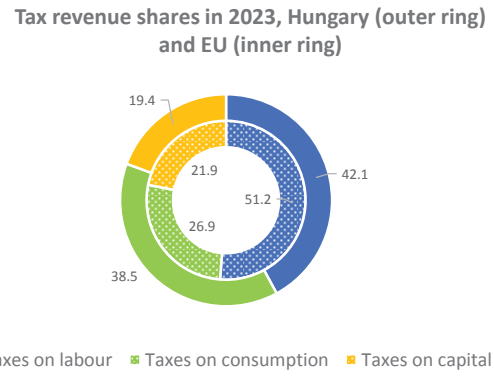
This annex provides an indicator-based overview of Hungary's tax system. It includes information on: (i) the tax mix; (ii) competitiveness and fairness aspects of the tax system; and (iii) tax collection and compliance. While some measures have been adopted, tackling aggressive tax planning (ATP) remains a challenge.

Hungary's tax revenues as a percentage of GDP are below the EU average, with a relatively heavy reliance on consumption taxes and a relatively low reliance on labour taxes. Table A2.1 shows that Hungary's annual tax revenues as a percentage of GDP increased from 35.0% in 2022 to 35.1% in 2023 but remained below the EU average of 39.0%. Labour taxation (14.8% of GDP in 2023) is the largest tax base, although its relative importance has declined since 2010. The tax system also relies heavily on consumption taxes (13.5% of GDP in 2023, above the EU average of 10.5%). Capital taxation in relation to GDP was 6.8% in 2023 (against an EU average of 8.5%). Revenue from environmental taxation is close to the EU average (2.2% of GDP in 2023 as compared with 2% in the EU), but recurrent property taxation remains relatively low (0.3% of GDP in 2023 compared with the EU average of 0.9%). Revenues from property taxes were relatively low (0.8% GDP), remaining below EU average (1.9%).

Hungary has the lowest corporate income tax (CIT) rate in the EU (9%) but levies a number of sector-specific taxes on companies, not always based on profits. In addition to CIT, Hungarian resident companies are subject to municipal tax (which is deductible for CIT purposes and is not treated as 'income tax' for tax treaty purposes) and activity-based taxes, some of which are not levied on profits. The top statutory CIT rate has more than halved over the past ten years, from 20.6% in 2014. The forward-looking average effective tax rate was 11.1% in 2022, the third-lowest among EU Member States, with the EU average around 19%. Hungary has enacted the global minimum tax directive ('Pillar 2'), which ensures a minimum tax rate of 15% for large companies. As Hungary's nominal and effective tax rates are both below 15%, an increase in tax revenues due to the 'top-up tax' is likely.

There are several tax incentives available in the Hungarian tax system, including areas such as R&D, green investment and investments in start-ups. R&D is supported through a tax credit and a tax base reduction option. Since 1 January 2024, a tax incentive qualifying as a refundable incentive under the global minimum taxation (Pillar 2) rules, has been available for eligible R&D costs. A tax credit is also available for investments of strategic importance for the transition to a zero net emissions economy. For companies investing in start-ups, the taxable profits may be reduced by three times the cost of shareholdings acquired (subject to certain requirements).

Graph A2.1: **Tax revenue shares in 2023**



Source: Taxation Trends Data, DG TAXUD

Hungary has made a commitment to simplify its tax system as part of the implementation of its recovery and resilience plan (RRP). Hungary's RRP includes commitments to introduce tax simplification measures by reducing the number of taxes to lower tax-related administrative costs and thereby contribute to a more competitive and fairer economy and a better business environment. One of the deliverables of the RRP is the phasing-out of six temporary sector-specific tax measures. While Hungary has made progress in this area, several sector-specific

Table A2.1: **Taxation indicators**

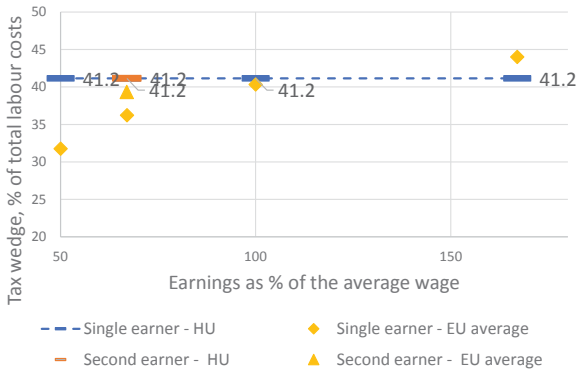
		Hungary					EU-27				
		2010	2021	2022	2023	2024	2010	2021	2022	2023	2024
Tax structure	Total taxes (including compulsory actual social contributions) (% of GDP)	36.9	33.6	35.0	35.1		37.8	40.2	39.7	39.0	
By tax base	Taxes on labour (% of GDP)	17.3	14.4	14.6	14.8		19.8	20.5	20.1	20.0	
	of which, social security contributions (SSC, % of GDP)	11.7	10.4	9.8	9.9		12.9	13.0	12.7	12.7	
	Taxes on consumption (% of GDP)	12.4	13.8	14.1	13.5		10.9	11.2	10.9	10.5	
	of which, value added taxes (VAT, % of GDP)	8.5	9.8	10.1	9.4		6.8	7.3	7.4	7.1	
	Taxes on capital (% of GDP)	7.2	5.4	6.3	6.8		7.1	8.5	8.7	8.5	
Some tax types	Personal income taxes (PIT, % of GDP)	6.3	4.1	5.3	5.4		8.6	9.6	9.4	9.3	
	Corporate income taxes (CIT, % of GDP)	1.1	1.2	1.3	1.7		2.2	2.9	3.2	3.2	
	Total property taxes (% of GDP)	1.1	0.9	1.0	0.8		1.9	2.2	2.1	1.9	
	Recurrent taxes on immovable property (% of GDP)	0.3	0.4	0.3	0.3		1.1	1.1	1.0	0.9	
	Environmental taxes (% of GDP)	2.6	2.0	1.9	2.2		2.5	2.4	2.1	2.0	
	Effective carbon rate in EUR per tonne of CO_2 equivalents	NA	59.6	NA	50.6		NA	86.0	NA	84.8	
Progressivity & fairness	Tax wedge at 50% of average wage (single person) (*)	41.0	43.2	41.2	41.2	41.2	33.9	31.8	31.5	31.5	31.8
	Tax wedge at 100% of average wage (single person) (*)	46.6	43.2	41.2	41.2	41.2	40.9	39.9	39.9	40.2	40.3
	Corporate income tax - effective average tax rates (1) (*)	18.1	10.2	10.2	10.2		21.3	19.3	19.1	18.9	
	Difference in Gini coefficient before and after taxes and cash social transfers (pensions excluded from social transfers) (2) (*)	12.6	4.6	5.6	4.6		8.6	8.2	7.9	7.7	
Tax administration & compliance	Outstanding tax arrears: total year-end tax debt (including debt considered not collectable) / total revenue (in %) (*)		12.0	10.6				35.5	32.6		
	VAT gap (% of VAT total tax liability, VTTL) (**)		4.7	2.3				6.6	7.0		

(1) Forward-looking effective tax rate (KPMG).
(2) A higher value indicates a stronger redistributive impact of taxation.
(*) EU-27 simple average.
(**) For more details on the VAT gap, see European Commission, Directorate-General for Taxation and Customs Union, VAT gap in the EU - 2024 report, https://data.europa.eu/doi/10.2778/2476549
For more data on tax revenues as well as the methodology applied, see the Data on Taxation webpage, https://ec.europa.eu/taxation_customs/taxation-1/economic-analysis-taxation/data-taxation_en.
Source: European Commission, OECD

taxes remain in place (including those on financial institutions, energy and retail sales).

Hungary's labour tax burden is significantly higher than the EU average for low-wage earners. Hungary has a flat personal income tax (PIT) rate of 15%, one of the lowest in the EU. As a result, the tax wedge ([26]) is the same across different income levels, meaning it is relatively high for low-income earners and relatively low for high-income earners. As shown in Table A2.1, Hungary's labour tax wedge was 41.2% in 2024, which is higher than the EU average for single people earning 50% of the average wage (31.8%), but close to the EU average for people earning the average wage or more (40.3%). This means that the tax system places a disproportionate burden on lower-paid workers through a high income-tax rate. In addition, they are also disproportionately burdened by high consumption taxes, as poorer households consume a higher proportion of their income than richer ones. The effectiveness of the tax and benefit system in reducing inequality (as measured by its ability to reduce the Gini coefficient) has declined over time (from -12.6 in 2010 to -4.6 in 2023), falling below the EU average (-7.7 in 2023).

Graph A2.2: **Tax wedge for single and second earners, % of total labour costs, 2024**



The tax wedge for second earners assumes a first earner at 100% of the average wage and no children. For the full methodology, see OECD, 2016, Taxing Wages 2014-2015.
Source: European Commission

Hungary has added a substantial REPowerEU chapter to its RRP but challenges remain in the area of environmental taxation. Hungary's plan includes 13 reforms and 16 investments to reduce its reliance on fossil fuels. However, the nominal marginal tax rates on diesel and unleaded petrol remain below the EU average. The price of diesel for private road use is lower than that of unleaded petrol, even though diesel has a higher carbon content and a greater negative impact on air quality. This is true for both the tax per litre and the tax per tonne of CO_2 emissions. In 2024, the diesel-to-petrol ratio for the tax per litre stood at 0.94, with the petrol rate set at EUR 392 per 1 000 litres.([27])

Hungary continues to perform comparatively well on tax compliance and tax administration, **demonstrating both effectiveness and efficiency in tax collection**. This performance is expected to improve further with the ongoing digitalisation of relevant procedures and processes. These efforts are part of Hungary's RRP measures to digitally transform tax compliance procedures to make tax reporting easier, simpler and faster. Hungary is currently enhancing the

([26]) The tax wedge is defined as the sum of personal income taxes and employee and employer social-security contributions net of family allowances, expressed as a percentage of total labour costs (the sum of the gross wage and social-security contributions paid by the employer).

([27]) European Commission Taxes in Europe database (https://ec.europa.eu/taxation_customs/tedb/#/home)

functionality of the recently launched eVAT platform to streamline and automate the preparation of VAT returns. The introduction of the eReceipt system has been postponed to 1 July 2025, while preparations for the multi-phase roll-out of the ePayroll platform in 2026 appear to be on track. As part of an ongoing technical support instrument (TSI) project, the Hungarian tax administration (NTCA) is working on a comprehensive digital transformation, including a new IT strategy and improved data asset management.

The VAT gap is still well below the EU average of 7%. In 2022, Hungary's VAT gap was 2.3% of the VAT total tax liability. While the EU-wide gap increased slightly between 2021 and 2022, Hungary's VAT gap decreased by 2.4 pps. This improvement could be attributed to various policy and digital instruments implemented over the years, such as the dedicated use of the reverse charge mechanism and the adaptation of electronic monitoring systems, as outlined in previous country report annexes([28]). Tax arrears in 2022 accounted for 10.6% of total net revenue. This was significantly below the EU average of 32.6%, although that average was distorted by very large values in a few Member States.

The cost of compliance and relevant facilitation measures present a relatively positive picture. In 2021, the total cost of compliance for SMEs was the second-lowest in the EU. The NTCA has also started providing pre-filled tax returns for PIT and VAT. ([29]) Hungary scored highly in 2021 on electronic filing, with 99.8% of CIT returns and 95.9% of PIT returns submitted electronically. Electronic filing for VAT reached 100% in 2021 ([30]). As for the effectiveness of dispute resolution, the average time taken to complete a mutual agreement procedure (MAP) case is considerably shorter than the EU average([31]).

Hungary's RRP includes a commitment to strengthen the tax system against the risk of aggressive tax planning (ATP). This includes measures like introducing minimum substance requirements for corporate income tax for shell companies, strengthening transfer pricing regulations and broadening the scope of non-deductibility for outbound payments. Hungary has taken action to improve the effectiveness of tax avoidance rules. The country has adopted measures to implement non-deductibility of interest and royalty payments to listed and low-tax jurisdictions starting January 2024. In addition, Hungary has strengthened its transfer pricing rules and improved compliance through the digitalisation of its tax system (ePayroll, eReceipt, eVat) as described above.

Whereas it is still early to assess the effectiveness of the changes introduced, tackling ATP remains a challenge. Foreign direct investment (FDI) inward flows, as a percentage of GDP, are almost three times higher than the EU average (194% of GDP vs 84% of GDP in the EU in 2023). In addition, the share of inward FDI stocks held through special purpose entities relative to GDP (65%) is higher in Hungary than at EU level (25%) (see Graph A2.3). These figures suggest that Hungary may be used in ATP structures. Hungary does not leavy a withholding tax on interest, dividend or royalty payments, which facilitates low-tax-cost repatriation of invested funds. However, Hungary has introduced withholding tax on payments to low-tax jurisdictions. The Hungary-USA double tax treaty was terminated with effect from 2024.

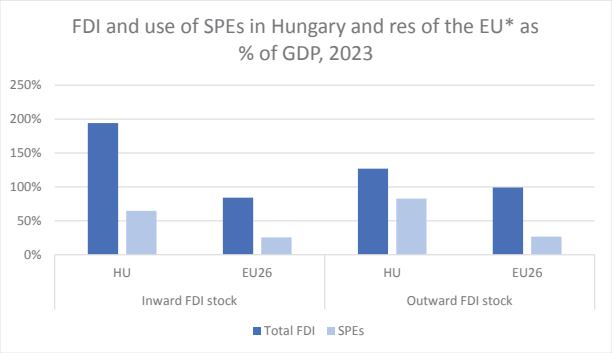
([28]) In this context, it is also welcomed that Hungary is currently implementing a TSI project to align its current real-time reporting system to the digital VAT reporting requirements under the recently adopted 'VAT in the digital age' (ViDA) package and to prepare the framework for mandatory B2B e-invoicing.

([29]) OECD, 2022 https://www.oecd.org/tax/forum-on-tax-administration/tax-technology-tools-and-digital-solutions/strategy-governanceand-new-skills.htm.

([30]) OECD Tax Administration 2023-© OECD 2023.

([31]) All data derived from the Statistics on APAs and MAPs in the EU - European Commission (europa.eu).

Graph A2.3: **FDI and use of SPEs in Hungary and the rest of the EU* as % of GDP, 2023**



*Aggregate data for 26 Member States. Data for Austria are confidential.

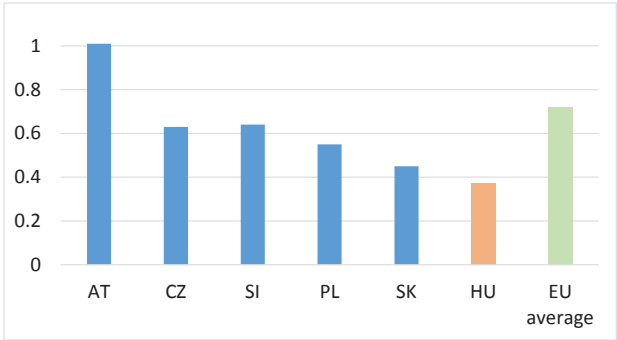
Source: European Commission

Stagnating R&D investment hinders Hungary's scientific and innovation performance. The 2024 European Innovation Scoreboard ([32]) shows that Hungary's innovation performance has improved over the years; however, the country is still performing poorly in comparison to the EU average. Hungary's R&D intensity did not increase over the past decade and remains well below the EU average (1.38% vs 2.24% of GDP in 2023). Low public spending on R&D affects the quality of the science base, undermining Hungary's innovative potential. Science-business linkages are underexploited, and innovation activities are concentrated in a small group of foreign companies, calling for decisive action to strengthen and broaden Hungary's domestic innovation base.

Science and innovative ecosystems

Low public spending on R&D holds back the quality and performance of the public science base and Hungary's transition towards a more knowledge-based economy. Public R&D expenditure has remained stagnant over the past years, and in 2023 was both well below the EU average (at 0.37% of GDP vs 0.72%) and lower than in other Central and Eastern European countries ([33]). Due to this significant underinvestment in public R&D, Hungary will struggle to reach its national target of spending 3% of GDP in total (public and private spending) on R&D by 2030 ([34]). This lack of public investment holds back scientific excellence, as evidenced by the share of Hungarian scientific publications as a percentage of its total publications within the top 10% most-cited scientific publications worldwide, which has not improved over the years and remains well below the EU average (5.9% vs 9.6% in 2021). To tackle this issue, the national research excellence programme ([35]) aims to promote internationally competitive academic excellence based on international standards. However, this will not be enough to overcome the chronic underfunding of the public science base, which, combined with a lack of monitoring and evaluation of science policies, undermines the quality of the public research system.

Graph A3.1: **Public expenditure on R&D (GOVERD + HERD) as a percentage of GDP in 2023**



Source: Eurostat

Underfunding and instability in the research landscape, along with suboptimal institutional funding, hinder the efficiency of the public research system and create uncertainties for researchers. When it comes to the allocation of public funding, the government appears to favour institutions governed by public trust funds over state-owned universities, which affects scientific excellence ([36]). The ongoing reorganisation of

([32]) 2024 European Innovation Scoreboard (EIS), country profile Hungary, country profile Hungary. The EIS provides a comparative analysis of innovation performance in EU countries, including the relative strengths and weaknesses of their national innovation systems (also compared to the EU average).

([33]) For example, public R&D investment accounts for 0.63% of GDP in Czechia, 0.55% in Poland, and 0.64% in Slovenia.

([34]) National research, development and innovation strategy 2021-2030.

([35]) Nemzeti Kutatási Kiválósági Program (NKKP)

([36]) While public universities that have not changed based on the model receive basic funding for maintenance and by head count, the institutions that have changed receive

the research institutes of the ex-Academy of Sciences since 2019, as well as unclear internal evaluation mechanisms ([37]), contribute to uncertain working conditions for researchers. This uncertain environment, coupled with low salaries and the absence of predictable career prospects, significantly affects the attractiveness of academic research careers. This further weakens the skills supply that is key for knowledge diffusion as well as society and market uptake of innovation. The roll out of the new bill on reforming HUN-REN ([38]) and the introduction of multiannual performance-based funding will require close attention and that it preserves academic freedom and leads to better research conditions. On a more positive note, the John von Neumann programme ([39]) has been rolled out with the goal of strengthening Hungary's knowledge-based economy and for it to become one of the top innovators in Europe by 2030. The mission-oriented approach of the programme is a key step towards directing R&I efforts towards strategic goals, but it would benefit from more strategic cross-cutting management in the form of a whole-of-government approach ([40]).

extra funding for example for salaries or R&I activities from the government. with emphasis on quantitative rather than qualitative output.

([37]) In 2023 HUN-REN set up a new indicator-based evaluation system, with retroactive performance requirements for 2022, fixing the financial allocations for research centres in 2024. At the request of HUN-REN, an international peer review of the research network was carried out in 2024. The fact that the methodology and results were not made public was strongly criticised by the research community and by the two biggest trade unions.

([38]) Nyitólap - Országgyűlés.

([39]) https://kormany.hu/dokumentumtar/neumann-janos-program.

([40]) Whole-of-government approach is the notion of ensuring policy coherence by applying a systemic, holistic, or cross-sectoral approach to both policy challenges and solutions to meet an overarching objective.

Business innovation

Hungary's innovation capacity remains limited to a small group of big, foreign-owned enterprises and a handful of large domestic companies in the manufacturing sector. Business enterprise expenditure on R&D as a percentage of GDP peaked at 1.23 in 2021 and since then has stagnated at 1.00, well below the EU average of 1.49. The Hungarian economy largely relies on large foreign direct investment (FDI) net flows ([41]) from big medium-high-tech and high-tech manufacturing companies. Domestic companies mainly contribute to international production chains through assembly-type activities with low added value, and only a few large multinational companies have relocated their innovative activities to Hungary ([42]). A considerable proportion of small and medium-sized enterprises do not engage in innovation activities ([43]), nor do they perceive a need to do so, while there is a high share of non-innovators with a potential to innovate ([44]). Hungary's narrow (domestic) innovation base and overreliance on FDI may also explain why Hungary has only one company among the top 800 EU R&D spenders ([45]).

The comparatively high level of public support to business R&D in Hungary has not yielded the expected results. The government applies a number of stimuli measures to foster business R&D, including indirect support measures through tax incentive schemes ([46]).

([41]) 39.4% of GDP is outstanding, against the EU average of 1.9% (Source: EIS, Hungary's country profile).

([42]) Enhancing labour market relevance and outcomes of doctoral education: Country note Hungary | OECD.

([43]) Business enterprise expenditure on R&D (BERD) performed by SMEs as % of GDP has been decreasing since 2018 and was 0.38 vs the EU average 0.40 in 2022.

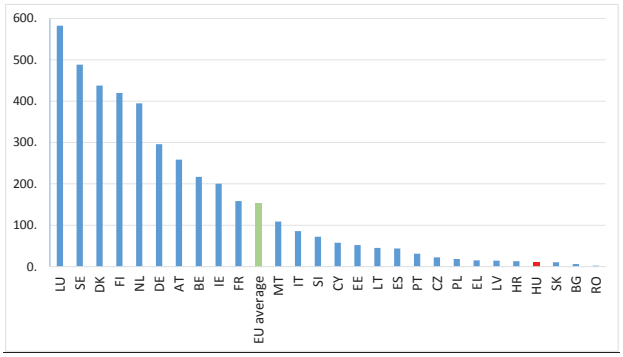
([44]) Non-innovators with a potential to innovate account for 39.6%, against the EU average of 17.8% (source: EIS, Hungary country profile).

([45]) The 2024 EU Industrial R&D Investment Scoreboard | IRI.

([46]) Hungary - Details | INNOTAX Portal.

Direct support to business R&D amounts to 0.15% of GDP, which is one of the highest share in the EU. However, the measures have been taken up by a smaller than expected number of enterprises ([47]), and the high level of support has not translated into an increase in innovation output, as measured by patents. Rather, the number of patent applications filed under the Patent Cooperation Treaty per billion GDP (in PPS €) has been on a downward trend over the last decade and fell to 1.1, well below the EU average of 3.2, in 2021. Hungary would benefit from participating in the unitary patent system, which offers key advantages in terms of promoting innovation and enhancing competitiveness ([48]). Hungary was ranked 36th in the 2024 global innovation index, which is lower than the previous year, and policy stability for doing business was highlighted as one of its weaknesses.

Graph A3.2: **Patent applications to the EPO by country of applicants and inventors in 2023**



Source: Eurostat

In response to this, and in addition to a number of funding schemes, the newly created Hungarian Innovation Agency (NIÜ) ([49]) has launched several non-financial programmes to help companies gain knowledge of project development and industrial property rights. For example, the XPAND programme provides tailor-made training to help start-ups, scale-ups and innovative small and medium-sized enterprises (SMEs) to enter the international market. Going forward, assessment and monitoring – on a regular basis and based on international best practice – of the policy mix used to foster business R&D, including R&D tax incentives ([50]), is crucial to make public spending more efficient and encourage SMEs and a broader range of economic players to innovate and be involved in the innovation value chain. This, combined with the creation of an environment helping new and innovative firms, in particular SMEs, to enter the market, will help broaden Hungary's innovation base and boost its productivity growth and competitiveness.

Businesses do not systematically seek public-private collaboration, and the lack of policies and a culture of entrepreneurship affects the commercialisation of innovation. Cooperation between academia and businesses is mainly limited to incumbent firms with links to universities. While public-private scientific co-publications, as a percentage of the total number of publications, are above the EU average, public expenditure on R&D financed by businesses as a of GDP decreased sharply over the past decade. In 2022, at 0.011%, it was well below the EU average of 0.050. Technology transfer offices are not yet sufficiently embedded in and accepted by academic circles, and spin-off channels are not yet well developed ([51]). As a response, the John von Neumann Program launched the renewal of the university technology transfer procedures. While cooperation between innovative SMEs has improved, also due to support programmes such as Széchenyi 2020 (financed by the 2014-2020 ERDF), in 2024 it was 73.1% below the EU average, having deteriorated by 7% since 2023. The Hungarian

([47]) Enhancing labour market relevance and outcomes of doctoral education: Country note Hungary | OECD.

([48]) Hungary is expected to join the Unified Patent Court Agreement, which it has signed but not yet ratified.

([49]) Home | Nemzeti Innovációs Ügynökség.

([50]) The peer review of the country's R&I system carried out in 2016 already recommended systematising the evaluation of R&I support programmes and instruments based on international standards, Peer Review of the Hungarian R&I system | Research and Innovation.

([51]) Hungarian Startup Report 2023.

start-up university programme (HSUP) ([52]) aims to improve the commercialisation of R&D results from higher education institutions by raising students' interest in innovation and entrepreneurship. The planned science and innovation parks ([53]) are also expected to foster knowledge valorisation. Going forward, properly implementing and monitoring these recently launched measures will be key, while at the same time carefully assessing the effectiveness of existing schemes to support science-industry collaboration to maximise their impact.

The adoption of digital technologies by enterprises is steadily improving, supported by national measures and EU funding. While Hungary has made significant progress in the digitisation of SMEs, with 57.4% of SMEs at a basic level of digital intensity, it remains far below the EU average of 72.9%. SMEs do not fully absorb digital technologies due to a lack of digital skills. Only 7.4% of Hungarian enterprises have adopted AI technologies, while the EU average is 13.9%.

Financing innovation

Venture capital availability in Hungary remains unstable. Based on market statistics Venture capital investment as a percentage of GDP progressed well until 2020, but then almost halved from 0.092 of GDP in 2021 to 0.052 in 2023 (vs the EU average of 0.078). Financing at the start-up stage dominates the Hungarian venture capital market, while incubation financing has almost disappeared. The number of companies receiving venture capital and equity funding has been decreasing since 2022. As regards the invested amount, the reported value of transactions was 183.7% higher in the first half of 2024 than in the first half of 2023, and 21.6% lower than in the first half of 2022 ([54]). Venture capital funding in Hungary is concentrated on start-ups (53.1% of the total), with a much smaller share going to seed financing (15%) and later stage ventures (32%), where capital requirements are usually greater. Public co-funding programmes for early-stage start-ups could be one reason for this. As new technology-based firms are likely to need more capital for growth also in later stages, more work is needed to support scale-ups at the development stage (see also the annex on access to finance).

Innovative talent

Entrepreneurship education is very limited in Hungary and systemic changes would be needed to strengthen it. While there are several state and private initiatives supporting the development of entrepreneurial skills, Hungary has no national strategy for entrepreneurship education. Entrepreneurship education is used in a narrow sense in the national school curriculum, which only relates it to economic and financial literacy ([55]). According to the 2023 Global Entrepreneurship Monitor ([56]), 36% of respondents feel they have the skills and knowledge to start a business, which is very low by international standards. Entrepreneurial activity is moderate, with early-stage entrepreneurial rates below the global average.

Tackling labour and skill shortages remains critical to fostering innovation and maintaining competitiveness. The share of the population aged 25-34 who have successfully completed tertiary education has been stagnating over the past decade and

([52]) Hungarian Startup University Program.

([53]) Neumann János Program.

([54]) Venture Capital and Private Equity update Hungary H1 2024.

([55]) Government decree 110/2012. (VI. 4.) on the publication, introduction and application of the National core curriculum.

([56]) Global Entrepreneurship Monitor 2023.

stood at 32.3% in 2023, among the lowest rates in the EU. The number of new graduates in science and engineering per thousand population aged 25-34 has been decreasing over the past years and in 2022 was well below the EU average, at 8.4 vs 17.6. As a result, in 2020 27% of Hungarian enterprises reported a skills gap, and more than 30% (mostly large firms) reported difficulties in the manufacturing sector ([57]). Structural reforms will be key to address labour market needs, as science, technology, engineering and mathematics graduates and an up-skilled workforce are tomorrow's specialists in technology-based industries and emerging areas such as artificial intelligence.

([57]) Understanding Skill Gaps in Firms | OECD.

Table A3.1: **Key innovation indicators**

Hungary	2012	2017	2020	2021	2022	2023	2024	EU average (1)	USA
Headline indicator									
R&D intensity (gross domestic expenditure on R&D as % of GDP)	1.26	1.31.	1.58	1.63	1.39	1.38	:	2.24	3.45
Science and innovative ecosystems									
Public expenditure on R&D as % of GDP	0.41	0.34	0.36	0.4	0.38	0.37	:	0.72	0.64
Scientific publications of the country within the top 10% most cited publications worldwide as % of total publications of the country	5.9	5.1	5.9	5.9	:	:	:	9.6	12.3
Researchers (FTEs) employed by public sector (Gov+HEI) per thousand active population	2.4	2.3	3.7	3.6	3.8	3.5	:	4.2	:
International co-publications as % of total number of publications	46.5	49.7	50.8	52.1	50.7	51.3	:	55.9	39.3
R&D investment & researchers employed in businesses									
Business enterprise expenditure on R&D (BERD) as % of GDP	0.83	0.96	1.21	1.23	1	1	:	1.49	2.7
Business enterprise expenditure on R&D (BERD) performed by SMEs as % of GDP	0.37	0.35	0.47	0.42	0.38	:	:	0.4	0.3
Researchers employed by business per thousand active population	2.8	3.7	5.2	5.6	5.8	5.8	:	5.7	:
Innovation outputs									
Patent applications filed under the Patent Cooperation Treaty per billion GDP (in PPS €)	1.4	1.2	1.2	1.1	1	:	:	2.8	:
Employment share of high-growth enterprises measured in employment (%)	16.82	20.43	:	:	:	:	:	12.51	:
Digitalisation of businesses									
SMEs with at least a basic level of digital intensity % SMEs (EU Digital Decade target by 2030: 90%)	:	:	:	:	51.73	:	57.44	72.91	:
Data analytics adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	:	:	53.21	:	33.17	:
Cloud adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	20.6	:	37.12	39.8	38.86	:
Artificial intelligence adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	2.98	:	3.68	7.41	13.48	:
Academia-business collaboration									
Public-private scientific co-publications as % of total number of publications	8.7	10.4	10.7	11.4	10.7	10.5	:	7.7	8.9
Public expenditure on R&D financed by business enterprise (national) as % of GDP	0.04	0.019	0.008	0.011	0.011	:	:	0.05	0.02
Public support for business innovation									
Total public sector support for BERD as % of GDP	0.26	0.21	0.24	0.26	0.191	:	:	0.204	0.251
R&D tax incentives: foregone revenues as % of GDP	0.12	0.06	0.038	0.035	0.041	0.039	:	0.102	0.141
BERD financed by the public sector (national and abroad) as % of GDP	0.142	0.141	0.200	0.225	0.150	:	:	0.100	0.110
Financing innovation									
Venture capital (market statistics) as % of GDP, total (calculated as a 3-year moving average)	0.03	0.04	0.08	0.09	0.08	0.05	:	0.08	:
Seed stage funding share (% of total venture capital)	4.06	20.49	27.18	22.84	21.89	14.97	:	7.29	:
Start-up stage funding share (% of of total venture capital)	62.26	67.88	54.18	46.68	46.33	53.07	:	44.02	:
Later stage funding share (% of total venture capital)	33.68	11.62	18.65	30.48	31.78	31.96	:	48.69	:
Innovative talent									
New graduates in science and engineering per thousand population aged 25-34	8.6	9.7	17.7	9.2	8.4	:	:	17.6	:

EU average for the last available year or the year with the highest number of country data.

Source: Eurostat, DG JRC, OECD, Science-Metrix (Scopus database), Invest Europe, European Innovation Scoreboard.

In an increasingly difficult economic climate, with weak investment, high prices and contracting growth, establishing a safe, predictable business environment is ever more critical and Hungary's key challenge.

Economic framework conditions

The investment outlook is weak. Real GDP was expected to grow by 0.6% in 2024, and strengthen by 2025, but investment remains sluggish, due to the postponement of public investments and a fall in business optimism. Uncertainties around the outlook for the automotive industry is expected to affect investment. A late 2024 survey by the German-Hungarian Chamber of Industry and Commerce indicated negative investment sentiment, with more firms planning to cut spending than increase ([58]). Public net fixed capital formation has fallen considerably (0.48% of GDP in 2020 to 0.1% in 2024). According to the 2024 EIB Investment Survey ([59]), the most frequently mentioned long-term barriers to investment are uncertainty about the future (72%); energy costs (60%); and availability of skilled staff (51%).

Investment in Hungary is heavily oriented towards machinery and equipment, with limited focus on intangibles. Firms allocate a much smaller share of investment to R&D than their EU counterparts. In 2023, the share of R&D investment was 2.8% of the total, significantly below the EU average of 7.7%.

Availability of finance is an obstacle to investment. According to the 2024 EIB Investment Survey ([60]), the share of finance-constrained companies is higher in Hungary than the EU overall. In 2024 the average business-to-business payment delay increased from 2023 and is now at 14.6 days (EU average: 15.5 days) ([8]). By contrast, the delay in payments from public entities to business has been decreasing and is below the EU average (10.9 days vs 15.2 days).

Hungary is equipped with strong digital infrastructure and is making good progress on deployment, with VHCN (very high-capacity network) coverage above the EU average and 5G coverage close to the EU average. FTTP (fibre to the premises) coverage is high (76.2%; EU average 64.0%). In 2023, Hungary continued to progress towards the 2030 Digital Decade connectivity targets, as coverage of fixed VHCN increased to 84.1% (4 percentage points higher than 2022). This corresponds to a similar increase in take-up by consumers, with the share of at least 1Gbps broadband lines reaching 37.2%, the second highest in the EU. Hungary has made considerable progress with its 5G network, with coverage increasing to 83.7% in 2023 (up by 45% from the previous year), now just below the EU average (89.3%).

The risk of cybersecurity incidents is increasing, given companies' reliance on digital technologies. In 2022, 13.4% of businesses registered ICT security incidents leading to the unavailability of ICT services, destruction or corruption of data or disclosure of confidential data, which is below the EU average (22.2%). However, businesses seem less prepared than EU peers as only 5.3% reported being insured against ICT security incidents (EU average 25.0%) and 79.0% reported using ICT security measures (EU average 91.8%).

Regulatory and administrative barriers

Excessive regulation, ad hoc taxation, and an unstable business climate continue to hinder market entry, competition, and innovation. In the retail, energy, transportation, and professional services sectors, strict regulations limit competition and

([58]) Német-Magyar Ipari és Kereskedelmi Kamara
([59]) EIB Investment Survey Country Overview 2024-Hungary
([60]) EIB Investment Survey 2024: European Union overview

affect productivity. Hungary has the highest number of regulated professions in the EU with professions like tourist guides, patent trademark agents, and lawyers all having levels of restrictiveness above the EU average.

Graph A4.1: **Making Business Easier: selected indicators.**

Share of (1) enterprises, (2) average intra-EU exports and imports in GDP, (3) firms, (4) SMEs.
Sources: (1) EIB IS, (2) Eurostat, (3) ECFIN BCS, (4) SAFE survey.

According to the OECD's product market regulation indicators, Hungary exhibits significantly more regulation than the average OECD country, indicating an opportunity to develop a regulatory framework more supportive of competition. Areas needing to improve include simplifying administrative processes for starting new businesses, enhancing methods for assessing the impacts of new and existing regulations on competition, and increasing stakeholder involvement in the regulatory consultation process. Reducing regulatory barriers in the professional and retail sectors, as well as non-tariff trade barriers, would help productivity.

Business entry rates are low, especially in sectors dominated by public ownership. The business registrations index for 2024 and its five-year average are below the EU average. Bankruptcy declarations in 2024 were over three times higher than in 2021, the highest rate in the EU. The lower-than-average entry rates are exacerbated by below-average survival rates for new businesses over the first five years, influenced by the strong presence of a few state-owned enterprises limiting competition, innovation, and research.

State-friendly domestic ownership is increasing across sectors like banking, telecommunications, utilities, media, and broadcasting. The diminishing presence of foreign capital (private net fixed capital formation as a percentage of GDP has more than halved since 2020) and a lack of expertise in high-value industries like banking and telecommunications poses a risk to productivity growth and innovation. Recent years have seen various cases of market interference in sectors like construction and retail (see below) that were detrimental to the business environment, discouraging investment from the EU and abroad, and which resulted in the acquisition of companies by less efficient state-owned enterprises or private firms with government ties.

Certain firms and industries experience discriminatory treatment through tailor-made taxes, price caps, and regulations imposed at short notice, implemented with little notice and no prior consultation. For example, there are price caps and profit taxes affecting the production of cement and ceramic products, as well as increased taxes for insurance and pharmaceutical companies.

The retail sector has faced a chronically unstable business environment with many regulations affecting its functioning, while also putting a disproportionate burden on foreign companies. The tax burden in this sector disproportionately impacts larger, often foreign-owned companies, and legislation

prevents European operators from adopting a franchised structure, akin to that of larger Hungarian retail businesses. Conditions for establishing or making changes to stores larger than 400 m^2 are unpredictable and lack transparency. Rules regulating the price of products, their promotion and retailer margins affect the viability of foreign retailers. On 12 September 2024, the Court of Justice of the European Union ruled in case C-557/23 that Hungarian measures fixing a maximum price for the sale of certain agricultural products and the obligation to offer for sale a specific quantity of such products violated Regulation (EU) No 1308/2013 establishing a common organisation of the markets in agricultural products, as amended by Regulation (EU) 2021/2117. The proposed legislation on combating food waste contains a prohibition on retailers selling food products 48 hours before their expiry date, depriving predominantly foreign retailers of the possibility of managing their stocks effectively.

The government uses its powers to exempt deals from merger scrutiny, meaning the impact of these transactions on the economy, competition, and the Single Market go unexamined. The criteria for exemptions are vague, and there is no process for challenging these criteria or the decisions made.

The government recently unveiled welcome plans to assist SMEs in scaling up. The Demjan Sandor Programme, which is co-funded by the EU, aims to provide financing to SMEs to strengthen competitiveness and investment, promote digitalisation, and lessen administrative burdens.

Single Market

Hungary is an open economy, highly integrated into the Single Market. It relies heavily on EU sources (27.3% of value added is sourced from the rest of the EU compared to an EU average of 19.7%).

Hungary experienced a sharp deterioration in conformity with EU law and is the worst performer in the EU. The conformity deficit (the percentage of all directives transposed incorrectly) stood at 3% at the end of 2024 (EU average of 0.9%) compared with 2.3% in 2022. This figure has deteriorated year-on-year over the past five years. There are forty-one ongoing infringement procedures, above the EU average of 26 and a figure that has considerably increased since 2020 ([61]). Hungary solved 78% of the SOLVIT (the system for resolving EU-rights issues) cases it managed as lead centre, which is below the EU average of 85%. Hungary does not actively take part in EU tools such as the Single Market Enforcement Taskforce, designed to improve the functioning of the single market.

Public procurement

Competition in public procurement procedures is improving. However, nearly one third of Hungarian public procurement contracts above the EU threshold fail to attract multiple bids (32% vs EU average of 29%), impacting the efficiency and cost-effectiveness of procurement procedures; nevertheless, some improvements have been observed in recent years.

Hungary initiated targeted reforms in some sectors that brought in mandatory preliminary market consultations and issued new guidelines for contract structuring to attract more bidders. Sectors, such as IT services, medical equipment, pharmaceuticals, and construction materials, show high levels of market concentration, reducing competitive pressure. To more broadly address the competition issue, in 2024 Hungary revised its

([61]) Single Market Scoreboard 2024

action plan for increasing competition in public procurement, incorporating fourteen new measures based on OECD recommendations ([62]), with a focus on improving the e-Procurement system (EKR), enhancing capacity-building programmes, and fostering SME participation. By 2024 Hungary had fully operationalised the Single-Bid Reporting Tool for tracking procurement outcomes and identifying sectors with persistently low competition. In late 2023, Hungary also revised its public procurement performance measurement framework to include new indicators based on OECD input, with the 2024 report providing the first comprehensive assessment under these enhanced metrics.

Removing barriers in the procurement market would aid competition. Existing barriers to entry might be removed by reducing red tape, streamlining procurement procedures (e.g. speeding-up of the decision-making for bid evaluation) and harmonising legal interpretations across different supervisory bodies to reduce administrative complexity. Putting in place regular public-private dialogues and continuously evaluating the impact of reforms is crucial for increasing suppliers' participation and achieving Hungary's goal of reducing further single-bid procedures.

Hungary is taking steps to advance the use of socially responsible public procurement (SRPP). The Public Procurement Authority has a dedicated website for SRPP, which includes resources such as guidelines and studies. It also provides a database on the use of reserved contracts with the registered 'sheltered place of employment.' Data collection efforts provide valuable information on the inclusion of social considerations in public procurement. In 2023, social aspects were incorporated into 4.2% of public procurement procedures conducted below EU thresholds, with these procedures accounting for 6.7% of the total value (approximately 1.5 times higher than in 2022) ([63]).

([62]) OECD (2024), Improving Competitive Practices in Hungary's Public Procurement: Reducing Single-bids and Enhancing Supplier Participation, OECD Public Governance Reviews, OECD Publishing, Paris, https://doi.org/10.1787/5d1c1ec1-en

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([63]) kozbeszerzes.hu/media/documents/annual-report-2023.pdf

Table A4.1: **Making Business Easier: indicators.**

Hungary							
POLICY AREA	**INDICATOR NAME**	**2020**	**2021**	**2022**	**2023**	**2024**	**EU-27 average**
Investment climate							
Shortages	Material shortage, firms facing constraints, %[1]	8.8	23.4	22.2	10.8	7.1	10.0
	Labour shortage, firms facing constraints, %[1]	24.4	38.5	39.0	28.6	23.1	20.2
	Vacancy rate, vacant posts as a % of all available ones (vacant + occupied)[2]	1.8	2.3	2.7	2.3	1.9	2.3
Infrastructure	Transport infrastructure as an obstacle to investment, % of firms reporting it as a major obstacle[3]	4.7	4.4	3.9	3.6	4.9	13.4
	VHCN coverage, %[4]	-	71.8	80.3	84.1	-	78.8
	FTTP coverage, %[4]	-	64.2	70.1	76.2	-	64.0
	5G coverage, %[4]	-	17.6	57.9	83.7	-	89.3
Reduction of regulatory and administrative barriers							
Regulatory environment	Impact of regulation on long-term investment, % firms reporting business regulation as a major obstacle[3]	10.8	7.6	7.9	10.9	8.5	24.5
Late payments	Payment gap - corporates B2B, difference in days between offered and actual payment[5]	18.0	11.9	10.9	14.8	14.6	15.6
	Payment gap - public sector, difference in days between offered and actual payment[5]	18.9	8.7	14.0	14.0	10.9	15.1
	Share of SMEs experiencing late payments, %*[6] — from public or private entities in the last 6 months	43.9	34.6	40.6	43.6	-	-
	Share of SMEs experiencing late payments, %*[6] — from private entities in the previous or current quarter	-	-	-	-	45.4	47.9
	Share of SMEs experiencing late payments, %*[6] — from public entities in the previous or current quarter	-	-	-	-	17.6	16.6
Single Market							
Integration	EU trade integration, % (Average intra-EU imports + average intra EU exports)/GDP[2]	57.0	57.7	65.9	57.0	52.7	41.6
	EEA Services Trade Restrictiveness Index[7]	0.045	0.044	0.044	0.044	0.051	0.050
Compliance	Transposition deficit, % of all directives not transposed[8]	1.0	0.7	1.5	0.2	0.5	0.8
	Conformity deficit, % of all directives transposed incorrectly[8]	1.6	1.8	1.9	2.3	3.0	0.9
	SOLVIT, % resolution rate per country[8]	95.0	91.2	93.5	75.0	78.3	84.9
	Number of pending infringement proceedings[8]	32.0	30.0	32.0	41.0	41.0	24.4
Public procurement							
Competition and transparency in public procurement	Single bids, % of total contractors**[8]	39	40	33	32	23	-
	Direct awards, %**[8]	6	5	5	4	5	7.0

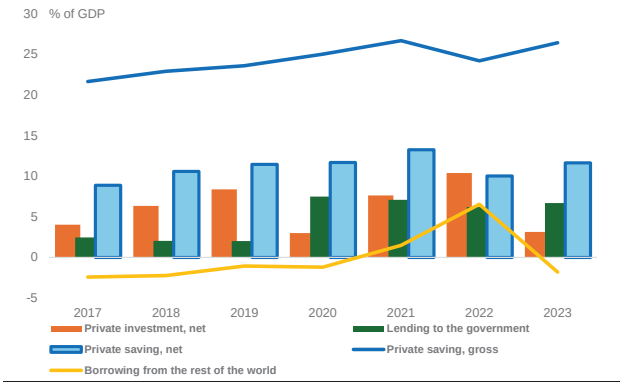
*Change in methodology in 2024: reporting late payments from public and private entities separately.
**The 2024 data on single bids is provisional and subject to revision.
Sources: (1) ECFIN BCS, (2) Eurostat, (3) EIB IS, (4) Digital Decade Country reports, (5) Interim Payment Report, (6) SAFE survey, (7) OECD, (8) up to 2023: Single Market and Competitiveness Scoreboard, 2024: Public procurement data space (PPDS).

Hungary has a negative net international investment position (NIIP) however it has declined throughout the last years. Banks, which dominate the financial sector, are robust, both in terms of capital and liquidity. Capital markets remain underdeveloped and do not contribute sufficiently to the financing of Hungarian companies. Retail participation has been improving when looking at the level of direct and indirect household investments. At the same time, the investment policies of domestic institutional investors are quite conservative. The issuance of tax-free government bonds (while raising the withholding tax on funds and deposits from 15% to 28%), does not create the appropriate incentives to foster the development of capital markets. Plans to enable the use of private pension savings for housing purposes in 2025 also reinforces this trend. This leaves internal financing as the main alternative to bank funding for Hungarian firms, which is a limiting factor for the set-up and subsequent scale-up of innovative start-ups with no or limited profitability. Moreover, the less-developed capital markets reduce the exit options for private equity and venture capital investors and contribute to a less-developed domestic venture and growth capital market, further compounding the lack of funding sources for innovation, a key element for competitiveness.

Availability and use of domestic savings

The growing net private savings of the Hungarian economy have helped to mitigate vulnerabilities related to external financing. Throughout 2014 to 2023, the private savings ratio fluctuated around its ten-year average of 10.7% of GDP, rising to 11.7% in 2023 (see Graph A3.1). The net private investment ratio, which measures the private sector's net contribution to capital accumulation in the country, averaged 5.1% of GDP over the decade but dropped to 3.1% in 2023. During this period, lending to the government showed an average deficit equivalent to 4.1% of GDP. The substantial positive balance between net domestic savings and net investment, coupled with a significant government deficit, led to net lending of, on average, 1.5% of GDP to the rest of the world between 2014 and 2023.

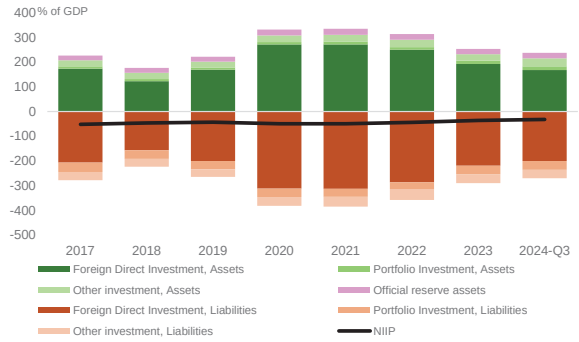
Graph A5.1: **Net savings-investment balance in Hungary**



Source: AMECO

Net external liabilities declined to 32% of GDP, suggesting that Hungary is a net capital importer. As of Q3 2024, Hungary's net international investment position (NIIP) was equivalent to -31.8% of GDP (see Graph A3.2). Net foreign direct investment stock, which reached -32% of GDP as of Q3 2024, accounted for most of the NIIP. The significant stock of foreign reserves, which amounted to 22.4% of GDP, decreases net external liabilities. The net portfolio investments, which are directly affected by the price volatility of equity valuations abroad (assets) and in Hungary (liabilities), were negative to the tune of -20.7% of GDP as of Q3 2024. They were in line with the net stock of other investments, which amounted to -1.5% of GDP at the same time.

Graph A5.2: **International investment position of Hungary**

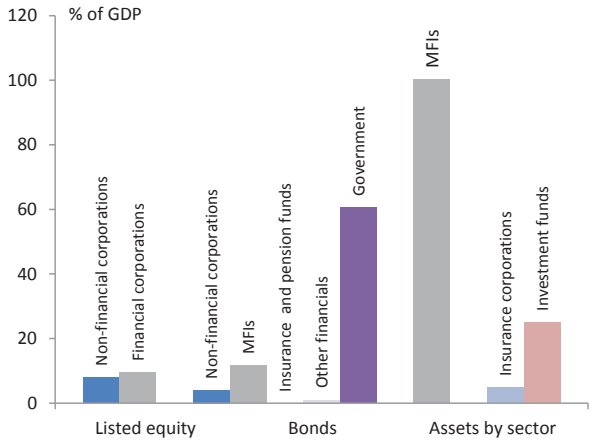


Source: ECB

Structure of the capital markets and size of the financial sector

The Hungarian economy has a small domestic equity market. The market capitalisation of listed equity reached 17.5% of GDP at end-2023 (see Graph A3.3). Characteristically, non-financial corporations (NFCs) accounted for 46% of that capitalisation, which reflects the extent to which the stock market is geared towards funding the non-financial segment of the real economy. The outstanding volume of debt securities reached 77.2% of GDP at end-2023. Bonds issued by the government accounted for almost 78.5% of the total bonds at end-2023.

Graph A5.3: **Capital markets and financial intermediaries in Hungary**



Source: ECB, EIOPA, AMECO.

Even though the financial sector in Hungary remains dominated by banks, non-bank financial intermediaries are growing as well. The banking sector is the largest segment of the financial services, total assets of banks accountedfor 100.2% of GDP in 2023, which remains however significantly below the EU average of 253.4%. The domestically owned banks accounted for 63.7% of total banking sector assets in 2023. The banking sector also has a very high level of concentration with the top five MFIs representing 60% the sector in 2023 (EU average: 51.1%). The insurance sector assets accounted for only 4.8% of GDP at end-2023. In 2023, insurance sector was composed of 26 institutions. However, the top five market participants held 63% of the insurance market based on gross written premium income in 2023 ([64]). At this stage, ECB/EIOPA data were not available on assets of the pension fund sector, while the OECD reported the total assets of Hungary's pension funds equate to around 4.5% of GDP at end-2023 ([65]). The total assets of investment funds accounted for 25% of GDP in 2023 (see section on institutional investors).

Resilience of the banking sector

The Hungarian banking system is stable and resilient. Hungarian banks remain well capitalised, with the total capital ratio at 21% in Q3-2024 (EU average: 20.1%). The common equity tier 1 (CET1) stood at 18.8% in Q3-2024 (EU average: 16.6%) (see Table A3.1). The banking sector was exceptionally profitable in 2024 with a return on equity (ROE) at 21.3% (EU average: 10%), due to volatile and one-off items (an increase in dividend income and

([64]) MNB, 2024, Report on Insurance, funds, capital market risks and consumer protection, p. 21.

([65]) OECD, 2024, Pension Markets in Focus-2024, p. 11.

reduction of the windfall tax) ([66]). The government announced that windfall tax was still due in 2024, but the amount payable could be reduced in line with an increase in banks' holdings of government securities. As of 1 July 2024, the MNB has increased the countercyclical capital buffer (CCyB) rate applicable to domestic exposures from 0 to 0.5%. The MNB has also decided to apply a 1% positive neutral CCyB rate to domestic exposures in a neutral risk environment, starting from 1 July 2025 ([67]). Due to rising commercial real estate (CRE) market risks, the MNB also decided to reactivate the systemic risk buffer (SyRB) as of 1 July 2024 as a precautionary measure. Hungarian banks' aggregate Minimum Requirement for Own Funds and Eligible Liabilities (MREL) rate stood at 24.6% of risk weighted assets at end-2023 ([68]). As of 1 January 2024, all banks in Hungary meet their final MREL targets against an average MREL binding target (including CBR) of 23.9% TREA (including CBR) ([69]). Based on the stress test results, domestic credit institutions would meet the regulatory requirements on liquidity and capital adequacy even in the event of a severe shock ([70]). Hungary has published information on its national bail-in mechanic in line with EBA guidelines ([71]).

Banks' liquidity is stable at a high level, with minor fluctuations. Banks met the LCR requirement with considerable surplus of liquid assets at 177% (the expected level was 100%) in August 2024 ([72]). The net stable funding ratio (NSFR) is also met by banks, with a systemic average above 130% (the expected level was 100%) ([73]).

Hungarian banks continue to reduce their non-performing loans (NPLs). The NPL ratio stood at 2.3% in Q3-2024 (EU average: 1.9%). The NPL ratio of corporate loans stagnated at a historically low level of 3.3% in Q3-2024 (EU average: 3.5%). The NPL ratio of household loans has fallen to 3.4% in Q3-2024 (EU average: 2.2%). Similarly, the NPL coverage ratio was 60% in Q3-2024 (EU average: 42.1%), which reflects banks' ability to absorb any future losses.

Resilience of the non-bank financial intermediaries

Hungary's insurance sector is rather concentrated, with declining profits, and well capitalised. The sector-wide return on equity (ROE) fell from 9.5% in 2022 to 5.4% in 2023 ([74]). The profitability of the insurance sector deteriorated further in 2023, mainly due to the impact of the extra tax levied by the government on the insurance sector (based on annual premium income). Based on gross written premiums, the non-life segment is larger than the life segment. The sectoral solvency ratio was 197.5% in 2023. According to EIOPA's 2024 dashboard, Hungary had a comparatively low aggregated insurance protection gap score for natural catastrophes ([75]).

The pension fund market remains stable with profits, but the declining membership

([66]) MNB, 2024, Financial Stability Report, Nov. 2024, p.5. The government announced that tax was still due in 2024, but the amount payable could be reduced in line with an increase in banks' holdings of government securities.

([67]) MNB, Countercyclical capital buffer (CCyB)

([68]) EBA MREL Dashboard - Q4 2023, p.13.

([69]) EBA MREL Dashboard - Q4 2023, p.13. CBR (Combined Buffer Requirement) and TREA (Total Risk Exposure Amount)

([70]) MNB, 2024, Financial Stability Report, Nov. 2024, p.5.

([71])) EBA, Guidelines to resolution authorities on the publication of their approach to implementing the bail-in tool.

([72]) MNB, 2024, Financial Stability Report, Nov. 2024, p.55.

([73]) MNB, 2024, Financial Stability Report, Nov. 2024, p.55.

([74]) MNB, 2024, Report on Insurance, funds, capital market risks and consumer protection, p. 7.

([75]) EIOPA, 2024. Dashboard on Insurance Protection for Natural Catastrophes in a Nutshell.

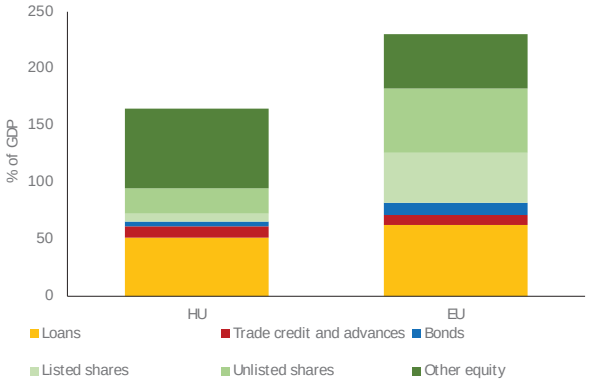
is a major risk. Hungary's public pension system is pay-as-you-go (PAYG), a defined benefit (DB) scheme covering all employees, while mandatory private pension funds were eliminated in 2010. Third-pillar voluntary private pension funds are categorised into (i) voluntary pension funds, (ii) private pension funds, and (iii) voluntary health/mutual aid funds, where the voluntary pension funds account for around 90% of the assets. The voluntary pension fund sector had 28 institutions with an operating profit of HUF 1.7 billion (EUR 4.4 million) in 2023, an improvement compared to the previous year ([76]). The number of voluntary pension fund members has been steadily decreasing for 15 years. At the end of 2023, 1.1 million members had voluntary pension savings (0.3 million fewer than in 2008) due to the difficulty to appeal to the younger generation ([77]). The health and mutual aid funds had 16 institutions and is also profitable. The number of members in the health and mutual aid fund sector increased to 1.1 million, while the operating profit was also positive at HUF 1.4 billion (EUR 3.6 million) in 2023 ([78]).

Sources of business funding and the role of banks

Firms in Hungary rely slightly more than the EU average on funding from banks and far less than the EU average on capital markets. More specifically, at the end of 2023, bank finance through loans constituted 31.2% of all funding sources for Hungarian non-financial corporations (NFCs) (EU average: 27.2%), while listed shares and bonds represented only 6.7% of funding sources (EU average: 23.8%). The overall level of NFC funding in Hungary was equivalent to 164.9% of GDP, which is substantially lower than the EU average of 230.3% of GDP (see Graph A3.4).

Hungarian firms rely mostly on internal financing like their European peers. According to the 2024 EIB Investment Survey, the investment needs of 67% of Hungarian firms are covered by internal funding, compared to an EU average of 66% ([79]). At the same time, 73% of Hungarian firms believe that their investment activities over the last three years were about the right amount (below the EU average of 80%), while 18% of Hungarian firms believe that their investment activities were too little (above the EU average of 14%). Overall, this suggests that most Hungarian firms do not perceive major investment gaps ([80]).

Graph A5.4: **Composition of NFC funding as % of GDP**



(1) Reference period 2023.
Source: Eurostat

Lending to households picked up and this is expected to continue. For households, the annual credit growth rate for adjusted loans has edged up from 2.7% in 2023 to 7.9% in Q3-2024. This growth is due to improvements in macroeconomic fundamentals, the reformed family subsidy programme (HPS Plus programme), and an increase in consumer

([76]) MNB, 2024, Report on Insurance, Funds, Capital Market Risks, and Consumer Protection, p.48.

([77]) MNB, 2024, Report on Insurance, Funds, Capital Market Risks, and Consumer Protection, p.47.

([78]) MNB, 2024, Report on Insurance, Funds, Capital Market Risks, and Consumer Protection, p.49.

([79]) EIB, 2024, 2024 EIB Investment Survey, p. 29.

([80]) Ibid., p. 7.

loans ([81]). According to the October 2024 bank lending survey conducted by the Hungarian National Bank (MNB), in the retail segment the demand for unsecured loans is not expected to continue to rise while demand for housing loans may pick up again over the next six months ([82]).

Lending to corporates slowed down while the outlook also remains subdued. For NFCs, the annual credit growth rate fell from 6.2% in 2023 to 3.1% in Q3-2024, due to insufficient demand (in particular from small and medium-sized enterprises (SMEs)) ([83]). According to the MNB's October 2024 bank lending survey, the investment activity of domestic companies is dampened mainly by subdued consumer demand, the lingering effects of inflation and uncertainty. Looking ahead to the next six months, banks do not expect demand for long-term loans (typically investment loans) to pick up ([84]).

Capital markets and the participation of retail investors

Hungarian capital markets remain under-developed. The main stock exchange in Hungary is the Budapest Stock Exchange (BSE), which is home to around 155 listed companies ([85]). The MNB has the controlling ownership of the BSE. The BSE total annual revenue for H1-2024 was 23% lower than H1-2023 ([86]). The equity market is the most important segment of the BSE, accounting for around 90% of trading revenue in H1 2024, while the second largest trading revenue is generated by derivatives ([87]). The BSE also operates a multilateral trading facility (MTF) for SMEs called BSE Xtend; and a new market segment for secondary bond trading called BSE Xbond. The use of equity by SMEs is very low, as only 3% of SMEs indicated in the 2024 SAFE survey that equity was relevant to them, compared to an EU average of 12% ([88]).

While there is no comprehensive government strategy on promoting capital markets, some sector-specific strategies were introduced by important national players in the financial sector. Building on the former 2016-2020 strategy ([89]), the BSE developed a new strategy for 2021-2025 to further increase the role of capital markets (e.g. promoting the ESG aspect in both equity and bond asset classes, exploring cooperation opportunities in the CEE region, and improving IT innovation and security) ([90]). In 2018, the MNB adopted a seven-point strategy report to promote the insurance sector in Hungary. The seven points and targets are: (i) widespread self-care (e.g. increasing coverage of life insurance and voluntary pension fund contracts, the number of contracts); (ii) converting market size (e.g. penetration of gross written premium/GDP); (iii) increasing the competitive market; (iv) efficient sales (e.g. use of innovative channels through online sales); (v) economies of scale; (vi) fair and competitive profitability; and (vii) well-capitalised insurers ([91]). The MNB carefully monitors the development of these seven targets on an annual basis.

Hungarian households have a high saving rate, with the majority of their financial

([81]) MNB, 2024, Financial Stability Report, Nov. 2024, p. 28.

([82]) MNB, 2024, Trends in Lending, Nov. 2024.

([83]) MNB, 2024, Financial Stability Report, Nov. 2024, p. 22.

([84]) MNB, 2024, Trends in Lending, Nov. 2024.

([85]) BSE, 2024, Semi-Annual Report, June 2024, p. 2.

([86]) BSE, 2024, Semi-Annual Report, June 2024, p. 3.

([87]) BSE, 2024, Semi-Annual Report, June 2024, p. 7

([88]) European Commission, 2024, Data and Surveys-SAFE, Results by country, T27.

([89]) BSE, 2015, BSE Strategy 2016-2020.

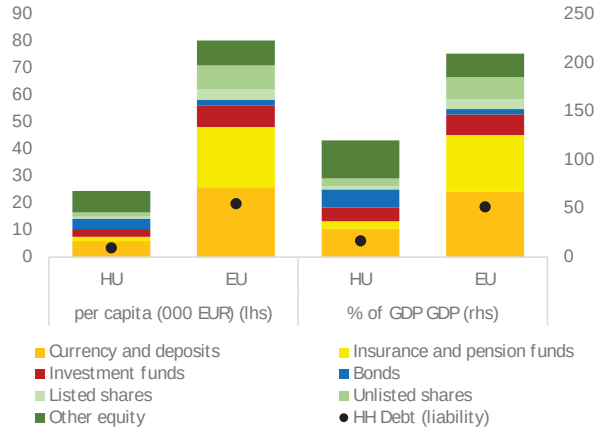
([90]) BSE, 2020. BSE Strategy 2021-2025.

([91]) MNB, 2018, The 10-year vision of the insurance sector in 7 points; also MNB, 2024, Report on Insurance, funds, capital market risks and consumer protection, p. 19.

assets held in government bonds and investment funds, but more can be done. Encouraging the build-up of universal funded supplementary pension schemes would positively contribute to (i) the sustainability and adequacy of pension benefits; (ii) investment in equity; (iii) access to finance; (iv) growth; and (v) innovation. In 2023, Hungarian households had a lower-than-average holding of cash and deposits, representing nearly a quarter (21.4%) of household assets compared to the EU average of 32.3% (part of the deposits seem to be replaced by domestic government bonds, very likely due to tax exemptions on these bonds). In 2023, 37.1% of household financial assets were held in three asset categories: (i) pension funds; (ii) investment funds; and (iii), directly held in financial investment instruments ([92]). This is still short of the EU average of 45.4% (see Graph A3.5). In Hungary, direct and intermediated retail investment by households was 52% in 2022 (EU average: 56.2%), which is rather high.

Financial taxation favours certain investments, hindering the broader development of capital markets. In 2022, the Hungarian government started issuing long-term bonds for retail investors, which were tax free, while raising the withholding tax on funds and deposits from 15% to 28% (starting in July 2023) ([93]). Long-term savings (deposits, fund units and other securities held in a special savings account for at least five years) were also exempt from tax. Moreover, under a new regulation, as from October 2023, banks must inform their clients about the potential loss they may suffer from holding their money in cash instead of investing in government bonds ([94]). 0verall, it is difficult to incentivise retail clients towards insurance products (which also have a large majority of government bonds) or investment funds, if direct access to government bonds is tax free. A wider review of the incentives in place to promote retail participation in financial markets may also be warranted.

Graph A5.5: **Composition of household financial assets per capita and as % of GDP**



(1) Reference period 2023.
Source: Eurostat

The role of domestic institutional investors

The Hungarian fund management industry is quite small, with conservative investment strategies. In Q3-2024, the net asset value of investment funds in Hungary amounted to HUF 19 611.4 billion (EUR 49.6 billion) ([95]). In Q3-2024, the largest proportion of investment fund assets was allocated to bonds (29.9%), followed by real estate funds (17.4%), private equity funds (12.1%), absolute return funds (9.4%), mixed securities funds (8%), equity funds (5.7%), money market funds (2.4%), and venture capital funds (0.1%) ([96]). In 2023 and

([92]) The breakdown is: bonds 15.5%, investment funds: 11.7%, insurance and pension products 6.4%, listed shares: 2.8%.

([93]) EFAMA, 2024, Household Participation in Capital Markets, Jan. 2024, p. 42.

([94]) EFAMA, 2024, Household Participation in Capital Markets, Jan. 2024, p. 42.

([95]) MNB, 2024, Time series of investment funds, Q3-2024.

([96]) MNB, 2024, Time series of investment funds, Q3-2024; Government Decree No 55/2024 entered into force on 1 July 2024, laying down that there would be four main types of funds based on their primary asset categories: securities funds, real estate funds, venture capital funds and mixed funds (there are a total of fourteen categories of investment funds within the four types).

2024, the Hungarian government introduced new asset allocation rules for investment funds, including a mandatory quota for investment funds to allocate at least 5% of their portfolio (and an additional 3% in short term securities for certain funds) to Hungarian government bonds ([97]).

The Hungarian insurance sector is small and has conservative investment strategies. It mainly invests in government bonds at 43.4% of total assets by Q2-2024 (compared to 19% for the European Economic Area as a whole) ([98]), while cash and deposits accounted for 4.7%. Investment funds accounted for 42.1% (of which 63.1% was in equity funds and 0.1% in private equity funds) ([99]). Equities accounted for 4.7% of insurers' investment portfolio, corporate bonds for 3.2%, and property for 1.5%. Domestic assets accounted for 79% of total investments ([100]).

The domestic pension fund industry has a conservative investment profile, with a greater focus on bonds. As mentioned earlier, Hungary's public pension system is pay as you go (PAYG) covering all employees, while mandatory private pension funds were practically eliminated in 2010. As regards voluntary pension funds, debt securities accounted for 54.3% (nearly half domestic) of the total assets held by pension funds, while investment funds accounted for 32.7% (including venture capital funds), shares for 9.7%, and bank deposits for 1.6% ([101]). Overall, a better developed pensions sector could help develop the domestic capital market.

The participation of pension fund investors in providing funding for start-ups and venture capital investors is very low. A 2024 paper by the think tank CEPS showed that Hungarian pension fund participation in private equity and venture capital funds between 2007-2023 was close to 0% and one of the two lowest levels in the EU (substantially short of the 19% for the Baltic states or +20% shares for the Nordic Member States) ([102]).

Recent government plans on voluntary private pension funds may hinder capital market growth. In October 2024, the Hungarian government announced its plans to propose allowing the tax-free use of private pension savings for housing purposes as a one-off measure in 2025. According to a recent draft proposal, it will be possible to use the full amount of savings from voluntary pension funds for renovations, equity for new mortgages or repayments for existing mortgages ([103]). This plan may trigger an outflow of pension funds (money saved for retirement) to housing renovation or the purchase of housing.

The depth of available venture and growth capital

The domestic venture and growth capital market is not developed enough to meet the financing needs of innovative firms. The value of annual private equity relative to nominal GDP went up to 0.25% in 2018 and dropped to 0.05% in 2023 (EU average in 2023: 0.41%) ([104]). The value of annual venture capital investment relative to nominal GDP went up to 0.10% in 2019 and then dropped to 0.03% in

([97]) Government Decree No 208/2023 on investment rules for each investment fund and Government Decree No 55/2024.

([98]) EIOPA, 2024, Insurance Statistics.

([99]) EIOPA, 2024, Insurance Statistics.

([100]) MNB, 2024, Report on Insurance, funds, capital market risks and consumer protection, p. 22.

([101])MNB, 2024, Time series of pension funds, Q3-2024.

([102]) CEPS, 2024, Closing the gaping hole in the capital market for EU start-ups – the role of pension funds, p. 2.

([103])Reuters, 2024. Hungary seeks housing boost from pensions ahead of 2026 election

([104]) European Commission, 2024, Overview of CMU Indicators – 2024 Update, Indicator 11.

Table A5.1: **Financial indicators**

		2017	2018	2019	2020	2021	2022	2023	2024-Q3	EU
Banking sector	Total assets of MFIs (% of GDP)	95,3	92,3	90,4	106,5	109,0	108,2	100,2	96,7	248,4
	Common Equity Tier 1 ratio	14,2	16,7	15,8	15,9	17,7	16,9	17,6	18,8	16,6
	Total capital adequacy ratio	16,2	18,5	18,0	18,3	19,7	18,9	20,1	21,0	20,1
	Overall NPL ratio (% of all loans)	8,4	5,4	4,2	3,6	3,2	3,1	2,4	2,3	1,9
	NPL (% loans to NFC-Non financial corporations)	9,8	4,4	3,8	4,1	3,3	3,6	3,4	3,3	3,5
	NPL (% loans to HH-Households)	12,2	9,8	6,8	6,1	6,0	5,7	3,9	3,4	2,2
	NPL-Non performing loans coverage ratio	59,1	-	-	-	56,5	55,1	56,9	60,0	42,1
	Return on Equity[1]	14,5	14,7	14,3	7,6	12,7	12,1	21,2	21,3	10,0
	Loans to NFCs (% of GDP)	16,5	17,0	17,0	18,5	18,1	17,8	16,7	15,6	30,0
	Loans to HHs (% of GDP)	14,8	14,1	14,6	16,1	16,3	14,6	13,5	13,3	44,5
	NFC credit annual % growth	10,2	13,6	14,1	8,9	10,7	15,2	6,2	3,1	0,8
	HH credit annual % growth	2,6	7,3	16,6	14,3	15,1	8,0	2,7	7,9	0,7
Non-banks sector	Stock market capitalisation (% of GDP)	-	-	-	16,4	17,5	13,0	17,5	18,1	69,3
	Initial public offerings (% of GDP)	0,04	0,00	0,00	0,01	0,00	0,00	0,00	-	0,05
	Market funding ratio	35,2	33,1	32,5	35,7	40,1	39,8	37,8	-	49,6
	Private equity (% of GDP)	0,13	0,25	0,12	0,17	0,16	0,15	0,05	-	0,41
	Venture capital (% of GDP)	0,04	0,05	0,10	0,09	0,09	0,05	0,03	-	0,05
	Financial literacy (composite)	-	-	-	-	-	-	44,0	-	45,5
	Bonds (as % of HH financial assets)	12,4	12,7	15,3	15,1	14,5	13,6	15,5	-	2,7
	Listed shares (as % of HH financial assets)	1,7	1,5	1,7	1,8	2,5	2,5	2,8	-	4,8
	Investment funds (as % of HH financial assets)	10,3	9,2	8,2	7,8	8,7	9,3	11,7	-	10,0
	Insurance/pension funds (as % of HH financial assets)	9,3	8,4	8,3	7,8	7,3	6,2	6,4	-	27,8
	Total assets of all insurers (% of GDP)	7,0	6,3	6,3	6,5	5,8	4,5	4,8	5,0	54,8
	Pension funds assets (% of GDP)	-	-	-	-	-	-	-	-	23,4

1-3 | 4-10 | 11-17 | 18-24 | 25-27 Colours indicate performance ranking among 27 EU Member States.

(1) Annualised data.
Credit growth and pension funds EU data refers to the EA average.
Source: ECB, ESTAT, EIOPA, DG FISMA CMU Dashboard, AMECO.

2023 (EU average: 0.05%) ([105]). Given the limited venture capital (VC) and private equity (PE) activity in Hungary, there is a financing gap for early-stage innovative firms in need of capital (see the Innovation to Business Annex).

There are some initiatives in place to promote start-up funding. The Hungarian Private Equity and Venture Capital Association reported that, during H1 2024, 40 companies received HUF 32 271 million (EUR 81.6 million) from VC and PE funds ([106]). There was a significant increase (183.7%) in the invested amount, even though the number of deals in H1 2024 was 21.6% lower than in H1 2023. Companies operating in communications, real estate, and business and industrial services sectors received 69.1% of the total capital invested in the first half of 2024 ([107]). The MNB has set up an innovation hub as a forum for direct and flexible contact with innovators, and a regulatory sandbox where innovative solutions can be tested more easily ([108]). However, there is no comprehensive legal framework to facilitate the creation and growth of start-ups as in other Member States.

Financing the green transition

The financing needs of Hungary's green transition could pose a challenge. Significant investment will be required in the next decades to achieve climate neutrality by 2050 ([109]). In the financial sector, the MNB has taken a number of measures to foster the growth of

([105])European Commission, 2024, Overview of CMU Indicators – 2024 Update, Indicator 16.

([106]) HVCA, 2024, Venture Capital and Private Equity, Update Hungary, H1 2024.

([107])HVCA, 2024, Venture Capital and Private Equity, Update Hungary, H1 2024.

([108]) MNB, 2023. Fintech and Digitisation Report

([109]) Ministry of Innovation and Technology. National Clean Development Strategy 2020-2050

green finance, including the green preferential capital requirements programme ([110]), the green mortgage bond purchase programme and funding for growth green home programme ([111]). In Hungary, the issuance of bonds with environmental, social, and governance objectives as a share of total bond issuance was higher in H1 2024 at around 13% than its three-year average of around 8% and is higher than that of most of its EU peers ([112]).

Hungary launched a project to develop a domestic green capital markets strategy to create a supportive regulatory environment. In July 2020, Hungary launched a project to develop a sustainable capital markets strategy with the assistance of the European Bank for Reconstruction and Development (EBRD) and the European Commission. The aim was to help capital markets finance investments in support of environmental sustainability, and to allow 'green' companies to access more favourable equity or bond funding ([113]).

Financial literacy

Financial literacy has improved in Hungary over the years and is now close to the EU average. Financial literacy is crucial to promote retail-investor participation in capital markets but also to familiarise SMEs with alternatives to bank financing. The July 2023 Eurobarometer survey showed that only 16% of Hungarians had a high level of financial literacy, 72% a medium level, and the remaining 12% a low level, compared to the EU average of 18% for high financial literacy, 64% for medium, and 18% for low ([114]). This leads to an overall financial literacy indicator (the average of the financial knowledge and financial behaviour indicators) of 44% vs an EU average score of 45.5% ([115]).

In Hungary, the government has been involved in improving financial education alongside initiatives taken by other state and non-state financial market stakeholders. In 2017, the Ministry of Finance ([116]) adopted a strategy and an action plan (2017-2023) for improving the population's financial awareness. Other public bodies (such as the MNB, as it is required to do so) and non-public bodies (such as the Hungarian Banking Association) operating in the financial market are trying to improve financial awareness through various programmes and activities. Financial knowledge is also taught in primary and secondary schools ([117]). More can be done in terms of deepening practical skills, as well as widening the scope to include SMEs in financial literacy initiatives.

([110]) This 2020 programme allows participating banks to reduce the amount of capital they are required to set aside for environmentally sustainable assets such as green loans.

([111]) These two programmes are part of the 2021 MNB green monetary policy toolkit strategy to support green housing loans. MNB, 2024, Green Finance Report – July 2023.

([112]) AFME, 2024, CMU Key Performance Indicators, p. 23.

([113]) C. Kandrács, 2023, Financing a Sustainable Economy in Hungary, Opportunities and Challenges. Public Finance Quarterly, 2023/1.

([114]) European Commission, 2023, Flash Eurobarometer Survey -Monitoring the level of financial literacy in the EU - July 2023, p. 17.

([115]) European Commission, 2024, Overview of CMU Indicators – 2024 Update, Indicator 27.

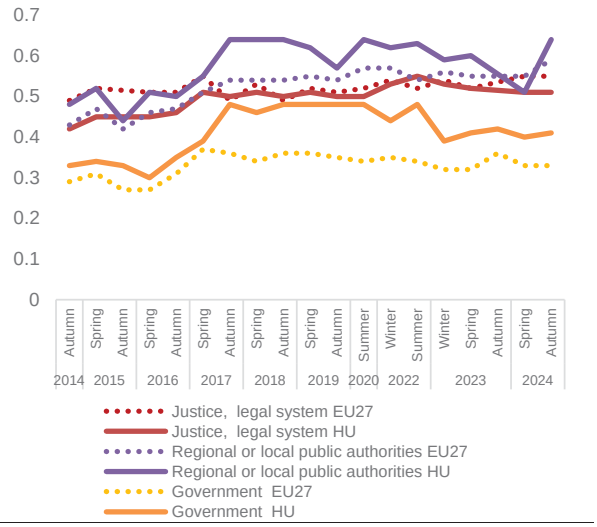
([116]) In January 2023, the task of improving financial awareness was transferred to the Ministry of Economic Development.

([117]) Hergár, Kovács, Németh, (2024), Status and development of Financial Literacy in Hungary.

Hungary's institutional framework influences its competitiveness. The country would benefit from greater legal certainty, improved regulatory practices, legislative simplification and fewer administrative burdens. The competitiveness strategy for 2024-2030 is moving in this direction. The digitalisation of Hungarian public administration is expanding with a focus on user-centricity, but at a slower pace than the EU average. Further challenges relate to the low attractiveness of the Hungarian administration. The Hungarian recovery and resilience plan (RRP) contains several reforms in the areas of anti-corruption, justice and better-lawmaking. However, the plan's implementation is significantly delayed.

Public perceptions

Graph A6.1: **Trust in justice, regional / local authorities and in government**



(1) EU-27 from 2019; EU-28 before
Source: Standard Eurobarometer surveys

Trust in public institutions remains above the EU average, with regional and local authorities achieving higher scores than other institutions (Graph A6.1). Aspects that could increase public trust in Hungary's public administration are more transparency about decisions and the use of public money and less bureaucracy ([118]). The perceived quality of government has remained unchanged at values below the EU average ([119]). Several measures aimed at enhancing trust and facilitating communication with the public are ongoing: in-person service delivery, mobile service points and dedicated delivery in post offices. Online services are being rolled out, such as digital citizenship offering e-identification and e-government services, the digital land registry and automated VAT for businesses (eÁFA). The Act on Regional Development ([120]) passed in 2024 aims to tackle disparities and foster trust in regional and local authorities.

Quality of legislation and regulatory simplification

Hungary's processes for developing and evaluating legislation remains below the EU average. Performance in regulatory tools like public consultation, ex-ante impact assessment and reviews of existing regulations is broadly similar for primary laws and subordinate regulations, and it improved slightly over 2021-2024. However, stakeholder engagement and ex post evaluation of legislation both remain below the EU average. In particular, there is potential for improving the methodology, systematic adoption, transparency, oversight and quality controls of public consultations of both primary and secondary legislation. Moreover, there is still substantial room for increasing the transparency, frequency, oversight and quality controls of ex post evaluation of legislation (Graph A6.2). A review of the methodology governing regulatory impact assessments came into effect in 2025.

([118]) Understanding Europeans' views on reform needs - April 2023 - - Eurobarometer survey, Country Fact Sheet.

([119]) Inforegio - European Quality of Government Index

([120]) https://vehir.hu/cikk/73829-navracsics-tibor-a-kozigazgatas-varhato-fejleszteseirol-beszelt-veszpremben (Accessed on 13/01/2025).

Table A6.1: **Hungary. Selected indicators on administrative burden reduction and simplification**

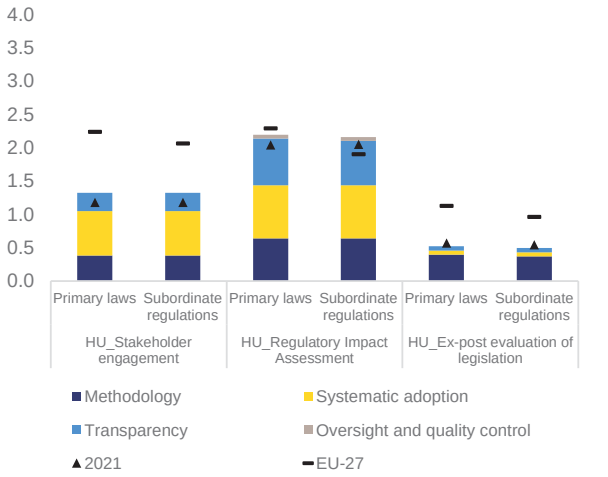
	Ex ante impact assessment of legislation		Ex post evaluation of legislation	
When developing new legislation, regulators are required to …	Identify and assess the impacts of the baseline or 'do nothing' option.	◑	Is required to consider the consistency of regulations and address areas of duplication.	●
	Identify and assess the impacts of alternative non-regulatory options.	●	Is required to contain an assessment of administrative burdens.	○
	Quantify administrative burdens of new regulations.	●	Is required to contain an assessment of substantive compliance costs.	○
	Quantify substantial costs of compliance of new regulations.	●	Compares the impact of the existing regulation to alternative options.	○
	Assess macroeconomic costs of new regulations.	●	Periodic ex post evaluation of existing regulations is mandatory.	○
	Assess the level of compliance.	○	Government uses stock-flow linkage rules when introducing new regulations (e.g., one-in one-out).	◑
	Identify and assess potential enforcement mechanisms.	○	A standing body has published an in-depth review of specific regulatory areas in the last 3 years.	●
			In the last 5 years, public stocktakes have invited businesses and citizens to assess the effectiveness, efficiency, and burdens of legislation.	○

● Yes / For all primary laws ◕ For major primary laws ◑ For some primary laws ○ No / Never

(1) This table presents a subset of iREG indicators focusing on regulatory costs. The indicators refer to primary legislation.
Source: (2025), Regulatory Policy Outlook 2025 [https://doi.org/10.1787/56b60e39-en] and Better Regulation across the European Union 2025 (forthcoming).

Furthermore, the median time for law adoption in Hungary is visibly below that of the median time in the EU-27 countries (Graph A6.3). The state of emergency allowing the government to override laws through decrees was extended once again for the whole of 2024 and up to November 2025. This limits public consultation and weakens legal certainty.

Graph A6.2: **Indicators of Regulatory Policy and Governance (iREG)**



Source: OECD (2025), Regulatory Policy Outlook 2025 and Better Regulation across the European Union 2025 (forthcoming).

There is room to further strengthen mechanisms for simplifying regulations. For example, ex post evaluations of legislation are not required to consider the consistency of regulations and address areas of duplication. Moreover, the government has not conducted recently in-depth reviews of specific regulatory

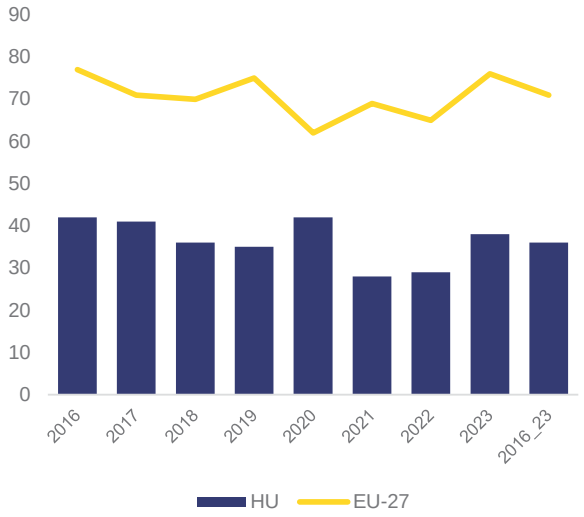
Table A6.2: **Digital Decade targets monitored through the Digital Economy and Society Index**

		Hungary			EU-27	Digital Decade target by 2030
		2022	2023	2024	2024	EU-27
Digitalisation of public services						
1	**Digital public services for citizens**	**64**	**68**	**73**	**79**	**100**
	Score (0 to 100)	2021	2022	2023	2023	2030
2	**Digital public services for businesses**	**74**	**76**	**75**	**85**	**100**
	Score (0 to 100)	2021	2022	2023	2023	2030
3	**Access to e-health records**	**na**	**80**	**86**	**79**	**100**
	Score (0 to 100)	2021	2022	2023	2023	2030

Source: State of the Digital Decade report 2024

areas and public stocktakes of legislation (see table A4.1).

Graph A6.3: **Median time for law adoption in Parliament (days)**



Source: European Commission based on national parliament's websites

The OECD product market regulation indicator shows that Hungary's licensing system is well aligned with many best practices, but not all of them. For example, while the government keeps an up-to-date online inventory of all the permits and licences required/issued to businesses by public bodies, there is no requirement for the government to regularly assess whether such licences and permits are still required or should be withdrawn (see also Annex 4). Moreover, the B-READY indicators ([121]) show that there is much potential for cutting the time needed to obtain a property transfer, a construction-related permit and an environmental licence. Unlike 19 other EU Member States, Hungary lacks a dedicated institution for promoting pro-productivity policies.

Social dialogue

Social dialogue in Hungary remains limited, especially in the public sector. Despite some improvements regarding the transparency and institutional framework of tripartite forum of the private sector (VKF), the overall framework of social dialogue is still weak (see Annex 10). This is partly due to the fragmentation of employers' and employees' representations, with different memberships and functions. Moreover, the establishment of a separate employment status for certain groups of public employees has weakened their ability to defend their collective interests. There is little to no consultation of social partners on major challenges and reforms to labour market and social policies. ESF+ is supporting social partners in building capacity ([122]).

([121]) World Bank. 2024. Business Ready 2024. Washington, DC: World Bank. doi:10.1596/978-1-4648-2021-2.

([122]) For an analysis of the involvement of Hungary's social partners at national level in the European Semester

Digital public services

The supply of digital public services to citizens and businesses in Hungary is below the EU average with a larger gap for businesses (table A6.2). Hungary has progressed in the EU's Digital Decade target for digital public services for citizens. In 2023 it had a score of 73, compared to the EU average score of 79 in 2023. Hungary's score for digital public services for businesses is 75, compared to an EU average score of 85. Concerning access to electronic health records, Hungary performs relatively well, scoring 86 out of 100, significantly exceeding the EU average of 79. This success can largely be attributed to the development of the EESZT (Electronic Health Service Space/Health Window application). The new mobile application, which provides access to health records, has become the country's most widely used mobile digital public service. The main gaps in Hungary's e-health maturity are the inability to authenticate with a (pre)notified eID and the fact that the access service does not follow guidelines on web accessibility.

The uptake of online public services is very high (85%, EU average: 75.0%). However, the use of eID is still low. Only 31.5% of individuals have used their eID to access online services for private purposes in the last 12 months, below the EU average of 41% ([123]). Hungary has not yet set up and notified eID schemes for legal persons under the eIDAS Regulation([124]). This means that Hungarian businesses cannot authenticate themselves to access public services provided by other Member States, including those enabled by the Once-Only Technical System, part of the EU Single Digital Gateway ([125]).

Hungary is finalising the necessary infrastructure for seamless, automated exchange of authentic documents and data across the EU. There are still additional steps to be taken by Hungary to become technically ready to connect to the Once-Only Technical System ([126]).

Civil service

Hungary's civil service is relatively young, with a higher ratio of staff aged 49 or below compared to those aged 50 or above than the EU average ([127]). The share of employees with higher education is relatively low, in contrast to the strong participation of civil servants in adult learning.

The low attractiveness in the Hungarian administration can impact its overall performance. One of the major challenges is the significant pay gap ([128]) between the public and private sector contributing to a high turnover amounting to 20-30% per year ([129]). The lack of attractiveness is exacerbated by limited opportunities for teleworking where Hungary ranks well below the EU average. A system of in-kind benefits aims to address the problem. The system includes discounts for sports and cultural services combined with local programmes for onboarding and employees' wellbeing.

and the Recovery and Resilience Facility, see Eurofound (2025), National-level social governance of the European Semester and the Recovery and Resilience Facility.

([123])European Commission. Digital Decade 2024: Country reports

([124]) European Commission, eIDAS Dashboard

([125])European Commission, The Once Only Principle System: A breakthrough for the EU's Digital Single Market

([126]) European Commission, Once-Only Technical System Acceleratormeter

([127])Eurostat. Employment by sex, age and economic activity.

([128]) Overall the pay gap is 12% according to official statistics. see KSH Central Statistical Office (2024) link and link

([129]) https://kormany.hu/hirek/a-hatekony-kozigazgatashoz-a-regiok-egyuttmukodesere-van-szukseg

Integrity

A far higher percentage of companies than the EU average consider corruption to be widespread and a problem in doing business, and ensuring timely and effective application of anti-corruption measures in practice is crucial. In Hungary, 78% of companies consider that corruption is widespread (EU average 64%) and 41% consider that corruption is a problem when doing business (EU average 36%) ([130]). Moreover, only 25% of companies believe that people and businesses caught bribing a senior official are appropriately punished (EU average 31%) ([131]). There has been no progress yet in establishing a robust track record against high-level corruption and enforcement against foreign bribery is still lacking ([132]). The Hungarian RRP includes several measures targeted at strengthening the anti-corruption framework. It remains vital to ensure that these measures are timely and effectively applied in practice. Furthermore, public procurement remains an area at high risk of corruption in Hungary. 29% of companies (EU average 27%) think that corruption has prevented them from winning a public tender or a public procurement contract in practice in the last three years ([133]). Construction, health, IT and communication services also appear to be high-risk areas ([134]). The RRP contains several commitments also in the area of public procurement.

Hungary has yet to put in place comprehensive regulations on lobbying and the post-employment obligations of public officials. The new National Anti-Corruption Strategy 2024-2025 and Action Plan, the government committed to bring forward a legislative proposal for a lobbying law, including rules on revolving doors, to be prepared by the Ministry of Justice by 30 November 2025. Hungary's lobbying rules remain incomplete, with no systematic follow-up to cases of non-compliance, which can create unfair advantages for some businesses. Post-employment restrictions and cooling-off periods remain largely fragmented and limited in personal scope, and enforcement of sanctions remains largely ineffective ([135]).

Justice

The justice system continues to perform efficiently overall. The disposition time in civil and commercial cases in first instance courts has increased slightly but, at 135 days, compared to 134 days in 2022, is still among the lowest in the EU. The estimated time taken to resolve administrative cases at first instance has further decreased and continues to be one of the lowest in the EU (120 days, compared to 125 days in 2022). The quality of the justice system is good overall, including as regards digitalisation. The courts have several digital tools at their disposal, including an electronic case management system, distance communication technology and secure electronic communication. Despite a recent increase of the salary base, stakeholders have expressed concerns about the process for its adoption. The Commission is monitoring the implementation of the recent reform seeking to strengthen judicial independence ([136]).

([130]) Flash Eurobarometer 543 on businesses' attitudes towards corruption in the EU (2024).

([131]) Ibid.

([132]) See the 2024 country-specific chapter for Hungary of the Rule of Law Report, p. 20.

([133]) Flash Eurobarometer 543 on businesses' attitudes towards corruption in the EU (2024).

([134]) See the 2024 country-specific chapter for Hungary of the Rule of Law Report, pp. 25-26.

([135]) See the 2024 country-specific chapter for Hungary of the Rule of Law Report, pp. 21-22.

([136]) For more detailed analysis of the performance of the justice system in Hungary, see the upcoming 2025 EU Justice Scoreboard and the 2024 Rule of Law Report.

Hungary faces significant challenges regarding its clean industry transition and climate mitigation: Despite progress in battery manufacturing, capacity in broader net-zero technologies is limited, with existing policy frameworks not offering comprehensive support. Hungary is highly dependent on critical raw material imports, highlighting vulnerabilities in strategic autonomy. Urgency is needed to tackle industrial emissions, improve waste management, and enhance circular economy practices, alongside efforts to reduce emissions from transport and buildings. This annex reviews the areas in need of urgent attention in Hungary's clean industry transition and climate mitigation.

Strategic autonomy and technology for the green transition

Net zero industry

Hungary is a leader in battery manufacturing but production in other net zero technologies remains modest ([137]). It is emerging as a significant player in the production of electric vehicle (EV) batteries, with a manufacturing capacity amounting to between 40 and 42 GWh/y (17-18% of total EU capacity) for battery and storage technologies. Prominent Chinese EV battery manufacturers, such as EVE Energy, CATL, and Sunwoda, are expanding operations. The Chinese company BYD established a new electric vehicle and battery manufacturing facility in Szeged, starting in 2025.

Labour shortages are an issue in the battery value chain, with companies attracting workers from each other, other value chains and non-EU countries. Vocational training programmes are struggling to provide the necessary skills.

Hungary is a competitive exporter of heat pump components, such as centrifugal pumps, heat exchange units and electric generating sets. The domestic market has huge potential, with the government aiming to install at least 100 000 heat pump systems (producing 400 MW) by 2030. In contrast, production capacity ranges between 100 and 400 MW/y (approximately 1-2% of the EU capacity) for solar PV, with capacity for both equal shares of modules and cells.

The policy framework supporting the scale-up of net zero technology manufacturing is limited to sectoral policies. The government has introduced various supportive policies for the battery sector, including substantial tax breaks and subsidies, and a National Battery Strategy([138]) to position Hungary as a key contributor to the European supply chain. But the country lacks a comprehensive enabling regulatory framework. There is no move to streamline industrial permitting, introduce non-price criteria in auctions and public procurement or develop industrial clusters promoting innovation.

Hungary has ambitious plans for a hydrogen industry, but the sector is still in its early stages. The National Hydrogen Strategy (2021) outlines goals for a hydrogen economy, emphasising green hydrogen production for industrial decarbonisation and sustainable transportation. The strategy aims to produce 36 000 tons of hydrogen a year by 2030. However, significant action has yet to occur, with only the largest industrial consumers and stakeholders beginning smaller projects.

Transforming the car industry

([137]) European Commission: Directorate-General for Energy, The net-zero manufacturing industry landscape across the Member States 2025.

([138]) Hungarian-National-Battery-Industry-Strategy-2030_ENG.pdf

The automotive industry is an important sector for Hungary, representing a considerable proportion of manufacturing output and up to 15% of exports([139]). In 2023 it employed approximately 100 000 individuals. There is increasing engagement internationally, particularly from Chinese companies. The rise in electric vehicle (EV) production is drawing major suppliers, including the world's largest battery manufacturers.

External forces create significant future challenges. These include the weakening of the German economy, it primary market. A sizable proportion of vehicle manufacturing output is exported to the US, making it vulnerable to international geopolitical shifts.

The automotive sector is grappling workforce issues to stay competitive. Dual challenges of labour shortages and high labour costs present obstacles for automotive manufacturers. In the third quarter of 2024 compared with the same quarter in the previous year, Hungary had the third highest increases in hourly wage costs for the EU (+14.1%) ([140]), part of a continued trend over the past decade. New manufacturing sites have difficulties finding affordable local workers and are recruiting people from other regions of Hungary or foreign workers.

Hungary has an ageing car fleet, with over 20% of vehicles being more than 20 years old([141]). Although Hungary is transitioning towards electric vehicles, in 2023, 75.7% of new registrations were still petrol-powered cars (including hybrids).

([139]) Industry – Hungarian Central Statistical Office
([140]) Eurostat: Labour cost index - recent trends - Statistics Explained
([141]) Newly registered electric cars by country | European Environment Agency's home page

Critical raw materials

Hungary is dependent on imports of critical raw materials, which are key for a green transition. Despite a recent decrease, Hungary's material import dependency ([142]) (24.1%) was still above the EU average in 2023 (22%). The average import concentration index ([143]) of 0.2 between 2018 and 2023 is slightly higher that the EU average (0.18). In 2023, the share of domestic material consumption ([144]) dedicated to non-metallic minerals and biomass was higher ([145]) than the EU average (respectively 62.4% and 25.9% vs. 54.4% and 22.9%), showing the dependency of Hungary's economy on these specific categories of raw materials. Hungary's material footprint ([146]) increased to 15.7 t/capita in 2023, above the EU average (14.2 t/capita). While it is a leading producer of perlite (second in the EU and sixth worldwide), it lacks domestic production of many essential materials and relies on imports. The largest imports of critical raw materials include aluminium, coking coal and fluorspar ([147]).

There is room to reduce Hungary's dependency on critical raw material in some sectors of the circular economy. Hungary's recycling rate for electrical and electronic equipment waste ([148]) has decreased in the last year and is now slightly below the EU average (79.3% vs. 80.7% in 2022). Hungary would benefit from increasing recycling and relying less on critical raw materials imports. The recycling and reuse rate for vehicles ([149]) was above the EU average in 2022 (96.9% vs. 89.1%).

([142]) Eurostat, dataset [env_ac_mid], 2024.
([143]) Concentration in selected raw materials, Import concentration index based on a basket of critical raw materials, based on COMEXT Data.
([144]) Eurostat, Dataset [env_ac_mfa], 2024.
([145]) European Environment Agency (EEA), Hungary 2024 circular economy country profile, December 2024.
([146]) Eurostat, dataset [cei_pc020], 2024.
([147]) RMIS - Country Profiles
([148]) Eurostat, Dataset [cei_wm60], 2024.
([149]) Eurostat, Dataset [env_waselvt], 2024.

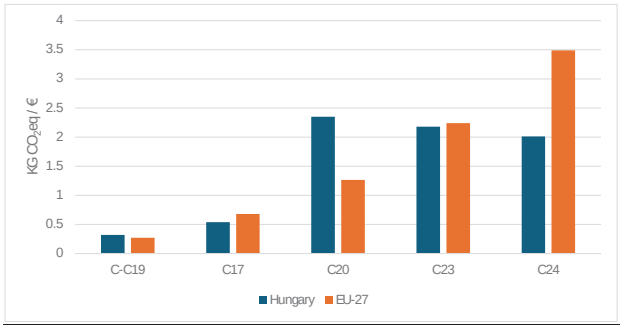
Climate mitigation

Industry decarbonisation

Manufacturing provides less than a sixth of all greenhouse gas emissions, but its emissions intensity is high, dominated by process emissions. At 15%, the share of industry in Hungary's total greenhouse gas emissions is below the EU average of 21% ([150]). In 2022, the manufacturing sector emitted 320 g CO2eq of greenhouse gases per euro of gross value added (GVA), almost 20% more than the EU average. The emissions intensity of manufacturing production decreased by 36% since 2017, more than in the EU overall (20%). More than half of Hungary's industrial emissions (56% in 2022) are related to industrial processes; in the EU this value is 43%, the remainder being related to energy use.

The process related emissions intensity of manufacturing in Hungary is improving but still high. Between 2017 and 2022, process and product related emissions intensity of manufacturing production in Hungary improved by 28%, above the EU average of 23%.([151]) In the same period, energy use -related emissions intensity improved by 18%, only slightly above the EU average, 16%. As a result, the energy-related emissions intensity of Hungary's manufacturing sector is like that of the EU, with 134 g CO2eq per euro of GVA. With 172 g/€, its process and product use-related emissions intensity remains much higher than in the EU overall, 99 g/€. Between 2017 and 2022, Hungary saw an increase of 6 percentage points in the share of electricity and renewables in the final energy consumption of its manufacturing sector, bringing that share to 46% in 2022. At the same time, the energy intensity of manufacturing production decreased by 9 per cent, from 1.9 to 1.8 GWh per euro of GVA.

Graph A7.1: **GHG emission intensity of manufacturing and energy-intensive sectors, 2022**



Source: Eurostat

Energy-intensive sectors have come under pressure lately. Energy-intensive industries (EEIs) ([152]) account for 11% of Hungary's manufacturing gross value added. With 2.3 kg of CO2eq/€, the emissions intensity of GVA in Hungary's chemical industry is comparatively high, 7th in the EU. Hungary has seen increased electricity prices for large consumers to very high levels, putting EEIs under pressure ([153]). By

([150])In 2023. Manufacturing includes all divisions of the "C" section of the NACE Rev. 2 statistical classification of economic activities. In the remainder of this section, unless indicated otherwise, data on manufacturing refer to the divisions of the NACE section C excluding division C19 (manufacture of coke and refined petroleum products), and the year 2022. The source of all data in this section is Eurostat; data following the UNFCCC Common Reporting Framework (CRF) are from the European Environment Agency (EEA), republished by Eurostat.

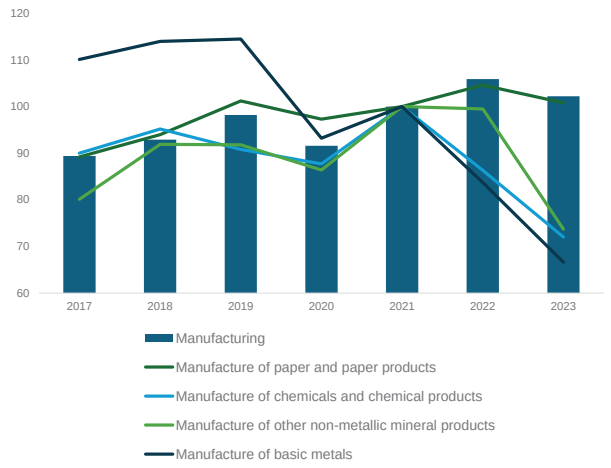
([151])For the GHG emissions intensity of GVA related to energy use and industrial processes and product use respectively, GHG emissions are from inventory data in line with the UNFCCC Common Reporting Format (CRF), notably referring to the source sectors CRF1.A.2 – fuel combustion in manufacturing industries and construction and CRF2 – industrial processes and product use. The CRF1.A.2 data broadly correspond to the NACE C and E sectors, excluding C-19. GVA data (in the denominator for both intensities) are aligned with this sectoral coverage. Therefore, they are not fully consistent with the data referred to in other part of this section.

([152])Notably, the manufacture of paper and paper products (NACE division C17), of chemicals and chemical products (C20), "other" non-metallic mineral products (C23; this division includes manufacturing activities related to a single substance of mineral origin, such as glass, ceramic products, tiles, and cement and plaster), and basic metals (C24). To date, these industries are energy-intensive – i.e. consuming much energy both on site and/or in the form of purchased electricity – and greenhouse gas emissions intensive, in various combinations.

([153])To date in Hungary, electricity prices for non-household consumers are among the highest in the EU. For a detailed

2024, production in the chemical industry and the manufacture of basic metals and non-metallic mineral products declined by up to one third. Production in the paper sector remained stable.

Graph A7.2: **Manufacturing industry production: total and selected sectors, index (2021 = 100), 2017-2023**



Source: Eurostat.

Hungary has some measures to support the decarbonisation of industry; more are needed. Hungary encourages the development of renewable energy supply and energy storage in industry parks. Electricity market players have also begun to set up renewable power purchase agreements. These measures could be complemented by dedicated support for improving energy efficiency in manufacturing processes and helping companies switch to cleaner technologies, also through demand-side measures.

Reduction of emissions in the effort sharing sectors

Hungary is projected to reach its 2030 effort sharing target if it adopts and implements the planned additional climate mitigation measures ([154]). In 2023, GHG emissions from Hungary's effort sharing sectors are expected to have been 14.7% below those of 2005. By 2030, current policies are projected to reduce them by 15.2% relative to 2005 levels. Additional policies considered in Hungary's final updated National Energy and Climate plan (NECP) are projected to entail reductions by a further 9.8 percentage points. Hence Hungary is projected to overachieve its effort sharing target, -18.7%, by 6.3 percentage points ([155]), once those measures have been adopted and implemented.

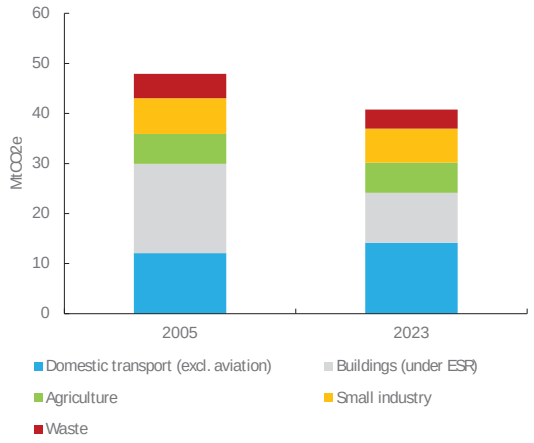
Swift action on decarbonising transport and buildings appears particularly needed in Hungary. Between 2005 and 2023, greenhouse gas emissions from road transport increased by 17% in Hungary, while they decreased by 5% in the EU overall. Speeding up climate mitigation in these sectors would help protect households, businesses and transport users in Hungary from the impact of the forthcoming carbon price.

analysis of energy prices, see Annex 8 on the affordable energy transition.

([154]) The national greenhouse gas emission reduction target is set out in Regulation (EU) 2023/857 (the Effort Sharing Regulation). It applies jointly to buildings (heating and cooling); road transport, agriculture; waste; and small industry (known as the effort sharing sectors).

([155]) The effort sharing emissions for 2023 are based on approximated inventory data. The final data will be established in 2027 after a comprehensive review. Projections on the impact of current policies ("with existing measures", WEM) and additional policies ("with additional measures", WAM), as per Hungary's final updated NECP.

Graph A7.3: **Greenhouse gas emissions from the effort sharing sectors, 2005 and 2023**



Source: European Environment Agency

Sustainable industry

Circular economy transition

There is room to increase the economy's circularity through additional policies. Resource productivity increased to 1.33 Euro/kg in 2023 but remains under the EU average (2.74 Euro/kg). The circular material use rate remained below the EU average in 2023 (5.9% vs 11.8%). In May 2023, the OECD report "Towards a National Circular Economy Strategy for Hungary" ([156]) suggested measures to support the circular economy transition, such as providing additional economic incentives for the separate collection of municipal bio-waste by supporting "pay-as-you-throw"-based household waste charges and increasing landfill taxes. A National Circular Economy Strategy, as requested in the OECD report, is under preparation.

Hungary's performance in waste management is deteriorating. Hungary is generating less waste than the EU average, with municipal waste generation of 429 kg/capita in 2023 (vs. an EU average of 511 kg/capita), but the country continues to show several negative trends (see Graph A7.4). The recycling rate for municipal waste decreased from 37.4% in 2019 to 33.4% in 2023 (EU average 48.7%) and the recycling rate for plastic packaging waste decreased to 28% in 2022 (EU average 41%). Hungary has missed the 2020 EU recycling targets and significant efforts will be needed to reach the targets for preparing for reuse and recycling of municipal waste and for recycling of plastic and glass packaging waste, which has been postponed to 2030. Hungary is also at risk of not meeting the 2035 target to landfill no more than 10% of municipal waste generated, with a municipal waste landfilling rate at 54% in 2023. The recycling rate for construction and demolition waste ([157]) slightly increased to 22.2% in 2022 (EU average 79.8%).

Hungary doesn't invest enough in the circular economy transition. Hungary is estimated ([158]) to need total additional investment worth at least EUR 316 million a year for the circular economy transition, including waste management, representing 0.19% of Hungary's GDP and 12.9% of investment needs in the environmental sector. Hungary would benefit from further implementing economic instrument to invest in infrastructure for separate collection, sorting and recycling.

Zero pollution industry

Hungary is among the Member States most affected by the health impacts from air pollution. Health impacts of air pollution ([159]) amounted to 90 032 years of life lost in 2022. It is estimated ([160]) that every year around 8 600 deaths can be attributed to fine particulate matter 2.5 ($PM_{2.5}$), 1 300 deaths to nitrogen dioxide (NO_2) and 2 000 to ground-level ozone

([156]) OECD, Towards a National Circular Economy Strategy for Hungary, OECD Publishing, Paris, 2023.

([157]) Based on Eurostat, dataset [env_wastrt__custom_13270296], 2024.

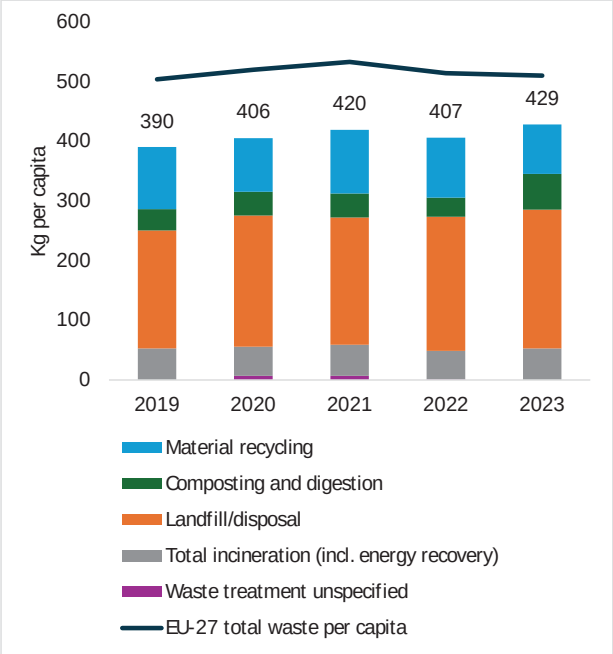
([158]) Environmental Implementation Review 2025.

([159]) Eurostat, Dataset [hlth_cd_iap], 2025.

([160]) EEA, Hungary – air pollution country fact sheet 2024, December 2024.

(O_3). Some main sources of air pollution are industrial processes and related activities (transport, energy production, and waste treatment), alongside heating systems, and Hungary would benefit from measures linking energy efficiency and air pollution. Emissions intensity of industrial air pollutants in Hungary caused more damage to health and the environment than in average in the EU, with EUR 37.8 of damage per thousand EUR of gross value added (GVA) ([161]) in 2021, compared to an EU average of EUR 27.5/thousand EUR GVA.

Graph A7.4: **Municipal waste treatment**



Source: Eurostat

Air quality is a major concern, with industry continuing to release large amounts of pollutants. Despite a positive trend for some pollutants, the situation worsened for several substances. Between 2010 and 2022, industrial release of PM_{10} increased by 174% and cadmium (Cd), mercury (Hg), and lead (Pb) by 449%. It is the highest increases of all Member States. Hungary is not meeting its emissions reduction commitments ([162]) for 2020-2029 for ammonia (NH_3) and $PM_{2.5}$ and not projected to meet commitments for 2030 onwards for NO_x, non-methane volatile organic compounds, NH_3 and $PM_{2.5}$. An estimated ([163]) total additional investment of at least EUR 512 million a year is needed to meet its environmental objectives concerning pollution prevention and control, representing 0.30% of Hungary's GDP.

Water pollution from industry is falling, except for heavy metal releases. Between 2010 and 2022, industrial releases of pollutants to water decreased by 25% for total nitrogen, 25% for total organic carbon and 26% total phosphorus. However, the releases of heavy metal (Cd, Hg, Pb and nickel) increased by 38% ([164]). Waste management is the main contributor to industrial emissions to water ([165]), and to a lesser extent the chemical, energy production, and pulp and paper industries.

([161])EEA, Industrial emission intensity indicators, 2021.

([162]) EEA, Hungary – air pollution country fact sheet 2024, December 2024.

([163])European Commission, DG Environment, *Environmental investment needs & gaps assessment programme*, 2025 update. Expressed in 2022 prices.

([164]) EEA, Industrial releases of pollutants to water and economic activity in the EU-27, September 2024.

([165])Industrial Reporting under the Industrial Emissions Directive 2010/75/EU and European Pollutant Release and Transfer Register Regulation (EC) No 166/2006 - ver. 12.0 Sep. 2024 (Tabular data).

Table A7.1: **Key clean industry and climate mitigation indicators: Hungary**

Strategic autonomy and technology for the green transition				Hungary					EU-27	
Net zero industry										
Operational manufacturing capacity 2023										
- Solar PV (c: cell, w: wafer, m: module), MW	200 (c), 200 (m)			- Electrolyzer, MW		-				
- Wind (b: blade, t: turbine, n: nacelle), MW	-			- battery, MWh		40000-42000				
Automotive industry transformation	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**		**2018**	**2021**
Motorisation rate (passenger cars per 1000 inhabitants), %	357	375	393	406	418	426	435	↗	539	561
New zero-emission vehicles, electricity motor, %	0.64	0.95	1.16	2.38	3.53	4.22	5.38	↗	1.03	8.96
Critical raw materials	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**		**2018**	**2021**
Material import dependency, %		29.5	27.1	26.8	27.9	29.7	24.1	↘	24.2	22.6

Climate mitigation				Hungary				Trend	EU-27	
Industry decarbonisation	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**		**2017**	**2022**
GHG emissions intensity of manufacturing production, kg/€	0.44	0.44	0.42	0.43	0.4	0.32	0.31	↘	0.34	0.27
Share of energy-related emissions in industrial GHG emissions	58.6	59.3	58.8	58.8	60.2	58.3	56.1	↘	44.8	42.5
Energy-related GHG emissions intensity of manufacturing and construction, kg/€	163.0	164.1	154.9	158.7	154.9	134.4	-	↘	158.4	132.9
Share of electricity and renewables in final energy consumption in manufacturing, %	39.4	39.9	41.5	41.5	42.5	45.7	47.3	↗	43.3	44.2
Energy intensity of manufacturing, GWh/€	1.94	1.94	1.90	2.02	2.03	1.77	1.71	↘	1.29	1.09
Share of energy-intensive industries in manufacturing production						10.7				7.3
GHG emissions intensity of production in sector [...], kg/€										
- paper and paper products (NACE C-17)	0.70	0.61	0.62	0.58	0.53	0.54	0.47	-	0.73	0.68
- chemicals and chemical products (NACE C20)	1.97	1.94	2.09	2.20	2.28	2.35	2.74	-	1.25	1.26
- other non-metallic mineral products (NACE C23)	2.54	2.54	2.56	2.55	2.34	2.18	2.15	-	2.53	2.24
- basic metals (NACE C24)	2.04	2.06	2.04	2.39	1.82	2.01	1.08	-	2.79	3.49
Reduction of effort sharing emissions		**2018**	**2019**	**2020**	**2021**	**2022**	**2023**		**2018**	**2023**
GHG emission reductions relative to base year, %					-3.6	-8.1	-14.7			
- domestic road transport		14.9	21.8	4.3	15.5	24.7	17.2	↗	1.4	5.2
- buildings		-30.8	-32.8	-29.5	-25.3	-35.2	-44.2	↘	21.4	32.9
	2005				**2021**	**2022**	**2023**	**Target**	**WEM**	**WAM**
Effort sharing: GHG emissions, Mt; target, gap, %	47.8				46.1	44.0	40.8	-18.7	-3.5	6.34

Sustainable industry				Hungary				Trend	EU-27	
Circular economy transition		**2018**	**2019**	**2020**	**2021**	**2022**	**2023**		**2018**	**2021**
Material footprint, tonnes per person		15.5	16.5	14.4	14.5	14.3	15.7	↗	14.7	15.0
Circular material use rate, %		6.9	5.5	5.1	5.0	4.9	5.9	↘	11.6	11.1
Resource productivity, €/kg		0.9	0.9	1.0	1.1	1.3	1.3	↗	2.1	2.3
Zero pollution industry										
Years of life lost due to PM2.5, per 100,000 inhabitants		1,377	988	1,032	1,124	1,350	-	↗	702	571
Air pollution damage cost intensity, per thousand € of GVA					37.8					27.5
Water pollution intensity, kg weighted by human factors per bn € GVA						0.6				0.9

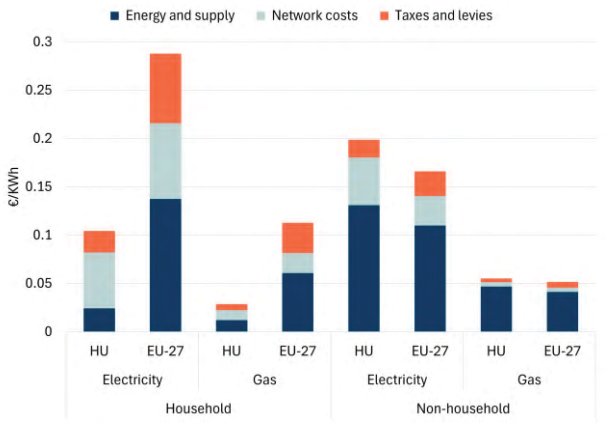
Source: **Net zero industry:** European Commission: The net-zero manufacturing industry landscape across Member States: final report, 2025. **Automotive industry transformation:** Eurostat. **Critical raw materials:** Eurostat. **Climate mitigation:** See footnotes in the "climate mitigation" section; reduction of effort sharing emissions: EEA greenhouse gases data viewer; European Commission, Climate Action Progress Report, 2024. **Sustainable industry:** Years of life lost due to PM2.5: Eurostat and EEA, Harm to human health from air pollution in Europe: burden of disease status, 2024. Air pollution damage: EEA, EU large industry air pollution damage costs intensity, 2024. Emissions covered: As, benzene, Cd, Cr, Hg, NH3, Ni, NMVOC, NOX, Pb, dioxins, PM10, PAH, SOX. Water pollution intensity: EEA, EU large industry water pollution intensity, 2024. Releases into water covered from cadmium, lead, mercury, nickel. Other indicators: Eurostat.

This annex outlines the progress made and the ongoing challenges faced in enhancing energy competitiveness and affordability, while advancing the transition to net zero. It examines the measures and targets proposed in the final (draft) updates to the national energy and climate plans (NECPs) for 2030.

While recent years have witnessed a significant growth in solar photovoltaics (PVs), lack of spare grid capacity and system flexibility hinder further renewable energy expansion. Consumer empowerment remains very limited, with little or no access to dynamic pricing and aggregators' services. Regulated energy prices for households represent a major cost for the system and increase the burden of high prices for businesses, whose electrification is also slowed down by a very unfavourable electricity/gas price ratio. Hungary remains significantly dependent on Russian fossil fuels, with very little progress in supply diversification.

Energy prices and costs

Graph A8.1: **Retail energy price components for household and non-household consumers, 2024**



(i) For household consumers, consumption band is DC for electricity and D2 for gas. Taxes and levies are shown including VAT.
(ii) For non-household consumers, consumption band is ID for electricity and I4 for gas. Taxes and levies are shown excluding VAT and recoverable charges, as these are typically recovered by businesses.
Source: Eurostat

Hungary's retail electricity and gas prices for households have declined in 2024 and remain the lowest in the EU due to the government's price cap. The share of network costs in electricity prices is double the EU average for both gas and electricity, at 55.4% and 27.2% respectively. Taxes are significantly lower than the EU average, with no excise duty being applied on top of the VAT for electricity and only a very small one for gas.

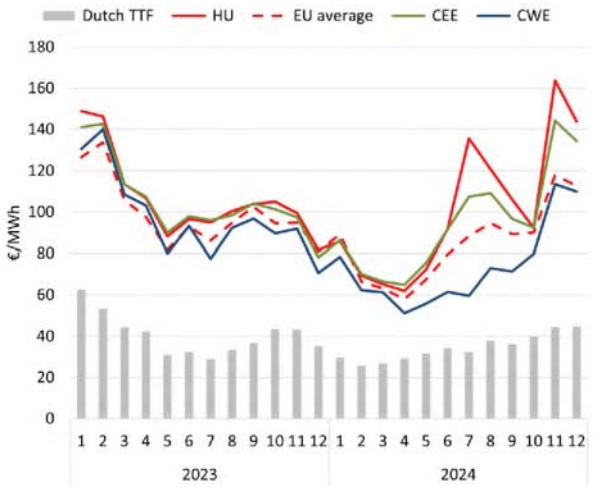
Retail energy prices for industrial consumers have also fallen and while they remain above the EU average the gap has narrowed significantly compared to 2023. Hungarian non-household consumers still pay 26% more for electricity and 16% more for gas than the EU average. Taxes and levies (excluding VAT) account for only 9.2% of electricity prices and 6.9% of gas prices for industrial users, considerably below the EU averages of 11% and 9%, respectively.

With an average of 101 EUR/MWh in 2024([166]), Hungary had the EU's sixth-highest wholesale electricity prices; and while prices in Hungary declined early in the year amid falling natural gas costs, they surged during the spring/summer and again in the winter, diverging from Central-Western European (CWE) markets. This increase was driven by factors affecting both consumption and generation. Prolonged summer heatwaves and a cold winter led to higher consumption in the region, while increased export needs from certain coupled markets and limited non-fossil flexibility further exacerbated the supply-demand gap, especially during peak demand hours. This gap was mainly covered by costly natural gas-fired generation, ramping up during the evening hours in the summer and throughout the entire day during the winter, as well as higher imports (mostly from Slovakia and Austria). Consequently, and more so than in 2023, these conditions drove concentrated price spikes in the evening hours (18h-21h), when solar

([166]) Fraunhofer (ENTSO-E data).

output declined and demand increased, especially during the summer. On the other hand, average daytime hourly prices were lower compared to 2023, likely owing to the uptake of solar output in Hungary (+37% in 2024) and in neighbouring markets([167]).

Graph A8.2: **Monthly average day-ahead wholesale electricity prices and European benchmark natural gas prices (Dutch TTF)**



(i) the Title Transfer Facility (TTF) is a virtual trading point for natural gas in the Netherlands. It serves as the primary benchmark for European natural gas prices.
(ii) CEE and CWE respectively provide average prices in the central-western European (Belgium, France, Germany, Luxembourg, the Netherlands and Austria) and central-eastern European (Poland, Czechia, Slovakia, Hungary, Slovenia and Romania) markets.
Source: S&P Platts and ENTSO-E

Flexibility and electricity grids

Hungary is part of the Core([168]) capacity calculation region. The general trend in this region is a reduction of the cross-border capacity made available to trade, which also applies to Hungary. Member States should ensure that a minimum of 70% of technical cross-border capacity is available for trading. Hungary has an action plan in place to reinforce the electricity grid and can do more to further increase cross-zonal electricity trading, particularly with Austria, by optimizing the use of existing cross-border infrastructure. Furthermore, Hungary adopted a network development plan for a new Hungarian-Romanian cross-border electricity transmission line. Construction is planned to start in January 2026.

The implementation of grid-related legislation and developments needs to be accelerated. In 2024, an unprecedented number of applications for the connection of renewable energy sources (RES) to the grid exceeding 10 GW caused continuing restrictions for new grid connection. The transmission system operator and distribution system operators hosted 'free capacity announcements' to assess project developers' interest in connection points. This was done in order to ease the strain on the grid by indicating development and investment needs. The transmission system operator required collateral from project developers and allowed projects to connect earlier than planned in order to inhibit speculation and support the sector's continued growth.

Government Decree 54/2024 has effectively halted new grid connections for most renewable energy projects, annulling recent capacity applications exceeding 10 GW. Capacity requests for grid connection beyond 2030 have been systematically rejected. The Decree states that a **new grid connection capacity allocation system will be** implemented starting in early 2025, making new feed-in capacity for weather-dependent renewables unlikely in the near future. However, on-site (self-consumption only) power plants remain unaffected.

The Hungarian government is adopting a top-down grid connection management approach, where the transmission system operator will determine both the locations

([167]) Yearly electricity data, Ember (generation and consumption data throughout the paragraph).
([168]) Core is the capacity calculation region (CCR) which covers central European countries namely Austria, Belgium Czechia, Germany, France, Croatia, Hungary, the Netherlands, Poland, Romania, Slovenia, Slovakia and, once connected, Ireland. A CCR is a group of countries which calculate cross-border electricity trade flows together.

for new connections and the type of capacity required. According to the government, this would improve the outlook for wind, geothermal and non-fossil storage, which could be useful to balance the recent growth of solar PVs. While aiming to align grid expansion with renewable growth, the measures create uncertainties for investors, potentially slowing new projects and favouring existing developments with secured grid access. Currently, the estimated time taken to connect a utility-scale PV system, as reported by the industry, is about six years, which is substantially longer than the EU average (around four years)([169]). As for wind energy, the first grid connection of a wind farm is not expected before 2029. This demonstrates that the strain on the grid poses a barrier to future growth.

The electricity system shows significant untapped flexibility potential. Hungary does not report on the installed non-fossil flexibility capacity in the draft updated NECP. In spite of this, Hungary has committed to taking steps to promote the installation of electricity storage through a combination of legislative and financial incentives, including in the form of pumped-storage power-plant capacity. The promotion of demand response is one of Hungary's objectives. The development of flexible tariff structures and the creation of a legislative environment supporting the creation of aggregators have been mentioned by Hungary as ways to achieve this. Despite the government ambition to achieve 1GW storage capacity by 2030, today total capacity is around only 0.02GW, with only DK and LV having less in the EU. The lack of system flexibility, coupled with the increasing penetration of intermittent solar energy, is reflected in the rising number of negative prices occurences, 74 in 2023 and 53 in 2024.

Hungary's regulatory framework still contains barriers to the development of flexible resources. Demand-side response cannot access the wholesale market and access to the ancillary service market involves specific barriers to assets installed at the distribution level. The slow deployment of smart meters impacts the availability of dynamic retail contracts.

Consumer empowerment remains limited. Electricity consumers in Hungary have access to fully regulated offers only, i.e. regulated fixed prices and regulated variable prices for households and regulated fixed prices for non-household consumers([170]). The share of fixed-price contracts is 100% vs an EU average of 73%([171]). In 2023, consumers in Hungary did not have access to dynamic-price contracts. In the same year, the electricity switching rates of household consumers decreased by 0.4% compared to 2022([172]). Electricity switching rates of non-household consumers are not reported. In Hungary, in 2023 only 9% of consumers had access to smart meters([173]), compared to an EU average of around 63%, and it is not possible for consumers to access near real-time consumption data. By 2030, the EU set a 80% target for smart meters deployment.

Hungary's first energy community was registered in 2023. The aim of the Hungarian energy strategy is to ensure that, by 2030, at least one renewable energy community operates in each of Hungary's 175 microregions. But the development of energy communities is hampered by poor grid access as well as by regulatory and financial barriers. Hungary has recently adopted legislation that simplifies permit-granting for renewable energy communities. To this end, Hungary

([169]) EU Market Outlook For Solar Power 2023 – 2027, SolarPowerEurope.

([170]) https://www.acer.europa.eu/sites/default/files/documents/Publications/ACER-CEER_2024_MMR_Retail.pdf

([171]) Idem.

([172]) Idem.

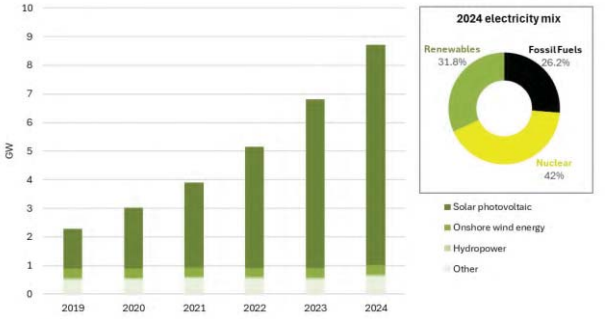
([173]) Idem.

launched a funding programme of EUR 12.7 million in 2024. There are only three energy communities in Hungary and the percentage of households generating electricity is 3.2%([174]).

In 2023, electricity accounted for 20.9% of Hungary's final energy consumption, below the EU average of 22.9%, and this share has remained largely stagnant in the last decade([175]). When it comes to households, electricity accounts for 20.1% of final energy consumption, while in industry it represents 37.7% (see also Annex 7). In Hungary, the electricity/gas price ratio for industry is almost 4, higher than in most of the EU. Households pay electricity more than three times as much as gas. This represents a major obstacle for the electrification of the Hungarian economy. In the transport sector, the share of electricity in final consumption remains negligible at 2.3%. Further progress in electrification across sectors is required for cost effectively decarbonising the economy and bringing the benefits of affordable renewable generation to consumers.([176])

Renewables and long-term contracts

Graph A8.3: **Hungary's installed renewable capacity (left) and electricity generation mix (right)**



"Other" includes renewable municipal waste, solid biofuels, liquid biofuels, and biogas.
Source: IRENA, Ember

In 2024, total installed solar capacity of solar PV has reached 7.7 GW, with a 30% YoY increase and surpassing the national target previously set for 2030 (6GW). Regarding onshore wind, despite some positive regulatory progress in removing obstacles, total capacity is stuck at 0.3GW for 10 years and the 2030 target of 1 GW remains unambitious. This is particularly notable given the government's recognition of wind energy's role in diversifying the electricity mix and reducing system and balancing costs. In 2023, the share of renewables in final energy consumption – calculated according to the RED methodology, was 17%, among the lowest in the EU and significantly below the EU average of 24.5%.

Renewables generated 32% of electricity in Hungary in 2024, below the EU overall share of 47%([177]). 25% of electricity was produced by solar energy, the highest share in the EU. The energy mix is still largely dominated by fossil fuels (68% share), with renewables covering just 14% of gross inland consumption in 2023 (the aggregate value for the EU is 20.1%.

([174]) Idem.

([175]) CAGR (compound annual growth rate) of 1.2% between 2013 and 2023 and minimum/maximum share of 18.4% and 20.9%, respectively.

([176]) Analysis based on Eurostat data for the second semester of 2024. For household consumers, consumption band is DC for electricity and D2 for gas, which refer to medium-sized consumers and provide an insight into affordability. For non-household consumers, consumption band is ID for electricity and I4 for gas, referring to large-sized consumers, providing an insight into international competitiveness (price used for the calculation excludes VAT and other recoverable taxes/levies/fees as non-household consumers are usually able to recover VAT and some other taxes).

([177]) Yearly electricity data, Ember.

Hungary has taken several important steps towards improving the legal framework on RES permitting. These include (i) introducing legislation that simplifies permit-granting for renewable energy communities, (ii) efforts to ensure better grid planning by having operators announce application rounds for connection points and (iii) introducing deposits to limit unrealised projects. There is room for improvement in human resources, repowering existing installations and establishing regulatory sandboxes for innovative RES projects.

Hungary has doubled its target for solar PV in its final updated NECP. By 2030, Hungary aims to have 12 GW of solar PV capacity. To support this development, in 2024 Hungary launched the Napenergia Plusz programme, which offers residential customers who want to install solar panel systems and energy storage equipment with a non-refundable state grant of up to 66% of the investment costs. Some 25 000 households will benefit from the measure. Moreover, by the end of 2024, no new schedule on the expected allocation of support for renewables had been released on the Union Renewables Development Platform. Nor did Hungary make a pledge under the European wind power action plan either.

The power purchase agreement (PPA) market in Hungary is currently in its very early stages, with only a few dozen MW of capacities being contracted. The first corporate PPA contract in Hungary was signed in early 2022, for 26 MW of PV capacity, as an on-site PPA between ID Energy Group and Lafarge. PPA contracts are in a disadvantaged position relative to contract-for-difference (CfD) auctions because energy producers must pay an additional income tax, whereas the participants in CfD are exempted. This rule was slightly amended in early 2024, as a new regulation exempts power plants from the payment of this tax if their capacity is over 5 MW and they are implemented through an on-site PPA contract, and do not feed into the electricity network. Regarding CfD, since March 2022, no tender for new renewable energy projects has been organised, allegedly due to the lack of grid connection capacities. The system allows for delayed entry into the compensation payment scheme, leaving producers with the possibility of entering into short-term PPAs (or other merchant solutions) if market conditions are more advantageous and thus enabling them to avoid pay-backs if electricity prices are high.

Energy efficiency

Hungary has demonstrated progress towards reaching the 2030 EU targets for energy efficiency. In 2023, primary energy consumption (PEC) decreased by 7.3% to 22.12 Mtoe. Final energy consumption (FEC) decreased by 7.6% to 16.76 Mtoe. Compared to 2022, FEC decreased in all main sectors: in industrial by 7.4%, in transport by 5.5%, in residential by 7.9% and in services by 14.2%. Under the recast Energy Efficiency Directive (Directive 2023/1791), Hungary should try to reach a PEC of 23.35 Mtoe and an FEC of 16.17 Mtoe by 2030.

Hungary has notified the Commission of its comprehensive heating and cooling assessment identifying potential for the application of high-efficiency cogeneration and efficient district heating and cooling in line with Article 25(1) of the Energy Efficiency Directive.

As part of its long-term renovation strategy, Hungary aims to reach 20% savings in the energy use of the residential building stock by 2030. In the final updated NECP, Hungary announced that the upcoming national building renovation plan, of which the draft is due to be prepared in 2025, will be more ambitious regarding the building stock, while the associated measures will also be reviewed. Although final energy consumption in households decreased by 7.8% between 2022

and 2023, it remained more or less constant when limate corrections were applied([178]). Therefore, Hungary needs to step up its efforts to improve the energy efficiency of buildings if it is to make a meaningful contribution to the 2030 reduction target for energy consumption in the buildings sector.

In 2022, heating and cooling represented 85% of the country's residential final energy consumption (compared to an EU average of 78%), of which 23% came from renewables (compared to an EN average of 26%). Approximately 12 000 heat pumps were sold in 2023, representing a decrease of 25% compared to the previous year. Hungary offers a renovation subsidy covering up to 50% of renovation costs and corresponding to a project value of up to HUF 3 000 000 (EUR 7 300) for families. This subsidy can also cover heat pumps. In 2023, electricity in Hungary was 3.4 times more expensive than gas, which increased to 4.0 times more expensive in the first half of 2024. This means that end users will save energy but will not make any significant financial savings if they choose a heat pump for heating. The residential electricity-to-gas price ratio has increased by 7% over the past five years, making heat pumps less financially attractive.

Hungary deploys a supportive national financing framework that mobilises energy efficiency investment. It is composed of grants and subsidies and of relevant financial instruments that can leverage private investments. In 2024, Hungary continued to implement several relevant financing measures, notably the Baross Gábor credit programme - green investment loan (Baross Gábor Újraiparosítási Zöld Beruházási Hitel). As part of its national financing framework supporting energy efficiency, Hungary adequately deploys financial instruments for energy efficiency, These include the residential loan scheme for energy efficiency and renewable energy-based modernisations of the building stock (*Lakossági energiahatékonysági Hitelprogram),* as well as tax credits. The effectiveness of the energy efficiency obligation schemes to support energy efficiency in enterprises is undermined by the low mandatory annual savings and low penalties for non-compliance. In term of sectors supported, Hungary's national financing framework mainly focuses on public and residential buildings.

Security of supply and diversification

Since Russia's invasion of Ukraine, Hungary has strengthened its energy ties with Russia. In 2023 and 2024, Hungary imported substantial volumes of Russian gas beyond the long-term contract of 4.5 bcm per year, with 2024 imports nearing 7 bcm.

Russian crude accounts for around 74% of its oil imports in 2023. The country could compensate for a potential phase-out of the Druzhba pipeline by making more use of the Janaf/Adria pipeline in Croatia.

Hungary remains fully dependent on Russian nuclear fuel. It has taken some steps to ensure security of supply. Notaybly in October 2024, the Paks operator concluded an agreement with an alternative fuel supplier (Framatome) for deliveries from 2027. It is important for Hungary to develop a national plan to fully phase out its dependency on Russian nuclear fuel, as foreseen by the REPowerEU Roadmap adopted on 6 May 2025.

([178]) Climate correction applied to the whole final energy consumption in households that is multiplied by the average heating degree days (HDD) over the period 2006-2023 and divided by the HDD in the corresponding year.

Fossil fuel subsidies

In 2023, environmentally harmful ([179]) fossil fuel subsidies without a planned phase-out before 2030 represented 1.01%([180]) of Hungary's GDP([181]), above the EU weighted average of 0.49%. Income/price support accounted for 89% of this volume, while tax measures and direct grants represented 10% and 1%, respectively. Fossil fuel subsidies without a planned phase-out before 2030 and which do not specifically address, in a targeted way, energy poverty nor genuine energy security concerns included the utility cost reduction programme, a VAT reduction for district heating using natural gas, and excise tax refunds for agricultural use of diesel. Additionally, Hungary's 2023 Effective Carbon Rate([182]) averaged EUR 50.6 per tonne of CO_2, below the EU weighted mean of EUR 84.80[6].

[179] Direct fossil fuel subsidies that incentivise maintaining or increasing in the availability of fossil fuels and/or use of fossil fuels.

[180] Numerator is based on volumes cross-checked with the Hungarian authorities. For all Member States, it includes public R&D expenditures for fossil fuels as reported by the IEA (Energy Technology RD&D Budgets) and excludes, for methodological consistency, excise tax exemption on kerosene consumed in intra-EU27 air traffic.

[181] 2023 Gross Domestic Product at market prices, Eurostat.

[182] The Effective Carbon Rates is the sum of carbon taxes, ETS permit prices and fuel excise taxes, representing the aggregate effective carbon rate paid on emissions.

Table A8.1: **Key Energy Indicators**

	Hungary				EU			
	2021	**2022**	**2023**	**2024**	**2021**	**2022**	**2023**	**2024**
Household consumer - Electricity retail price (EUR/KWh)	**0.1005**	**0.0975**	**0.1141**	**0.1044**	**0.2314**	**0.2649**	**0.2877**	**0.2879**
Energy & supply [%]	34.2%	27.6%	26.3%	23.4%	36.6%	54.3%	55.6%	47.8%
Network costs	44.5%	51.2%	52.4%	55.4%	26.7%	25.3%	24.8%	27.2%
Taxes and levies including VAT	21.3%	21.2%	21.3%	21.3%	36.7%	20.3%	19.6%	25.0%
VAT	21.3%	21.2%	21.3%	21.3%	14.5%	13.4%	13.8%	14.6%
Household consumer - Gas retail price	**0.0306**	**0.0301**	**0.0335**	**0.0286**	**0.0684**	**0.0948**	**0.1121**	**0.1128**
Energy & supply	53.6%	51.5%	34.6%	42.3%	43.7%	61.0%	64.5%	53.9%
Network costs	25.2%	27.2%	44.2%	36.4%	22.5%	17.3%	17.1%	18.3%
Taxes and levies including VAT	21.2%	21.3%	21.2%	21.3%	33.8%	21.7%	18.4%	27.8%
VAT	21.2%	21.3%	21.2%	21.3%	15.5%	11.6%	10.2%	13.6%
Non-household consumer - Electricity retail price	**0.0931**	**0.2014**	**0.2525**	**0.1987**	**0.1242**	**0.1895**	**0.1971**	**0.1661**
Energy & supply	54.2%	67.7%	55.4%	52.9%	43.0%	66.5%	63.0%	55.8%
Network costs	19.9%	11.5%	21.3%	20.0%	15.8%	10.7%	11.9%	15.5%
Taxes and levies excluding VAT	7.2%	-0.8%	3.2%	9.2%	30.4%	9.9%	11.2%	15.4%
Non-household consumer - Gas retail price	**0.0398**	**0.0859**	**0.0834**	**0.0552**	**0.0328**	**0.0722**	**0.0672**	**0.0517**
Energy & supply	57.7%	73.9%	68.4%	67.0%	66.2%	77.3%	77.3%	68.7%
Network costs	5.1%	2.7%	6.1%	6.3%	7.7%	3.8%	5.3%	7.1%
Taxes and levies excluding VAT	20.1%	2.7%	5.4%	6.9%	12.5%	6.1%	7.3%	11.6%
Wholesale electrity price (EUR/MWh)	113.4	270.9	107.1	100.7	111.0	233.2	99.1	84.7
Dutch TTF (EUR/MWh)	*n/a*	*n/a*	*n/a*	*n/a*	46.9	123.1	40.5	34.4

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Gross Electricity Production (GWh)	**32,915**	**32,067**	**34,291**	**34,930**	**36,120**	**35,802**	**35,546**	-
Combustible Fuels	15,407	14,725	15,429	15,358	15,301	14,392	11,704	-
Nuclear	16,098	15,733	16,288	16,055	15,990	15,812	15,918	-
Hydro	220	222	219	244	212	178	222	-
Wind	758	607	729	655	664	610	646	-
Solar	349	629	1,497	2,459	3,796	4,732	6,925	-
Geothermal	1	12	18	16	12	4	16	-
Other Sources	82	139	111	143	145	73	115	
Gross Electricity Production [%]								
Combustible Fuels	46.8%	45.9%	45.0%	44.0%	42.4%	40.2%	32.9%	-
Nuclear	48.9%	49.1%	47.5%	46.0%	44.3%	44.2%	44.8%	-
Hydro	0.7%	0.7%	0.6%	0.7%	0.6%	0.5%	0.6%	-
Wind	2.3%	1.9%	2.1%	1.9%	1.8%	1.7%	1.8%	-
Solar	1.1%	2.0%	4.4%	7.0%	10.5%	13.2%	19.5%	-
Geothermal	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	-
Other Sources	0.2%	0.4%	0.3%	0.4%	0.4%	0.2%	0.3%	-
Net Imports of Electricity (GWh)	**12,878**	**14,348**	**12,584**	**11,677**	**12,754**	**12,152**	**11,099**	-
As a % of electricity available for final consumption	32.1%	35.1%	30.4%	28.2%	29.1%	28.2%	26.2%	-
Electricity Interconnection [%]	**58.3%**	**58.8%**	**53.1%**	**35.3%**	**32.5%**	**41.4%**	**48.0%**	**41.7%**
Share of renewable energy consumption - by sector [%]								
Electricity	7.5%	8.3%	10.0%	11.9%	13.7%	15.3%	19.5%	-
Heating and cooling	19.9%	18.2%	18.2%	17.7%	17.9%	20.2%	22.3%	-
Transport	7.7%	7.7%	8.1%	11.6%	6.2%	7.8%	7.6%	-
Overall	13.6%	12.5%	12.6%	13.9%	14.1%	15.1%	17.1%	-

	2020	**2021**	**2022**	**2023**	**2020**	**2021**	**2022**	**2023**
Import Dependency [%]	**56.6%**	**54.1%**	**64.2%**	**62.1%**	**57.5%**	**55.5%**	**62.5%**	**58.3%**
of Solid fossil fuels	43.7%	38.5%	41.4%	24.9%	35.8%	37.2%	45.9%	40.8%
of Oil and petroleum products	87.1%	86.9%	89.4%	89.0%	96.8%	91.7%	97.8%	94.5%
of Natural Gas	75.6%	67.2%	99.1%	98.6%	83.6%	83.6%	97.6%	90.0%
Dependency from Russian Fossil Fuels [%]								
of Natural Gas	95.0%	95.0%	82.4%	78.1%	41.0%	40.9%	20.7%	9.3%
of Crude Oil	61.0%	58.2%	85.7%	77.4%	25.7%	25.2%	18.4%	3.0%
of Hard Coal	21.7%	18.1%	7.3%	0.0%	49.1%	47.4%	21.5%	1.0%

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Gas Consumption (in bcm)	**10.7**	**10.3**	**10.4**	**10.9**	**11.4**	**9.7**	**8.6**
Gas Consumption year-on-year change [%]	7.0%	-3.6%	0.7%	4.2%	5.1%	-14.9%	-10.9%
Gas Imports - by type (in bcm)	**9.8**	**7.7**	**11.7**	**7.9**	**7.5**	**9.3**	**8.2**
Gas imports - pipeline	9.8	7.7	11.7	7.9	7.5	9.3	8.2
Gas imports - LNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gas Imports - by main source supplier [%]							
Russia	95.0%	95.0%	95.0%	95.0%	95.0%	82.4%	78.1%
Romania	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.5%
United States	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%

Source: Eurostat, ENTSO-E, S&P Platts

Climate change and environmental pollution are serious threats to Hungary's population, environment and economy. The country is showing an increasing vulnerability to extreme climate events and faces challenges in implementing preparedness strategies, particularly as regards water resilience. Hungary is increasingly exposed to drought and flood hazards, as illustrated by the floods in September 2024. Urgent measures are needed to implement sustainable water management strategies, focusing on green infrastructures, and to ensure the long-term sustainability of sectors that rely on ecosystem services. The state of nature and ecosystems continues to degrade, creating significant risks to Hungary's economy and competitiveness. The country needs to take targeted measures to effectively prevent further degradation, better protect its nature, and ensure sufficient investments to restore ecosystems. To that end, Hungary should continue taking steps to ensure its transition towards more sustainable agriculture practices.

Climate adaptation and preparedness

As regards the impacts of climate change in Hungary, the problems of droughts and flash floods have recently moved into focus. Over the past century, the increase in the average temperature in Hungary (1.2 °C over the period 1901-2018) has been significantly higher than the estimated global figure of 0.9 °C. The upward trend in the average temperature has been particularly sharp since the 1980s. This coincides with increasingly long and intense droughts, with regions experiencing both a scarcity and an abundance of water within the same year. Heavy rainfall has become more frequent, and part of the annual distribution of rainfall is expected to shift to occurring outside the vegetation period ([183]).

Agriculture is particularly vulnerable to the impacts of climate change, and sustainable water management strategies are therefore needed. In 2022, drought affected 27% of Hungary's territory, with devastating damage to agriculture ([184]). According to Hungary's third river basin management plan, recent droughts have affected crop and livestock production, inland waterway navigation, and public water supply. Among the risks relating to climate change, further to droughts and floods, Hungary's agriculture is vulnerable to soil erosion, windstorms and early or late frosts. These risks can lead to yield reduction, forest fires and the spread of new pests and diseases. In 2019, Hungary adopted a drought management plan with a range of drought mitigation measures. It does not provide details on the projected impacts of these measures though, nor how these relate to water scarcity management areas. Overall, there have been no significant changes in how the Water Framework Directive (WFD) is implemented in Hungary regarding water abstraction and water scarcity management. Considering the climate and socio-economic changes in the Danube, Hungary would benefit from enhanced international cooperation on water abstraction and water scarcity, through existing international frameworks such as EUSDR, ICPDR and bilateral water commissions among others.

There is room for more preparedness measures based on green infrastructures in Hungary. Due to more frequent droughts, with higher temperatures and evaporation, agriculture's demand for water is increasing. This puts pressure on groundwater and water supply systems. In recent years, Hungary has

([183]) See the modelling of the Hungarian Meteorological Service.

([184]) In 2022, among the EU Members with over 3 mn inhabitants, only Belgium, France, Croatia and Portugal had larger parts of their territory affected by droughts.

focused on irrigation development for enhancing agricultural productivity. In this context, Hungary will need comprehensive measures to develop a resilient and water-efficient agriculture. A change of agricultural practices would reinforce climate adaptation and prevent dependency on increasingly unreliable rain and river flows ([185]). Hungary's common agricultural policy strategic plan supports investments and agroecological practices for natural water retention and resource efficiency, and it is expected to improve water balance on 1 million hectares of agricultural land. According to the second flood risk management plan ([186]), Hungary considers natural long-term flood prevention by addressing land use in floodplains, but its flood protection strategy still relies mainly on structural water retention projects and grey infrastructures. Hungary would also benefit from further transboundary coordination on flood protection.

Although uninsured risks appear low, potential losses in Hungary due to climate change impacts cannot be ignored. In 2022, climate-related economic losses amounted to about 1.4% of gross domestic product (GDP) ([187]). Hungary's insurance protection gap for natural catastrophes, though not including droughts, is comparatively low overall, albeit moderate for floods. A stress test in the European Commission's fiscal sustainability report (2021) finds non-negligible fiscal impacts for Hungary from possible climate change related hazards, even under the 1.5 °C and 2 °C scenarios ([188]).

Hungary has scope to reinforce to strengthen institutional and administrative aspects of its climate adaptation policies. The ministry of energy is the main authority for climate adaptation, with some responsibilities shared with other ministries and administrations. The follow-up on Hungary's national climate strategy of 2018 through annual action plans has been pending. Local authorities are not legally obliged to prepare climate strategies, but all the counties and 132 settlements have elaborated a climate strategy including adaptation. NATéR, the policy support tool for domestic climate adaptation with data, forecasts and information on climate impacts, has not been further developed since 2020, which impairs its usefulness going forward. There is a need for capacity building on adaptation including at subnational level; to this end, Hungary intends to prepare a curriculum and training materials to strengthen administrative capacity on climate adaptation and integrated water management.

Water resilience

There is room for improvement in Hungary's water resilience. Water productivity ([189]) has slightly increased in Hungary over recent years ([190]), with EUR 30 per m^3 of abstracted water in 2022. The water exploitation index plus (WEI+) has also slightly

([185]) Commission Staff Working Document, Third river basin management plans, second flood hazard and risk maps and second flood risk management plans, Member State: Hungary, 4 February 2025.

([186]) Commission Staff Working Document, Third river basin management plans, second flood hazard and risk maps and second flood risk management plans, Member State: Hungary, 4 February 2025.

([187]) Source: Eurostat. Still, this magnitude was exceptional so far; such losses have been typically macroeconomically negligible up until now.

([188]) Notably an increase in the debt to GDP ratio of 3 to 4 percentage points. The report finds that an increase in global temperatures of 3 °C would lead to more abrupt and nonlinear impacts. The analysis only considers extreme events and not the compounding impacts of slow-onset climate change. It cautions that the results are likely to underestimate expected fiscal impacts. See: European Commission, 2021, *Fiscal Sustainability Report, Part 2, Chapter 2*, Link.

([189]) Measured as GDP in 2010 chain linked volumes over total fresh surface water abstracted in cubic metres.

([190]) EUR 28 per m^3 of abstracted water in 2018.

increased from 1.4% in 2021 to 1.7% in 2022, but it remains below the EU average (3.6% in 2021). Despite a decreasing trend, the energy sector is still Hungary's most water-consuming sector ([191]), accounting for 72% of the net water consumption in 2022 (e.g. 1 043 million m^3 of a total of 1 446 million m^3). However, net water consumption significantly increased between 2010 and 2022, by 136% for manufacturing, 29% for public water supply, and 11% for agriculture. Hungary has also room to increase administrative capacity in the water sector. Following a transfer of responsibilities from the Ministry of Interior in 2024, the Ministry of Energy became the main authority for water management, protection, and utilities. However, water governance is still shared with the Ministry of Agriculture, notably regarding water supply for agriculture, and the Ministry of Interior, regarding drinking water quality.

Water quality is a major challenge for Hungary due to the significant pressures on water bodies from agriculture, industry and settlements. According to Hungary's third river basin management plan, only 11.3% of surface water bodies are classified as having good ecological status/potential, far below the EU average (37.3%), mainly due to diffuse nutrient pollution from agriculture. Their chemical status has not improved since the second plan's assessment, as only 46% of surface water bodies have a good chemical status, mainly due to pollution from heavy industry emissions and combustion processes ([192]). As regards groundwater bodies, the percentage of groundwater bodies with good quantitative status remains at 80%, below the EU average (90%). Moreover, 17.3% of groundwater bodies with good quantitative status are identified as being at risk of falling to a poor status by 2027. The percentage of groundwater bodies with a good chemical status has slightly increased to 80.5%. However, 10.8% of groundwater bodies with a good chemical status in Hungary are identified as being at risk of falling to a poor status by 2027. Groundwater bodies are mainly affected by untreated wastewater, nutrients from agriculture, urban run-off, industrial wastewater and contamination from old industrial sites. The third plan highlights that there are significant pressures from agriculture, industry and settlements in Hungary.

Despite some progress, Hungary's wastewater treatment remains a significant cause for concern. Wastewater treatment is a major source of water pollution, as discharges of urban wastewater are a significant cause of poor water quality in Hungary, in particular for rivers and groundwater bodies. Hungary is one of the Member States that has faced the greatest difficulties in implementing the Urban Waste-Water Treatment Directive (UWWTD). Despite an increase since 2018, Hungary's compliance rate with the Directive was only 59% in 2020 ([193]), far below the EU average (76%), resulting in a ruling against it by the Court of Justice of the European Union in 2023. The Hungarian authorities have acknowledged that many plants in operation should be refurbished or upgraded.

Hungary has scope to take additional measures to achieve compliance. EUR 659 million from national sources and EU funds already contribute to meeting Hungary's investment needs for water protection and management. However, the investment needs (Graph A9.2) show a substantial gap for water protection and water management (EUR 610 million per year by 2027 or 0.36% of Hungary's GDP). Over half of this gap can be attributed to unaddressed financing needs in wastewater

([191])Based on data provided by the European Environment Agency (EEA) between 2010 and 2022.

([192]) Failure to achieve good chemical status is mainly due to a small number of persistent, bioaccumulative and toxic (PBT) substances (polybrominated diphenyl ethers, mercury, polyaromatic hydrocarbons, perfluorooctane sulfonic acid and its derivatives and heptachlor and heptachlor epoxide) and non-PBT substances ((arsenic, but also cadmium, lead and nickel, along with the hydrocarbon fluoranthene).

([193])European Commission, 2020, *UWWTD National Summary Chapter 2020 Hungary*, LInk.

management (EUR 313 million per year). EUR 40 million per year of the investment gap relates to drinking water, while around EUR 255 million per year relates to other aspects of the WFD. Infrastructure development would help to improve wastewater collection and treatment and water reuse, and to reduce leaks in the networks and the general water supply. Increasing investment will be all the more important as, on one hand, the UWWTD was revised and strengthened in 2024 ([194]), and on the other, Hungary plans to further develop several water-intensive industrial plants in the coming years. For instance, the Hungarian authorities has announced the construction of plants dedicated to battery manufacturing in Nyíregyháza and Debrecen, which will increase both water and energy demands, and raise the issue of potential pollution, with increased needs for wastewater treatment. Additional investments are also needed to increase administrative capacities, implement effective measures to achieve full compliance with the WFD and the UWWTD, decontaminate water bodies, and support nature-based solutions, flood prevention and river restoration. Hungary would also benefit from enhanced transboundary cooperation to achieve the objective of the WFD.

Biodiversity and ecosystems

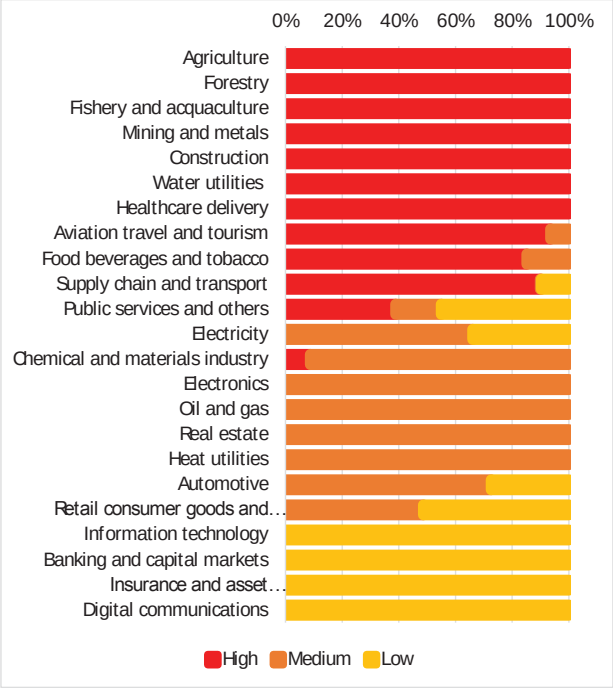
Biodiversity and nature are deteriorating in Hungary, and actions to restore habitats and species should be strengthened. According to the latest available data, only 13.3% of the country's habitats have a good status, lower than the EU average of 14.7%. Similarly, the conservation status of species is concerning, with 35% reported as having a good status, slightly above the EU-28 average (27%). Less than 8% of the forest habitats ([195]) show a favourable conservation status, and overall Hungary's forest conditions are more degraded than the EU average, with a forest health indicator of 0.58 in 2018 (compared to the EU average of 0.62). Moreover, data show deteriorating trends for habitats and species compared to the previous reporting period. This situation has serious implications for Hungary's environmental and climate resilience, as the loss of biodiversity impairs ecosystems' ability to provide services that help mitigate the effects of climate change (such as regulating water cycles, maintaining soil health, and sequestering carbon) and climate-related events such as floods, fires and droughts.

Nature degradation creates significant risks to competitiveness, as Hungary's economy relies on ecosystem services. Overall, Hungary's dependency on ecosystem services is close to the EU average, with 44% of its gross value added showing a high level of dependency, ranking 13th among the Member States. Several sectors, such as agriculture, forestry, fisheries, the mining and metals industry, construction, water utilities and healthcare delivery (see Graph A9.1) are particularly dependent on ecosystem services, with 100% of the gross value added of these sectors directly dependent on ecosystem services. This means that failure to maintain the capacity of ecosystems to deliver services could entail significant costs or even stop production in these sectors. Protecting and restoring key ecosystems would ensure that the long-term competitiveness of these and other economic sectors is preserved.

([194]) Directive 2024/3 019, of 27 November 2024. The deadline for transposition is 31 July 2027.

([195]) Assessments done for the forest habitats listed under Article 17 of the Habitats Directive.

Graph A9.1: **Direct dependency(1) on ecosystem services(2) of the gross value added generated by economic sector in 2022**



(1) Dependency based on the sector's own operations, excluding value chain operations within countries and across international value chains. A high dependency indicates a high potential exposure to nature-related shocks or deteriorating trends, which means that the disruption of an ecosystem
service could cause production failure and severe financial loss.
(2) Ecosystem services are the contributions of ecosystems to the benefits that are used in economic and other human activity, including provisioning services (e.g. biomass provisioning or water supply), regulating and maintenance services (e.g. soil quality regulation or pollination), and cultural services (e.g. recreational activities).
Source: Hirschbuehl et al., 2025, *The EU economy's dependency on nature*, Link.

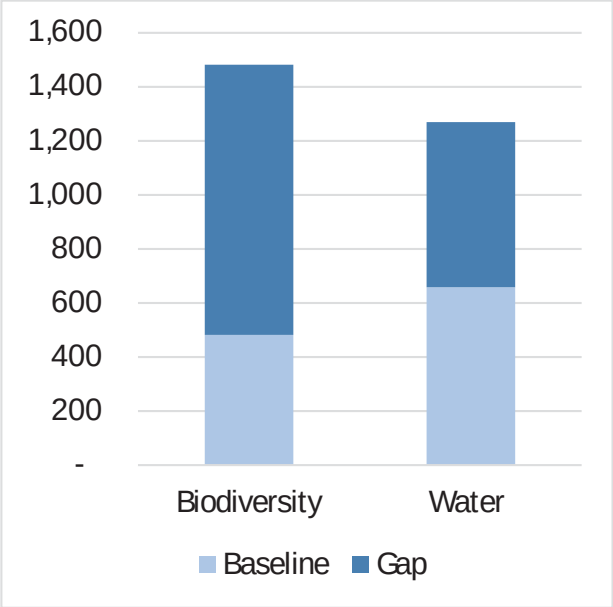
Targeted action on nature protection and restoration is needed in order to meet Hungary's nature restoration targets. In 2022, 22.2% of Hungary's territory was protected land area, and this percentage has remained stable over the last few years, below the EU average. There is therefore scope for Hungary to achieve its political commitment to expand protected areas and improve the conservation of existing protected areas by 2030, as set out in its National Biodiversity Strategy for 2030 ([196]). Between 2006 and 2012, the extent of soil areas providing flood control ecosystem services in Hungary fell by 12% due to soil sealing ([197]). Another of Hungary's areas for action concerns the restoration of 5 029 km^2 of habitats listed in Annex I to the Habitats Directive, corresponding to up to 5.4% of its territory ([198]). Hungary needs EUR 1 482 billion in investment per year to effectively conserve and restore its natural capital, mitigate the impacts of climate change, and preserve the country's rich biodiversity (see Graph A7.2). The current level of financing for biodiversity and ecosystem conservation in Hungary is around EUR 482 million per year, which represents a financing gap of EUR 1 billion. This shortfall puts at risk the country's commitment to global biodiversity agreements and undermines its long-term economic and social development.

([196]) Government of Hungary, 2023, *National Biodiversity Strategy*, Link.

([197]) European Commission, European Environment Agency (2021), Accounting for ecosystems and their services in the European Union.

([198]) European Commission (2022), Impact assessment accompanying the proposal for a Regulation on nature restoration.

Graph A9.2: **Investment needs and gaps in EUR million, in 2022 constant prices**



Source: European Commission, DG Environment, Environmental investment needs & gaps assessment programme, 2025 update.

Sustainable agriculture and land use

Hungary's carbon removals fall short of the level of ambition needed to meet its 2030 target for land use, land use change and forestry (LULUCF). Hungary has seen modest improvements in its LULUCF sector carbon removals since 2018. To meet its 2030 LULUCF target, additional carbon removals of -0.9 million tonnes of CO_2 equivalent (CO_2eq) are needed ([199]). The latest available projections show a gap to target of 0.1 million tonnes of CO_2eq for 2030 ([200]). Additional measures therefore need to be applied to reach the 2030 target.

Hungarian agriculture has an increasing environmental impact on air, water and soil. Hungary's utilised agricultural area (UAA) amounted to 5 million hectares in 2022. There was a significant increase in nutrient losses between 2018 and 2021 (from 43 kg to 56.1 kg of nitrogen per hectare of UAA), which is a significant environmental concern and poses a threat to human health. According to data from the Nitrates Directive, 7.27% of groundwater monitoring stations in Hungary recorded average nitrate concentrations above 50 mg/l between 2016 and 2019, exceeding the healthy threshold for human consumption. The livestock density index was 0.43 in 2020, below the EU average of 0.75. Ammonia emissions from agriculture have shown an increasing trend over the last decade, representing 92.8% of total agricultural emissions in 2022, which is above the EU average (89.8%). Hungary only monitored the level of pesticide pollution at a few monitoring stations (and only for rivers). Despite this low level of monitoring, 60% of surface water bodies were reported as exceeding the pesticide thresholds in 2021.

Hungary must pursue its efforts to transition to a sustainable food system by further implementing policies to reduce the environmental impact of agriculture. Agriculture is a key economic sector in Hungary. The bioeconomy, encompassing the production and processing of biological products, contributed EUR 10.75 billion of added value to the country's gross domestic product in 2021 ([201]), showing an increasing trend since 2018. Agriculture accounted for around EUR 5.1 billion, the beverage industry EUR 477 million, and the food industry contributed around EUR 2.4 billion to Hungary's GDP. Sustainable agriculture practices can help mitigate the environmental impact of agriculture and ensure the long-term competitiveness of the sector. Hungary's common agricultural policy strategic plan supports measures to improve carbon storage, protect natural resources, preserve biodiversity and pursue other climate and environmental objectives, with EUR 1.2 billion, 71% of its rural development funding, and EUR 1 billion, 15%

([199]) National LULUCF targets of the Member States in line with Regulation (EU) 2023/839.

([200]) Climate Action Progress Report 2024 COM/2024/498.

([201]) Jobs and wealth in the EU bioeconomy

of its direct payments. However, there is scope to further promote sustainable practices. In 2022 ([202]), organic farming, which reduces the use of synthetic fertilisers and pesticides, made up only 6.3% of Hungary's agricultural land, below the 2020 EU average of 9.10%.

([202]) D'Andrimont, R. et al., 2024, Estimation of the share of landscape features in agricultural land based on the LUCAS 2022 survey, Link.

Table A9.1: **Key indicators for progress on climate adaptation, preparedness and environment**

Climate adaptation and preparedness:	Hungary						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Drought impact on ecosystems *[area impacted by drought as % of total]*	0	0.77	0.25	1.78	26.19	0	6.77	2.76
Forest-fire burnt area (1) *[ha, annual average 2006-2023]*	715	715	715	715	715	715		
Economic losses from extreme events *[EUR million at constant 2022 prices]*	8	14	11	34	2 430	30	24 142	62 981
Insurance protection gap (2) *[composite score between 0 and 4]*	-	-	-	-	0.88	0.88		
Heat-related mortality (3) *[number of deaths per 100 000 inhabitants in 2013-2022]*	32	32	32	32	32			
Sub-national climate adaptation action *[% of population covered by the EU Covenant of Mayors for Climate & Energy]*	44	53	55	56	56	59	41	44

Water resilience:	Hungary						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Water Exploitation Index Plus, WEI+ (4) *[total water consumption as % of renewable freshwater resources]*	1.3	1.4	1.4	1.4	1.7	-	4.5	4.5
Water consumption *[million m^3]*	1 337	1 407	1 441	1 507	1 446	-		
Ecological/quantitative status of water bodies (5) *[% of water bodies failing to achieve good status]*								
Surface water bodies	-	-	-	84%	-	-	-	59%
Groundwater bodies	-	-	-	20%	-	-	-	93%

Biodiversity and ecosystems:	Hungary						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Conservation status of habitats (6) *[% of habitats having a good conservation status]*	13.3	-	-	-	-	-	14.7	-
Common farmland bird index *2000=100*	80.7	81.0	81.3	77.3	75.7	-	72.2	74.4
Protected areas *[% of protected land areas]*	-	-	-	22	22	-	-	26

Sustainable agriculture and land use:	Hungary						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Bioeconomy's added value (7) *[EUR million]*	9 452	9 744	9 681	10 750			634 378	716 124
Landscape features *[% of agricultural land covered with landscape features]*	-	-	-	-	4	-		
Food waste *[kg per capita]*	-	-	93	91	84	-		
Area under organic farming *[% of total UAA]*	3.9	5.7	6.0	5.8	6.3		7.99	-
Nitrogen balance *[kg of nitrogen per ha of UAA]*	43.0	40.7	49.9	56.1	-	-		
Nitrates in groundwater (8) *[mgNO_3/l]*	-	-	-	-	-	-		
Net greenhouse gas removals from LULUCF (9) *[Kt CO_2-eq]*	- 4 806	- 5 382	- 7 106	- 7 195	- 6 803	-	- 256 077	- 240 984

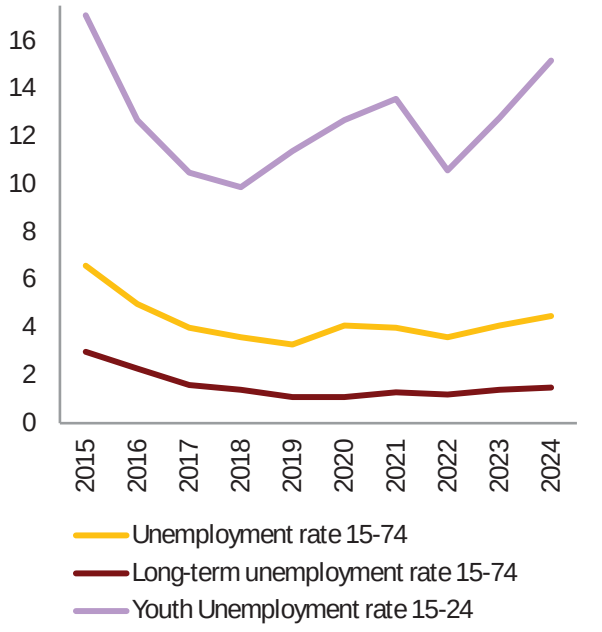
(1) The data show the average for the timespan 2006-2023 based on EFFIS - European Forest Fire Information System.
(2) Scale: 0 (no protection gap) – 4 (very high gap). EIOPA, 2024, Dashboard on insurance protection gap for natural catastrophes.
(3) van Daalen, K. R. et al., 2024, The 2024 Europe report of the Lancet Countdown on health and climate change: unprecedented warming demands unprecedented action. The Lancet Public Health.
(4) This indicator measures total water consumption as a percentage of the renewable freshwater resources available for a given territory and period. Values above 20% are generally considered to be a sign of water scarcity, while values equal or greater than 40% indicate situations of severe water scarcity.
(5) European Commission, 2024, seventh Implementation Report from the Commission to the Council and the European Parliament on the implementation of the Water Framework Directive (2000/60/EC) and the Floods Directive (2007/60/EC) (Third River Basin Management Plans and Second Flood Risk Management Plans).
(6) For this indicator, the EU average includes figures for the UK under the previous configuration, EU-28.
(7) European Commission, 2023, EU Bioeconomy Monitoring System dashboards.
(8) Nitrates can persist in groundwater for a long time and accumulate at a high level through inputs from anthropogenic sources (mainly agriculture). The EU drinking water standard sets a limit of 50 mg NO_3/L to avoid threats to human health.
(9) Net removals are expressed in negative figures, net emissions in positive figures. Reported data are from the 2024 greenhouse gas inventory submission. 2030 value of net greenhouse gas removals as in Regulation (EU) 2023/839 – Annex IIa.
Source: Eurostat, EEA

In recent years, Hungary's labour market has performed well and shown considerable improvement. However, the country still faces structural challenges that have a detrimental impact on its competitiveness and potential economic growth. These challenges include persistently low productivity, stark regional imbalances, a low and declining impact of the Active Labour Market Policy (ALMP) system and the lack of an integrated service provision, as reflected in the significant underrepresentation of certain groups in the labour market - particularly Roma communities, people with lower levels of educational attainment and persons with disabilities. As Hungary works towards its 2030 employment-rate target, key challenges to achieve a more robust and inclusive labour market and thriving economy - include harnessing the potential of underrepresented groups and improving the effectiveness of social dialogue.

Hungary's labour market outcomes are stable and stand at historically high levels, but the slightly increasing unemployment rates require monitoring. Employment and activity rates (for the 20 – 64 and 15 – 64 age groups respectively) reached historical peaks in 2024 (81.1% and 78.6%). Both rates remained well above the EU average in 2024 (75.8% and 75.4%). At 85%, the country's 2030 employment-rate target is within reach, but persistently low employment rates among vulnerable groups might make it difficult to meet the target. Employment growth is slowing down, and the number of people who hold a second job has risen steadily since 2021. The overall unemployment rate increased from 3.6% in 2022 to 4.1% in 2023 and 4.5% in 2024. Long-term unemployment rose by 0.2 percentage points (pps) to 1.4%, in 2023, and increased further to 1.5% in 2024. In 2024, unemployment increased in all regions except in Pest, and was around 7% in three of the four least-developed regions. These regional disparities are the result of lower educational attainment and fewer jobs in rural areas (see Annex 17).

Young people continue to face significant difficulties finding work. In 2024, 15.2% of young people between 15-24 were unemployed (up by 4.6 pps from 2022). Young people with lower levels of educational attainment were much more likely to be unemployed, both in Hungary and in the rest of the EU (29.2% vs 19.8% in 2023). Regions with historically lower educational attainment levels have high youth unemployment rates, e.g. 22.8% in Southern Transdanubia in 2024, when 4.2% of young people in the 15-294 age group were unemployed for 12 months or longer. These figures also show the negative impact of dropping out of school and early school leaving (see Annex 12). The proportion of young people not in employment, education or training (NEETs) remained around the EU average among 15–29-year-olds (10.9% vs 11.0% in 2024).

Graph A10.1:**Unemployment rates (%)**



Source: Eurostat.

In the period 2021 to 2027, the ESF+ is the only source of funding for the Youth Guarantee. Its aim is to support the labour

market integration of NEETs, albeit with a large budget of EUR 526 million. Since 2024, Hungary has been trying to help the more vulnerable young people, especially the inactive, by establishing country-wide mapping strategies and outreach plans. There is further scope for improving the quality and choice of Youth Guarantee training intended to increase long-term employability. As from 2025, interest-free, multi-purpose loans (*Munkáshitel*) of up to HUF 4 million (around EUR 10 000) are available to 17–25-year-olds. Such loans are contingent on at least 20 hours of employment per week or self-employment throughout the loan period; students and graduates in higher education are excluded. The idea is to offer financial incentives for young people into work more quickly. However, this measure might be less effective for low-skilled young people, who would rather need reskilling or upskilling, which is a long-term investment in making them more employable but discourages participation in higher education.**Vulnerable groups such as low-qualified adults, Roma and persons with disabilities also face barriers to labour market integration.** Employment outcomes in Hungary are closely tied to educational attainment. The employment rate for people with at most lower secondary (59.9%) was over 20 pps lower than for people with upper secondary or post-secondary education in 2024. Among 15-64-year-olds, only 48.7% of Roma ([203]) people were in work in 2023, as opposed to 75.5% of those not from Roma communities, and 20.6% of Roma people were unemployed (vs 3.8% of non-Roma people). The disability employment gap decreased by 2.4 pps in 2024 but remains high, at 27.2 pps. Almost 40% of young persons with disabilities are NEETs (2022) ([204]). To improve the situation, Hungary recently set an employment target for persons with disabilities.

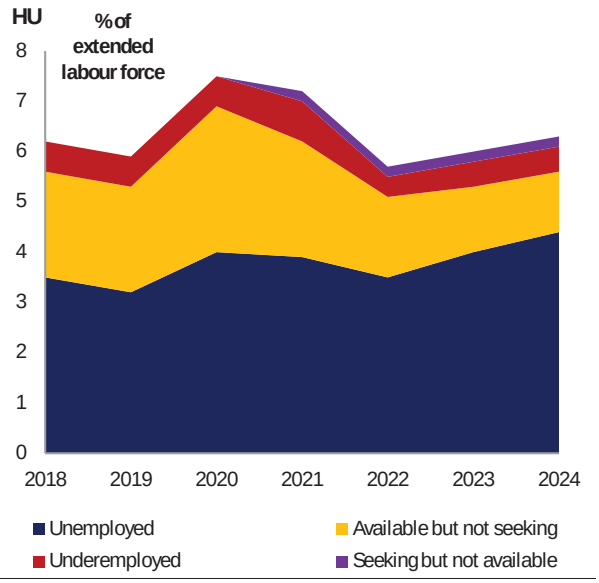
Vulnerable groups also tend to remain unemployed for longer. Since the 2021 legislation on the public employment service, ALMP has focused on re-employment via wage subsidies, and there is reduced access to reskilling and upskilling measures, which could ensure long-term labour market integration. The recent 2024 legislative amendment now enables PES to play a more prominent role in the provision of labour market trainings. Insufficient availability of quality training providers might appear as a challenge. Given that fewer than one in three long-term unemployed people who get a job remain employed after six months there is room for improvement in providing tailor-made, complex services such as transversal skills([205]) development, health and psychological services and support in job-seeking to address needs of long-term unemployed-. In the Economic Development and Innovation Operational Programme Plus (EDIOP Plus), Hungary allocated EUR 787 million (HUF 295 billion) of ESF+ funds to labour market measures – of which 40% goes to people over 30 and 60% to people under 30. The planned measures were launched during 2024 with the aim of helping 300 000 people to find work and are primarily targeted at vulnerable groups and the long-term unemployed.

([203]) National Statistical Office. Indicators to the National Social Inclusion Strategy, 2024.

([204]) European comparative data on persons with disabilities - data 2022 - European Commission

([205]) Transversal skills like critical thinking, teamwork, and learning skills are essential for work, education and daily life. Developing and recognising these skills play an important role in promoting sustainable economic growth, social inclusion, and competitiveness.

Graph A10.2:**Labour market slack**



Source: Eurostat.

Historically low unemployment rates have been rising since 2022, while the overall labour market slack remains low. In 2024, the unemployment rate (4.5%) remained below the EU average (5.9%), as it has been since 2012. However, unemployment in Hungary has been rising since 2022, in contrast with a broadly stable trend in the EU. Labour market slack ([206]) increased from 6% in 2023 to 6.3% in 2024 but remained well below the EU average of 11.7%. This slight increase was driven by an increase in unemployment, while the other components remained stable. The rates of under-employed people working part time in Hungary are among the lowest in the EU. The labour reserve is more than 10 times the number of vacant posts in the three least developed of Hungary's counties. The government announced urgent measures in 2024 to harness this untapped labour potential of around 300 000 people, although specific details are still to be provided.

Labour shortages remain a challenge, in certain sectors. The job-vacancy rate has been on a downward trend since 2022. At 2.1%, it was below its pre-pandemic level (2.5% in 2019), and slightly below the EU average (2.4%) in 2024. The decrease in vacancies is most prominent in the private sector, while the largest shortages were reported in the administrative, healthcare, social work, public administration and defence - sectors. The job-vacancy rates were between 3% and 4% for all of these sectors in 2024. The low number of employees in the public and health sectors is partly due to the low level of salaries and working conditions (see Annex 11). According to recent CEDEFOP-EURES data ([207]), employers indicated a need for more office associates, office professionals, researchers and engineers. In October 2024, the proportion of employers expecting labour shortages to limit their production was relatively high in the service (33.5% vs 26.8% in the EU) and construction (29.3% vs 28.0% in the EU) sectors ([208]).

There is a growing need for skilled workers in emerging sectors that are key to the green and digital transitions. In 2024, employment in the country's energy-intensive industries accounted for 5.0% of total employment, while job creation in the green economy remained limited. In 2022, employment in the environmental goods and services sector was among the lowest in the EU, at 1.0% of total employment (vs 3.3% in the EU). At the same time, the job-vacancy rate in manufacturing, electricity, gas and water supply - key sectors for the green transition - was above the EU average. The greenhouse gas emission intensity of Hungary's workforce has improved, decreasing from 12.2 tonnes per worker in 2015 to 9.7 tonnes in 2023 (vs 12.3 in the EU), reflecting progress in the green transition.

([206]) Labour market slack refers to all unmet needs for employment, namely it represents the extent to which labour supply exceeds labour demand in the short run. It encompasses four components: under-employed people working part-time, unemployed people, people seeking work but not immediately available, and people available to work but not seeking.

([207]) EURES - Countries and occupations | CEDEFOP

([208]) Source: European Business and Consumer Surveys.

By contrast, the ICT sector remains underdeveloped, with ICT specialists accounting for 4.5% of total employment in 2024, compared to 5.0% in the EU. This is partly due to a high drop-out rate from higher education programmes preparing ICT specialists (see Annex 12) and graduates not entering ICT employment in Hungary. Women are particularly underrepresented, at only 15.2% of ICT specialists (vs 19.5% in the EU). The proportion of the population with at least basic digital skills increased by 10 pps to 58.9% in 2023, compared to an EU average of 55.6% (see Annex 12). However, this proportion is much lower for the inactive ([209]) (aged 25-64 and excluding students) (32.4%), those with lower levels of educational attainment (33.4%) and the unemployed (44.1%). This indicates that those who are more vulnerable in the labour market lag significantly behind in digital skills, further hampering their ability to find work.

Overall, Hungary has almost halved its skills mismatches during the last decade. The macroeconomic skills mismatch ([210]) decreased consistently from 30.0 in 2013 to 17.5 in 2023, then increased slightly to 17.7 in 2024. In 2024, despite the low overall tertiary graduate rate, 14.5% of workers with higher-education qualifications were employed in occupations that did not require that level of qualification, while the EU average for the same year was 21.5%. Sectors such as accommodation and food service activities, agriculture, forestry and fishing, transport, and administrative and support service activities have the highest over-qualification rates. However, they are lower than the EU levels for the same sectors.

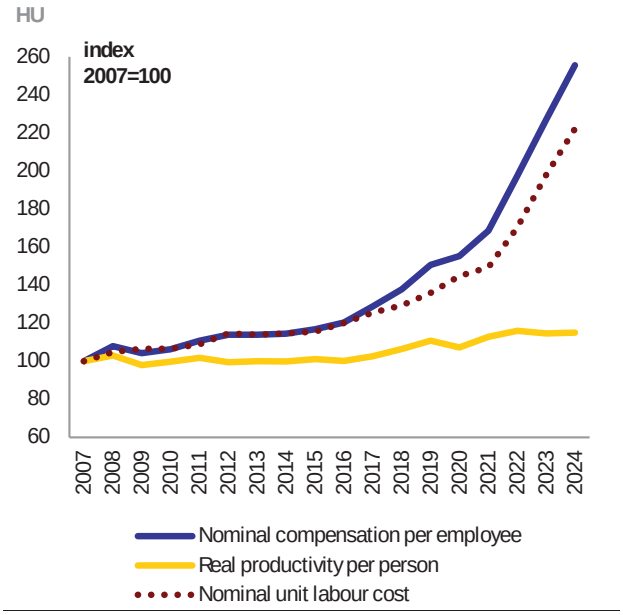
In Hungary, wage growth has been strong. Nominal wages are expected to grow by 7.8% in 2025, after reaching the highest growth rate (17.2%) in the EU in 2022 and remaining among the highest in 2023 (14.4%) and 2024 (12.5%). Nominal wage growth in Hungary is expected to fall to EU average levels (3.4%), following a period marked by great divergence (2022-2024). In parallel, real wages have been growing at a rapid (yet volatile) pace, reaching 8.5% in 2024 and expected at 4.0% in 2025. This is also significantly above the EU average. Real wages increased in 2022 (3.7%) but declined by 2.1% in 2023 ([211]). The rise in real wages is due to both persistent nominal wage growth and steep disinflation (from 17.0% in 2023 to 3.8% in 2024). The statutory minimum wage increased by more than 45.4% between January 2022 and January 2025, an increase of around 5.1% in real terms. The minimum wage remains lower than in almost all other EU Member States, however.

([209]) A person who is neither employed nor unemployed is economically inactive. This means that they are not in paid work,and are not looking for work. This may be because someone is retired, looking after family or home, or a student, among other reasons. The set of people outside the labour is also called the "inactive population"

([210]) The macroeconomic skills mismatch indicator measures the dispersion of employment rates across skill groups (represented by qualification levels, with ISCED 0-2 low; 3-4 medium and 5-7 high).

([211]) For nominal wage growth, pay per employee is considered. This includes: i) Wages and salaries payable in cash or in kind; and ii) Social contributions payable by employers. For real gross wages, the deflator used is HICP. Real wages using this deflator may differ from real wages shown in AMECO (that uses private consumption as deflator). Data for 2024 and 2025 are based on the European Commission Autumn 2024 economic forecast.

Graph A10.3:**Unit labour costs and productivity**



Source: Eurostat.

Rapid wage growth, along with substantial increases in unit labour costs (ULCs) may undermine competitiveness if not accompanied by productivity growth. Wage growth over the period from 2014-2022 has been slightly below what could be expected based on developments in the usual macroeconomic drivers([212]) in Hungary. By contrast, wage growth surpassed the expected levels in 2023 and 2024. In recent years, ULCs increased by considerably more than in most EU Member States: 14.2% in 2022, 15.7% in 2023 and 12.2% in 2024, and it is forecast to increase by 6.0% in 2025. While export market shares have still been growing in recent years (e.g. over 2021-2023), continuous strong wage developments may increasingly affect competitiveness if not backed by higher productivity.

Social dialogue remains limited, especially in the public sector. The overall framework of social dialogue remains weak due to the fragmentation of employers' and employees' representations, with different memberships and functions. Following the establishment of an ad hoc group to discuss ALMPs in 2023, the government adopted a legal basis([213]) for the institutional framework for the tripartite forum of the private sector (VKF) in autumn 2024. The VKF has consultancy powers on questions on the minimum wage and national tripartite negotiations, in line with the minimum wage directive and its transposition into Hungarian law. This is an improvement on the previous arrangement: whereas previously the VKF was governed only by the rules of procedure signed by the parties; there is now a more transparent and legally binding framework.

In parallel, the public sector has seen a gradual erosion of workers' rights in recent years, including restricting teachers' right to strike and abolishing the army trade union. The establishment of a separate employment status for certain groups of public employees has weakened their ability to defend their collective interests: in some cases, collective agreements have become void and have had to be renegotiated. The two relevant groups in the public sector are barely still in existence and only OKÉT had one meeting in October 2024. There is little to no consultation with social partners on major challenges and reforms to the labour market and social policy, for example on pensions or the minimum income. Hungary is supporting social partners in building capacity, mainly through the ESF+ - with an allocation of 0.32% or EUR 17 million in ESF+ funding for this purpose.

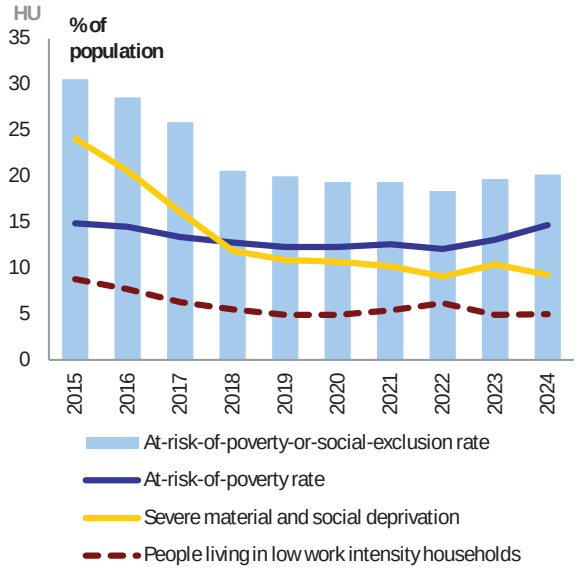
([212]) Wage benchmarks are predicted by developments in inflation, productivity, the trade balance and the unemployment rate.

([213]) Government Regulation 308/2024 (X. 25.) entered into force on 26 October 2024: https://njt.hu/jogszabaly/2024-308-20-22.2#SZ10@BE0@POB

Despite improvements in overall social conditions over the last decade in Hungary, certain vulnerable groups benefited much less and continue to face significant challenges related to poverty and social exclusion. Poverty or social exclusion risks are on the rise and expected to rise further due to inflation in basic commodities, a decade of inadequate social assistance and a lack of targeted mainstream social policy measures. Socially disadvantaged people, such as Roma, persons with disabilities and the low-skilled, face barriers to accessing quality education, the labour market and social mobility overall. The limited capacity of the social protection system and unequal access to quality services also pose risks for Hungary's sustainable and inclusive growth.

After a decade of improvement, poverty and social exclusion is on the rise again in Hungary. The people at-risk-of-poverty or social exclusion (AROPE) rate saw a gradual decline between 2015 and 2022, but increased for two years in a row by 1.3 pps to 19.7% in 2023 and by further 0.5pps to 20.2% in 2024. It remained still below the EU average of 21.0% in 2024. The increasing AROPE rate is mainly driven by a high severe material and social deprivation (SMSD) rate, which rose in 2023 and decreased in 2024 (by 1.1 pps to 9.3% vs 6.4% in the EU) and an increasing (though still below EU average) at-risk-of poverty (AROP) rate (+1.6 pp. to 14.7% vs 16.2% in the EU). **Progress towards the 2030 poverty reduction target has stopped.** The number of people at-risk-of-poverty or social exclusion further increased by 42 000 in 2024, following an increase of 122 000 in 2023. At the current pace (-9 000 since 2019), Hungary risks not reaching its 2030 target([214]) of reducing the number of people at-risk-of-poverty or social exclusion by 292 000. To combat poverty, Hungary would benefit from taking further steps, especially since the country has one of the highest depths of poverty in the EU. Described by the gap between the median income of those at risk of poverty or the national poverty threshold, it was 29.7% in 2024. . The poverty gap for children was one of the highest in the EU in 2023 after climbing by 343% (by 49.8 pps) to 64.3%, from one of the lowest rates in 2022., and then falling to 28.2% in 2024.

Graph A11.1:**At-risk-of-poverty-or-social-exclusion rate and its component rates**



Source: Eurostat.

Rural areas and some specific groups are particularly affected by poverty or social exclusion. In 2024, the AROPE rate in rural areas (25.8%) was 11.37pps higher than in urban areas. Partly related to the degree of urbanisation, there are significant differences in AROPE rates across regions. In Central Transdanubia, the AROPE rate was at 11.6%, and 29.9% in northern Hungary in 2024. The AROPE rate also increased among persons with disabilities (by 2.4 pps to 32.4%, vs 28.8% in the EU), and is 18 pps higher than for persons without disabilities. This is linked to lower employment and high disability employment gap in Hungary (see Annex 10). Roma people were over three times more likely to be AROPE

([214]) HU expresses its national poverty reduction target as a reduction in the material and social deprivation rate for families with children (to 13% by 2030) that can be translated into a reduction by 292 000 of people at risk of poverty or social exclusion by 2030.

than non-Roma people in 2023 (61.7% vs 18.7%) ([215]). , Households with three or more children (28.1.1%) and single households (over 30%), especially single parents, older people on their own and single female households were also much more affected by poverty or social exclusion in 2024. To tackle social exclusion and deprivation, in 2024, Hungary amended its National Social Inclusion Strategy 2021-2030, mainly aiming to prevent and combat segregation. The strategy's action plan for 2021-2024 (extended until June 2025) is complemented with actions to map segregated neighbourhoods and monitor the supply of social housing. A new strategy action for 2025-2027 is under preparation. The new actions and monitoring framework can help improve transparency and the effectiveness of the actions.

Educational attainment and employment status play an important role in determining poverty risks. The AROPE rate among the low-skilled increased by 4.6 pps, to 45.6% in 2023 and by further 0.9pps to 16.5% in 2024, which were above the EU average , the highest rates since 2017. This was driven by increased monetary poverty (31.6%). Adults with a low-level of education also faced above the EU average in-work poverty (2439% vs 17.4% in the EU) in 2024, in contrast with a below average rate and a minor decline among those with at least secondary education attainment. People not employed ([216]) (18-64 age group) were three times (27.1%), and those unemployed seven times (47.1%) more likely than the employed (6.5%) to face poverty risks.

The risk of poverty or social exclusion among children after a sharp increase returned to slightly below EU average in 2024. Between 202**3** and 2024 the AROPE rate for children **f**ell back by 3.3 pps to 21.1%, which is below the EU average (24.2%). The AROPE rate of children whose parents have low educational attainment decreased by 7.5 pps in 2024 to reach 67.9%%, and remained above EU average (61.2%). Hungary has not set a complementary child poverty reduction target. To mitigate the impact of child poverty, Hungary is implementing the European Child Guarantee (ECG) under its action plan of May 2023. The 2024 progress report shows progress in some areas, including improving affordability of transport and free eye screening in disadvantaged neighbourhoods. More effort to ensure better access of children AROPE to quality early childhood education and care would be beneficial for children's early development and their parents' access to the labour market. The implementation of the ECG is supported by EU cohesion policy funds and the Recovery and Resilience Facility. This includes the creation of creches, material assistance to the most deprived children and their families, and educational, housing and social assistance services in the 300 most disadvantaged municipalities. The funding amounts to a total of EUR 413 million of RRF and social cohesion policy funding.

Income inequalities increased despite recent significant income growth. The real gross disposable household income (GDHI) per capita is at 161.0% of its 2008 level compared to 113.6% in the EU, highlighting the strong wage growth in recent years. However, the income of the richest 20% of the population was 4.3 times higher than that of the poorest 20% in 2023 (vs 4.7 in the EU), compared to 4.5 in 2023. This suggests that lower income quintiles benefited less from recent income growth than higher income quintiles. The income share of the lowest income decile fell below the EU average in 2023 and remained below in 2024, at 3.0%. In recent years, taxes and social benefits lowered income equality to a much lower extent in Hungary than in most EU countries (34% vs 49% in the EU in 2024). According to national data in 2024, the gross average social income per person in the lowest income quintile was HUF 421 000, while it was HUF 1 269 million for the top income quintile.

([215])Helyzetkép | 2023

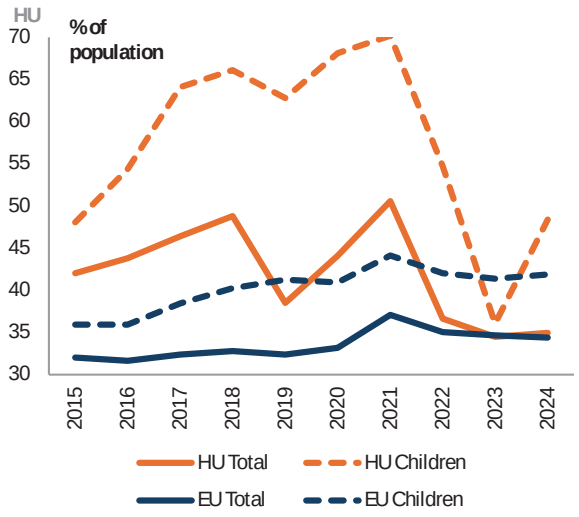
([216]) Not employed: unemployed, retired and other inactive.

Some of the key factors influencing inequalities are a weak social benefit system, lacking targeted support measures to low-income households as well as barriers to enter the labour market for the most vulnerable (see Annex 10)**.** The very high inflation rate in 2022 and 2023, with persistently high food prices (even in 2024), notably affected and continues to affect low-income households, who spend a higher share of their budget on food than higher-income households. Other important drivers include the insufficient access to quality education, especially among socio-economically disadvantaged, families, including those at risk of poverty or social exclusion. There is scope for improving the effects of taxes and social transfers on reducing inequalities ([217]).

The adequacy of social protection further deteriorated. Social protection expenditure is among the lowest in the EU (12.3% vs 19.2% of GDP in 2023), especially for social assistance and unemployment benefits. In 2022, households on minimum income benefits had a net income of only 18.9% of the at-risk-of-poverty threshold and only 7.8% of the net income of a low-wage worker (vs respectively 55.6% and 46.1% in the EU). The adequacy of the minimum income is therefore one of the lowest in the EU (59%) and even continues to decrease, as the nominal value of the minimum income (HUF 28 500 or EUR 74 per month) has not changed since 2012, while consumer prices have increased by 75% since then. Similarly, the adequacy of the unemployment benefit is also one of the lowest in the EU (see Annex 10).

The limited capacity of the system to alleviate poverty risks points to further scope for increasing both the efficiency and effectiveness of social transfers. Following a steep decline from above EU average (50.6% vs 37.1%) in 2021 to 36.7% in 2022, the impact of social transfers (excluding pensions) on poverty reduction remained fairly stable at EU average (35.0% vs 34.4% in the EU) in 2024 after a further decrease in 2023). The impact of social transfers on reducing poverty among children fell from 70.2% in 2021 to 36.1% in 2023 (vs 43.1% in the EU) before recovering to 48.4% 2024. Social transfers are also less effective at alleviating poverty in the most disadvantaged regions, such as the northern Great Plain (30.2%). Linking the adequacy of minimum income schemes to the minimum wage or indexing it to inflation would help secure its adequacy and reduce Hungary's high SMSD rate.

Graph A11.2:**Impact of social transfers on poverty reduction (%)**



Source: Eurostat.

The social protection system also presents coverage gaps. Workers in non-standard forms of employment (including casual, seasonal workers, trainees and apprentices) are not covered by sickness and invalidity benefits. The self-employed and temporary contract workers are less likely to receive social benefits than their EU peers (7.9. and 18.0% vs EU 12.7% and 39.2%.) There is scope for further actions to strengthen access to social protection, in line

([217])Economic inequalities in the EU - Key trends and policies, p. 33 Publications catalogue - Employment, Social Affairs & Inclusion - European Commission.

with the related 2019 Council Recommendation ([218]).

House prices increased significantly over the last decade and continue to grow strongly. House prices have sharply risen by 160% since 2015. They rose by more than 20% in 2022 and by 7% in 2023 despite the higher interest rate environment. They have risen further in 2024 (+13% year-on-year in 2024-Q3). Mortgage rates increased from 4.2% in 2021 to 9.8% in 2023. The adjustment to higher interest rates has reduced housing transactions and building activity. The number of housing transactions reduced 9.9% and 27.0% in 2022 and 2023, respectively while building permits fell sharply by nearly 40% in 2023, which may suggest a lower supply in the future and subsequent risks of lingering price pressures. Despite the decline in transactions, mortgage credit increased in 2023, after some stagnation in 2022, driven by mortgage subsidy schemes and lower lending rates.

Overall the affordability of housing has deteriorated on the back of strong demand and limited supply House prices have grown faster than incomes over the past decade and the standardised house price-to-income ratio sharply rose from 2015 to 2022 before easing in 2023, still attaining 15% overall increase since 2015. The number of dwellings has increased by 4% since 2015 while population has decreased slightly. Hence, the ratio of dwellings per capita has increased by 6% since 2015 but it remains low compared to other EU countries. The ratio of house completions per capita has increased strongly since 2015 but also remains low in EU comparison. Recent developments suggest that the mismatch between supply and demand will remain. Generous housing policies focused on the demand side fuel house price increases in the context of constrained supply At the same time, taking into account the cost of mortgages, the borrowing capacity of households remained broadly stable over the past decade. While the rental market is rather small, the ratio of new rents to incomes increased over the last decade especially in the city centres. Rents also increased by 85%, and by 25% only between 2021 and 2023.

High housing costs negatively impact living standards. In 2024, 8.5%, (EU: 8.2%) of the population faced housing costs higher than 40% of their total disposable household income – a 0.2 pps increase from 2023. For people experiencing poverty risks, the housing-cost overburden rate rose sharply in recent years, driven by limited access to affordable housing, and at 33.5% remained above Eu average in 2024 (EU: 31.1%), . Sharply increased rent prices can partly explain the very high housing overburden rate among tenants with rent at market prices in 2024 (40.5%). Poor housing conditions are widespread among marginalised communities. Transport poverty in Hungary is widespread, particularly in rural regions where rail accessibility is low, public transport options are limited or non-existent, and one in four residents is at risk of social exclusion. There is no national policy targeting transport poverty, and structural measures remain limited. Rural mobility would benefit from expanding affordable, zero-emission bus and rail services, and enhancing multimodal connectivity.

Low-income households have limited access to the available housing support measures. In recent years, Hungary has provided generous financial support for families to buy, renovate and build homes, often on condition of committing to having children in the future. These measures mostly require own resources and are based on loans. Low-income households are rarely awarded such loans as they are considered high-risk clients by banks. Although EU funds have supported creating and renovating social housing units in recent years, the total number of social housing units in Hungary fell from 59 000 to 38 000 in 2023, or from 1.3% to 0.9% of the total housing

([218]) Council adopts recommendation on adequate minimum income - Employment, Social Affairs & Inclusion - European Commission

stock. The decline in the availability of social housing has come about as a result of the lack of government policy as well as a lack in incentives for municipalities to maintain their social housing stock. Municipalities also seem to have more opportunities to rent out their housing stock at market value. The RRF allocated financing to the building of 400 new and the refurbishing of 1 000 social housing units by 2026 in the 300 most disadvantaged municipalities. In addition, in 2024, the government announced measures to promote affordable housing. Only some elements of this plan have been presented, including narrowing the conditions of an ongoing large-scale incentive for home ownership of young families (age limitation). A new programme of HUF 20-30 billion for the construction of rental housing and student housing have also been announced, but its allocation is limited compared to the 2025 budget of HUF 300-400 billion for non-means-tested support for home ownership, and its details are still to be presented.

Energy poverty and environmental inequalities pose challenges to the fair green transition. The percentage of the population unable to keep their home sufficiently warm fell sharply from 15% in 2012 to 4.7% in 2022, due to a cap on gas and electricity prices since 2013. However, after the partial removal of the cap mid-2022, energy poverty surged by more than 50% to 7.2% in 2023 (though remaining below EU average of 10.6%) but decreased to 6.1% in 2024. For people at-risk-of-poverty or social exclusion, however the share of the population unable to keep their home sufficiently warm is 16.8% in 2024. A two-band pricing was introduced for residential consumers and the price caps remained up to the level of average consumption (and up to a higher level for natural gas for large families). Gas prices increased by 62% and firewood prices by 90% between 2021 and 2023, then slightly decreased in 2024. The carbon footprint inequality between the wealthiest and the poorest 20% of the population is one of the highest in the EU (2.3 vs 1.9).

The root causes of energy poverty among the poorest households are yet to be addressed. Hungary has adopted a range of measures, including a focus on energy efficiency and support for renewable energy projects. Notable initiatives in the Hungarian RRP include support for the installation of residential solar panels, heating modernisation, and financial assistance for vulnerable households. Hungary is also focusing on improving energy efficiency in disadvantaged areas, with a particular emphasis on rural and eastern regions. However, structural measures aimed at addressing the root causes of energy poverty remain limited. Currently, national policies of regulated energy prices and consumer protection schemes continue, though Hungary would benefit from more comprehensive and targeted measures to address energy efficiency and social inclusion at a broader scale.

Hungary's competitiveness is limited by early school leaving, low levels of basic skills and educational attainment, and skills shortages. Challenges in providing quality education combined with strong inequalities in education leave one in two disadvantaged pupils with low basic skills, often resulting in fewer upskilling opportunities and employment prospects later in life. Moreover, the high number of early leavers from education and training and the relatively low number of higher education graduates does not meet employers' demand for highly skilled workers. The low share of science, technology, engineering and mathematics (STEM) graduates further exacerbates skills shortages and hinders Hungary's potential for research and innovation, productivity growth and competitiveness. The above average participation of adults in training might be an important window of opportunity to reskill and upskill the working age population for better employability. Vulnerable groups, however, deserve special attention.

Participation of children as of age 3 in early childhood education and care (ECEC) is in line with the EU average, but lowering staff qualification requirements impacts service quality for building the foundations for basic skills. From the age of three, 92.6% of children participate in ECEC (vs 93.3% in the EU). Regional coverage of kindergartens remains uneven: in 2022, 31% of municipalities had no kindergarten ([219]). In 2020, the government changed the employment conditions in kindergartens, reducing the required number of qualified teaching staff. In January 2024, qualification requirements were eased further, allowing secondary vocational education and training (VET) graduates in kindergarten education to work as ECEC teachers, which was previously only possible with a higher education diploma.

There are large inequalities in educational outcomes, leaving significant parts of the population behind. More than half of students from the bottom quarter of the socio-economic distribution underachieve in mathematics (54.9% vs 48.0% in the EU). Inequalities are rooted in the way the education system is organised: of all students in the EU, disadvantaged students in Hungary most often attend separate schools from their advantaged peers. The concentration of disadvantaged students in certain schools and insufficient support for low-achieving students also lead to a high level of separation based on performance. Of all students in the EU, low-achieving students in Hungary are the second most separated from their high-achieving peers. Performance-based selection starts at age 10, when best-achieving students can apply to eight-year general secondary schools.

Teacher shortages are a pressing concern. In 2018, one third of schools participating in the OECD Programme for International Student Assessment (PISA) had reported a shortage of qualified teachers, but this rose to more than 40% by 2022. The biggest teacher shortages in Hungary are in rural areas, and the proportion of unqualified teachers at schools with a disadvantaged profile is two to three times higher than at schools with a normal profile ([220]). A growing number of students in initial teacher education are admitted with relatively low application scores. In a recent survey, teachers cited low wages, high workload, a lack of professional autonomy, the composition of the curriculum, and administrative burden as the biggest problems in their work ([221]). There is no system to forecast teacher supply and demand, which could support planning. The teaching

([219]) Varga, J. (ed): A közoktatás indikátorrendszere 2023.

([220]) Varga, J. (ed): A közoktatás indikátorrendszere 2023.

([221]) Társadalomtudományi Kutatóközpont Politikatudományi Intézete: Pedagóguskutatás 2023 - Gyorsjelentés. Társadalomtudományi Kutatóközpont Politikatudományi Intézete: Pedagóguskutatás 2023 - Gyorsjelentés.

workforce is also ageing: in 2021, 29.5% of teachers were aged 55 or older (EU: 24.5%).

Further efforts are needed to build a highly skilled teaching workforce that can improve young people's skills. Hungary started implementing a major reform of teachers' salaries in 2024, co-financed by the European Social Fund Plus (ESF+), as part of a programme to make the teaching profession more attractive. In 2022, the actual salaries of lower secondary teachers were equivalent to just 57% of other tertiary graduates' salaries ([222]). The aim of the reform is to increase this percentage to at least 80% by January 2025 and to keep it at this level until at least December 2030. As a first step, a 32% average increase was implemented in January 2024, followed by a 21% increase in January 2025. In addition, teachers working in disadvantaged municipalities or schools with a high share of disadvantaged pupils and applying inclusive methods receive a 20% salary top-up. Novice teachers have seen their salaries rise even faster, with increases at least 10 percentage points (pps) higher between 2023 and 2025.

Early school leaving and a lack of basic skills among young people are the main barriers to skills development later in life. 4.1% of 14-year-olds and 3.4% of 15-year-olds were out of school in 2023, well above the EU averages of 1.7% and 2.6%, respectively. Early school leaving decreased for two consecutive years, in 2023 and 2024, and stands now at 10.3%, still above the EU average of 9.3%. The rate is higher in villages (16.9%), in the least-developed regions (+3.1pps up to 21.6% in Northern Hungary), for persons with disabilities (at 41.2% one of the highest in the EU) in 2024, and among Roma (58.7%; non-Roma: 9.3% in 2023) ([223]). Despite the persisting challenge and extensive data on student performance collected through national competency tests and the school drop-out early warning system, there are no effective large-scale programmes in place to support low-performing primary and secondary schools to reduce the number of school dropouts or to improve education outcomes. In addition, the low level of basic skills of 15-year-olds remains a cause for concern ([224]). In PISA 2022, around one third of Hungarian students underperformed in mathematics and one quarter in reading and science.

Since 2012, the share of top performers has not changed significantly, limiting the pool of innovative talent. Despite being below the EU average in the previous PISA rounds, the country's proportion of top-achieving students is now on par with the EU average in mathematics, and slightly below average in science and reading. However, this is only because the EU average gradually decreased in all three domains while Hungary's performance remained stable.

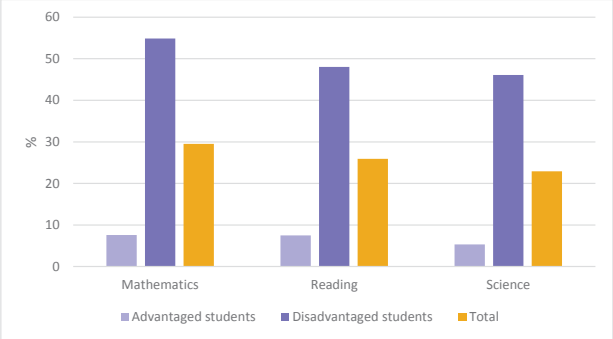
The lack of excellence at school level is a key driver behind low participation in STEM fields in higher education and remains a key barrier to boosting competitiveness and the economy's innovation capacity. Among pupils in the eighth grade, 37% were low achievers in computer and information literacy – below the EU average of 43% but far above the EU target of less than 15%. This may be linked to challenges stemming from curricula, teachers' digital skills and the digital education infrastructure. The recovery and resilience facility and cohesion policy programmes are funding digital equipment for pupils and aim to improve teachers' digital skills and pedagogical skills in a digital environment through specialised training.

([222]) OECD: Teachers' and school heads' actual salaries relative to earnings of tertiary-educated workers, by age group and by gender.

([223]) Government of Hungary: Hungarian National Social Inclusion Strategy 2030. 2024 data.

([224]) Compared to 2012, the shares of low achievers increased to 29.5% in mathematics (EU: 29.5%), 25.9% in reading (EU: 26.2%) and 22.9% in science (EU: 24.2%).

Graph A12.1:**Underachievement in mathematics, reading and science by students' socio-economic background (%)**



Source: PISA 2022

VET participation is increasing, but barriers to progression to higher educational levels put three-year VET students in a particularly disadvantaged position. In line with the government's intention to promote VET, participation in upper secondary VET has increased in recent years, with about 50.9% of pupils in secondary VET programmes in 2023 (3 pps down from 2022). This is due to: (i) higher enrolment rates among young people in five-year VET courses, which lead to an upper secondary school leaving certificate giving access to higher education; and (ii) the possibility of obtaining a second VET qualification free of charge, which attracts more adults to VET (over a quarter of all VET students studied in adult-learning status in 2023/2024). About a quarter of all VET pupils (25,1%) in medium-level VET are enrolled in STEM fields in Hungary in 2022 (36,2% EU wide). Though decreasing in number, almost 25% of VET students (and 13% of all upper secondary full-time students) were enrolled in three-year VET programmes, which do not give direct access to any further formal full-time studies.

Average performance in basic skills tends to be weaker among VET students, which creates challenges for the labour market. In PISA 2022, Hungarian students had one of the largest gaps in average mathematics performance between general and vocational programmes, largely due to differences in the socio-economic composition of schools. Despite low educational outcomes, the employment rate of recent VET graduates aged 20-34 at 84.2% was above the EU average in 2023, pointing to a tight labour market. Increasing the taught time dedicated to basic skills and continuing mentoring and additional pedagogical support to low-achievers, co-funded from ESF+, could help Hungary tackle the challenge of low achievement in VET.

The declining number of higher education graduates is driving skill shortages. Despite a growing demand for higher education graduates, in 2024 only 32.3% of Hungarians aged 25-34 had a tertiary education degree (vs 44.2% in the EU). The employment rate of recent tertiary graduates (94.7%) exceeds the EU average (87.7%), indicating high demand.

The low educational attainment rate is compounded by low intergenerational educational mobility ([225]). Hungary has the fourth-lowest share of first-generation graduates among OECD countries, according to data recorded between 2011 and 2018. Children of parents with no higher education qualifications are less likely to obtain a tertiary degree than those whose parents have a degree (with a 27-percentage point gap in tertiary degree attainment compared to their peers from more educated families). Less than 1% of Roma aged 15-24-year-olds were enrolled in higher education in 2023 ([226]). Data show a high correlation between total net earnings and the share of graduates. The share of graduates explains the 61% earnings gap between municipalities ([227]). Therefore, improving equity in educational participation could promote social mobility and increase earning levels.

([225]) Első generációs diplomások Magyarországon. In: Szabó-Morvai, Á. & Pető, R. (Eds.). Munkaerőpiaci Tükör 2022. Társadalmi egyenlőtlenség és mobilitás.
([226]) Government of Hungary: Hungarian National Social Inclusion Strategy 2030. 2024 data.
([227]) Gazdaságkutató Zrt.: A települési jövedelmek közötti különbségek főleg a diplomások eltérő arányára vezethetők vissza

The number of higher education graduates in STEM remains low, despite policy efforts. Graduate tracking data show high employment rates among STEM graduates, particularly from ICT and engineering programmes, and they also earn significantly more than graduates from other fields ([228]). Hungary implemented several measures to increase participation in STEM priority areas. However, in 2022, only 24.1% of all tertiary students were enrolled in STEM subjects (vs 27.1% in the EU). However, the share of students enrolled in ICT subjects (8.3%) was well above the EU average (5.2%). The share of female students enrolled in ICT was low, at 15.3% (vs 20.2% in the EU). In school education, the low number of teaching hours in science and a shortage of science teachers ([229]) contribute to students not pursuing studies in STEM-related fields.

Some sectors are affected by lingering skills shortages. Hungarian small and medium-sized enterprises (SMEs) claimed that skills shortages hampered their general business activities more than their EU counterparts did. A lack of digital skills prevented the effective use of digital technology in business and lacking skills was also a barrier to a more environmentally friendly way of working ([230]). Job vacancy rates have been decreasing and are now below the EU average (2.1% vs 2.4% in the EU in 2024). While this is partly related to the economic slowdown, the share of unfilled jobs is high in some sectors, such as health and social work, administrative and support services and public administration. Hungary has been developing skills forecasting tools, but they are not linked together or coordinated, the set of data published is limited, and the involvement of social partners in its management could be improved.

([228]) https://www.diplomantul.hu/adminisztrativ-adatbazisok-egyesitese.
([229]) Varga, J. (ed): A közoktatás indikátorrendszere 2023.
([230]) Eurobarometer survey 2023: Skills_shortages_recruitment_retention_trategies_in_SMEs_fl_529_factsheet_HU_hu.pdf.

Low basic skills among adults and persistent inequalities present serious challenges to competitiveness. The 2022 Programme for the International Assessment of Adult Competencies survey, which measures adult performance in literacy, numeracy and problem solving, showed Hungarian adults performing below the EU average in all domains. The 16-24 age group who are still enrolled in initial education or have recently completed it scored significantly below average, signalling potential issues in the quality of education. Almost one in four adults are low achievers both in numeracy and literacy (24.1% compared to 21.8% in the EU), and the impact of the family's educational background remains significant in adulthood. Educational attainment also significantly influences labour market outcomes and wages.

Graph A12.2:**Adult learning participation and digital skills of some vulnerable groups**

Source: Eurostat; Adult Education Survey 2022 (excluding guided on-the-job training).

The adult population's digital skills are above the EU average, but some vulnerable groups lag behind. In 2023, 58.9% of the population had at least a basic level of digital skills, a sharp rise from 49.1% in 2021 and surpassing the EU average of 55.6%. Those most vulnerable in the labour market – namely those outside the labour force, adults with lower secondary education or less, and unemployed people – still lag behind the average (29.4%, 33.4% and 44.1%, respectively). Those working in agriculture, forestry and

fishery as well as manual workers also perform well below the national average (41.4% and 45.5% respectively). Looking at high levels of digital skills, the share of ICT graduates was above the EU average in Hungary, including among women (6.8% and 1.2% vs 4.5% and 1.0% in the EU). However, the low share of ICT specialists in employment (4.2% vs 4.8% in the EU in 2023), with one of the lowest shares of female IT specialists, suggests that the Hungarian labour market is not able to keep its highly specialised IT experts.

The high energy intensity of the Hungarian economy will require substantial investment in reskilling and upskilling to ensure a fair green transition. In 2024, labour shortages were reported in Hungary for several occupations requiring specific skills related to the green transition, including refuse sorters, insulation workers and mixed crop growers ([231]). The share of employees who participated in education and training in energy intensive industries slightly increased, from 6.3% in 2022 to 8.4% in 2024, but was still below the EU average of 11.7%. Nevertheless, many Hungarians consider that their skills enable them to contribute to the green transition (66% vs 54% in the EU) ([232]).

Maintaining a high adult participation rate in learning could be an opportunity to increase the competitiveness of Hungary's workforce, but vulnerable groups need targeted support. In 2022, Hungary was among the best performers in the EU (39.5%) in adult participation in learning, with 62.2% of adults participating in learning in the previous 12 months. This is higher than the national target of 60% by 2030. Adults with a low level of educational attainment, unemployed people, and people outside the labour force participate less in learning (42.1%, 20.7% and 18.6%, respectively). A regulation on short courses leading to micro-credentials and their certification was published at the end of 2024 to address skills shortages, and the piloting of individual learning accounts between 2025 and 2027 has been announced. The law on adult training and its implementing decree sets out the main features of a new adult learning fund (to be operational as from 2027), which should finance policy development, labour market forecasting and large-scale training. Details on how individuals, especially the most vulnerable, can benefit from the fund as well as the source of funding are not yet available.

([231]) Source: European Labour Authority, *EURES Report on labour shortages and surpluses 2024*, 2025, based on data from EURES National Coordination Offices. Skills and knowledge requirements align with the ESCO taxonomy on skills for the green transition, with examples analysed using the ESCO green intensity index.
([232]) Eurobarometer - 97.4.

Table A13.1: **Social Scoreboard for Hungary**

Social Scoreboard for Hungary		
Equal opportunities and access to the labour market	Adult participation in learning (during the last 12 months, excl. guided on the job training, % of the population aged 25-64, 2022)	62,2
	Early leavers from education and training (% of the population aged 18-24, 2024)	10,3
	Share of individuals who have basic or above basic overall digital skills (% of the population aged 16-74, 2023)	58,9
	Young people not in employment, education or training (% of the population aged 15-29, 2024)	10,9
	Gender employment gap (percentage points, population aged 20-64, 2024)	7,9
	Income quintile ratio (S80/S20, 2024)	4,26
Dynamic labour markets and fair working conditions	Employment rate (% of the population aged 20-64, 2024)	81,1
	Unemployment rate (% of the active population aged 15-74, 2024)	4,5
	Long term unemployment (% of the active population aged 15-74, 2024)	1,5
	Gross disposable household income (GDHI) per capita growth (index, 2008=100, 2023)	161,0
Social protection and inclusion	At risk of poverty or social exclusion (AROPE) rate (% of the total population, 2024)	20,2
	At risk of poverty or social exclusion (AROPE) rate for children (% of the population aged 0-17, 2024)	21,1
	Impact of social transfers (other than pensions) on poverty reduction (% reduction of AROP, 2024)	35,0
	Disability employment gap (percentage points, population aged 20-64, 2024)	27,2
	Housing cost overburden (% of the total population, 2024)	8,5
	Children aged less than 3 years in formal childcare (% of the under 3-years-old population, 2024)	16,5
	Self-reported unmet need for medical care (% of the population aged 16+, 2024)	1,0

Critical situation	To watch	Weak but improving	Good but to monitor	On average	Better than average	Best performers

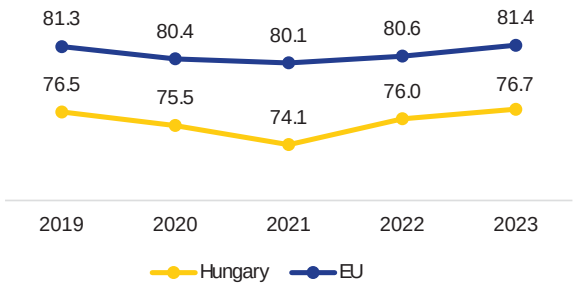
(1) Update of 5 May 2025. Members States are categorised based on the Social Scoreboard according to a methodology agreed with the EMCO and SPC Committees. Please consult the Annex of the Joint Employment Report 2025 for details on the methodology (https://employment-social-affairs.ec.europa.eu/joint-employment-report-2025-0).

Source: Eurostat

Hungary's health system faces significant challenges. These need to be addressed if the country is to improve the health of its population and social fairness, while boosting the competitiveness of the economy. These challenges include low life expectancy, linked to high treatable and preventable mortality, and geographical disparities in the accessibility of healthcare. Both issues are associated with suboptimal cost-effectiveness and funding of the health system, an insufficient focus on disease prevention and outpatient care, and shortages of healthcare workers.

Life expectancy at birth in Hungary rebounded above its pre-COVID-19 level but was still among the lowest in the EU in 2023. Women are expected to live 6.5 years longer than men. That said, they can only expect to live around 2.6 years longer than men in good health. Mortality rates due to preventable and treatable causes are among the highest in the EU, suggesting shortcomings in the effectiveness of the health system (see Annex 15).

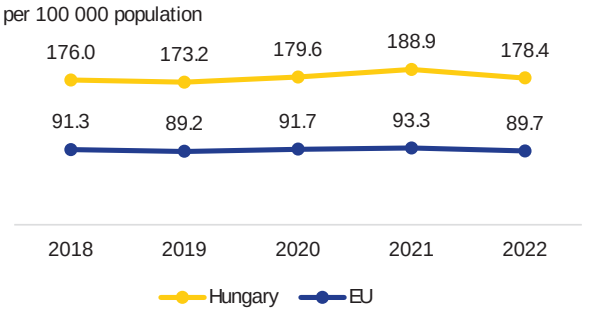
Graph A14.1:**Life expectancy at birth, years**



Source: Eurostat (demo_mlexpec)

Shortcomings in the effectiveness of the health system also negatively impact Hungary's workforce, productivity and competitiveness. In Hungary, mortality at working age as a proportion of total mortality is significantly higher than the EU average, exacerbating the effects of population ageing on a shrinking labour force. The rate of potential productive life years lost due to non-communicable diseases such as cancer and diseases of the circulatory system ('cardiovascular diseases') is high compared to the rest of the EU ([233]). Hungary participates in several joint actions funded by EU4Health aimed at reducing the burden of cardiovascular diseases, cancer, diabetes and respiratory diseases. Between 2022 and 2040, Hungary's working age population is forecast to shrink by 0.4% every year as a result of lower birth rates (EU-level projection: 0.3%).

Graph A14.2:**Treatable mortality**



Age-standardised death rate **(mortality that could be avoided through optimal quality healthcare)**
Source: Eurostat (hlth_cd_apr)

Hungary's health system is strongly hospital centred. In 2022, health spending per inhabitant was one of the lowest in the EU, with the largest share going to hospital care (around 34% of total health expenditure). This, together with a high number of hospital beds (590 per 100 000 population in 2022, much higher than the EU average), illustrates Hungary's strongly hospital-centred care model. Over-reliance on hospitals within a health system can hamper healthcare accessibility, suggesting opportunities for optimising the cost-effective allocation of resources. Out-of-pocket payments account for a greater proportion of spending on health in Hungary than the EU average ([234]). More than half of all out-of-pocket payments are for outpatient pharmaceuticals. Historically, the health system

([233]) Update to 2022 data of analysis presented by Health at a Glance: Europe 2016 - © OECD 2016.

([234]) OECD/European Commission (2024), Health at a Glance: Europe 2024: State of Health in the EU Cycle, pp. 186-187.

Table A14.1: **Key health indicators**

	2019	2020	2021	2022	2023	EU average* (latest year)
Cancer mortality per 100 000 population	327.7	320.9	309.9	312.2	n.a.	234.7 (2022)
Mortality due to circulatory diseases per 100 000 population	714.8	731.4	722.8	732.1	n.a.	336.4 (2022)
Current expenditure on health, purchasing power standards, per capita	1 483	1 689	1 866	1 867	n.a.	3 684.6 (2022)
Public share of health expenditure, % of current health expenditure	68.7	70.8	72.5	72.6	71.5	81.3 (2022)
Spending on prevention, % of current health expenditure	3.2	3.7	7.6	2.9	n.a.	5.5 (2022)
Available hospital beds per 100 000 population**	606	601	601	590	n.a.	444 (2022)
Doctors per 1 000 population*	3.5	3.1	3.3	3.5	n.a.	4.2 (2022)*
Nurses per 1 000 population*	4.2	4.2	4.3	4.4	n.a.	7.6 (2022)*
Mortality at working age (20-64 years), % of total mortality	21.1	19.9	21.0	19.1	18.6	14.3 (2023)
Number of patents (pharma / biotech / medical technology)	12	25	5	8	8	29 (2023)***
Total consumption of antibacterials for systemic use, daily defined dose per 1 000 inhabitants****	14.4	11.2	11.9	14.4	14.2	20.0 (2023)

*The EU average is weighted for all indicators except for doctors and nurses per 1 000 population, for which the EU simple average is used based on 2022 (or latest 2021) data except for Luxembourg (2017). Doctors' density data refer to practising doctors in all countries except Greece, Portugal (licensed to practise) and Slovakia (professionally active). Density of nurses: data refer to practising nurses (EU recognised qualification) in most countries except France and Slovakia (professionally active) and Greece (hospital only). **'Available hospital beds' covers somatic care, not psychiatric care. ***The EU median is used for patents.

Source: Eurostat database; European Patent Office; ****European Centre for Disease Prevention and Control (ECDC) for 2023.

in Hungary has been underfunded: both capital spending annually 0.2% of GDP (EU average: 0.5% average 2016-2022) and public share of spending on healthcare (72.6%) are among the lowest in the EU (EU average: 81.3%). This is reflected in the low availability of key diagnostic technology: Hungary has among the fewest medical imaging devices per capita in the EU. Under the Hungarian recovery and resilience plan (RRP), around EUR 1.3 billion is planned for health reforms and supporting investments. In addition to the RRP, significant funding for healthcare (EUR 154 million) is planned under the EU cohesion policy funds in 2021-2027. These funds aim to strengthen and modernise inpatient care and its infrastructure, bolstering the provision of services by the hospital network, and strengthening the integration of primary and preventive care by setting up group practices of general practitioners.

Hungary places insufficient focus on disease prevention. Spending on prevention in Hungary is low. In 2022, it accounted for 2.9% of total spending on health, much lower than the EU average of 5.5%. Cardiovascular diseases and cancer remain the leading causes of death, with mortality rates among the highest in the EU. In 2022, breast cancer, cervical cancer and colorectal cancer screening rates were below 30% ([235]). Suicide rates have decreased over time in Hungary but are still among the highest in the EU. Long waiting lists have been reported, delaying access to mental health services and other types of care. Behavioural risk factors are a key driver of mortality in Hungary. Alcohol consumption is above the EU average, smoking rates among the highest in the EU, and consumption of fruit and vegetables, and levels of physical activity outside working time among the lowest in the EU ([236]). A public health policy strategy for the period 2023-2033 has been adopted setting key objectives and tasks.

Persistent shortages of health professionals limit the provision of healthcare. For several years, the density of doctors in Hungary (3.5 per 1 000 population in 2021) has been below the EU average of 4.2 per 1 000. Hungary has one of the lowest shares of general practitioners in the EU (12% vs an EU average of 21%). Moreover, the uneven geographical distribution of doctors is a major barrier to access to care in peripheral regions (see Annex 17). The Hungarian government has incentivised doctors to work in the public

([235]) Health at a Glance: Europe 2024, pp. 162.
([236]) Health at a Glance: Europe 2024, Chapter 4.

sector, granting them a 120% salary increase over three years (2021-2023) ([237]). It also banned Informal payments.

Hungary had only 4.4 practising nurses per 1 000 population in 2022, one of the lowest rates in the EU (EU average: 7.6 per 1 000 population), posing a significant challenge to the health system and more broadly, the care system (see Annexes 10 and 12) ([238]). Hungary has among the EU's lowest shares of nurses aged between 25 and 34 and the highest shares of nurses aged between 45 and 54, raising concerns about the long-term accessibility of health services. The Hungarian government has substantially improved the remuneration of nurses in recent years to increase attractiveness and retention in the profession. It announced further remuneration increases in 2024 - 20% in nominal terms. The aim is to have the average basic salary of nurses reach 37% of the average basic salary of doctors ([239]). Nevertheless, between 2020 (Q1) and 2024 (Q3) employment in healthcare services dropped by 3.4% (compared to an EU-level increase of 11.4%). Hungary participates in the HEROES joint action ([240]) under EU4Health, through which EU countries share knowledge and experience on health workforce planning.

The Hungarian health system's potential to drive innovation and foster industrial development in the EU medical sector is not being fully exploited. Hungary is among the EU countries that report the lowest public spending on health research and development. This is reflected in the low number of European patents generated: eight in 2023 in the combined areas of pharmaceuticals, biotechnologies and medical devices (vs an EU-level median of 29) ([241]). A moderate amount of clinical trials are held in Hungary ([242]).

Hungary aims to scale up the digitalisation of its health system, **with support from EU programmes.** The shares of people accessing their personal health records online and of people using online health services (excluding phone) instead of in-person consultations increased in 2024 compared to 2020, yet there is still room for further deployment (see Annex 6). Moreover, major differences in patient use have been observed depending on their socio-economic background. Significant planned investments under the RRP aim to boost the digital transformation of the healthcare sector in Hungary. Measures focus on: (i) the development of information technology infrastructure in healthcare institutions; (ii) the development of telemedicine solutions; (iii) the rollout of enhanced mobile health applications; and (iv) a remote health monitoring system for older people. Hungary participates in several EU4Health-funded projects which facilitate the implementation of the European Health Data Space and strengthen digital infrastructure in Hungary ([243]).

([237]) Health at a Glance: Europe 2024, pp. 190-191.

([238]) Under the newly adopted Eurostat definition of nurses (in line with Directive 2005/36/EC on the recognition of professional qualifications) nurse density numbers are significantly lower than those arrived at when using a broader definition, for example that used for OECD health statistics.

([239]) Health at a Glance: Europe 2024, pp. 196-197.

([240]) JA HEROES | Health workforce planning project.

([241]) European Patent Office, Data to download | epo.org.

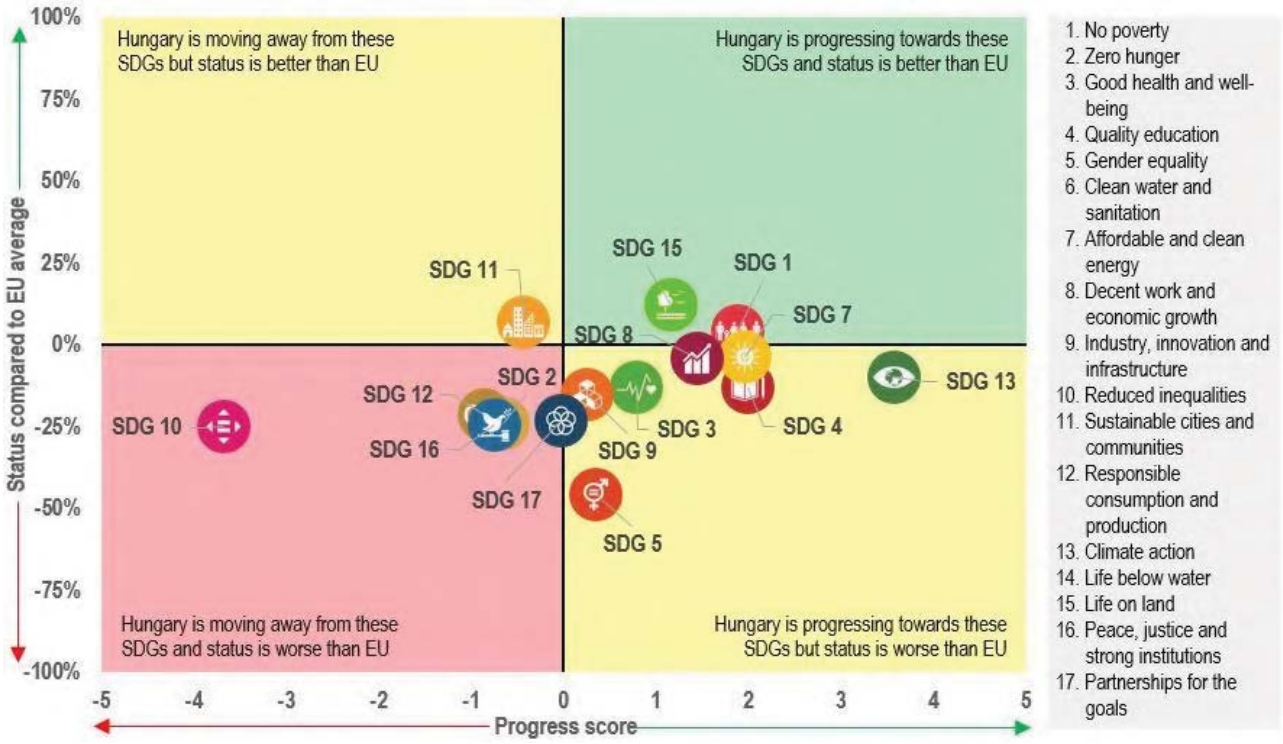
([242]) EMA (2024), Monitoring the European clinical trials environment, p. 9.

([243]) DQ4HDAB - Enhancing Data Quality for Use by the Health Data Access Body, Xt-EHR - Extended EHR@EU Data Space for Primary Use, EHDS2 Pilot - Pilot for a European Health Data Space on secondary use of health data, TEHDAS2 - Second Joint Action Towards the European Health Data Space

This Annex assesses Hungary's progress on the Sustainable Development Goals (SDGs) along the dimensions of competitiveness, sustainability, social fairness and macroeconomic stability. The 17 SDGs and their related indicators provide a policy framework under the UN's 2030 Agenda for Sustainable Development. The aim is to end all forms of poverty, fight inequalities and tackle climate change and the environmental crisis, while ensuring that no one is left behind. The EU and its Member States are committed to this historic global framework agreement and to playing an active role in maximising progress on the SDGs. The graph below is based on the EU SDG indicator set developed to monitor progress on the SDGs in the EU.

In relation SDGs on *competitiveness*, Hungary is improving but needs to catch up with the EU average on all of them (SDGs 4, 8 and 9). The country is achieving mixed results on industry, innovation and infrastructure (SDG 9), performing well on sustainable infrastructure but being outperformed on R&D indicators, in particular on patent applications to the European Patent Office (29 per million inhabitants in 2024; EU average: 156) and expenditure on R&D (1.38% of GDP in 2023; EU average: 2.24%). Its investment share of GDP (SDG 8; 25.6% in 2023) continues to be above the EU average (21.7%). With the exception of the gender gap, Hungary outperforms the EU average on all employment indicators (SDG 8), but on decent work indicators, it could do better on fatal accidents at work (1.70 out of every 100 000 workers in 2022). The recovery and resilience

Graph A15.1:**Progress towards the SDGs in Hungary**



For detailed datasets on the various SDGs, see the annual Eurostat report 'Sustainable development in the European Union'; for details on extensive country-specific data on the short-term progress of Member States: Key findings – Sustainable development indicators - Eurostat (europa.eu). A high status does not mean that a country is close to reaching a specific SDG, but signals that it is doing better than the EU on average. The progress score is an absolute measure based on the indicator trends over the past five years. The calculation does not take into account any target values, as most EU policy targets are only valid for the aggregate EU level. Depending on data availability for each goal, not all 17 SDGs are shown for each country.

Source: Eurostat, latest update of 28 April 2025. Data refer mainly to the period 2018-2023 or 2019-2024. Data on SDGs may vary across the report and its annexes due to different cut-off dates.

plan (RRP) includes measures supporting the development of research and development cooperation and boosting digitalisation in education, public administration, and the health, transport and energy sectors.

While Hungary is improving (SDGs 7, 9, 13 and 15) or is performing well (SDGs 15 and 11) on some SDGs related to *sustainability*, it is moving away from others (SDGs, 2, 11 and 12) and needs to catch up with the EU average (SDGs 2, 7, 9, 12 and 13). On SDG 12 (Responsible consumption and production), Hungary is moving further away from the EU average. There is room for improvement on the circular economy, where the circular material use rate is low (HU: 5.9%, EU: 11.8%; see also Annex 9) and has decreased from 6.9% in 2018. Other contributing factors are the small environmental goods and services sector, passenger car emissions (decreasing more slowly than the EU average) and low energy productivity. On a positive note, Hungary's net greenhouse gas emissions (SDG 13; 5.1 tonnes per capita in 2023) continue to be below the EU average (6.8 tonnes per capita). Moreover, the net greenhouse gas emissions from land use and forestry have decreased and remain below well the EU average. The RRP includes measures to facilitate the development of renewable energy and improve the sustainability of transport, water management and the circular economy.

On *social fairness,* Hungary needs to catch up with the EU average on all SDGs (SDGs 3, 4, 5, 7, 8 and 10) apart from SDG 1 where Hungary is only slightly above the EU average. While Hungary is moving away from SDG 10, Hungary is improving on several SDGs (SDGs 1, 3, 4, 5, 7 and 8) on fairness. While Hungary has made progress on most indicators related to SDG 1 (No poverty), Hungary is still below EU average on severe material, social and housing deprivation rate. On SDG 3 (Good health and well-being), Hungary needs to catch up, primarily by reducing the obesity rate and avoidable mortality. While the unadjusted gender pay gap (SDG 5) decreased, on average, to 12.0% of men's average gross hourly earnings in the EU as a whole, it widened by 3.6 percentage points to 17.8% in Hungary in the five years preceding 2023. Moreover, Hungary continues to lag far behind the EU average on indicators related to women in leadership positions (senior management positions and seats in the national parliament). The negative progress on SDG 10 (Reduced Inequalities) is mainly driven by the worsened inequalities within the country, as evidenced by the increase in the urban-rural gap for risk of poverty or social exclusion. The RRP supports social development in disadvantaged settlements and aims to improve higher and vocational education and modernise the health sector.

Hungary is improving only on SDG 8 and still needs to catch up with the EU average on all SDGs related to *macroeconomic stability* (SDGs 8, 16, 17). To catch up with the rest of the EU on SDG 16 (Peace, justice and strong institutions), Hungary has room for considerable improvement on general government total expenditure on law courts, as well as on the worsening perceived independence of the justice system and Corruption Perceptions Index. On SDG 17 (Partnerships for the goals), Hungary continues to be below the EU average for global partnership indicators. The RRP includes reforms to improve public finances, measures in areas related to the rule of law and the anti-corruption framework, and reforms to strengthen judicial independence.

As the SDGs form an overarching framework, any links to relevant SDGs are either explained or depicted with icons in the other annexes.

Hungary faces structural challenges in a wide range of policy areas, as identified in the country-specific recommendations (CSRs) addressed to the country as part of the European Semester. They refer, among other things, to the budgetary framework, long-term sustainability of the pension system, business environment, taxation, energy efficiency, renewable energy generation, fossil fuel subsidies, water resilience, education, skills, social policy, healthcare and housing.

The Commission has assessed the 2019-2024 CSRs considering the policy action taken by Hungary to date and the commitments in its recovery and resilience plan (RRP). At this stage, Hungary has made at least 'some progress' on 20% of the CSRs ([244]), and 'limited progress' on 65% (Table A16.2).

EU funding instruments provide considerable resources to Hungary by supporting investments and structural reforms to increase competitiveness, environmental sustainability and social fairness, while helping to address challenges identified in the CSRs. In addition to the EUR 6.5 billion grant and 3.9 billion loan funding from the Recovery and Resilience Facility (RRF) in 2021-2026, EU cohesion policy funds ([245]) have allocated EUR 21.7 billion ([246]) to Hungary (amounting to EUR 26.1 billion with national co-financing) for 2021-2027 ([247]) to boost regional competitiveness and growth. Support from these instruments combined represents around 16.25% of 2024 GDP ([248]). The contribution of these instruments to different policy objectives is outlined in Graphs A16.1 and A16.2. This substantial support comes on top of financing provided to Hungary under the 2014-2020 multiannual financial framework, which financed projects until 2023 and has had significant benefits for the economy and Hungarian society. Project selection under the 2021-2027 cohesion policy programmes has progressed, however significant volumes of investment are yet to be mobilised. Access to funding is limited by non-fulfilled enabling conditions and pending issues under the conditionality procedure. Solving these outstanding issues is key to the successful implementation of cohesion policy programmes in Hungary. Hungary has still not fulfilled the horizontal enabling condition on the Charter of Fundamental Rights in regard to academic freedom, LGBTI issues linked to the so-called child protection law and the treatment of asylum seekers. There are also three thematic enabling conditions which are not yet fulfilled, blocking payments to Hungary.

The Hungarian RRP contains 93 investments and 73 reforms to stimulate sustainable growth and address social and regional divides. A year before the end of the RRF timespan, no disbursements have taken place and no RRP milestones and targets have been confirmed as implemented ([249]). Progress is hindered, in particular, by the lack of effective mechanisms to protect the EU's financial

([244]) 2% of the 2019-2024 CSRs have been fully implemented, 2% substantially implemented, and some progress has been made on 16%.

([245]) In 2021-2027, cohesion policy funds include the European Regional Development Fund, the Cohesion Fund, the European Social Fund Plus and the Just Transition Fund. The information on cohesion policy included in this annex is based on adopted programmes with the cut-off date of 5 May 2025.

([246]) EU 21.7 billion is the initial EU allocation to Hungary, reflecting decisions adopted on 22 December 2022. This amount has been reduced by EUR 1.04 billion, corresponding to commitments suspended in 2022 that could not be entered in the EU general budget by the end of 2024. This was due to the application, in the absence of remedies taken by Hungary, of Article 2(1) of Council Implementing Decision (EU) 2022/2506 of 15 December 2022 and pursuant to Article 7(3) of Regulation (EU, Euratom) 2020/2092 on a general regime of conditionality for the protection of the Union budget. As of 1 January 2025, the total EU funding available to Hungary under cohesion policy 2021-2027 programmes is EUR 20.7 billion.

([247]) European territorial cooperation (ETC) programmes are excluded from the figure.

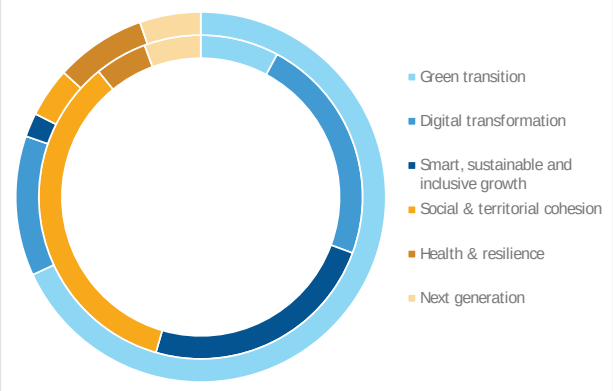
([248]) RRF funding includes both grants and loans, where applicable. GDP figures are based on Eurostat data for 2024.

([249]) As of mid-May 2025, Hungary has not yet submitted any payment requests.

interests, persistent problems related to the anti-corruption framework, weaknesses in control procedures, and competition in public procurement, and a lack of clarity in investment objectives, and uncertainty and delays in the implementation of investments. Hungary needs to urgently accelerate efforts to ensure completion of RRP measures by 31 August 2026.

Hungary also receives funding from several other EU instruments, including those listed in Table A16.1. Most notably, the common agricultural policy (CAP) provides Hungary with an EU contribution of EUR 8.5 billion under the CAP strategic plan 2023-2027 ([250]). Operations amounting to EUR 1.1 billion ([251]) have been signed under the InvestEU instrument backed by the EU guarantee, improving access to financing for riskier operations in Hungary.

Graph A16.1:**Distribution of RRF funding in Hungary by policy field**

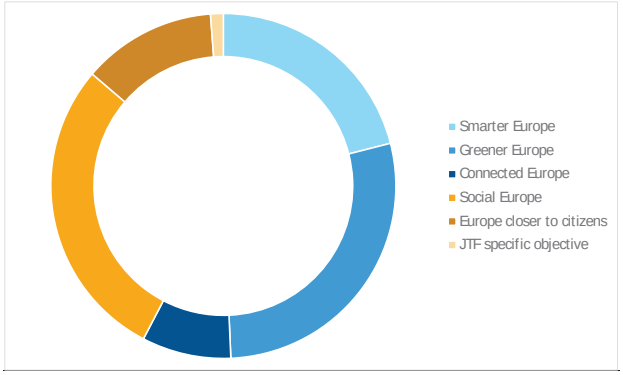


(1) Each RRP measure helps achieve the aims of two of the six policy pillars of the RRF. The primary contribution is shown in the outer circle, while the secondary contribution is shown in the inner circle. Each circle represents 100% of the RRF funds. Therefore, the total contribution to all pillars displayed on this chart amounts to 200% of the RRF funds allocated.
Source: European Commission

([250]) An overview of Hungary's formally approved strategy to implement the EU's common agricultural policy nationally can be found at: https://agriculture.ec.europa.eu/cap-my-country/cap-strategic-plans/hungary_en

([251])Data reflect the situation on 31.12.2024.

Graph A16.2:**Distribution of cohesion policy funding across policy objectives in Hungary**



Source: European Commission

Cohesion policy funds aim to increase the productivity and competitiveness of Hungarian firms and improve the business environment. The European Regional Development Fund (ERDF) is supporting investments in both productive assets and intangibles in 6 600 small and medium-sized enterprises (SMEs), generating EUR 560 million in private investment. Grants complement significant investment-loan programmes launched in 2024. The ERDF also supports innovation activities for up to 2 500 SMEs through calls published in 2024, including small-scale organisational and process innovation. Additionally, targeted calls and loan programmes are supporting the digital transformation of SMEs, including in advanced technologies, thereby improving their level of digital intensity. Around EUR 1 billion from the European Social Fund Plus (ESF+) supports access to the labour market, targeting those most in need and young people. This helps SMEs and individuals adapt through training, wage subsidies, workplace safety measures and health screening. Special focus is placed on developing skills for the green and digital transition. Implementation includes improving the quality of vocational education and training by reducing early school leaving, enhancing key competencies, modernising teacher development and promoting apprenticeships in new sectoral training centres.

Other funds are contributing to competitiveness in Hungary, for instance

through open calls. The Connecting Europe Facility has financed strategic investments for instance in enhancing connectivity, sustainability, and efficiency along the Trans-European Transport Network (TEN-T), rail infrastructure, and the development of alternative fuel infrastructure; infrastructure projects that allow for energy market integration, decarbonisation of the energy system and security of energy supply, and the diversification of natural gas sources and routes in Hungary; and advancing the deployment and take up of 5G in smart communities. Horizon Europe has supported research and innovation from scientific breakthroughs to scaling up innovations, with Climate, Energy and Mobility and Food, Bioeconomy Natural Resources, Agriculture and Environment as top priorities in Hungary. In 2024, the TSI provided support to accelerate climate adaptation measures in water management, to adapt its VAT digital reporting requirements, to operationalise the transfer strategies for banking resolution, to revise cost and finance parameters in hospital care, to introduce data asset management in the tax and custom administration, and to promote the mental health of youth in the field of online gambling and gaming.

Hungary's RRP also contains ambitious measures to improve the business environment and competitiveness. Measures are being implemented to strengthen the anti-corruption framework and judicial independence, reforms to improve competition in public procurement, as well as the quality and transparency of decision-making.

EU funds are playing a significant role in promoting environmental sustainability and green transition in Hungary during the current seven-year EU budget (multiannual financial framework). The ERDF will deliver transformative results by enhancing sustainability and environmental protection. Over 313 000 residents of Hungary will benefit from improved flood protection, while hundreds of thousands will gain access to better water supply and wastewater treatment. Additionally, the ERDF funding will help protect natural habitats and cut greenhouse gas emissions by over 0.5 million tonnes, demonstrating the significant impact of EU funding. Furthermore, the CAP strategic plan 2023-2027 is supporting water balance improvement on 1 million hectares of agricultural land. The plan allocates EUR 1.2 billion of EU funding to environmental and climate objectives under rural development (EAFRD) and EUR 1 billion to eco-schemes under direct payments (EAGF).

Hungary's RRP, including the REPowerEU chapter, has a comprehensive set of reforms and investments for the green transition. Measures are being implemented to remove regulatory obstacles and invest in grid development to advance renewable energy use, improve energy efficiency in private and public building, and promote sustainable transport. The plan currently dedicates 67.1% of the available funds to measures that support climate objectives.

Promoting fairness, social cohesion and improving access to basic services are among the key priorities of EU funding in Hungary. ERDF support includes the catching-up settlements programme, which enhances basic and educational services in the country's 300 least-developed settlements. The support significantly contributes to increasing the availability and quality of nursery places, adding 8 900 places across the least-developed regions. This will help these regions retain their population, especially young people and families. Importantly, the ESF+ supports targeted teacher salary increases, prioritising those disadvantaged areas, at-risk students, and shortage subjects like STEM. Furthermore, Hungary is dedicating EUR 1.3 billion (25%) of its ESF+ to social inclusion and EUR 285 million (5.6%) to child poverty. This will benefit 250 000 disadvantaged people, including 100 000 children. Almost EUR 1.8 billion will go towards supporting quality education by making teaching more attractive. A flagship

Table A16.1: **Selected EU funds with adopted allocations - summary data (million EUR)**

Selected EU funds with adopted allocations - summary data (million EUR)			
Instrument/policy	**Allocation 2021-2026**		**Disbursed since 2021 (1)**
RRF grants (including the RepowerEU allocation)	6 511.7		140.1
RRF loans	3 918.3		779.5
Instrument/policy	**Allocation 2014-2020 (2)**	**Allocation 2021-2027**	**Disbursed since 2021 (3)** (covering total payments to the Member State on commitments originating from both 2014-2020 and 2021-2027 programming periods)
Cohesion policy (total)	22 529.7	21 730.1	11 293.7
European Regional Development Fund (ERDF)	11 380.7	13 568.2	5 443.0
Cohesion Fund (CF)	6 025.4	2 602.2	2 710.3
European Social Fund (ESF, ESF+) and the Youth Employment Initiative (YEI)	5 123.6	5 298.7	3 059.3
Just Transition Fund (JTF)		261.1	81.0
Fisheries			
European Maritime, Fisheries and Aquaculture Fund (EMFAF) and the European Maritime and Fisheries Fund (EMFF)	38.4	37.7	23.1
Migration and home affairs			
Migration, border management and internal security - AMIF, BMVI and ISF (4)	114.6	224.8	70.4
The common agricultural policy under the CAP strategic plan (5)	**Allocation 2023-2027**		**Disbursements under the CAP Strategic Plan (6)**
Total under the CAP strategic plan	8 454.9		2 773.1
European Agricultural Guarantee Fund (EAGF)	6 819.8		2 418.5
European Fund for Agricultural Development (EAFRD)	1 635.1		354.6

(1) The cut-off date for data on disbursements under the RRF is 31 May 2025.
(2) Cohesion policy 2014-2020 allocations include REACT-EU appropriations committed in 2021-2022.
(3) These amounts relate only to disbursements made from 2021 onwards and do not include payments made to the Member State before 2021. Hence the figures do not comprise the totality of payments corresponding to the 2014-2020 allocation. The cut-off date for data on disbursements under EMFAF and EMFF is 29 April 2025. The cut-off date for data on disbursements under cohesion policy funds, AMIF, BMVI and ISF is 5 May 2025.
(4) AMIF - Asylum, Migration and Integration Fund; BMVI - Border Management and Visa Instrument; ISF - Internal Security Fund.
(5) Expenditure outside the CAP strategic plan is not included.
(6) The cut-off date for data on EARDF disbursements is 5 May 2025. The information on EAGF disbursements is based on the Member State declarations until March 2025. Disbursements for the Direct Payments (EAGF) started in 2024.
Source: European Commission

initiative targets the 300 most deprived villages with high child and Roma populations, implementing integrated social, education, employment and healthcare measures locally.

Hungary's RRP contains several reforms and investments related to fairness and social policies. Measures are being implemented to upgrade healthcare infrastructure and equipment, improvement in health service provision. It also contains measures to improve access to mainstream education for disadvantaged students, improve teachers working conditions, and envisages expansion of early age childcare places. The plan also has measures strengthening the adequacy of pensions for lower-income pensioners.

Table A16.2: **Summary table on 2019-2024 CSRs**

Hungary	Assessment in May 2025	Relevant SDGs
2019 CSR 1		
Ensure compliance with the Council Recommendation of 14 June 2019 with a view to correcting the significant deviation from the adjustment path towards the medium-term budgetary objective.	Not relevant anymore	SDG 8, 16
2019 CSR 2	**Limited progress**	
Continue the labour market integration of the most vulnerable groups, in particular through upskilling, and	Limited progress	SDG 4, 8, 10
improve the adequacy of social assistance and unemployment benefits.	Limited progress	SDG 1, 2, 10
Improve education outcomes and increase the participation of disadvantaged groups, in particular Roma in quality mainstream education.	Limited progress	SDG 4, 8, 10
Improve health outcomes by supporting preventive health measures and strengthening primary healthcare.	Limited progress	SDG 3, 16
2019 CSR 3	**Limited progress**	
Focus investment-related economic policy on research and innovation,	Limited progress	SDG 9, 10, 11
low-carbon energy,	Some progress	SDG 7, 9, 10, 11, 13
transport infrastructure, and	Some progress	SDG 10, 11
waste management and	Limited progress	SDG 6, 10, 11, 12, 15
energy and resource efficiency, taking into account regional disparities.	Limited progress	SDG 6, 7, 10, 11, 12, 15
Improve competition in public procurement.	Limited progress	SDG 9
2019 CSR 4	**Limited progress**	
Reinforce the anti-corruption framework, including by improving prosecutorial efforts and access to public information, and	Limited progress	SDG 16
strengthen judicial independence.	Some progress	SDG 16
Improve the quality and transparency of the decision-making process through effective social dialogue and engagement with other stakeholders and through regular, appropriate impact assessments.	Limited progress	SDG 8, 16
Continue simplifying the tax system, while strengthening it against the risk of aggressive tax planning.	Limited progress	SDG 8, 10, 12, 16
Improve competition and regulatory predictability in the services sector.	No progress	SDG 9, 16
2020 CSR 1	**Limited progress**	
Take all necessary measures, in line with the general escape clause of the Stability and Growth Pact, to effectively address the COVID-19 pandemic, sustain the economy and support the ensuing recovery. When economic conditions allow, pursue fiscal policies aimed at achieving prudent medium-term fiscal positions and ensuring debt sustainability, while enhancing investment.	Not relevant anymore	SDG 8, 16
Address shortages of health workers and ensure an adequate supply of critical medical products and infrastructure to increase the resilience of the health system.	Some progress	SDG 3
Improve access to quality preventive and primary care services.	Limited progress	SDG 3
2020 CSR 2	**Limited progress**	
Protect employment through enhanced short-time working arrangements and effective active labour-market policies and extend the duration of unemployment benefits.	Limited progress	SDG 1, 2, 8, 10
Improve the adequacy of social assistance and ensure access to essential services and	Limited progress	SDG 1, 2, 10
quality education for all.	Limited progress	SDG 4
2020 CSR 3	**Some progress**	
Ensure liquidity support to SMEs.	Substantial progress	SDG 8, 9
Front-load mature public investment projects and	Some progress	SDG 8, 16
promote private investment to foster the economic recovery.	Substantial progress	SDG 8, 9
Focus investment on the green and digital transition, in particular clean and efficient production and use of energy,	Limited progress	SDG 7, 9, 13
sustainable transport,	Some progress	SDG 11
water and waste management,	Limited progress	SDG 6, 12, 15
research and innovation, and	Limited progress	SDG 9
digital infrastructure for schools.	Some progress	SDG 4, 9, 16
2020 CSR 4	**No progress**	
Ensure that any emergency measures be strictly proportionate, limited in time and in line with European and international standards and do not interfere with business activities and the stability of the regulatory environment.	No progress	SDG 16
Ensure effective involvement of social partners and stakeholders in the policy-making process.	No progress	SDG 8, 16
Improve competition in public procurement.	Limited progress	SDG 9
2020 CSR 5	**Limited progress**	
Strengthen the tax system against the risk of aggressive tax planning.	Limited progress	SDG 8, 16
2021 CSR 1	**Not relevant anymore**	
In 2022, maintain a supportive fiscal stance, including the impulse provided by the Recovery and Resilience Facility, and preserve nationally financed investment.	Not relevant anymore	SDG 8, 16
When economic conditions allow, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions and ensuring fiscal sustainability in the medium term.	Not relevant anymore	SDG 8, 16
At the same time, enhance investment to boost growth potential. *Pay particular attention to the composition of public finances, on both the revenue and expenditure sides of the national budget, and to the quality of budgetary measures in order to ensure a sustainable and inclusive recovery. Prioritise sustainable and growth-enhancing investment, in particular investment supporting the green and digital transition.*	Not relevant anymore	SDG 8, 16
Give priority to fiscal structural reforms that will help provide financing for public policy priorities and contribute to the long-term sustainability of public finances, including, where relevant, by strengthening the coverage, adequacy and sustainability of health and social protection systems for all.	Not relevant anymore	SDG 8, 16

(Continued on the next page)

Table (continued)

2022 CSR 1	**Limited progress**	
In 2023, ensure that the growth of nationally financed primary current expenditure is in line with an overall neutral policy stance, taking into account continued temporary and targeted support to households and firms most vulnerable to energy price hikes and to people fleeing Ukraine. Stand ready to adjust current spending to the evolving situation.	Not relevant anymore	SDG 8, 16
Expand public investment for the green and digital transitions, and for energy security taking into account the REPowerEU initiative, including by making use of the Recovery and Resilience Facility and other Union funds.	Not relevant anymore	SDG 8, 16
For the period beyond 2023, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions.	Not relevant anymore	SDG 8, 16
Improve the long-term sustainability of the pension system, while preserving adequacy in particular through addressing income inequalities.	Limited progress	SDG 8
2022 CSR 2		
Swiftly finalise the negotiations with the Commission on the 2021–2027 cohesion policy programming documents with a view to starting their implementation.	Progress on the cohesion policy programming documents is monitored under the EU cohesion policy.	
2022 CSR 3	**Limited progress**	
Continue the labour-market integration of the most-vulnerable groups, in particular through upskilling, and extend the duration of unemployment benefits.	Limited progress	SDG 1, 2, 4, 8, 10
Improve the adequacy of social assistance and ensure access to essential services and adequate housing for all.	Limited progress	SDG 1, 2, 10
Improve education outcomes and increase the participation of disadvantaged groups, in particular Roma, in quality mainstream education.	Limited progress	SDG 4, 8, 10
Improve access to quality preventive and primary care services.	Limited progress	SDG 3
2022 CSR 4	**Limited progress**	
Reinforce the anti-corruption framework, including by improving prosecutorial efforts and access to public information, and	Limited progress	SDG 16
strengthen judicial independence.	Some progress	SDG 16
Improve the quality and transparency of the decision-making process through effective social dialogue, engagement with other stakeholders and regular impact assessments.	Limited progress	SDG 16
Continue simplifying the tax system.	Limited progress	SDG 8, 10, 12
Improve regulatory predictability and competition in the services sector, in particular in retail and utilities, and apply competition scrutiny systematically in business transactions.	No progress	SDG 9
Improve competition in public procurement.	Limited progress	SDG 9
2022 CSR 5	**Limited progress**	
Promote reform and investment on sustainable water and waste management and the circularity of the economy,	Limited progress	SDG 6, 12, 15
the digitalisation of businesses,	Some progress	SDG 9
green and digital skills, and	Limited progress	SDG 4
research and innovation.	Limited progress	SDG 9
2022 CSR 6	**Some progress**	
Reduce overall reliance on fossil fuels	Limited progress	SDG 7, 9, 13
by accelerating the deployment of renewables, in particular by streamlining the permitting procedures	Some progress	SDG 7, 8, 9, 13
and the upgrading of the electricity infrastructure.	Limited progress	SDG 7, 9, 13
Diversify imports of fossil fuels by, inter alia, strengthening interconnection with the participation of other countries.	Limited progress	SDG 7, 9, 13
Reduce the dependency on fossil fuels in buildings and transport by stepping up efforts on energy-efficiency measures for all, especially in residential houses	Some progress	SDG 7, 9, 13
and on sustainable transport, in particular through electrification.	Some progress	SDG 7, 9, 13
2023 CSR 1	**Limited progress**	
Wind down the emergency energy support measures in force, using the related savings to reduce the government deficit, as soon as possible in 2023 and 2024. Should renewed energy price increases necessitate new or continued support measures, ensure that such support measures are targeted at protecting vulnerable households and firms, are fiscally affordable and preserve incentives for energy savings.	Limited progress	SDG 8, 16
Ensure prudent fiscal policy, in particular by limiting the nominal increase in nationally financed net primary expenditure in 2024 to not more than 4.4 %.	Some progress	SDG 8, 16
Preserve nationally financed public investment and ensure the effective absorption of grants under the Facility and of other Union funds, in particular to foster the green and digital transitions.	No progress	SDG 8, 16
For the period beyond 2024, continue to pursue a medium-term fiscal strategy of gradual and sustainable consolidation, combined with investments and reforms conducive to higher sustainable growth, in order to achieve a prudent medium-term fiscal position.	No progress	SDG 8, 16
Pursue effective coordination and clear demarcation of macroeconomic policies in order to ensure fiscal and external sustainability.	Limited progress	SDG 8, 16
Phase out price and interest-rate caps in order to reduce distortive effects and to facilitate the smooth transmission of monetary policy.	Limited progress	SDG 8
Target support measures in the housing sector to low-income households.	Limited progress	SDG 8, 10, 1
Strengthen the medium-term budgetary framework, align the preparation of annual budgets with the budgetary year and limit discretion in the implementation of annual budgets.	Limited progress	SDG 8, 16

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Table (continued)

2023 CSR 2		
Urgently fulfil the required milestones and targets related to strengthening judicial independence and safeguarding the protection of the financial interests of the Union in order to allow for a swift and steady implementation of its recovery and resilience plan. Swiftly finalise the REPowerEU chapter with a view to rapidly starting the implementation thereof. Proceed with the speedy implementation of	RRP implementation is monitored through the assessment of RRP payment requests and analysis of the bi-annual reporting on the achievement of the milestones and targets, to be reflected in the country reports. Progress on the	
2023 CSR 3	**Limited progress**	
Improve the adequacy of the social assistance system, including unemployment benefits.	Limited progress	SDG 1, 2, 10
Improve access to effective active labour market measures, in particular upskilling opportunities for the most disadvantaged groups,	Limited progress	SDG 8, 4, 10
and ensure effective social dialogue.	Limited progress	SDG 16
Improve the regulatory framework and competition in services by avoiding selective and arbitrary administrative interventions and the use of tailor-made legislation providing undue advantage or disadvantage to specific companies,	No progress	SDG 9, 16
by applying competition scrutiny systematically to business transactions and by reducing the use of emergency measures to what is strictly necessary, in line with the principles of the single market and of the rule of law.	No progress	SDG 9, 16
2023 CSR 4	**Limited progress**	
Reduce overall reliance on fossil fuels	Limited progress	SDG 7, 9, 13
by accelerating the deployment of renewables, including wind energy, geothermal and sustainable biomethane, in particular by streamlining permitting procedures, while conducting regular environmental impact assessments, and by creating a supportive and predictable regulatory environment.	Some progress	SDG 7, 8, 9, 13
Phase out subsidies for fossil fuels.	No Progress	SDG 12, 13
Reform the rules on the balancing of the energy market and tariff setting in order to allow for cost recovery and an optimum use of the grid.	Limited progress	SDG 7, 8, 9
Where necessary, upgrade the electricity infrastructure, including grid and storage capacities.	Limited progress	SDG 7, 8, 9
Diversify imports of fossil fuels in order to significantly decrease dependence on Russia, including by strengthening cooperation with other Member States, including, where necessary, on infrastructure.	Limited progress	SDG 7, 8, 9
Improve energy efficiency, in particular in buildings, and continue efforts to reduce overall gas consumption.	Limited progress	SDG 7, 8, 9
Adjust the current system of regulated energy prices in order to encourage energy saving while providing targeted support for low-income households.	Limited progress	SDG 7, 13, 1, 10
Step up policy efforts aimed at the provision and acquisition of skills and competences needed for the green transition.	Limited progress	SDG 4, 7, 13
2024 CSR 1	**Some progress**	
Submit the medium-term fiscal-structural plan in a timely manner.	Full Implementation	SDG 8, 16
In line with the requirements of the reformed Stability and Growth Pact, limit the growth in net expenditure 26 in 2025 to a rate consistent with, inter alia, putting the general government debt on a plausibly downward trajectory over the medium term and reducing the general government deficit towards the 3% of GDP Treaty reference value.	Full Implementation	SDG 8, 16
Wind down the emergency energy support measures before the 2024/2025 heating season.	Limited progress	SDG 8, 16
Pursue effective coordination and clear demarcation of macroeconomic policies to ensure fiscal and external sustainability.	Limited Progress	SDG 8, 16
Phase out remaining price and interest rate caps to reduce distortive effects and facilitate the smooth transmission of monetary policy.	Limited progress	SDG 8
Target support measures in the housing sector to low-income households.	Limited progress	SDG 1, 8, 10
Strengthen the medium-term budgetary framework, align the preparation of annual budgets with the budgetary year and limit discretion in the implementation of annual budgets.	Limited progress	SDG 8, 16
2024 CSR 2		
In light of prolonged delays, significantly accelerate the implementation of cohesion policy programmes and the recovery and resilience plan, including the REPowerEU chapter, ensuring completion of reforms and investments by August 2026, by swiftly implementing the necessary measures to ensure the protection of the EU's financial interests and resolving pending issues on enabling conditions. In the context of the mid-term review of cohesion policy programmes, continue focusing on the agreed priorities, taking action to better address poverty, focusing on energy poverty and the least developed districts and municipalities, and improve the smart specialisation strategy, while considering the opportunities provided by the Strategic Technologies for Europe Platform initiative to improve competitiveness.	RRP implementation is monitored through the assessment of RRP payment requests and analysis of the bi-annual reporting on the achievement of the milestones and targets. Progress on the cohesion policy is monitored in the context of the Cohesion Policy of the European Union.	
2024 CSR 3	**Limited progress**	
Improve the regulatory framework and enhance competition in product markets and services by avoiding arbitrary administrative interventions and the selective use of tailor-made legislation providing undue advantage or disadvantage to specific companies,	No progress	SDG 9, 16
by applying competition scrutiny systematically to business transactions and by reducing the use of emergency measures to what is strictly necessary, in line with the principles of the single market and the rule of law.	No progress	SDG 9, 16
Improve the adequacy of social assistance and unemployment benefits.	Limited progress	SDG 1, 2, 10
Improve educational attainment levels as well as access to effective active labour market measures, in particular upskilling and reskilling opportunities for the most disadvantaged groups, and	No progress	SDG 4, 8, 10
ensure effective social dialogue.	Limited progress	SDG 16
2024 CSR 4	**Limited progress**	
Reduce overall reliance on fossil fuels, accelerate the diversification of gas supply towards non-Russian sources, and	Limited progress	SDG 7, 8, 9
take steps to phase out fossil fuel subsidies.	No progress	SDG 12, 13

Source: European Commission

While persistent regional disparities are present in Hungary, significant opportunities exist for growth and regional convergence, provided there is also a positive change in the business and institutional environment. Several regions show promising potential in high-tech sectors and knowledge-intensive services, including electromobility, pharmaceuticals, and ICT, in addition, other regions well-positioned to leverage green technologies, including geothermal energy. For this to happen however, further investments in education, digital transformation, R&D, energy and access to services are necessary, while capitalizing on regional specializations.

Despite growth in the last decade, the gap between the capital region and the other regions is both substantial and persistent. In 2023, real GDP per head in Budapest corresponded to 168% of the EU average, while it remained below 70% in all other NUTS 2 regions. Észak-Alföld and Észak-Magyarország remain the poorest regions of the country, with GDP per head at 49 and 48% of the EU average.

Though all regions grew faster than the EU-27 average in 2014-2023, internal convergence is progressing slowly. Except for Budapest and Pest, the other regions are growing more slowly than the national average. This shows that not only the gap with the capital region is increasing, but also that the gaps between different non-capital regions are becoming noteworthy.

Competitiveness

Regional economic disparities are primarily driven by differences in productivity performance across counties. While productivity per hour worked in Budapest and Pest reached 75-80% of the EU average, other regions were below the national average with Észak-Alföld laging significantly behind Despite these gaps, the post-2013 period has seen most counties achieving productivity growth rates above the EU average, with Dél-Alföld and Pest performing particularly strongly, while performance was lower in Dél-Dunántúl and Észak-Alföld.

Regional differences in human capital ([252]), innovation capacities, and digital and technological transformation significantly influence productivity patterns across Hungary.

Employment in high-tech sectors is in general above the EU average in Hungary. In Budapest, 13.0% of employment is in high-tech sectors, and the figure is also high in Pest (8.5%), Közép-Dunántúl (6.6%), Észak-Magyarország (5.0%) and Észak-Alföld (4.7%), all higher or close to the EU average (5.2%), demonstrating these regions' strong position in these sectors.

Employment in knowledge-intensive services lags behind the EU average but is still near the national average (37.2%) in the four least developed regions, which reveals promising opportunity for growth. Participation in education and training also exceeded the national average in the four least developed regions, which can contribute to improving their competitiveness.

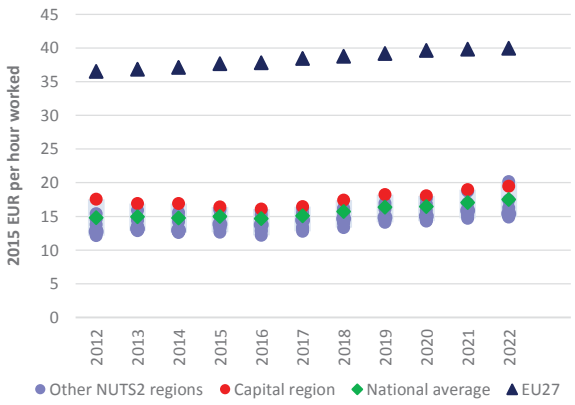
([252]) Human capital encompasses knowledge, skills and competences, highlighting the importance of education, training and experience in building a workforce that drives economic growth, innovation and productivity.

Table A17.1: **Selected indicators at regional level in Hungary**

	GDP per head (PPS)	Productivity - GDP per hour worked (PPS)	Real productivity growth (per hour worked)	Employment in high-technology sectors	Population growth	Participation in lifelong learning	Population with low educational attainment	At-risk-of-poverty or social exclusion
	Index EU-27 = 100	Index EU-27 = 100	Average annual % change	% of total employment	Average annual change per 1000 residents	% of population aged 25-64	% of population aged 25-64	% of total population
	2023	2022	2013-2022	2024	2014-2023	2024	2024	2024
European Union (27 MS)	100	100	0.9	5.2	1.7	13.3	19.6	21.0
Hungary	77	70	1.7	6.7	-2.7	11.8	11.9	20.2
Budapest	168	75	1.1	13.0	-2.8	15.5	3.3	12.7
Pest	65	80	2.8	8.5	9.1	10.8	8.0	20.3
Közép-Dunántúl	67	65	1.7	6.6	-1.2	9.3	12.1	11.6
Nyugat-Dunántúl	68	68	1.8	4.0	0.2	7.4	10.0	13.4
Dél-Dunántúl	51	65	1.4	3.3	-7.3	11.2	16.8	23.3
Észak-Magyarország	48	64	1.9	5.0	-8.2	12.3	20.1	29.9
Észak-Alföld	49	62	1.5	4.7	-5.6	12.0	17.9	26.8
Dél-Alföld	54	64	2.3	2.6	-6.9	13.0	13.1	24.8

Source: Eurostat and JRC

Graph A17.1:**Labour productivity per hour worked**



Unit: Real GDP per hour worked (EUR, 2015 prices)
Source: ARDECO (JRC)

Despite progress, outside of Budapest and Pest county, less than 25% of the population aged 25-64 had a high level of education in 2024 (EU: 36.1%). The number of people having a low level of education was significantly above the national average in Észak-Magyarország, Észak-Alföld and Dél-Dunántúl, indicating a barrier to productivity growth. This indicates that targeted investments in education and skills in these regions would be beneficial to lay the foundations for improving their competitiveness.

On the digital transformation of enterprises, whereas most regions lag behind the EU average, the rate of businesses using advanced digital technologies reached or exceeded the EU average in certain fields. These included data analytics in all regions and the use of AI in Dél- and Közép-Dunántúl. In addition, the high rate of access to broadband connection across the country provides an opportunity for growth based on digital technologies, including in services.

Budapest was the only region with higher investments in R&D (2.3% of GDP) than the EU average (2.28%) in 2022. Közép-Dunántúl and Dél-Alföld also surpassed the other regions in terms of R&D expenditure, pointing to their potential in innovation-driven growth. The other five regions lag significantly behind in terms of R&D expenditure, which constrains their growth potential.

There is significant potential in regional specialisation, building on the competitive advantages of regions. Industry already makes a significantly above-average contribution to regional GVA in Komárom-Esztergom, Fejér, Győr-Sopron-Moson, Heves and Borsod-Abaúj-Zemplén counties (between

33% and 42%, compared to 20.1% in the EU). This can positively impact real productivity growth, provided these regions can also move towards higher value-added activities, advanced technologies and promoting business R&D and innovation in these sectors.

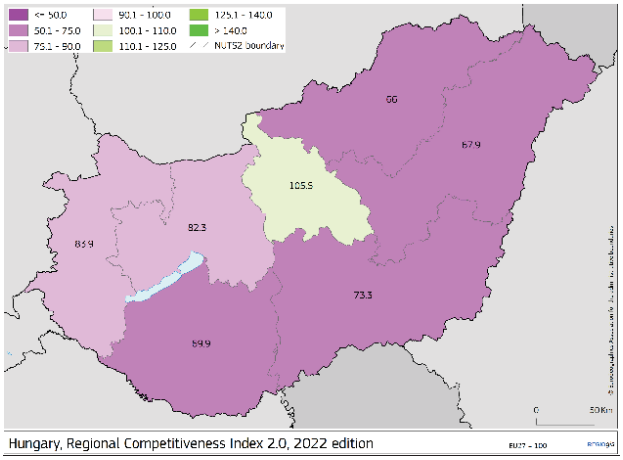
Some counties – Pest, Csongrád-Csanád, Győr-Moson-Sopron, Hajdú-Bihar, Baranya and Borsod-Abaúj-Zemplén - show potential to develop growth trajectories built around knowledge-based activities, including the development of ecosystems and internationalisation. This includes electromobility (inter alia in Győr-Moson-Sopron), the pharmaceutical industry and agriculture (Hajdú-Bihar), the health and biotechnology industry (Csongrád-Csanád) and ICT (Veszprém). In the remainder of counties, improving the innovation activities of small to medium-sized enterprises could pave the way towards improving their productivity.

Green technology has the potential to drive growth in several regions, with the potential to scale up at the level of the single market, drawing on these regions' natural endowments and human and technological capacities. All regions except Nyugat-Dunántúl and Közép-Dunántúl have unique potential at global level for geothermal energy production and associated activities, which is a strategic opportunity. Észak-Alföld has a relatively stronger profile in green transition, as do Dél-Alföld, Dél-Dunántúl and Pest in digital transition, indicating focuses for investment. In addition, green agriculture and energy technology companies have already demonstrated promising results in several regions, for example in Észak- and Dél-Alföld, as have environmental technology (e.g. waste or water management) companies in Budapest, Pest and Közép-Dunántúl.

However, one-sided specialisation also entails risks. These include high exposure to sector-specific crises, especially as regards the car industry, and potentially increased pressure on the environment, as is the case with the recently opened battery factories, especially in Észak-Alföld, Pest and Nyugat-Dunántúl. This highlights the importance of diversification in the regions concerned.

Disparities in demographical trends also affect the growth potential of regions. With the exception of Pest, population declined is all regions between 2014 and 2023 - reaching a significant contraction of 8.2 per 1 000 residents in Észak-Magyarország, 7.3 in Dél-Dunántúl, 6.9 Dél-Alföld and 5.6 in Észak-Alföld.

Map A17.1: **Regional Competitiveness Index 2.0, 2022 edition**



Source: DG REGIO, JRC based on Eurostat

Institutional quality remains well below the EU average (European Quality of Government Index 2024 ([253])), in particular in Észak-Magyarország and Észak-Alföld. This is also reflected in the challenges affecting the subnational business environment ([254]), especially as concerns utility services and the effective implementation of regulations in place. Furthermore, the decreasing autonomy of municipalities significantly reduces their ability to create a competitive local business environment.

([253]) European Quality of Government Index 2024| University of Gothenburg

([254]) World Bank. 2024. *Subnational Business Ready in the European Union 2024: HUNGARY*. Washington, DC: World Bank. Licence: Creative Commons Attribution CC BY 3.0 IGO.

All regions except Budapest fall below the EU-27 average in terms of competitiveness. Hungary lags behind European peers when it comes to competitiveness in a broad sense, including and beyond quality of government, as measured by the Regional Competitiveness Index 2.0. Nevertheless, the Western regions of Közép-Dunántúl and Nyugat-Dunántúl outperform other regions, rooted in higher levels of education and labour market efficiency

Social fairness

Labour market conditions are generally better or comparable to the EU average in all Hungarian regions. In 2024, the unemployment rate varied from 2.6% in Budapest to 7.3% in Dél-Dunántúl. Regional youth unemployment rates ranged from 7.9% in Közép-Dunántúl to 22.8% in Dél-Dunántúl in 2024. In addition, unemployment and youth unemployment rates reflect urban-rural divides.

The risk of poverty and social exclusion varies across regions and is more pronounced in rural areas (see Annex 11). In 2024, 29.9% of the population in Észak-Magyarország were at risk of poverty or social exclusion, and the figure was also well above the national average (20.2%) in Észak-Alföld (26.8%) and Dél-Dunántúl (23.3%). In these regions, the number of people receiving regular child benefits is 4-5 times higher than in Nyugat-Magyarország and Pest.

Access to healthcare is very limited in rural areas, where only 12% of the rural population live within 10 minutes' drive from the nearest hospital. Disparities in access to quality basic services - social, educational, healthcare, and childcare services - affect the capacity of rural areas to retain their population ([255]), especially in the case of young people and families, affecting especially Észak-Magyarország and Észak-Alföld, and inner peripheries.

The incidence of housing cost overburden has increased since 2021. The proportion of households spending more than 40% of their income on rent (at 8.5% in 2024) has quadrupled since 2021 in cities and tripled in towns and suburbs and rural areas. The quality of housing and living conditions are least favourable among the lowest income quintile, especially the Roma. In addition, the supply of affordable housing cannot keep up with the growing concentration of economic activities, resulting in pressure on regional housing markets and in an increase in commuting.

The proportion of people facing energy poverty increased in all **regions in 2023 or 2024.** Overall in Hungary, the proportion of the population unable to keep their home sufficiently warm increased from 4.7% in 2022 to 7.2% in 2023 before easing to 6.1% in 2024. Észak-Magyarország (11.7%) and Észak-Alföld (9.0%) recorded the highest rates and the sharpest deterioration in the past two years.

Adoption of sustainable transportation is slow, particularly passenger rail transport. Outside Budapest and Pest, less than 10% of the population in a 120-km radius can be reached within 1.5 hours by train. This highlights the country's high car dependency and investment needs in public transportation.

Sustainability

Hungarian regions face specific challenges and opportunities concerning sustainability. The Regional Green Transition Vulnerability Index is high for all regions, particularly Észak-Alföld, Dél-Alföld and Dél-Dunántúl, due to the strong reliance on transitioning sectors, such as agriculture. The impact of climate change on regional GDP is especially significant in Dél-Alföld and in Baranya County. The occurrence of droughts has increased in Észak- and Dél-

([255]) Field Consulting Services Zrt (2020): A helyi életminőség javulása terán elért eredmények értékelése.

Alföld, aggravated by the lack of adequate water retention measures. The area of Homokhátság in Dél-Alföld is a particularly vulnerable region, struggling with water scarcity, which has created various economic and social problems, also attributable to the lack of comprehensive measures ([256]). Larger cities experience urban heat island effects. Hungary is prone to flooding, especially along the Danube and Tisza rivers, and flash floods occur on the hilly and mountainous area – including in Észak-Magyarország. Climate change is coupled with excess mortality in the four least developed regions.

The health of natural ecosystems is at risk in several regions. This is because of habitat fragmentation and loss of biodiversity, resulting from urban sprawl, unsustainable agricultural practices – although IPM practices have been applied by farmers - and re-industrialisation. Natura 2000 sites and protected areas, such as Hortobágy National Park in the Észak-Alföld region, are under pressure, whereas wetland habitats along the Dráva River are threatened by reduced water flows.

Air quality in Hungary is below the EU average. Annual average concentrations of both particulate matters (PM 2.5 and 10) exceeded the EU average for all regions, peaking in Budapest, Baranya, Borsod-Abaúj-Zemplén, Szabolcs-Szatmár-Bereg and Heves counties, as a result of transportation and using solid fuels for industrial activity and for residential heating.

Several regions display untapped potential for renewable energy production. Municipalities in Észak-Alföld, Dél-Alföld and Dél-Dunántúl have a high untapped potential for solar energy production, while other regions have potential for onshore wind energy, with more favourable wind capacity factors in the regions in Nyugat-Dunántúl.

([256]) Kovacs, Andras & Farkas, Jeno & Vasárus, Gábor & Lennert, József. (2024). A duna-tisza közi homokhátság területés vidékfejlesztési kihívásai. Földrajzi Közlemények. 148. 1-17.