Council of the European Union

Brussels, 11 June 2025
(OR. en)

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UEM 237
SOC 373
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ECB
EIB

COVER NOTE

From:	Secretary-General of the European Commission, signed by Ms Martine DEPREZ, Director
date of receipt:	4 June 2025
To:	Ms Thérèse BLANCHET, Secretary-General of the Council of the European Union
No. Cion doc.:	SWD(2025) 225 final
Subject:	COMMISSION STAFF WORKING DOCUMENT 2025 Country Report - Slovakia Accompanying the document Recommendation for a COUNCIL RECOMMENDATION on the economic, social, employment, structural and budgetary policies of Slovakia

Delegations will find attached document SWD(2025) 225 final.

Encl.: SWD(2025) 225 final

EUROPEAN
COMMISSION

Brussels, 4.6.2025
SWD(2025) 225 final

COMMISSION STAFF WORKING DOCUMENT

2025 Country Report - Slovakia

Accompanying the document

Recommendation for a COUNCIL RECOMMENDATION

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

{COM(2025) 225 final}

European Commission

Slovakia

2025 Country Report



ECONOMIC DEVELOPMENTS AND KEY POLICY CHALLENGES

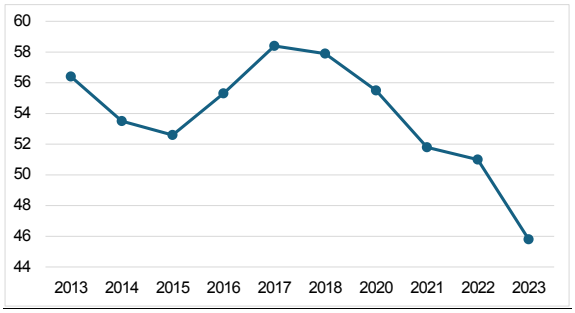
Growth prospects are uncertain and competitiveness is deteriorating

The economy grew by 2.1% in 2024, but the outlook remains uncertain. A relatively strong economic growth in 2024 was fuelled mainly by household and public consumption throughout the year. Expectations for an increase in taxes in 2025 supported private consumption in the last quarter of 2024. Conversely, investment contracted in both the third and fourth quarters of 2024, following the robust expansion in 2023, which was mostly due to a peak in absorption of EU funds. A modest trade surplus supported the continuation of growth in 2024, but geopolitical tensions are likely to hinder its sustainability. Exports recovered and helped reduce Slovakia's persistent current account deficit, but inflationary pressures and a high government deficit still pose a risk for the sustainability of the external position ([1]) GDP growth is forecast at 1.5% in 2025 and 1.4% in 2026, as trade tensions erode export activity, tame global demand and increase uncertainty. Inflation fell to 3.2% in 2024 but is expected to rise to 4.0% in 2025, due to the introduction of higher taxes. The economic outlook remains highly uncertain in view of possible external shocks, including further trade tensions driven by tariffs imposed by the US.

([1]) The external position refers to a country's financial and trade balance with the rest of the world, including exports, imports, debt and investments.

Slovakia's small, open and highly industrialised economy faces increasing competitiveness challenges. The country's competitiveness is weakened by low labour productivity growth, which declined in 2022 and somewhat recovered in 2023 and 2024. The recovery in labour productivity did not keep up with increases in unit labour costs. Together with a persistent shortage of skilled labour, the existing large innovation gap with other EU countries, which has widened in recent years (see Annex 3), and the significant drop in foreign direct investment (FDI) inflows (see Graph 1.1) have further weakened Slovakia's overall competitive position.

Graph 1.1:**FDI stock (% of GDP) in Slovakia**



Source: Eurostat

The job market is tight, marked by shortages and skills mismatches

The job market in Slovakia remains tight amid strong demand. The employment rate remained above the EU average in 2024 (78% vs 75.9%), and the unemployment rate reached a historic low in Q3-2024 (5.1%, EU average: 5.7%). However, the job market in Slovakia is very

tight and marked by shortages of workers, especially in healthcare and education, and skills mismatches. This is compounded by an ageing population, which undermines Slovakia's growth potential and labour productivity. In addition, various groups, most notably women and Roma, are under-represented in the job market, hindering output growth (see Annex 10). -Broad-based regional disparities in socio-economic development – for instance related to demographics and the availability of basic services and jobs – further contribute to uneven economic development across the country.

Wages have grown faster than inflation, which however remains high. Following a decline in 2022 and 2023, real wages increased by 3.8% in 2024 and are forecast to increase by 0.9% in 2025. This is the result of expected higher future inflation, which will limit real wage growth ([2]). Despite wage increases driven by rising inflation, which have resulted in robust growth in unit labour costs (ULC) of 5.0%, this trend has not led to a commensurate increase in labour productivity, which has experienced only modest growth of 2.2%. The purchasing power losses experienced by households between 2021 and 2023 also contributed to a significant decline in real disposable household income. While wages have been increasing to compensate for the rising inflation, pushing up the growing unit labour costs (ULC), labour productivity growth has been decreasing.

Structural weaknesses hinder Slovakia's competitiveness and productivity

Slovakia faces structural challenges that undermine its productivity growth and growth potential. The unpredictable regulatory environment, administrative burdens and the fragmented governance structure heavily impact Slovakia's capacity to effectively implement investment projects. This hinders, in particular, innovation and diversification of the Slovak economy, as investments are currently concentrated in highly industrialised manufacturing sectors, especially the automotive industry. Structural reforms are needed to help improve the business environment and trigger innovation and diversification, most notably in the areas of public administration, green energy, job market and education, tax administration, R&D, innovation and health. Innovative firms also face insufficient access to finance due to underdeveloped capital markets (see Section 2 and Annex 5). In parallel, to help Slovakia transition to a modern economy, a critical review is needed of the current growth model, which is heavily reliant on a low-cost workforce and concentration of productivity gains in the manufacturing sector, which is largely foreign-owned.

Slovakia continues to face vulnerabilities related to competitiveness, the external position, the housing market and household debt. Earlier this year, an in-depth review was carried out as part of the macroeconomic imbalance procedure ([3]). The analysis found that, while the inflation differential with the euro-area average has

([2]) Nominal wages are expected to increase by 5.7% in 2025.

([3]) In-Depth Review for Slovakia, published on 13 May 2025, SWD(2025) 125 final.

narrowed, it remains significant, weighing on competitiveness. In 2024, the current account deficit worsened somewhat, large government deficits continue to pose a risk to the external sustainability as well as to fiscal sustainability, and the current account deficit is forecast to slightly increase again. Moreover, after two decades of strong household debt growth, higher interest rates have dampened the demand for mortgages in the past two years. Demand is expected to rebound as monetary policy has been eased. Policy progress to tackle these issues has been limited.

The tax system needs to be made fairer and more efficient

The current tax mix does not sufficiently utilise property and environmental taxation, and people on lower incomes face relatively high tax wedge ([4])**.** In the current property taxation system, immovable property is taxed based on its area rather than its market value. This system fails to capture rising property values and disproportionately benefits owners of high-value properties. Incorporating value-based aspects that consider land value into the tax calculation mechanism would improve revenue collection and result in a more efficient tax mix. There is also scope for expanding the use of underutilised environmental taxation instruments, such as waste disposal taxes and transport taxes (see Annex 2). Furthermore, the tax wedge is disproportionately higher for lower-income earners than for higher-income ones, mainly due to the limited progressivity of the personal income tax and social contributions. Adjusting labour taxes to reduce the taxation of earnings from labour for lower-income households could help lower their tax wedge and facilitate labour market participation.

Slovakia's fiscal strategy must support growth while ensuring sustainability

Despite the large consolidation package announced by the government, additional measures will be necessary to correct the excessive budget deficit and ensure fiscal sustainability. So far, the consolidation package, approved in 2024, has heavily focused on increases in the value added tax (VAT), the corporate income tax and the financial transaction tax. These increases risk putting a strain on consumption and reducing incentives to invest. Moreover, higher taxes can have an inflationary effect and further worsen competitiveness. The recent VAT reform increases the complexity of the tax system in Slovakia, as in addition to the base rate increase from 20% to 23%, a rate of 19% (for groceries and electricity provision) and a rate of 5% (for essential groceries, medicines, books, and other selected goods and services) are applied. The reform also has progressive distributional effects, as lower-income households benefit more from the reduced rates for essential goods ([5]). The increased corporate income tax for companies with a yearly taxable income of over EUR 5 million and the newly introduced financial transaction tax create a

([4]) Tax wedge is defined as the ratio between the amount of taxes paid by an average single worker and the corresponding total labour cost for the employer.

([5]) Estimations were performed by the European Commission, Joint Research Centre, with the EUROMOD tax-benefit microsimulation model.

significant tax burden for Slovak companies. It is essential that consolidation measures preserve investment and ensure a growth-friendly budget composition, helping Slovakia remain attractive to investors.

Government deficit remains elevated in 2025 and 2026

Persistent spending measures keep the government deficit high despite revenue-boosting tax adjustments. The general government deficit rose slightly from 5.2% of GDP in 2023 to 5.3% in 2024, despite a decline in public spending from 48.0% of GDP in 2023 to 47.1% in 2024. The decline in public spending was primarily due to lower spending financed by EU sources, while most national spending measures remained permanent, contributing to the higher deficit. Conversely, government revenues experienced a more significant decline, decreasing from 42.8% of GDP in 2023 to 41.8% in 2024, primarily due to a reduced absorption of EU funds. The government budget deficit is projected to decrease to 4.9 % of GDP in 2025, driven by the consolidation package. However, expenditure-increasing measures, such as postponed delivery of military equipment, a permanent 13th pension payment, and higher spending on healthcare and military salaries, resulted in only a slightly lower public deficit. For 2026, the government budget deficit is expected to remain high at 5.1%, as most spending measures are permanent and no new consolidation package has been announced.

The general government debt is set to increase over the forecast period. The government debt-to-GDP ratio rose to 59.3% in 2024 due to elevated spending levels and is projected to increase further to 60.9% in 2025 and 63.0% in 2026, driven by significant government deficits.

In 2024 and 2025, Slovakia's net expenditure is projected to grow below the maximum growth. In 2024, net expenditure ([6]) in Slovakia grew by 5.4% (see Annex 1). This increase is mainly driven by strong expenditure-increasing discretionary measures, like higher social benefits and support with high energy prices. In 2025, net expenditure is forecast by the Commission to grow by 3.8%, which is right below the maximum growth rate recommended by the Council ([7]). The cumulative growth rate of net expenditure in 2024 and 2025 taken together is projected at 9.3%, which is below the maximum recommended by the Council.

The ageing population poses challenges for the long-term sustainability of public finances. Fiscal sustainability risks remain high in the medium and long term, driven in particular by rising ageing costs and an unfavourable initial budgetary position (see Annex 1). The demographic developments constitute a significant fiscal challenge as they lead to higher spending on pensions and, to a lesser extent, also on healthcare and long-term care costs. According to the Commission's 2024 Ageing Report, the old-

([6]) 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.

([7]) Council Recommendation with a view to bringing an end to the situation of an excessive deficit in Slovakia (C/2025/5039) and Council Recommendation of 21 January 2025 endorsing the national medium-term fiscal-structural plan of Slovakia (OJ C, C/2025/645, 10.2.2025, ELI: http://data.europa.eu/eli/C/2025/645/oj).

Box 1:

UN Sustainable Development Goals (SDGs)

Slovakia performs well on some SDG indicators related to environmental sustainability (SDGs 6, 11, 15) but is moving away from the targets for some SDGs related to macroeconomic stability (SDG 17).

Although there are signs that Slovakia is catching up, it is below the EU average on SDGs related to productivity (SDGs 4, 8, 9), due partly to the relatively low participation in and quality of its education system (see Annex 15).

age dependency ratio – the ratio of people over 65 to people of working age, i.e. 20-64 years old – is expected to more than double from 2022 to 2060 as life expectancy increases. Pension spending is estimated to increase from 9.4% of GDP in 2024 to 11.3% in 2070, marking a significant long-term improvement compared to past projections (notably via to the reintroduction of the link between life expectancy and the retirement age). However, pension spending is still expected to increase over the short-to-medium term due to effect of demographic trends and other expenditure-increasing pension measures adopted in 2022.

Box 2:

Barriers to private and public investment

Slovakia faces significant barriers to unlocking both public and private investments, hindering its economic growth potential and overall competitiveness. Investments are concentrated in highly industrialised manufacturing sectors. Key country-specific barriers include:

- **Fragmented governance and complex regulatory environment.** The complexity of administrative processes and the rapid pace of legislative changes create high uncertainty for investments and doing business in Slovakia. The fragmented governance structure, in particular at regional and local levels, and regional disparities further limit effective planning and implementation of viable and strategic investments throughout the country. This also slows down the absorption of EU funds.

- **Limited access to finance for innovative projects.** The underdeveloped capital market and limited availability of private equity financing and venture capital hamper the growth of innovative start-ups and small to medium-sized enterprises. In particular, this hinders their ability to scale up and invest in research and development.

- **Shortage of skilled staff.** The shortage of skilled staff and lack of investment in human capital, particularly in areas such as research and development, limit the potential for businesses to innovate. Large regional disparities including in education outcomes contribute to the challenge.

These challenges also act as a bottleneck to the implementation of EU funds. In addition, Slovakia's capacity to effectively implement investment projects and absorb EU funds is also hindered by inefficient **public procurement** processes and insufficient **preparation of investment projects**. This hinders Slovakia's potential for innovation and economic diversification.

The implementation of Slovakia's RRP is well under way but faces several obstacles linked to above challenges. At present, Slovakia has fulfilled 33% of the milestones and targets in its RRP, with assessment of the fifth payment request ongoing.

It remains important to accelerate the implementation of the cohesion policy programme. 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 Slovakia has signalled interest in leveraging the Strategic Technologies for Europe Platform under cohesion policy, Slovakia 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.

INNOVATION, BUSINESS ENVIRONMENT AND PRODUCTIVITY

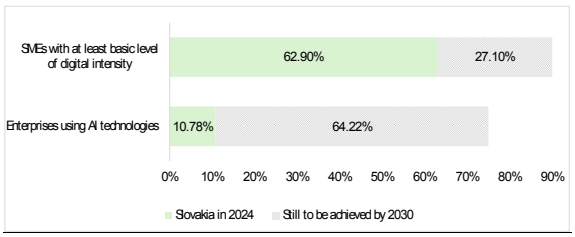
Innovation and digitalisation are key to diversifying Slovakia's economy

Slovakia lags behind in terms of innovation and digitalisation performance. This is demonstrated by the slow adoption of new technologies, low private and public spending in research and development (R&D), and weak digital infrastructure and innovation output (such as patents). Together with a fragmented governance structure and a substandard business environment, this hampers Slovakia's competitiveness potential on the global stage. Innovation and digitalisation will need to be key drivers for growth in Slovakia, helping to diversify the economy and maintain a competitive edge (see Section 1). Furthermore, promoting clean tech initiatives and boosting innovation related to the green transition could offer an opportunity to diversify Slovakia's economy by tapping into emerging industries.

Private and public R&D expenditure is significantly below the EU average. Private sector R&D expenditure was at a mere 0.58% of GDP in 2023, significantly below the EU average of 1.47%. Public sector spending was only 0.37% of GDP in 2023, compared to the EU average of 0.72% ([8]). The government committed to maintain a trajectory of annual increases in public R&D spending, also to create an opportunity to stimulate further private R&D investment, which remains critically low. The lack of R&D expenditure also affects the healthcare sector, where Slovakia reports among the lowest levels of public spending in the EU (see Annexes 3 and 14).

The adoption of digital technologies, especially by small to medium-sized enterprises (SMEs), remains largely below the EU average. Slovakia also underperforms compared to the EU when it comes to the adoption of advanced digital technologies, such as artificial intelligence (AI), cloud and data analytics. Only 62.9% of SMEs have basic digital intensity, against an EU average of 72.9% (see Annex 3). Some steps have been taken to improve the situation through Recovery and Resilience Facility investments, e.g. in projects aiming to develop and apply top digital technologies and create digital innovation hubs. However, there is much scope for further efforts.

Graph 2.1:**Slovakia's performance against two 2030 digital targets**



Source: Eurostat

Slovakia's digital infrastructure is sub-par and needs improvement. Digital

([8]) Eurostat: https://ec.europa.eu/eurostat/databrowser/view/gba_nabsfin07__custom_15738222/default/table?lang=en.

infrastructure is lagging, with very high-capacity networks covering just 69.12% of households in 2023 compared to the EU average of 78.81% (see Annex 4). Fixed and mobile network coverage, especially in rural areas, is far below EU targets. The Ministry of Investments, Regional Development and Informatisation observed an investment gap of over EUR 500 million for gigabit connectivity ([9]), which undermines the ability to boost digital solutions. This may also hamper the uptake of advanced digital technologies. Efforts to facilitate infrastructure deployment are ongoing, such as allowing fibre optic networks on existing poles, introducing a new construction law, and adopting the Gigabit Infrastructure Act, but the effects of these are yet to be seen. Prompt and effective implementation of these new measures would be beneficial.

Strengthened support for SMEs could boost innovation and R&D

Slovakia's R&D intensity is at 1%, compared to the EU average of 2.2%. The continued implementation of ongoing reforms and investments is needed to meet the target of 2% R&D intensity set out in the 2023 National Strategy for Research, Development and Innovation.

SMEs, highly prevalent in Slovakia's private sector, face resource constraints to invest in R&D. While Slovakia introduced a tax incentive system intended to stimulate R&D spending among businesses, this system is more beneficial for larger enterprises. Government support for R&D could be made more accessible to SMEs by, for instance, offering cash refunds in addition to existing tax incentives, or providing more targeted competitive grant schemes. Additional support can build further on recent efforts under the recovery and resilience plan (RRP), for example in the form of financial instruments supporting innovation through the Slovak Investment Holding. By facilitating innovation in areas such as the green transition and cleantech, SMEs could play a significant role in driving sustainable development and contributing to a diversified economic landscape.

The research and innovation environment remains fragmented. One measure to address this would be to promote collaboration between research institutions and the private sector. To build critical mass and drive impactful advancements it is important to encourage mergers and pool research institutions, while continuing to support quality-related funding by verifying excellent research. Replicating best practices and insights developed under the RRP, for instance conducting international evaluations when awarding grants to the research community or on knowledge transfer, would also foster the quality of research outputs and increase their likelihood of successful commercialisation. Moreover, anchoring such improvements in a binding institutional framework would help bring about a streamlined ecosystem with clearly assigned responsibilities, increased predictability, and better incentives for the scientific community to engage in R&D (see Annex 3).

Capital market is not sufficiently developed to support innovation

As a result of an underdeveloped capital market, Slovak firms face insufficient access to finance. The overall level of non-financial corporation funding represents

([9]) As estimated based on the 2024 Geographical Survey.

98.7% of GDP, compared to the EU average of 230.3% (see Annex 5). Furthermore, Slovak firms rely disproportionately more on funding from banks as opposed to capital markets. For start-ups, market financing is especially important to spur innovation. The access of firms to household savings is limited due to the low retail participation in capital markets, with a relatively large share of household assets stored in cash, deposits and housing, contributing to underused market financing. In particular, households hold 52.1% of their assets in cash and deposits, compared to the EU average of 32.2%. There is scope for increasing the level of direct and indirect retail investment by improving financial literacy. Furthermore, venture capital and private equity are limited, particularly affecting SMEs and innovative start-ups. The value of annual venture capital investment stood at 0.01% of GDP in 2023, compared to the EU average of 0.05% (see Annex 5). Government initiatives that support start-up funding or attract domestic institutional investors in private equity and venture capital could support capital market development and thus an improvement in access to finance.

Slovakia's complex regulatory environment and fragmented local governance hinder the business environment

Slovakia's business environment is one of the least favourable in the EU, hindering the country's competitiveness. As a result of long and complex administrative procedures, an unpredictable regulatory environment, fast-changing legislation and insufficient investment planning, among other things, Slovakia has the worst conditions for doing business in the EU (see Annex 4).

Simplification of administrative and regulatory procedures and increased transparency, predictability and evidence-based policymaking are key to improving the business environment. Slovak legislation tends to change rapidly and fast-track legislative procedures have become increasingly common when adopting new laws or amendments. For instance, in 2017-2021, 25 business-related laws were changed, on average, 62 times per calendar year (see Annex 4). At the same time, the number of legislative proposals between October 2023 and February 2025 bypassing standard impact assessments and stakeholder consultations reached 37% of adopted laws (see Annex 4). Under Slovakia's better regulation framework, there is a formal obligation to carry out impact assessments in various policy areas, among other things. However, the framework lacks a clear and binding nature, has limited quality and is not implemented effectively. The regulatory governance procedures are not obligatory for the parliament, which affects the quality of legislation, as in 2023, 60% of legislative initiatives were tabled by members of the parliament (see Annex 6). Despite the introduction of several measures, such as ex-post evaluations, prevention of gold-plating or anti-bureaucratic packages – also contained in the RRP – to simplify the regulatory environment and increase its predictability, the overall improvements have been marginal, with business and labour regulations in Slovakia significantly deteriorating in 2024 compared to the previous year (see Annex 4).

Fragmented public administration, limited transparency in public procurement processes and a lack of sound investment planning pose serious challenges to Slovakia's competitiveness.

Local administration is very fragmented. There is a large variation in the size of municipalities, hampering effective governance and cooperation, strategic planning and the correct implementation of fiscal policies (see Annex 6). Moreover, in the past few years, municipalities have received additional responsibilities that were not matched with adequate funding. A reform of the local governance structure, better streamlining powers and financing, could boost the effectiveness of investments and the absorption of funds. While a recent amendment to the Public Procurement Act aimed to simplify public procurement procedures for municipalities and businesses, results are yet to be confirmed (see Annex 4). Moreover, the changes pose transparency and competition risks, especially for below-threshold procurement, making it easier for favouritism to occur. Furthermore, investment management in Slovakia is currently planned for seven-year periods (linked to the timespan of EU funds) and lacks a long-term and strategic vision, giving little investment certainty to businesses as well as regional and local stakeholders. These challenges are especially problematic for small municipalities, which need additional training and capacity in procuring, planning projects and investments, and applying for EU funds. As the government is currently working on a national investment strategy until 2050, it is important that a cross-party agreement on the strategy will be reached, and that the strategy is adopted in good time.

Rule of law concerns have increased, and civil service reforms threaten stability and transparency

Recent changes to the civil service may negatively affect the quality of public administration. The Civil Service Council, an independent body overseeing the implementation of the Civil Service Act and handling complaints from civil servants, was dissolved in 2024. Amendments to the Civil Service Act in 2021 concerning dismissal procedures for civil servants have raised concerns regarding the stability and transparency of the system. At the same time, as a result of insufficient training and skills development of civil servants, the quality and productivity of the service remain rather low, hampering the regulatory environment (see Annex 6).

There are concerns over the judicial system and, following a series of recent reforms, the institutional and analytical capacity and ability of the police force and prosecutors to investigate and prosecute corruption was seriously disrupted in the course of 2024. Concerns over the judicial system include missing safeguards regarding the dismissal procedure of members of the Judicial Council. Moreover, several consecutive amendments to the criminal code, reducing the sentences and limitation periods for corruption criminal offences, and the dismantling of the Special Prosecution Office and the police force specialised in tackling corruption (National Crime Agency) raised serious concerns about the robustness of Slovakia's legislative framework. Subsequent reorganisations of the prosecution and police services led to the decentralisation of investigations and impacted the adequate follow-up of ongoing cases, as well as the degree of specialisation and capacity that had been

built over previous years also as part of RRP investments (e.g. ensuring the recruitment and training of police officers in the area of anti-corruption – Annex 6). These developments can further undermine Slovakia's competitiveness as they threaten to hamper the business and regulatory environment. As the negative impact on legal certainty and investor confidence may be long-lasting, it will be important to restore effective anti-corruption measures, including deterrence, investigation, and prosecution of high-level corruption.

Despite recent substantial changes made, the Slovak anti-money laundering framework and the framework for combatting the financing of terrorism call for additional improvements. Slovakia has taken important steps to address weaknesses in its framework for Anti-Money Laundering and Combatting the Financing of Terrorism (AML/CFT), notably by recently amending their main AML Act and also by regularly reporting to the Commission on the actions taken following a 2022 implementation report by the Council of Europe. However, concerns remain regarding the supervision of Non-profit organizations (NPOs) and the definition and monitoring of Virtual Assets Providers (VASPs) activities as recently outlined by Moneyval, as well as beneficial ownership information for trusts and similar legal arrangement, and fit and proper's requirements, in particular.

DECARBONISATION, ENERGY AFFORDABILITY AND SUSTAINABILITY

Supporting the roll-out of technologies for the green transition could boost economic resilience

Slovakia's large and labour-intensive industrial sector faces several challenges to modernise, meet climate objectives, and remain competitive. The industrial sector accounts for approximately 30% of GDP, significantly above the EU average. Slovakia is a global leader in per-capita car production. Its automotive industry is primarily combustion-based, but there are emerging signs of a shift towards electric vehicle production. At the same time, Slovakia also has the EU's highest share of emissions from manufacturing (35% – see Annex 7). In recent years, the industrial sector has faced increasing pressure to transition away from traditional production to new business opportunities, including more automated processes and the production of green technologies. Despite this, the manufacturing capacity across net-zero technologies remains limited, accounting for less than 1% of the EU's capacity for solar photovoltaic modules and around 2% for battery and storage technologies (see Annex 7). Manufacturing is still heavily reliant on imports of critical raw materials, given the country's rather low endowment of subsoil assets ([10]), making Slovakia particularly vulnerable to supply chain disruptions. By gradually shifting towards a more diversified and innovation-driven economy, Slovakia could boost long-term economic sustainability and its resilience to external shocks.

Slovakia has recently taken measures to support the roll-out of projects in strategic sectors, including those promoting the growth of the green economy. In March 2024, Slovakia adopted its framework to support strategic sectors ([11]). As of March 2025, businesses in targeted areas are able to benefit from increased financial incentives, as the government increased the intensity of investment support for the digital, green, biotechnology and pharmaceutical sectors by 10% ([12]). Although an important step, the support framework could be complemented by a transparent mechanism to regularly review priority actions, targeting particularly high-value manufacturing and investing in emerging industries. To boost the effectiveness of investments, eligible actions could include infrastructure (digital and electricity connection for businesses) and innovation investments, but also reskilling and advisory services to further integrate producers into the EU-wide supply chains. There is also further scope for introducing an overarching net-zero policy framework to support cleantech manufacturing.

([10]) https://www.minzp.sk/files/iep/making-slovak-republic-more-resource-efficient-economy_final.pdf.

([11]) Act No. 142/2024 Coll. The act enables the designation of certain investments as strategic. Such investments are to benefit from faster permitting procedures.

([12]) Act No. 34/2025 Coll. The act increases the intensity of investment support by 10 percentage points.

To address persistently high non-household energy costs hindering the business environment, there is scope to scale up renewable energy infrastructure investments and reform taxes and tariff structures. Wholesale electricity prices were the ninth highest in the EU in 2024, averaging 93 EUR/MWh (see Annex 8). Regional wholesale prices also remained above the European Power Benchmark in 2024 ([13]). Also, non-household natural gas prices were the fourth highest in the EU in the first half of 2024 ([14]). The scope for reforming electricity taxation is underscored by the significant share of taxes and levies in the electricity price for energy-intensive industries, amounting to 11% (see Annex 7). Furthermore, electrification is disincentivised by Slovakia having one of the EU's widest gaps between electricity and gas prices, with electricity costing 2.8 times more for energy-intensive industries, and 3.1 times for households after taxes (see Annex 7). The effective carbon rate is also lower than the EU average (see Annex 2 and 8), driven by lower fuel excise duties. The existing exemption from excise duty on coal and natural gas also does not provide the right incentive for the use of cleaner sources and perpetuate the use of fossil fuels. Moreover, with regulated electricity and gas prices for all households, consumer engagement and energy efficiency investment incentives remain subdued.

The potential of renewable energy sources is underused in Slovakia

In 2024, renewables contributed to 24% of Slovakia's electricity mix, well below the EU average of 47%. At the same time, Slovakia's national renewables target for 2030 – as set out in its draft updated national energy and climate plan – is 23%, far below the 35% set by the Energy Union governance formula ([15]). While Slovakia has recently adopted several reforms to support the roll-out of investments in renewables and accelerate permitting procedures, some of these measures are yet to be implemented (e.g. acceleration zones). More ambition is needed also in incentivising grid investments through regulatory policies of grid operators. Furthermore, Slovakia needs to take action to boost the support of local communities for renewables and ensure their right to participate in permitting processes. Furthermore, fossil fuel consumption in Slovakia would benefit from greater diversification, as Russian crude oil, for example, still makes up more than 80% of all crude oil consumed in 2024 and around 70% of natural gas was of Russian origin in the same year (see Annex 8).

Decarbonising the heating sector in Slovakia is crucial for meeting the country's climate goals and reducing reliance on fossil fuels, particularly natural gas. Despite the significantly decarbonised electricity mix due to nuclear sources, the heating system is still heavily reliant on fossil fuel, in particular imported natural gas (see Annex 8). The potential of

([13]) Study on energy prices and costs – evaluating impacts on households and industry's costs – 2024 edition. Page 40 (Figure 7).

([14]) Eurostat (online data codes:nrg_pc_2023).

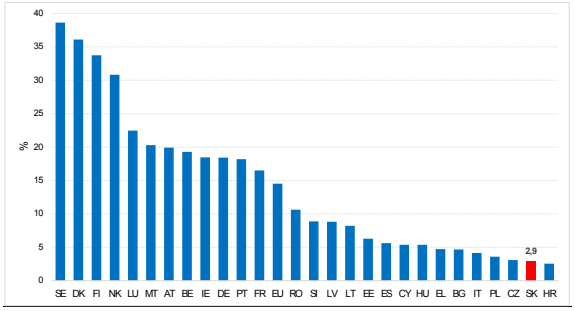
([15]) Commission Recommendation of 18.12.2023 on the draft updated integrated national energy and climate plan of Slovakia covering the period 2021-2030 and on the consistency of Slovakia's measures with the Union's climate-neutrality objective.

renewable energy sources (e.g. geothermal), clean technologies (e.g. heat pumps) and energy efficiency savings in Slovakia's large district heating networks is underutilised, even though the Modernisation Fund already provides significant financial support to this sector. At the same time, for components used in heat pumps and geothermal energy applications, Slovakia stands out as a Member State with competitive production facilities ([16]). Government policies, including subsidies and incentives, are supporting households and businesses in adopting greener heating technologies. However, challenges such as high upfront costs and the need to modernise heat distribution remain key hurdles to achieving the full decarbonisation of the heating sector. Slovakia could consider further measures to support high-efficiency cogeneration and the modernisation of heat distribution and to improve the integration of renewables into the heating system.

Clean transport infrastructure development lags behind

Slovakia's large automotive industry faces challenges in promoting zero-emission vehicles domestically. Despite being highly export-driven, the Slovak automotive sector struggles with low consumer interest in zero-emission vehicles within the country. Zero-emission vehicles make up only 2.9% of new car registrations (see Graph 3.1 and Annex 7), placing Slovakia among the last EU countries in terms of deployment of zero-emission road transport. Therefore, the low demand for these vehicles may hinder the future competitiveness of Slovakia's automotive sector on its domestic market as the sector increasingly shifts towards manufacturing only zero-emission vehicles. While the uptake is slowly improving thanks to recovery and resilience plan (RRP) reforms, such as the adoption of the Electromobility Action Plan, structural issues such as low domestic interest remain, particularly due to the slow implementation of incentives from the action plan and low affordability of zero-emission vehicles for individuals and companies. Similarly, the deployment of recharging and hydrogen-refuelling infrastructure is also lagging, as the rate of deployment of both solutions is equally one of the lowest in the EU. Although an investment in recharging and hydrogen-refuelling infrastructure is planned under the RRP, this will be insufficient to fully inspire significant further investments by the private sector in such infrastructure and to meet requirements set by EU legislation. Slovakia could consider further financial support for the uptake of zero-emission infrastructure and incentives for private companies to invest in the expansion of public infrastructure.

Graph 3.1:**Zero-emission passenger cars in 2023 (% of new registered vehicles)**



Source: Eurostat

Railway transport infrastructure lacks efficient governance and is slow in modernisation. This is despite some progress in recent years in increasing the amounts allocated for financing the

([16]) European Commission: Directorate-General for Energy and ECORYS, The net-zero manufacturing industry landscape across Member States – Final report, Publications Office of the European Union, 2025, https://data.europa.eu/doi/10.2833/2249632.

operation of infrastructure and for investment projects. State-owned railway infrastructure is modernising at a slow pace and remains unattractive both for passenger and commercial use. Slovakia currently lacks a centralised approach to strategically ensure financing of renovations and upgrades of national transport infrastructure (see Annex 7). A centralised national fund could help accelerate medium- to long-term planning and financing of key transport investments. This could be accompanied by a reform of national railway infrastructure management, to accelerate and streamline investments in modernising physical and digital rail infrastructure.

Nature-based solutions are key to improving Slovakia's water resilience

The quality of Slovak surface water bodies is deteriorating as a result of inadequate water management measures. The assessment of Slovakia's third river basin management plans showed that the number of surface water bodies classified as having good (or better) ecological status has decreased significantly from 56% in 2015 to 41% in 2021 (see Annex 9). This pressure has been caused by an increased number of extreme weather events, excessive amounts of pollutants and frequent changes to the shape and flow of water bodies. The increasing number of areas that are affected by drought as well as floods (e.g. in September 2024) also demonstrates the urgency for increasing water resilience. Yet, in 2023, Slovakia's draft updated national energy and climate plan did not take account of relevant and acute climate vulnerabilities and risks, which risks jeopardising the achievement of energy and climate mitigation objectives. Improving water bodies' status and increasing resilience to floods and droughts require improving sustainable water management and prioritising nature-based solutions and river restorations over constructing new water dams and other 'grey infrastructure'. Even though the Slovak RRP includes some measures on revitalisation of watercourses, these are not sufficient to address the challenges.

SKILLS, QUALITY JOBS AND SOCIAL FAIRNESS

Staff and skills shortages put brakes on growth

Addressing staff and skills shortages through targeted upskilling and reskilling would boost productivity and help deliver on the green and digital transitions. Shortages of workers in Slovakia are particularly severe in construction, industry and services, with education and healthcare services being particularly understaffed. At the same time, there is a significant shortage of workers with specific skills, especially green and digital. Slovakia lacks ICT specialists, and the share of people with at least basic digital skills remains low: it decreased to 51.3% in 2023 (see Annex 13), which is still below the EU average of 55.6%. Efforts are particularly needed to increase the currently low share of students enrolled in science, technology, engineering and mathematics (STEM) programmes as this share was at 21.8% in 2022 (against an EU average of 27.1%). Targeted reskilling and upskilling measures are thus crucial for adapting to the changing job market demands and promoting the diversification of the Slovak economy.

Targeted and effective active labour market policies (ALMPs), combined with more flexible working arrangements could encourage more people to work or look for a job and reduce shortages of workers. While the overall unemployment rate has been declining in recent years, long-term and youth unemployment remain high. At the same time, the unemployment rate among people from disadvantaged groups, such as the marginalised Roma communities, rose to 53.4%, against an EU average of 19%, in 2022 (see Annex 10). Slovakia has very low investments in ALMPs, with a substantial part of investments financed from cohesion policy funds. These measures fail to sufficiently address the needs of the under-represented and most vulnerable groups in the country, such as Roma, young people, women and long-term unemployed people (see Annex 10).

Insufficient childcare makes it more difficult for people to work or look for a job

The lack of childcare for children under the age of 3 and the limited availability of flexible work arrangements make it more difficult for women and parents to work or look for a job. In 2024, the enrolment rate of children under 3 in early childhood education and care increased to 5.1% but remains far below the EU average of 39.2% ([17]). The situation is even more serious for children from marginalised Roma communities. The limited participation of children under 3 in formal childcare is attributed to the generous parental leave periods, which discourage women from reintegrate into the job market, and the insufficient availability of affordable high-quality childcare facilities (see Annex 10). As a result, the rate of

([17]) Eurostat.

women who are working or looking for a job is relatively low in Slovakia. More efforts to increase the availability of childcare facilities and promote the enrolment of children under 3 would not only contribute to increasing the rate of women who are working or looking for a job, but also to facilitating long-term skills development. At the same time, introducing more flexible work arrangements would incentivise parents to work more. For instance, supporting part-time employment and revising the tax system, in particular by reducing the cost of part-time workers for employers, could help get parents of young children into work. To further increase the supply of workers, implementing measures in the RRP to attract, for example, doctors and other healthcare workers will be important. This could be done, for instance, by simplifying procedures for the recognition of degrees and work experience and by facilitating integration. However, further efforts are needed to train and attract workers in sectors where it is most difficult to find qualified applicants.

Challenges in the education system weaken basic skills performance

A shortage of teachers, insufficient in-service training and support to teachers, long-term underfunding of the education system, and the low attractiveness of the teaching profession worsen pupils' performance in basic skills. Relatively low renumeration, insufficient access to high-quality continuing professional development and a high administrative burden make the teaching profession unattractive, with negative consequences for the quality of education. Many children from disadvantaged backgrounds, including from the marginalised Roma communities, face significant socio-economic challenges hindering their educational outcomes (see Annex 12). In the 2022 OECD PISA survey, 33.2% of Slovak students underperformed in mathematics, 35.4% in reading and 30.6% in science (EU averages: 29.5%, 26.2% and 24.2%, respectively), among the highest underachievement rates in the EU. Nevertheless, the ongoing curricular reform, supported by the RRP, should ensure improving basic skills, particularly for maths and reading. The success of the curricular reform will also depend on how teachers are prepared and supported in implementing it. Low basic skills are also a concern among adults, as results of the Survey of Adult Skills ([18]) show a significant decline in literacy and numeracy performance between 2011/2012 and 2022/2023, with a growing share of low-performing adults and a shrinking share of high performers.

Social inclusion could be strengthened, and the availability and accessibility of housing increased

The risks of poverty and social exclusion have been increasing already since 2020 (see Annex 11). More action is needed to reach the national 2030 poverty reduction target. The rate of children who are at risk of poverty or social exclusion dropped below the EU average but remains relatively high (22.6% vs EU 24.2% in 2024 – see Annex 11). Challenges surrounding poverty are marked by regional disparities, with the eastern part of the country experiencing the most significant challenges. With the

([18]) OECD (2024), *Do adults have the skills they need to thrive in a changing world? Survey of Adult Skills 2023*, OECD Publishing, Paris, https://doi.org/10.1787/b263dc5d-en.

support from the RRP and the European Social Fund Plus, several policy measures are being implemented to reduce the segregation of Roma in education, for example by introducing a legal definition of segregation in education. Nonetheless, challenges remain, especially at local level.

The supply of social housing is low. Only 1.6% of the housing stock is dedicated to social rental housing. As the most vulnerable people struggle to access housing, increasing public support for the construction of social housing would be important to address this (see Annex 11). The expansion of the social housing stock in Slovakia could benefit more from the experience of non-governmental organisation and social enterprises to make housing projects more inclusive, for example by easing the eligibility requirements for the most vulnerable people and by complementing the housing with the necessary supporting services (psychological, social, financial care). Slovakia could scale up and mainstream existing pilot projects funded by the European Social Fund Plus that combine the easing of eligibility requirements and the provision of social services to deprived tenants. At the same time, following a period of slower mortgage growth, the growth rate of house prices has gradually picked up, hampering housing affordability. The decline in residential construction limits the supply of housing, putting upward pressure on house prices.

The quality and sustainability of the healthcare system can be improved

The lack of healthcare professionals and the ageing workforce pose serious challenges to the sustainability of Slovakia's healthcare system. Slovakia has a lower density of healthcare workers than the EU average, with 3.7 doctors and 5.7 nurses per 1 000 people in 2022, compared to the EU averages of 4.2 and 7.6, respectively (see Annex 14). Additionally, 23.7% of nurses are nearing retirement, which will exacerbate the shortage. The efforts to increase enrolment in healthcare studies, improve working conditions and modernise infrastructure appear to be very limited compared to the system's needs.

Persisting inefficiencies in the hospital sector and a lack of disease prevention pose an additional risk to the sustainability of the healthcare system. By the end of 2023, Slovakia's 13 largest state hospitals were facing significant debt, with an average delay in bill payments of 400 days. Financial constraints and late payments hinder efforts to boost efficiency gains in healthcare. Moreover, in 2022, only 2.0% of Slovakia's total health expenditure was allocated to prevention, far below the EU average of 5.5%. Slovakia also reports some of the highest rates of treatable mortality in the EU, particularly from cardiovascular diseases and cancer. There is significant potential to improve the cost-effectiveness of the healthcare system by optimising resource allocation, further digitalising the health system, and further centralising administrative functions. Simultaneously, improving preventive care services is important to lower mortality from preventable causes and to reduce healthcare costs.

KEY FINDINGS

To boost competitiveness, sustainability and social fairness, Slovakia would benefit from:

- **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;

- **making the tax system fairer and more efficient** by: (i) integrating value-based aspects, such as land value, into the calculation of property taxation; (ii) strengthening environmental taxes; and (iii) reducing the high taxes on wages, in particular for people on lower incomes;

- **supporting the housing supply and expanding the rental market** by streamlining the process of obtaining building permits and reducing administrative burdens, while taking into consideration vulnerable groups in state-supported housing programmes;

- **ensuring that government policies to reduce the deficit and debt supports growth** by: (i) complementing the recent tax increases with measures that preserve investment; (ii) increasing the efficiency of public spending, in particular in healthcare; (iii) avoiding excessive tax burdens on businesses; and (iv) maintaining a growth-friendly budget composition;

- **boosting innovation and digitalisation** by: (i) increasing public and private R&D investment; (ii) encouraging business-science linkages; (iii) improving financial support and exploiting the potential of R&D tax incentives for SMEs; (iv) strengthening digital infrastructure, including by rolling out very high-capacity digital networks; and (v) supporting SME adoption of advanced digital technologies;

- **improving the business environment** by: (i) simplifying administrative and regulatory procedures; (ii) ensuring legislative stability, transparency and use of evidence through a more effective better regulation framework; (iii) boosting transparency and competition in public procurement; and (iv) strengthening investment planning;

- **strengthening governance and anti-corruption measures** by reforming the local governance structure, ensuring civil service stability, and restoring the independence and capacity of law enforcement to fight corruption;

- **improving access to finance** by supporting the development of capital markets, increasing retail

investment and expanding venture capital and private equity to support SMEs and start-ups;

- **making further progress to decarbonise, innovate and diversify the economy** by reforming electricity and carbon taxation to incentivise electrification, strengthening the legislative and investment framework for production of clean and renewable technologies, and supporting decarbonisation of the heating and transport sectors, including for zero-emission vehicle infrastructure;

- **increasing climate and water resilience** by improving sustainable water management and prioritising nature-based solutions and river restorations;

- **addressing labour and skills shortages** by: (i) expanding green and digital skills training; (ii) strengthening active labour market policies for long-term unemployed people, Roma, women and parents with young children; (iii) introducing more flexible work arrangements; (iv) promoting training and support for recruiting and retaining healthcare professionals and teachers; (v) tackling the low uptake of early childhood education and care for children under the age of 3; (vi) increasing enrolment in science, technology, engineering, and mathematics (STEM) education; (vii) improving teacher support and training to strengthen basic skills for pupils; and (viii) expanding preventive healthcare measures.

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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 Slovakia, including how Slovakia is responding to Council recommendations issued under the reformed Economic Governance Framework.

The reformed framework, which entered into force on 30 April 2024([19]), 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.

Slovakia submitted its plan on 15 October 2024. The plan covers the period until 2028, presenting a fiscal adjustment over four years. On 21 January 2025, the Council adopted the Recommendation endorsing Slovakia's ([20]). On 21 January 2025 the Council also adopted a Recommendation under Article 126(7) TFEU to correct the excessive deficit in Slovakia([21]). 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 to correct the excessive deficit and endorsing the Slovakia's plan is carried out on the basis of outturn data from Eurostat and the Commission Spring 2025 Forecast and taking into account the Annual Progress Report (APR), that Slovakia submitted on 30 April 2025. Furthermore, given Slovakia's request to activate the National Escape Clause ([22]) in accordance with the Commission Communication of 19 March 2025([23]), 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 A1.8, including data on defence expenditure.

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.([24])

([19]) 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.

([20]) OJ C, C/2025/645, 10.2.2025, ELI: http://data.europa.eu/eli/C/2025/645/oj.

([21]) Council Recommendation with a view to bringing an end to the situation of an excessive deficit in Slovakia, C/2025/5039.

([22]) On 30 April 2025, Slovakia 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 Slovakia to deviate from, and exceed, the net expenditure path set by the Council, COM(2025)614.

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

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

Developments in government deficit and debt

Slovakia's government deficit amounted to 5.3% of GDP in 2024. Based on the Commission's Spring 2025 Forecast, it is projected to decrease to 4.9% of GDP in 2025. The government debt-to-GDP ratio amounted to 59.3% at the end of 2024 and, according to the Commission, it is projected to increase to 60.9% end-2025. The high debt in 2025 results primarily from accumulated high primary deficits in the previous years that more than compensate the favourable interest-growth-rate differential.

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

	Variables		2024	2025		2026	
			Outturn	APR	COM	APR	COM
1	General government balance	% GDP	-5.3	-4.9	-4.9	-4.5	-5.1
2	General government gross debt	% GDP	59.3	61.1	60.9	63.3	63.0

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

Developments in net expenditure

The net expenditure([25]) growth of Slovakia in 2025 is forecast by the Commission([26]) to be below the recommended maximum. Considering 2024 and 2025 together, the cumulative growth rate of net expenditure is also projected to be below the recommended maximum cumulative growth rate. The Annual Progress Report (APR) presents a lower net expenditure growth rate of 3.0% for 2024 than the Commission's estimate, due to the APR assuming a lower level of EU-funded expenditures for 2023 than in the validated outturn data from Eurostat. This assumption leads to higher net expenditure in the APR, resulting in a lower growth rate for 2024 and subsequently lower cumulative growth rate estimates.

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

	Annual			Cumulative*		
	REC	APR	COM	REC	APR	COM
	Growth rates					
2024	n.a.	3.0%	5.4%	n.a.	n.a.	n.a.
2025	3.8%	3.6%	3.8%	10.3%	6.6%	9.3%
2026	0.9%	2.3%	3.9%	11.2%	n.a.	13.6%

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

([25]) 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.

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

General government defence expenditure in Slovakia amounted to 1.4% of GDP in 2021, 1.0% of GDP in 2022 and 1.2% of GDP in 2023([27]). According to the Commission 2025 Spring Forecast, expenditure on defence is projected at 1.3% of GDP in 2024 and 2.3% of GDP in 2025.

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

	Variables		2023	2024	2025	2026
			Outturn	Outturn	COM	COM
1	Total expenditure	bn NAC	59.4	61.7	67.0	71.1
2	Interest expenditure	bn NAC	1.4	1.8	2.2	2.4
3	Cyclical unemployment expenditure	bn NAC	0.0	0.0	0.0	0.0
4	Expenditure funded by transfers from the EU	bn NAC	4.2	2.0	3.2	4.1
5	National co-financing of EU programmes	bn NAC	0.6	0.5	0.4	0.4
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**	**53.2**	**57.4**	**61.3**	**64.2**
8	Change in net nationally financed primary expenditure (before DRM)	bn NAC		4.3	3.9	2.9
9	DRM (excl. one-off revenue, incremental impact)	bn NAC		1.4	1.7	0.5
10=8-9	**Change in net nationally financed primary expenditure (after DRM)**	**bn NAC**		**2.8**	**2.2**	**2.4**
11	Outturn / forecast net expenditure growth	% change		5.36%	3.8%	3.9%
12	Recommended net expenditure growth*	% change		6.2%	3.8%	0.9%
13=(11-12) x 7	Annual deviation	bn NAC		-0.4	0.0	1.9
14 (cumulated from 13)	Cumulated deviation	bn NAC		-0.4	-0.5	1.4
15=13/17	**Annual balance**	**% GDP**		**-0.3**	**0.0**	**1.3**
16=14/17	**Cumulated balance**	**% GDP**		**-0.3**	**-0.3**	**1.0**
17	p.m. Nominal GDP	bn NAC	123.8	131.0	138.1	144.7

* 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

Table A1.4: **Defence expenditure**

			2021	2022	2023	2024	2025	2026
1	Total defence expenditure	% GDP	1.4	1.0	1.2	1.3	2.3	2.0
2	*of which: gross fixed capital formation*	% GDP	0.2	-0.1	-1.0	0.2	1.2	0.9
3	Flexibility from increases in defence expenditure	% GDP					0.9	0.6
4	**Cumulated balance after flexibility**	**% GDP**					**-1.2**	**0.4**

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

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

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

	Variables		2024	2025		2026	
			Outturn	APR	COM	APR	COM
1=7+8+9	**Real GDP**	**% change**	**2.1**	**1.9**	**1.5**	**1.9**	**1.4**
2	Private consumption	% change	2.9	1.6	0.9	1.8	1.6
3	Government consumption expenditure	% change	3.7	1.3	0.9	1.2	0.8
4	Gross fixed capital formation	% change	1.8	8.9	3.6	-0.3	3.8
5	Exports of goods and services	% change	0.3	2.7	1.9	3.9	1.8
6	Imports of goods and services	% change	2.3	4.4	2.1	3.7	2.4
	Contributions to real GDP growth						
7	- Final domestic demand	pps	2.9	3.1	1.4	1.2	1.9
8	- Change in inventories	pps	1.0	0.6	0.2	0.6	0.0
9	- Net exports	pps	-1.8	-1.3	-0.2	0.3	-0.5
10	Output gap	% pot GDP	-0.3	-0.5	-0.8	-0.8	-1.4
11	Employment	% change	-0.2	0.3	-0.1	0.1	-0.1
12	Unemployment rate	%	5.3	5.3	5.3	5.2	5.3
13	Labour productivity	% change	2.2	1.7	1.6	1.8	1.5
14	HICP	% change	3.2	3.9	4.0	3.7	2.9
15	GDP deflator	% change	3.6	3.1	3.9	3.4	3.3
16	Compensation of employees per head	% change	7.3	5.3	4.9	5.3	4.4
17	Net lending/borrowing vis-à-vis the rest of the world	% GDP	-2.1	n.a.	-1.9	n.a.	-2.3

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**	**41.8**	**44.0**	**43.6**	**42.7**	**44.0**
	of which:					
2	- Taxes on production and imports	11.4	12.6	12.5	12.5	12.4
3	- Current taxes on income, wealth, etc.	8.2	8.3	8.3	8.2	8.2
4	- Social contributions	16.0	15.9	15.8	16.1	15.9
5	- Other (residual)	6.2	7.2	7.0	5.9	7.5
8=9+16	**Expenditure**	**47.1**	**48.9**	**48.5**	**47.3**	**49.1**
	of which:					
9	- Primary expenditure	45.7	47.3	46.9	45.7	47.5
	of which:					
10	- Compensation of employees	11.3	11.1	11.3	11.0	11.2
11	- Intermediate consumption	5.7	6.3	5.6	6.0	5.4
12	- Social payments	20.8	20.4	20.2	20.0	20.3
13	- Subsidies	1.7	1.1	1.0	0.7	0.9
14	- Gross fixed capital formation	3.6	4.9	5.1	3.6	5.2
15	- Other	2.6	3.5	3.7	4.4	4.5
16	- Interest expenditure	1.4	1.6	1.6	1.6	1.6
18=1-8	**General government balance**	**-5.3**	**-4.9**	**-4.9**	**-4.5**	**-5.1**
19=1-9	**Primary balance**	**-3.9**	**-3.3**	**-3.3**	**-2.9**	**-3.5**
20	Cyclically adjusted balance	-5.2	n.a.	-4.5	n.a.	-4.6
21	One-offs	0.0	0.0	0.0	0.0	0.0
22=20-21	**Structural balance**	**-5.2**	**-4.5**	**-4.5**	**-4.2**	**-4.6**
23=22+16	Structural primary balance	-3.8	-2.9	-3.0	-2.6	-3.0

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)**	**59.3**	**61.1**	**60.9**	**63.3**	**63.0**
2=3+4+8	Change in the ratio (pps. of GDP)	3.6	1.8	1.6	2.2	2.1
	Contributions**					
3	**Primary balance**	**3.9**	**3.3**	**3.3**	**2.9**	**3.5**
4≈5+6+7	**'Snow-ball' effect**	**-1.6**	**-1.3**	**-1.5**	**-1.5**	**-1.2**
	of which:					
5	- Interest expenditure	1.4	1.6	1.6	1.6	1.6
6	- Real growth effect	-1.1	-1.1	-0.8	-1.1	-0.8
7	- Inflation effect	-2.0	-1.8	-2.2	-2.0	-2.0
8	**'Stock-flow' adjustment**	**1.4**	**-0.3**	**-0.2**	**0.8**	**-0.2**

* 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	0.0	0.1	0.7	2.2	1.6
2	Cash disbursements of RRF grants from EU	n.a.	0.8	0.4	1.2	0.6	1.0	1.1

	Expenditure financed by RRF grants (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
3	Total current expenditure	0.0	0.0	0.0	0.1	0.2	0.2	0.2
4	Gross fixed capital formation	0.0	0.0	0.0	0.1	0.1	1.5	1.0
5	Capital transfers	0.0	0.0	0.0	0.0	0.4	0.5	0.5
6=4+5	Total capital expenditure	0.0	0.0	0.0	0.1	0.4	2.0	1.4

	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	0.0
8	Other costs with impact on revenue	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Financial transactions	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Annual Progress Report

Cost of ageing

Total age-related spending in Slovakia is projected to rise from about 20% of GDP in 2024 to 23% in 2040 and to 25% in 2070 (see Table A1.9**).** The overall increase of around 5 pps of GDP by 2070 is due to a combination of rising pension, healthcare and long-term care expenditure.

Public pension spending is projected at 9.4% of GDP in 2024 and to rise by 2 pps of GDP by 2070, of which 1.4 pps would occur by 2040. The peak increase is expected in the late 2050s, when spending would be 2.8 pps of GDP higher than in 2024, followed by a decrease over the final decade of the projections.

Public healthcare expenditure is projected at 6.1% of GDP in 2024 (slightly below the EU average of 6.6%) and is expected to increase by 0.7 pps by 2040 and by a further 0.4 pps by 2070. These increases, due to an ageing population, pose a risk to fiscal sustainability in the medium and long term ([28]).

Public expenditure on long-term care is projected at 1.1% of GDP in 2024 (below the EU average of 1.7%) and is expected to increase by 0.5 pps of GDP by 2040 and by a further 0.8 pps of GDP by 2070 ([29]).

Table A1.9: **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)	
SK	20.3	*1.4*	*0.7*	*0.5*	*0.1*	***2.8***	23.1	**SK**
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)	
SK	20.3	*2.0*	*1.2*	*1.3*	*0.3*	***4.7***	25.0	**SK**
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 Slovak Council for Budget Responsibility (CBR) is a well-resourced independent fiscal institution with a broad mandate and a relatively developed media presence. The leadership has staggered (but non-renewable) mandates of seven years and is subject to a three-year "cooling off period" before joining a government. Although its access to information has recently been strengthened, it has no formal access-to-information agreement with the Ministry of Finance and no legal base for access to data from entities outside the general government sector, such as state-

([28]) Key performance characteristics, recent reforms and investments of the Slovak healthcare system are discussed in Annex 14 'Health and health systems'.

([29]) The adequacy and quality of the Slovak long-term care system are covered in Annex 11 'Social policies'.

owned enterprises. In addition, the CBR has no recourse if an entity refuses to provide the requested data. Its policy dialogue with the government is underdeveloped.

Slovakia continues to reform the planning of public investment, including through the recovery and resilience plan, while monitoring and ex-post assessments remain weak. Project selection at ministry level has improved through a new methodology for the preparation and evaluation of investment projects, including the role of investment strategies ([30]) This methodology is due to be implemented retroactively and gradually across the full investment portfolio by 2026 ([31]). Further reforms of project governance are planned by the Investment Authority Slovakia, aimed to improve risk management and project selection. In addition, all central government investment projects above EUR 40 million must be submitted to the Ministry of Finance for evaluation. For projects above EUR 40 million, mandatory feasibility studies. are performed. The assessment of the investment projects is carried out centrally by the Ministry of Finance, unless a project is classified as a "strategic investment", in which case the assessment does not have to be centrally performed by the Ministry of Finance. Since 2021, only evaluated and prepared projects can be included in the budget. By contrast, there are no systematic ex post reviews or asset registers in place.

Table A1.10: **Fiscal Governance Database Indicators**

2023	Slovakia	EU Average
Country Fiscal Rule Strength Index (C-FRSI)	16.06	14.52
Medium-Term Budgetary Framework Index (MTBFI)	0.78	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

([30]) Measure C.18 [R.3] on streamlining public investment - application of the methodology for the procedures for preparing and prioritising investments.

([31]) Recovery and Resilience Plan measure C.18 [R.3].

This annex provides an indicator-based overview of Slovakia'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.

In October 2024, Slovakia's parliament approved a comprehensive fiscal consolidation package (combining expenditure cuts and revenues increases) totalling EUR 2.7 billion. The package is supposed to reduce the budget deficit by approximately 1 percentage point annually and bring it below 3% of GDP by 2027. Among tax increases, the consolidation plan includes: (i) adjustments to VAT (increase of a base rate from 20% to 23%); (ii) reforms of corporate-income tax (CIT) (strengthening the progressive nature of the tax structure); (iii) the introduction of a financial transaction tax; and (iv) the strengthening of the special levy in regulated industries. These measures reflect Slovakia's commitment to fiscal discipline and are designed to stabilise the debt-to-GDP ratio at approximately 60.5% by 2028.

The tax mix could be made more efficient and more supportive of inclusive and sustainable growth. Table A2.1 shows that Slovakia's total tax revenue in 2024 was equivalent to 35.3% of GDP, well below the EU aggregate of 39.0% despite a steady upward trend in the ratio since 2010. Both labour and consumption taxes account for a significantly higher share of Slovakia's total tax revenue (Graph A2.1) than the respective EU averages. The largest portion of tax revenues comes from labour taxes, which represent 53.9% of total tax revenue (2.7 pps above the EU average). This is followed by consumption taxes which make up 33.0% of total revenue, compared with the EU average of 26.9%. A distinctive feature of Slovakia's tax mix is that the high share of labour taxes is primarily driven by compulsory social contributions, which amount to 42.9% of total revenue, exceeding the EU average (32.6%) for 10.3 pps (in terms of GDP, social contributions in Slovakia amounted to 15.1% of GDP, against the EU average of 12.7% of GDP). In contrast, taxes on capital account for only 13.1% of total taxation, significantly below the

Table A2.1: **Taxation indicators**

		Slovakia					EU-27				
		2010	2021	2022	2023	2024	2010	2021	2022	2023	2024
Tax structure	Total taxes (including compulsory actual social contributions) (% of GDP)	27.8	34.7	35.0	34.9	35.3	37.8	40.2	39.7	39.0	
By tax base	Taxes on labour (% of GDP)	14.4	18.6	18.4	18.9		19.8	20.5	20.1	20.0	
	of which, social security contributions (SSC, % of GDP)	11.9	15.0	14.7	15.1		12.9	13.0	12.7	12.7	
	Taxes on consumption (% of GDP)	9.8	11.3	11.3	11.6		10.9	11.2	10.9	10.5	
	of which, value added taxes (VAT, % of GDP)	6.1	7.4	7.7	8.0		6.8	7.3	7.4	7.1	
	Taxes on capital (% of GDP)	3.6	4.7	5.2	4.6		7.1	8.5	8.7	8.5	
Some tax types	Personal income taxes (PIT, % of GDP)	2.6	3.7	3.7	3.8		8.6	9.6	9.4	9.3	
	Corporate income taxes (CIT, % of GDP)	2.4	3.6	3.6	3.6		2.2	2.9	3.2	3.2	
	Total property taxes (% of GDP)	0.4	0.5	0.4	0.4		1.9	2.2	2.1	1.9	
	Recurrent taxes on immovable property (% of GDP)	0.4	0.5	0.4	0.4		1.1	1.1	1.0	0.9	
	Environmental taxes (% of GDP)	2.1	2.3	2.5	2.0		2.5	2.4	2.1	2.0	
	Effective carbon rate in EUR per tonne of CO_2 equivalents	NA	65.8	NA	64.1		NA	86.0	NA	84.8	
Progressivity & fairness	Tax wedge at 50% of average wage (single person) (*)	31.8	36.9	37.3	37.6	38.2	33.9	31.8	31.5	31.5	31.8
	Tax wedge at 100% of average wage (single person) (*)	38.1	41.5	41.6	41.7	42.6	40.9	39.9	39.9	40.2	40.3
	Corporate income tax - effective average tax rates (1) (*)	18.6	20.6	20.6	20.6		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) (*)	5.6	6.4	6.0	6.6		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 %) (*)		21.6	19.8				35.5	32.6		
	VAT gap (% of VAT total tax liability, VTTL) (**)		13.8	14.6				6.6	7.0		

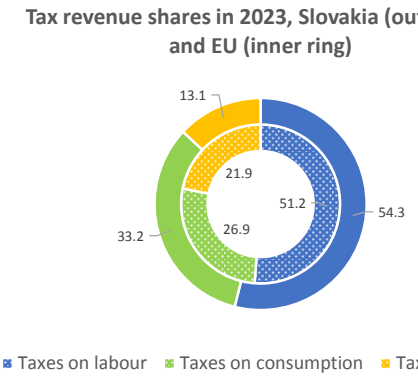
(1) Forward-looking effective tax rate (KPMG).
(2) A higher value indicates a stronger redistributive impact of taxation.
(*) EU-27 simple average.
(**) For more details on the VAT gap, see European Commission, Directorate-General for Taxation and Customs Union, VAT gap in the EU - 2024 report, https://data.europa.eu/doi/10.2778/2476549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

EU average of 21.9%. The structure of Slovakia's tax mix suggests that careful consideration should be given to a rebalancing, shifting the burden away from labour taxation to capital taxation. This could play a role in supporting inclusive growth and equality of opportunity.

Revenues from property taxes in Slovakia are low (equivalent to 0.4% of GDP in 2023 compared with 1.9% of GDP in the EU as a whole), despite property taxes being considered relatively growth friendly. Unlike most other Member States, Slovakia has an area-based taxation system, in which immovable property is taxed based on its area rather than its estimated market value. In such a taxation framework, the location, quality, type, number of rooms and age of the dwelling are not factored in, and this hampers fairness and equity. Slovakia still does not possess either valuation systems or sufficient data to align the notional property values used by the taxation system with market values. Given these characteristics, implementing a market-value-based taxation system, either in addition to or as a replacement for the current area-based system, would be more appropriate to improve fairness, increase tax revenue, and help dampen real estate demand. Currently, the market value is factored in the calculation of the land tax which, however, does not apply to areas covered by buildings or apartments. In this regard, the extension of a levy on land value, typically imposed on landowners, could be an efficient and non-distortive solution to address the issues arising from the current area-based property tax system.

With the stagnating share of environmental taxation in Slovakia's tax mix, more use can be made of this tax type. Specifically, revenues derived from taxes on transport, pollution and natural resources, consistently below the EU average, indicate potential to strengthen the application of the 'polluter pays' principle. Effective carbon rate in EUR per tonne of CO_2 equivalents in Slovakia (64.1) is significantly below the EU average (84.8), which suggests weaker economic incentives for businesses and consumers to reduce emissions in line with EU and global climate goals. To fully internalise externalities, Slovakia could consider expanding the use of underutilised environmental tax instruments such as waste disposal taxes (including incineration), transport taxes, and additional levies on waste discharge into water or plastic products.

Graph A2.1: **Tax revenue shares in 2024**



Source: Taxation Trends Data, DG TAXUD

The consolidation package will impact companies through increased taxation and higher operational costs. This could reduce economic activity, impacting corporate expansion and resulting in a slowdown of economic growth and higher inflation in the short term. The progressive tax structure of the new CIT (ranging from 10% till 24%) is expected to increase revenue generation for public services and infrastructure, potentially improving the business environment. However, it may also lead larger corporations to reassess their investment strategies in Slovakia due to increased tax liabilities. The overall impact will depend on how businesses adapt to these changes and on how effective the government is in implementing them.

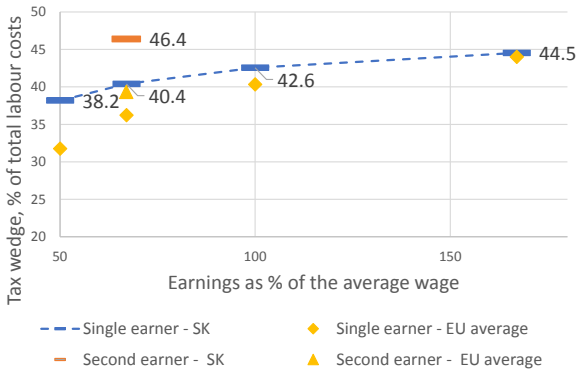
Slovakia ranked 15th in investment (gross fixed capital formation) as a share of GDP in the EU, at 22.0% in 2023, close to the EU-27 average (22.2%). Investment growth is set to be limited in 2024, following a jump in 2023 due to intensified use of EU funds by the end

of the year. In 2025, investment is expected to pick up again, driven by absorption of EU structural funds and the Recovery and Resilience Facility. On R&D expenditure as a share of GDP, in 2022 Slovakia ranked within the lower third of EU countries, holding the 20th position in the EU-27. In terms of public support for R&D expenditure, Slovakia performed slightly better, although it remains considerably behind the EU average.

Nevertheless, **Slovakia offers a range of support mechanisms for startups and scale-ups**, including equity investments through government-backed funds, tax incentives for investors, and provisions for employee stock options, all aimed at fostering innovation and economic growth.

Finding skilled staff, uncertainty, and energy costs remain the main investment obstacles for businesses. In the European Investment Bank's 2024 investment survey, Slovakia had the worst ranking for skilled staff. Businesses' difficulties in hiring skilled staff have worsened recently, resulting in 93% of firms now facing this challenge, compared with 77% in the EU. Uncertainty about the future is a concern for 90% of businesses against an EU average of 79%. Energy-cost barriers slightly decreased in 2024 compared with 2023, although this issue remains more pressing in Slovakia than elsewhere in the EU.

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

Labour taxation is less progressive than on average in the EU due to a relatively high tax wedge ([32]) for lower-wage earners. Graph A2.2 shows that the labour tax wedgefor Slovakia in 2024 was above the EU average for low earners (e.g. 38.2% for single people earning 50% of the average wage, compared to an EU average of 31.8%), and close to the EU average at higher wage levels. Second earners earning a wage of 67% of the average wage, whose spouses earn the average wage, were subject to a tax wedge greater than the EU average. In addition, the tax wedge faced by these second earners was higher than that of single people at the same wage level. The ability of the tax-and-benefit system to reduce inequality (measured by its ability to reduce the Gini coefficient) has increased from 5.6 points since 2010 to 6.6 in 2023. (see Table A2.1). While this is below the EU average (7.7 points), it is sufficient to keep inequality in Slovakia as measured by the Gini index among the lowest in the EU.

([32]) 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).

Slovakia has shown commitment to improving the efficiency of its tax-collection system through significant IT investments and a comprehensive digital transformation strategy. The VAT gap has decreased significantly in recent years in Slovakia, but despite marked improvements in recent years, the VAT compliance gap remains above the EU average. The ongoing digitalisation efforts (e.g. mandatory e-invoices for domestic business-to-business transactions planned as of 1 January 2027) are likely to increase the overall effectiveness of Slovakia's tax administration.

The shares of e-filing rates for CIT and VAT are above the EU average, although there is room for improvement for e-filing of personal-income-tax returns in Slovakia. Slovakia is progressing towards implementing e-filing for all types of taxes. Efforts are ongoing to expand e-filing capabilities.

Estimates of total tax-compliance costs for SMEs in Slovakia are well below the EU average. For estimated average CIT compliance costs, Slovakia has the second lowest costs in the EU. Similarly, looking at estimated average VAT compliance costs, Slovakia also has the lowest costs in the EU.

On dispute-resolution, the overall inventory of cases does not stand out as particularly high, and the average time a dispute-resolution cycle takes is two years.

Slovakia is an 'emerging innovator', and the gap between its performance and the EU average is widening. According to the 2024 edition of the European Innovation Scoreboard ([33]), Slovakia's performance (65.1%) remains significantly below the EU average and is improving at a lower rate than the EU average. Slovakia's R&D intensity ([34]) increased in 2023 but remains well below the EU average (1.03% vs 2.24%). In its 2023 national strategy for research, development and innovation (NSRDI) ([35]), Slovakia set a 2% target for R&D intensity and provided an action plan containing concrete measures ([36]) for reforming the research and innovation (R&I) system. This is much needed, considering the weak and fragmented public science base and modest innovation activity in the private sector, particularly SMEs. The country is also lagging behind in the adoption of advanced digital technologies, which remains below the EU average. To successfully implement the NSRDI, a whole-of-government approach and strong coordination is needed. Moreover, the digitalisation of businesses remains an issue in Slovakia despite recent progress in the uptake of AI solutions.

Science and innovative ecosystems

A weak and fragmented public science base restricts the potential for knowledge diffusion, which is essential for boosting competitiveness. Slovakia's share of scientific publications among the top 10% most cited, as a percentage of its total scientific publications, remains one of the lowest among EU Member States (4.6% compared to the EU average of 9.6% in 2021), although it has increased slightly (up from 3.6% in 2017). This points to a weak public science base due to long-standing underinvestment ([37]) and a fragmented landscape of R&I performing institutions of 35 higher education institutions and 45 research centres and institutes. Reforms to improve R&I governance and coordination have been launched under the recovery and resilience plan, complemented by an analysis of the responsibilities of ministries, funding agencies and policymaking organisations. Some of these proposals for streamlining governance are likely to be reflected in the new R&I bill currently in the legislative process. Moreover, the NSRDI action plan envisages an evaluation of five ongoing reforms aimed at enhancing the quality of higher education institutions, including a periodic assessment of their scientific performance ([38]). The bill is expected to propose further reforms aimed at boosting research and innovation, drawing on lessons learned. Continued support for high-quality scientific outputs, along with further efforts to consolidate the fragmented system, are needed to build a critical mass and achieve the

([33]) 2024, European Innovation Scoreboard, Country profile: Slovakia.. The EIS provides a comparative analysis of innovation performance in EU countries, including the relative strengths and weaknesses of their national innovation systems.

([34]) R&D intensity is defined as gross domestic expenditure on R&D as a percentage of GDP.

([35]) Web page: Národná stratégia výskumu, vývoja a inovácií – Výskumná a inovačná autorita.

([36]) The authorities have announced that by June 2024, 28 out of a total of 91 measures of the action plan had been completed.

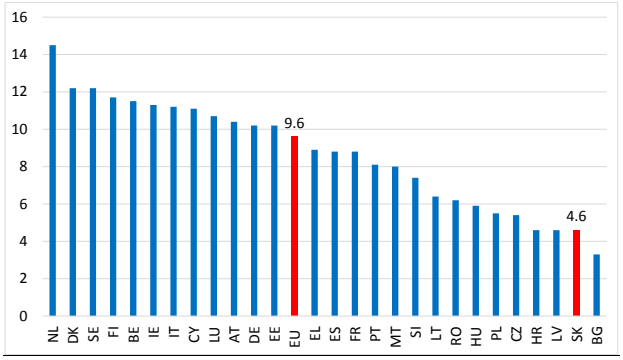
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([37]) At 0.45% of GDP, public expenditure on R&D (GOVERD + HERD) remains significantly below the EU average of 0.72% and is increasing only at a slow pace (by 0.41% in 2020).

([38]) In 2024, a total of EUR 84 million was allocated to quality-related funding based on the verification of excellence in research (VER). This amount is expected to remain the same or increase in 2025 and 2026.

targets ([39]) set by the NSRDI and the action plan. In this respect, engaging international evaluators in calls funded from the recovery and resilience facility guaranteed more efficient evaluations, reduced conflicts of interest and thus proved as good practice.

Graph A3.1: **Slovakia's share of scientific publications among the top 10% most cited as a percentage of its total scientific publications**

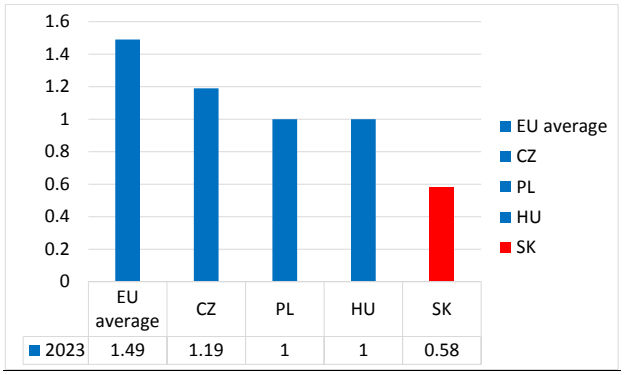


Source: Eurostat

Business innovation

Slovakia's ability to innovate and integrate new technologies is limited, with low R&D expenditure in the private sector. There is a high proportion of low-productivity micro-enterprises in the Slovak business population. These micro-enterprises, businesses with less than 10 employees, which represent 97% of firms and account for over 40% of business-sector employment in Slovakia, engage little in research and innovation ([40]). Productivity growth has mostly been driven by the manufacturing sector, especially large multinational firms, while productivity gains in service sectors have been more moderate ([41]). The size of the ICT sector is below the EU average (4.71% vs 5.49% in gross value added in 2021) and R&D business expenditure in the ICT sector amounts to 27.58% of total R&D expenditure ([42]). Overall weak innovation activity in the private sector is also reflected in low business enterprise expenditure on R&D (BERD) as a percentage of GDP, which in 2023 stood at 0.58% compared to the EU average of 1.49%. Moreover, it results in low innovation output, as measured for instance in patent applications. In 2022, only 0.5 patents were filed under the Patent Cooperation Treaty per billion GDP, while the EU average was 2.8. Boosting innovation activity in the business sector to achieve the 1.2% target for business R&D remains a key priority ([43]). Additionally, Slovakia would benefit from participating in the unitary patent system, which offers key advantages in terms of promoting innovation and enhancing competitiveness ([44]).

Graph A3.2: **Business expenditure on R&D as a percentage of GDP in the Visegrad countries**



Source: Eurostat

Slovakia continues to lag behind on the digitalisation of businesses. In 2024, 62.9% of Slovak SMEs have a basic level of digital intensity, considerably below the EU average of 72.91%. The country also performs below the EU average as regards the proportion of

([39]) One such target is to increase the share of scientific publications among the top 10% most cited, as a percentage of total scientific publications, to 8% by 2030 (from 4.6% in 2021).

([40]) OECD report Strengthening FDI and SME Linkages in the Slovak Republic | OECD, 2022.

([41]) OECD (2024), *OECD Economic Surveys: Slovak Republic 2024*: https://doi.org/10.1787/397ca086-en.

([42]) Eurostat, ICT sector size and R&D in ICT sector, 2021 data.

([43]) Target set in the national strategy for research, development and innovation.

([44]) The country is has already signed and is expected to ratify the Unified Patent Court Agreement.

businesses that have taken up advanced digital technologies (i.e. artificial intelligence, cloud computing services and data analytics). However, there is a promising trend in the adoption of AI solutions, with 10.78% of Slovak businesses using AI in 2024, which indicates a 53.13% increase from 7.04% in 2023. Adoption of AI technology by businesses nonetheless remains below the EU average of 13.48%. Along similar lines, in 2023, 30.17% of Slovak enterprises have adopted data analytics as opposed to 33.17% at EU level, while 30.16% used cloud computing services, as opposed to 38.86% at EU level. Overall, considerable work is still required to reach the 2030 goal of achieving 75% adoption of AI, cloud computing and data analytics, and other Digital Decade targets.

Exploring the potential of better targeted public support could be beneficial in stimulating companies to engage in innovation. Total public-sector support for business R&D expenditure as a percentage of GDP is significantly below the EU average (0.204%). However, in an encouraging recent trend, the rate increased from 0.022% in 2017 to 0.092% in 2021. This growth has been driven by increased R&D tax incentives, while direct support to R&D has stagnated at a low level. Recent evaluations of the R&D tax allowance ([45]) suggest that the scheme mainly benefits large, incumbent, and multinational firms ([46]). Moreover, a recent OECD report ([47]) notes that the R&D tax incentive scheme ([48]) does not include cash refunds, which could be particularly beneficial for smaller and recently established companies in need of financial support at an early stage of the innovation process. Also, an evaluation ([49]) of the 'patent box' ([50]) scheme has shown that it only benefited a few larger companies, and that the current set-up is not likely to boost the level of intellectual property by stimulating patent activity by domestic businesses or attracting foreign patents. Expanding the use of direct competitive grant schemes is a measure to be considered, along with continued use of the newly established portal ([51]) as a one-stop shop for finding information on public support for R&I.

Collaboration between businesses and the research sector is limited, with little technology transfer. Science-business collaboration in Slovakia has been held back by a weak science and innovation base, combined with a lack of infrastructure to support collaboration between academia and industry. This is reflected in some relevant indicators, such as public expenditure on R&D funded by businesses as a percentage of GDP, which is very low and far below the EU average (0.006% compared to 0.050% in 2022); it has also been declining over time (from 0.034% in 2012). Moreover, in 2023 the number of researchers (full-time equivalents) employed by businesses was significantly lower – less than half – than the EU average. However, data on public-private scientific co-publications as a share of total publications show a more positive trend, rising from 4.9% in 2013 to 7% in 2023, which is still slightly below the EU average of 7.7%. This is due, among other things, to the structure of the Slovak business population,

([45]) The R&D tax allowance was reduced from 200% to 100% of eligible R&D expenditure in 2022.

([46]) MoF and VAIA, 2023, *Review of Spending, Competencies and Personnel in Research, Development and Innovation. Final Report:* Research (see p. 76).

([47]) OECD (2024), *OECD Economic Surveys: Slovak Republic 2024*: https://doi.org/10.1787/397ca086-en (see p. 50).

([48]) MoF and VAIA, 2023, *Review of Spending, Competencies and Personnel in Research, Development and Innovation. Final Report:* Research –(see p. 74) tax instruments include: tax relief for beneficieries of incentives; deduction of R&D expences; patent box.

([49]) MoF and VAIA, 2023, *Review of Spending, Competencies and Personnel in Research, Development and Innovation Final Report:* Research (see p. 79).

([50]) patent box" refers to a tax regime that allows companies to apply a reduced corporate tax rate to income derived from intellectual property (IP) assets, such as patents, copyrights, and trademarks.

([51]) Support finder - Research and Innovation Portal.

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which is dominated by micro-enterprises with no innovation activity. These firms typically have limited capacity for setting up collaboration linkages with academia that support knowledge transfer and for adopting advanced foreign technologies ([52]). More recently, the recovery and resilience plan has stimulated academia-business cooperation through several investment streams ([53]). However, shortcomings remain and are acknowledged in the 2023 R&D strategy, which includes specific measures in its action plan, such as improved support for technology transfer offices and simplified management of intellectual property rights. Implementing these targeted measures is essential, while ensuring stability of dedicated programmes. Moreover, the lack of collaboration between sectors should also be addressed in the planned updated version of the action plan.

Financing innovation

The local venture capital and growth capital market is not developed enough to meet the financing needs of innovative firms. Venture capital investment has been growing slowly, from 0.003% of GDP in 2014 to 0.015% in 2023, but remains very low in comparison to the EU average of 0.078%. Similarly, the value of private equity relative to nominal GDP increased from 0.02% in 2022 to 0.03% in 2023 but remains below the EU average of 0.41%. There are some initiatives in place to promote start-up funding, such as a crowdfunding platform to enable some businesses to access venture and growth capital, but the available funds are limited. However, there is no comprehensive legal framework for supporting the creation and growth of start-ups.

([52]) OECD (2022), *Strengthening FDI and SME Linkages in the Slovak Republic*: https://doi.org/10.1787/972046f5-en.

([53]) Component 9 Investment 2: Support for cooperation between companies, academia and research organisations.

Innovative talent

Slovakian businesses grapple with the consequences of a considerable skill gaps. According to a recent OECD study ([54]), 54% of Slovakian enterprises report skill gaps ([55]). This has a number of adverse consequences for firms. One in three firms says that skills mismatches limit their ability to adopt new technologies. This highlights the significant economic risks involved and the need to address this issue. Students enrolled in science, technology, engineering and mathematics programmes accounted for 21.8% of all tertiary enrolments (ISCED 5-8) in 2022, significantly lower than the EU average of 27.1% and a decrease from 22.8% since 2017 (see Annex 10). Moreover, Slovakia continues to face a brain drain, as Slovak higher education institutions are poorly ranked internationally, and the research quality is low ([56]). This is reflected in the very high proportion of high-school graduates who study abroad, few of whom intend to return home after their studies ([57]). This implies that Slovakia is losing some of its most-skilled workers, further aggravating skills shortages. The national strategy for research, development and innovation acknowledges the necessity to retain and attract talent, and its action plan incorporates several measures in this domain. Also, in line with the action plan, a unit in charge of coordinating and guiding policies on retaining and attracting talent has been set up

([54]) OECD (2024), *Understanding Skill Gaps in Firms: Results of the PIAAC Employer Module*, OECD Skills Studies, OECD Publishing, Paris: https://doi.org/10.1787/b388d1da-en.

([55]) Skill gaps are defined as mismatches between the skills available in a firm and those required to meet current and future business needs (including adapting to technological change).

([56]) OECD (2021), *Improving Higher Education in the Slovak Republic*, Higher Education, OECD Publishing, Paris, https://doi.org/10.1787/259e23ba-en.

([57]) Martinák and Varsik, 2020.

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within the Research and Innovation Authority (VAIA).

Entrepreneurship education is integrated into the national curriculum as a part of the national financial literacy standard, covering both primary and secondary schools and vocational and educational training. However, there is less emphasis on developing entrepreneurship in higher education than in secondary education.

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

Slovakia	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)	0.79	0.88	0.89	0.9	0.98	1.03	:	2.24	3.45
Science and innovative ecosystems									
Public expenditure on R&D as % of GDP	0.46	0.4	0.41	0.4	0.42	0.45	:	0.72	0.64
Scientific publications of the country within the top 10% most cited publications worldwide as % of total publications of the country	3.4	3.6	4.3	4.6	:	:	:	9.6	12.3
Researchers (FTE) employed by public sector (Gov+HEI) per thousand active population	4.6	4.2	4.7	4.7	4.7	:	:	4.2	:
International co-publications as % of total number of publications	41.4	42.3	49.8	49.9	48.9	50.6	:	55.9	39.3
R&D investment & researchers employed in businesses									
Business enterprise expenditure on R&D (BERD) as % of GDP	0.33	0.48	0.48	0.5	0.56	0.58	:	1.49	2.7
Business enterprise expenditure on R&D (BERD) performed by SMEs as % of GDP	0.12	0.14	0.21	0.23	0.26	:	:	0.40	0.30
Researchers employed by business per thousand active population	0.9	1.2	1.5	1.8	2.1	2.4	:	5.7	:
Innovation outputs									
Patent Cooperation Treaty patent applications per billion GDP (in PPS€)	0.4	0.6	0.6	0.6	0.5	:	:	2.8	:
Employment share of high-growth enterprises measured in employment (%)	21`.50	18.81	10.19	:	:	:	:	12.51	:
Digitalisation of businesses									
SMEs with at least a basic level of digital intensity % SMEs (EU Digital Decade target by 2030: 90%)	:	:	:	:	60.24	:	62.9	72.91	:
Data analytics adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	:	:	30.17	:	33.17	:
Cloud adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	30.84	:	30.16	:	38.86	:
Artificial intelligence adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	5.19	:	7.04	10.78	13.48	:
Academia-business collaboration									
Public-private scientific co-publications as % of total number of publications	5.8	5.9	6.3	6.9	6.9	7	:	7.7	8.9
Public expenditure on R&D financed by business enterprise (national) as % of GDP	0.034	0.021	0.008	0.008	0.006	:	:	0.05	0.02
Public support for business innovation									
Total public sector support for BERD as % of GDP	0.032	0.022	0.065	0.091	0.600	:	:	0.204	0.251
R&D tax incentives: foregone revenues as % of GDP	0.0001	0.01	0.043	0.060	0.040	:	:	0.102	0.141
BERD financed by the public sector (national and abroad) as % of GDP	0.032	0.013	0.022	0.032	0.020	:	:	0.100	0.110
Financing innovation									
Venture capital (market statistics) as % of GDP, total (calculated as a 3-year moving average)	0.001	0.012	0.016	0.021	0.019	0.015	:	0.078	
Seed funding (market statistics) as % of GDP	84.1	16.1	11.2	10	17.7	20.5	:	7.3	
Start-up and early-stage funding (market statistics) as % of GDP	0	71.9	74.1	64.1	57.8	40.8	:	44.0	
Later stage and scale-up funding (market statistics) as % of GDP	15.9	12	14.7	25.9	24.4	38.7	:	48.7	
Innovative talent									
New graduates in science and engineering per thousand population aged 25-34	16.7	12	8.8	8.9	8.6	:	:	17.6	:
Graduates in the field of computing per thousand population aged 25-34	2.3	2	2.2	2.3	2.5	:	:	3.6	:

(1) 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.

Slovakia's business environment faces challenges linked to high levels of administrative and regulatory burden, requiring further progress in addressing barriers to remain competitive in the long term. Despite several reforms to reduce the administrative and regulatory burden on businesses over recent years, significant challenges persist. The competitiveness of the Slovak economy has further deteriorated over the last decade, the country has become less attractive to foreign investors, and the consolidation package adopted by the Slovak parliament in September 2024 poses new challenges and costs for Slovak businesses.

Economic framework conditions

The business environment in Slovakia remains one of the least favourable in the EU. According to the Prosperity and Financial Health Index ([58]), Slovakia has the worst conditions for doing business in the EU. Among the factors behind this unfavourable position are: long-standing structural problems related to the quality of education and innovation; increased taxes and a higher tax wedge for businesses; and an unpredictable regulatory regime. Underperforming market capitalisation limits financing for companies and start-ups, and restricts company growth (see the Annexes on Innovation to Business and on Capital markets, financial stability and access to finance).

Public and private investments face a long-term structural challenge in Slovakia, hindering further economic growth. Investments in Slovakia account for approximately 20% of GDP ([59]), with businesses making almost two thirds of total investments. This share has not changed much over the past 15 years. Although the total share of investments is comparable to other EU countries, the key distinction lies in their composition. Machinery and equipment investments and investments in buildings, dominate. Meanwhile, investments in intellectual property represent less than half and in research and development only a third of the share of western EU countries (see the Innovation to Business Annex).

Availability of skilled staff and uncertainty about the future remain the main investment obstacles for businesses. Slovakia ranks as the worst for lack of skilled staff ([60]). Businesses' difficulties in hiring skilled staff have worsened, with a 10 percentage-point increase in 2024 compared to 2023, resulting in 93% of firms facing this challenge (against 77% in the EU) (see the Labour market Annex). Uncertainty about the future is the second major investment obstacle. In Slovakia, this issue has grown more pressing in 2024, with 90% of businesses facing uncertainty, an 8 percentage-point increase on 2023. The Slovak figure significantly surpasses the EU average of 79% for 2024.

Slovakia ranks bottom of the Central and Eastern Europe region (CEE) when it comes to attracting foreign investments. The country's attractiveness to foreign companies has been the lowest in the last five years ([61]). While in 2014-2023 Slovakia received foreign capital at the level of 1 per cent of GDP per year, the countries of the CEE region averaged up to 2.5% of GDP ([62]). Foreign capital has undoubtedly been one of the main factors in the success of the Slovak economy in recent

([58]) Česká spořitelna, Europe in Data portal and the Institute of Sociology of the Czech Academy of Sciences: The Prosperity and Financial Health Index, December 2024.

([59]) National Bank of Slovakia: Ako sa banky podieľajú na financovaní investícií podnikov?. September 2024.

([60]) European Investment Bank, EIB Investment Survey 2024, based on interviews carried out between April and July 2024.

([61]) Chambers of Commerce of NL, DE, IT, FR, AT, SE in Slovakia: Prieskum konjunktúry medzi európskymi investormi v SR, April 2024.pdf.

([62]) UniCredit Bank Czech Republic and Slovakia, Weekly Notes 40/2024.pdf.

decades. Slovakia's foreign direct investment rate dropped from 2.1% GDP in 2022 to just 0.1% in 2023.

Slovakia's payment environment reflects a mixed landscape, with structural challenges ongoing. The business-to-business payment gap and the gap from the public sector decreased in 2024 compared to 2023 and are below the EU average. A reform under the Slovak medium-term fiscal-structural plan, introducing a mandatory e-invoicing system, could help further reduce late payments in commercial transactions in Slovakia ([63]). However, the share of SMEs experiencing late payments is higher in Slovakia (51%) than in the EU overall (47%). Excessive payment delays in the public health sector create a considerable barrier for businesses, limiting their competitiveness and resilience. Despite a Court of Justice ruling on late payment ([64]), Slovakia has yet to ensure that its public healthcare authorities comply properly with the 60-day payment period for paying suppliers.

Slovakia's digital infrastructure requires significant improvement to meet EU targets, particularly in rural areas. In 2023, Slovakia achieved 69.12% Very High-Capacity Networks (VHCN) coverage, falling short of the EU average (78.81%) and slightly declining from 71.31% in 2022. While Fiber to the Premises (FTTP) coverage was in line with the EU average at 64.19%, it also slightly decreased compared to 2022 (66.89%). The percentage decrease in VHCN and FTTP coverage in 2023 is because the number of households has increased. However, the number of VHCN connections increased in absolute value by 59099 and FTTP connections by 43429 in 2023. In rural areas, VHCN and FTTP coverage increased from 2022, but remained consistently lower than EU average (at 35% for VHCN and 34.96% for FTTP, compared to the EU's 55.64% and 52.72%). Slovakia's 5G coverage reached 79% in 2023, exceeding the 2022 figure (55.34%) but remaining behind the EU average of over 89.3%. The gap is particularly wide in rural areas, where 5G coverage is 46.14%, compared to the EU's 73.71%. Recent developments are impacting infrastructure deployment, including the possibility to install fibre optic networks on existing poles. The new construction law will introduce changes aimed at streamlining processes. While its full impact is still unclear, the Gigabit Infrastructure Act is expected to further simplify the rollout of gigabit networks.

Slovak businesses show resilience to ICT security incidents and a strong focus on employee awareness, but they fall short of the EU average in implementing security measures. While the share of enterprises experiencing ICT security incidents due to external attacks increased to 2.02% in 2024, from 1.78% in 2022, it remains below the EU average of 3.43% ([65]). 87.13% of enterprises implemented ICT security measures, below the EU's 92.76%, while 61.44% made their employees aware of their obligations in ICT security related issues (above the EU average of 59.97%) ([66]).

Regulatory and administrative barriers

The complexity of administrative processes and rapidly changing legislation are the most significant problems when doing business in Slovakia. These areas have been ranked as the two main issues in Eurobarometer measurements for the past decade ([67]). Another study ([68]), monitoring the

([63]) EU Payment Observatory: How electronic invoicing helps reduce late payments in commercial transactions, July 2024.

([64]) On 19 September 2024 the Court of Justice of the European Union ruled that Slovakia had failed to fulfil its obligations under the Late Payment Directive (C-412/23).

([65]) Eurostat, isoc_cisce_ic.

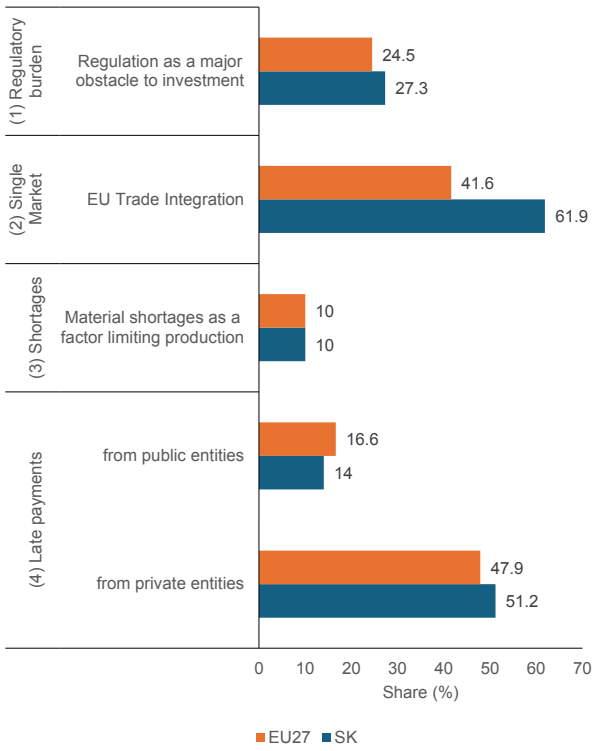
([66]) Eurostat, isoc_cisce_ra.

([67]) Eurobarometer: Businesses' Attitudes towards Corruption in the EU (2013-2023).

frequency of amendments to laws affecting businesses in 2017-2021, indicated that 25 significant business-related laws had been amended 308 times over the monitored period, which is almost 62 times per calendar year on average.

An evidence-based and systematic legislative process, clear rules on better regulation, and enhanced policy coordination would create a more favourable and predictable business environment. While in the past, the fast-track legislative procedure was the exception, over the past few years it has become standard practice. The number of legislative proposals bypassing the standard impact assessment and interservice consultation increased most between March 2020 and February 2023 (mainly due to the COVID-19 pandemic), reaching 46% of adopted laws ([69]) and remains still high (between October 2023-February 2025, it was 37% compared to 16% in 2016-2019). This shift has led to concerns, including among businesses, that the quality and thoroughness of legislation is being compromised. Reducing the reliance on fast-track procedures, improving the quality, setting clear and binding rules on better regulation and implementing them effectively, and alleviating the excessive regulatory burden would enable businesses to better anticipate and plan investments (see also the Effective institutional framework Annex). The new Government Council for Competitiveness and Productivity (a merger of two similar advisory bodies) is expected to start operations in the first half of 2025 and could stimulate dialogue on the competitiveness of the Slovak economy between ministries and other key economic and social stakeholders.

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.

Progress has been made in adopting laws to alleviate regulatory and administrative burdens on businesses, but additional efforts are required to further enhance the business environment. Over the last few years, Slovakia has introduced several measures to make business easier, including under the RRP. Within the framework of three anti-bureaucratic packages ([70]), 412 measures implemented in 2020-2024 brought EUR 581.3 million in savings for the business environment. Around 40 legislative proposals are being assessed annually to prevent gold-plating and 250 ex-post evaluation are being conducted in order to review existing regulations. Moreover, adopting proportionality in regulatory impact assessments (RIA) and the creation of an IT platform for better regulation are aimed at

([68]) Slovak Business Agency, The analysis of the quality of the regulatory framework and the legislative process, 2022.

([69]) Ministry of Finance of the Slovak Republic, Ako_nestrielat_naslepo.pdf, 2023.

([70]) Anti-bureaucratic packages | Improve business environment

streamlining the RIA processes. Even though the measures have the potential to build a competitive business environment, their effects have not yet been widely perceived by businesses. According to stakeholders, they have provided only marginal improvements, often overshadowed by large legislative packages (e.g. the consolidation package) adopted without sufficient prior consultation and impact assessment. This is also confirmed by the EIB investment surveys ([71]), with the score for business and labour regulations in Slovakia significantly deteriorating in 2024 compared to the previous year. The perception of business regulations as a barrier to investment worsened among Slovak businesses, with that view rising from 57% in 2023 to 70% in 2024. This trend was echoed by labour regulations, which 76% of businesses saw as an obstacle to investment in 2024, a 16 percentage-point increase on the previous year.

The government consolidation package approved by Parliament in October 2024 weighs heavily on business activity and investments. Key measures within the package that have substantially affected the quality of business environment include a three-point increase in corporate income tax (for taxable income over EUR 5 million) to 24%, the highest corporate tax of any of the Visegrád countries, and a new financial transaction tax for companies at 0.4% per bank transfer with a maximum of EUR 40. Slovakia is the only country in the euro area to have this tax.

While progress has been made in adopting laws to improve and harmonise insolvency procedures, additional efforts could be made to further prevent insolvency for viable companies. In Slovakia's RRP, a set of laws on insolvency procedures, including early warning tools, were introduced in 2022 and 2023 to improve procedures that can be long and costly. However, according to Eurostat data, the number of bankruptcies in Slovakia is increasing and was already higher in the first three quarters of 2024 (86) than for the full year of 2023 (85), with both higher than the 74 seen in 2022. Many companies in financial difficulties are still viable and can be rescued if their problems are identified at an early stage and if they are assisted in diagnosing their problems and implementing corrections by impartial advisors. Slovakia can benefit from improving its existing early warning mentoring tools for companies at risk of failure.

Single market

Slovak businesses demonstrate strong integration into both the single market and global value chains. Slovakia is one of the most export-oriented economies in the world. It has the highest integration rate in the EU for goods: the trade volume of goods represented 55% of its GDP in 2024 (compared to the EU average of 27%). Traditionally, the EU remains the largest trading partner for Slovak exporters with a significant 77.1% of exports directed towards EU markets (October 2024). Conversely, imports from EU Member States have also dominated, accounting for a substantial 63.6% share ([72]). Yet while Slovakia's economy has a substantial comparative advantage in the export of vehicles, diversifying the economy away from reliance on one industrial sector and focusing on innovation and higher added value will be essential for building a more resilient economy.

In some sectors, market regulations create barriers to competition and market entry. At around 300, Slovakia has the fourth highest reported number of regulated professions in the EU ([73]). This presents challenges for individuals seeking to provide services in

([71]) EIB Investment Survey 2024, EIB Investment Survey 2023.

([72]) Statistical Office of the Slovak Republic, December 2024.

([73]) European Commission, Regulated professions database, December 2024

Slovakia. The OECD PMR data ([74]) suggest that restrictions on regulated professions in Slovakia are the highest in the EU for civil engineers and notaries, the fourth highest for architects and above the EU average for lawyers. Reducing regulatory barriers in professional services can promote market entry and may foster competition on quality and prices, as well as productivity increases in the regulated sectors and across the industries that they serve.

Slovakia could further benefit from the single market. Although the country has made some progress in addressing conformity deficit, it still has areas for improvement. While the conformity deficit indicator, measuring the percentage of all directives transposed incorrectly, decreased in 2024 (1.1%) compared to 2023 (1.3%), it remains above the EU average in 2024 (0.9%). Slovakia has also performed slightly worse on the transposition deficit indicator. The percentage of single market directives not transposed increased from 0.6% in 2023 to 0.7% in 2024 though remaining below the 1% threshold set by the European Council. In addition, in 2024 Slovakia resolved 95.5% of the SOLVIT cases it handled as lead centre (EU average of 84.9%). Even though it is above the EU average, this is a drop from 2023 when it resolved 100% of the cases. Slovakia has more single market infringement cases than the EU average (31 vs the EU average of 24 in 2024), but their duration is 25% shorter than the EU-wide average.

Public procurement

The new public procurement procedures have the potential to both benefit and hinder businesses. While the amendment to the Public Procurement Act, effective from August 2024, aims to simplify the processes and reduce administrative burden, it may also further hamper transparency and competition in public procurement, making it easier for favouritism to occur. One of the most significant changes is the merger of the 'sub-threshold contract' and 'low-value contract' categories and the increase in the threshold for contracts without prior publication from EUR 10 000 to EUR 50 000. This change may undermine competition, not only domestically but also in a cross-border context, risking the inefficient use of public money. The Eurobarometer analysis ([75]) also suggests that the perception of corruption in the Slovak business environment, which was already high, has undergone one of the highest increases in the EU over the past year, up 6 percentage points on last year to 85% of companies stating that corruption is a widespread problem in Slovakia. Ensuring fair competition and full transparency in public procurement will be key to enhancing the effectiveness and efficiency of government spending.

([74]) OECD Product Market Regulation, July 2024

([75]) Eurobarometer: Businesses' attitudes towards corruption in the EU, April 2024

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

Slovakia							
POLICY AREA	**INDICATOR NAME**	**2020**	**2021**	**2022**	**2023**	**2024**	**EU-27 average**
Investment climate							
Shortages	Material shortage, firms facing constraints, %[1]	8.8	23.3	31.8	14.3	10.0	10.0
	Labour shortage, firms facing constraints, %[1]	13.8	23.0	27.0	26.0	25.3	20.2
	Vacancy rate, vacant posts as a % of all available ones (vacant + occupied)[2]	0.7	0.7	0.9	0.9	0.9	2.3
Infrastructure	Transport infrastructure as an obstacle to investment, % of firms reporting it as a major obstacle[3]	7.2	11.1	7.3	13.0	10.9	13.4
	VHCN coverage, %[4]	-	66.7	71.3	69.1	-	78.8
	FTTP coverage, %[4]	-	62.3	66.9	64.2	-	64.0
	5G coverage, %[4]	-	13.8	55.3	79.0	-	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]	21.1	22.4	14.1	19.2	27.3	24.5
Late payments	Payment gap - corporates B2B, difference in days between offered and actual payment[5]	14.0	12.8	12.1	15.5	13.0	15.6
	Payment gap - public sector, difference in days between offered and actual payment[5]	16.1	10.2	12.9	17.9	14.6	15.1
	Share of SMEs experiencing late payments, %*[6] — from public or private entities in the last 6 months	50.8	45.6	55.1	55.7	-	-
	Share of SMEs experiencing late payments, %*[6] — from private entities in the previous or current quarter	-	-	-	-	51.2	47.9
	Share of SMEs experiencing late payments, %*[6] — from public entities in the previous or current quarter	-	-	-	-	14.0	16.6
Single Market							
Integration	EU trade integration, % (Average intra-EU imports + average intra EU exports)/GDP[2]	61.6	66.4	73.7	66.1	61.9	41.6
	EEA Services Trade Restrictiveness Index[7]	0.041	0.041	0.041	0.041	0.045	0.050
Compliance	Transposition deficit, % of all directives not transposed[8]	1.4	1.4	0.9	0.6	0.7	0.8
	Conformity deficit, % of all directives transposed incorrectly[8]	1.1	1.3	1.4	1.3	1.1	0.9
	SOLVIT, % resolution rate per country[8]	100	100	100	100	95.5	84.9
	Number of pending infringement proceedings[8]	27.0	27.0	29.0	31.0	31.0	24.4
Public procurement							
Competition and transparency in public procurement	Single bids, % of total contractors**[8]	26	27	30	33	25	-
	Direct awards, %**[8]	5	3	5	3	4	7.0

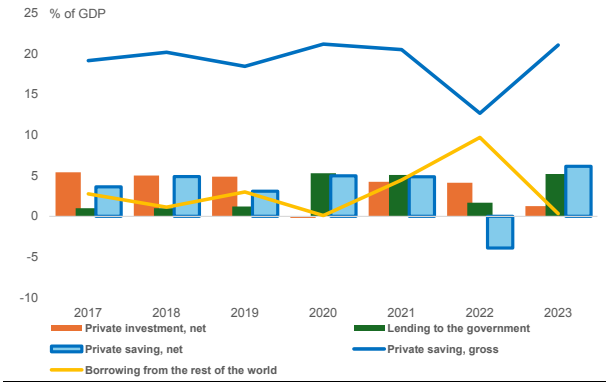
*Change in methodology in 2024: reporting late payments from public and private entities separately.
**Data on single bids for 2024 is provisional and subject to revision. Due to missing data, the EU average of direct awards data is calculated without Romania.
Sources: (1) ECFIN BCS, (2) Eurostat, (3) EIB IS, (4) Digital Decade Country reports, (5) Intrum Payment Report, (6) SAFE survey, (7) OECD, (8) up to 2023: Single Market and Competitiveness Scoreboard, 2024: Public procurement data space (PPDS).

In Slovakia, private investment and public spending are partially financed by foreign savings. While negative, Slovakia's net international investment position has continued to strengthen thanks to strong nominal GDP growth. Capital markets remain at a very early stage of development and do not contribute sufficiently to the financing of Slovak companies. Retail participation in capital markets remains low, despite some progress in the level of direct and indirect household investments. Banks, which dominate the financial sector, are robust, both in terms of capital and liquidity. Government bonds account for a large part of the institutional investor's portfolio, but there is a noticeable trend of diversification through investment funds, in particular pension funds where amendments to pension regulations allow for greater investment diversification. However, the less-developed capital markets reduce the exit options for private equity and venture capital investors, 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 Slovak economy have been supporting domestic private investment and public finances. In the last decade, the private savings ratio, net of fixed capital consumption, fluctuated around its ten-year average of 4.3% of GDP, reaching a maximum of 8% in 2014 The net private investment ratio, which measures the net contribution of the private sector to capital accumulation in the country, exhibited a ten-year average of 3.6% of GDP and reached a maximum of 5.8% in 2016. During the same period, lending to the government showed an average deficit equivalent to 2.9% of GDP. Thus, the slightly positive balance between net domestic savings and net investment, together with the substantial government deficit, resulted in net borrowing by Slovakia from foreign economies that averaged 2.3% of GDP, with a peak of 9.7% in 2022. Hence, Slovak private investment and public spending are partially financed by foreign savings (see Graph A5.1).

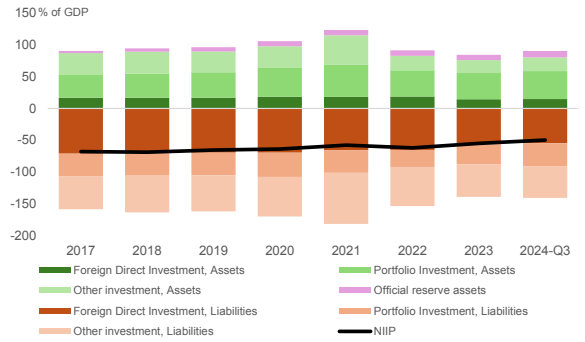
Graph A5.1: **Net savings-investment balance**



Source: AMECO

Slovakia has a negative net international investment position (NIIP) despite some improvements throughout the last years. As of Q3 2024, total assets to foreigners reached 90.8% of GDP, while liabilities to foreigners stood at 140.5% of GDP, resulting in a net international investment position (NIIP) equivalent to -49.7% of GDP (see Graph A5.2). This is an improvement compared to previous three years, owing to the strong nominal GDP growth. At the same time, the net stock of foreign direct investment (FDI) stood at -39.8% of GDP as of Q3 2024. The net portfolio investments turned positive to 7.3% of GDP as of Q3 2024. The net stock of other investments amounted to -27.4% of GDP. The stock of official foreign reserve assets increased to 10.1% of GDP at the end of 2024, compared to 3.6% of GDP at the end of 2017. Thus, the Slovak economy appears to be well integrated in international capital flows, notably as a stable recipient of FDI and other investments.

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

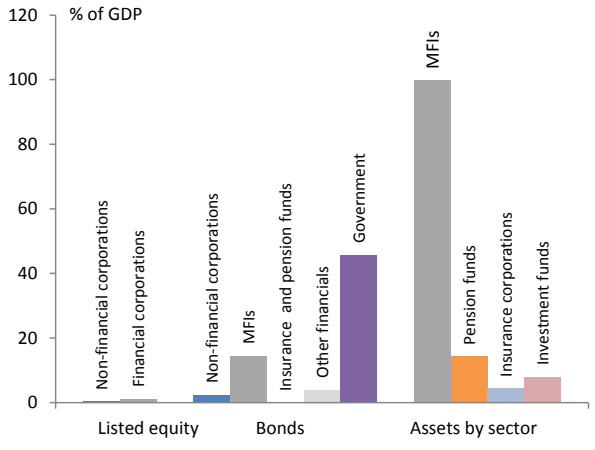


Source: ECB

Structure of the capital markets and size of the financial sector

The Slovak economy has a small domestic capital market. The market capitalisation of listed equity reached 1.5% of GDP by the end of 2023 (see Graph A5.3). Non-financial corporations (NFCs) accounted for only 26.7% of that capitalisation. The outstanding volume of debt securities reached 66.7% of GDP at the end of 2023. Government bonds accounted for almost 69% of the total bonds by 2023.

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



Source: ECB, EIOPA, AMECO.

Even though the financial sector in Slovakia remains dominated by banks, non-bank financial intermediaries are growing as well. The banking sector is the largest segment of the financial services, accounting for 99.8% of GDP in 2023, which remains however significantly below the EU average of 253.4%. The foreign-owned banks accounted for 87.4% of total banking sector assets in 2023. The banking sector also has a very high level of concentration with the top five monetary financial institutions (MFIs) representing 77.1% the sector in 2023 (EU average: 51.1%). The insurance sector assets accounted for only 4.4% of GDP at end-2023 (EU average: 54.8%). The insurance market is composed of 26 undertakings, out of which nine are domestic insurance corporations with total assets EUR 5.8 billion (the rest are branches of insurers or insurers from other EU Member States) ([76]). The assets of Slovak mandatory and voluntary pension funds equated to 14.4% of GDP at end 2023, which makes pension funds the second largest segment of the financial system after the banking sector (see Graph A.3.3). The Slovak pension fund sector is composed of around five companies managing 36 pension funds, and with total assets of EUR 20.2 billion ([77]), ([78]). The total assets of investment funds accounted for 7.9% of GDP in 2023 (see section on institutional investors). The investment fund sector is composed of six domestic asset management companies and two foreign asset management companies, managing a total of 93 domestic open-end funds and one domestic closed-end fund, with total assets of EUR 10.9 billion ([79]).

Resilience of the banking sector

The Slovak banking sector remains resilient, as it is sufficiently profitable and well capitalised. The Slovak banks' total capital ratio was 20.3% in Q3-2024 (EU average: 20.1%), underlining the robustness of the

([76]) NBS, 2024. Statistical Bulletin, Q3-2024, p.7.

([77]) NBS, 2024. Statistical Bulletin, Q3-2024, p.7.

([78]) NBS, 2024. Financial sector analytical data.

([79]) NBS, 2024. Statistical Bulletin, Q3-2024, p.7.

banking sector. The common equity tier 1 ratio is at 17.7% in Q3-2024 (EU average: 16.6%). Banking sector profitability remained healthy despite the introduction of the bank levy ([80]), with return on equity of 10.2% in Q3-2024 (EU average: 10%). This was largely due to higher net interest income, net fee and commission income, and a year-on-year decrease in net provisioning ([81]). Since 1 August 2023, the National Bank of Slovakia (NBS) maintained the countercyclical capital buffer (CCyB) at 1.5% in view of the risks present in the household and commercial real estate sectors ([82]). The NBS has also introduced several borrower-based measures to limit potential risks of real estate developments on the banking sector ([83]). Slovak banks' aggregate Minimum Requirement for Own Funds and Eligible Liabilities (MREL) rate stood at 32.1% of risk weighted assets at end-2023 ([84]). As of 1 January 2024, all banks in Slovakia meet their final MREL targets against an average MREL binding target (including CBR) of 27.9% TREA (including CBR) ([85]). Slovakia has not yet published information on its national bail-in mechanic in line with EBA guidelines ([86]).

The banking sector continues to have a robust liquidity position. The structural net stable funding ratio (NSFR) was 132% in Q3 2024, slightly declining from 134% in Q2 2024 ([87]). The liquidity coverage ratio (LCR) was at 194% in October 2024 ([88]). The sector's overall liquidity position has strengthened since the end of the first half of 2024, largely because growth in stable sources of funding, specifically deposits and bond issuances, has been stronger than loan growth. This has contributed to the ongoing slow decline in the ratio of loans to deposit and bond liabilities ([89]). The repayment of a large part of the remaining targeted long-term refinancing operations (TLTROs) in individual banks at the end of the Q1 2024 did not threaten the liquidity position ([90]).

The non-performing loans (NPL) ratio in the Slovak banking sector remains low. The overall NPL was at 1.9% in Q3 2024, in line with the EU average, while the NPL ratio for NFCs was 2.5%, below the EU average (3.5%) and for households was 1.9%, below the EU average (2.2%). Similarly, the coverage ratio of NPLs was 61.5% in Q3 2024 (EU average: 42.1%), which reflects banks' ability to absorb future losses. The share of Stage 2 loans in the total portfolio was 9.8% in October 2024 (up from July 2024: 9.3%) and the coverage of provisions was 5.3% (down from July 2024: 5.5%) ([91]). From a financial stability perspective, the slight increase in the share of Stage 2 loans does not represent a significant risk, since it followed several months of substantial declines and affected only a few banks ([92]). Although NPL ratios are showing signs of deterioration in the commercial real estate (CRE) portfolio, their level remains low ([93]).

Despite recent substantial changes, the Slovak Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT) framework requires additional

([80]) In 2024, banks will pay 30% super tax on profits in the form of a levy, bringing the effective tax rate to almost 45% in 2024. This bank levy is then set to fall 5% per year to 15% in 2027, before being eliminated in 2028. See NBS, Financial Stability Report, May 2024, p.36.

([81]) NBS, 2024. Macroprudential Commentary, Dec. 2024, p.4.

([82]) NBS, 2024. Financial Stability Report, May 2024, p.8.

([83]) European Commission, 2024, In-depth review: Slovakia.

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

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

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

([87]) NBS, 2024. Macroprudential Commentary, Dec. 2024, p.4.

([88]) NBS, 2024. Macroprudential Commentary, Dec. 2024, p.4.

([89]) NBS, 2024. Macroprudential Commentary, Dec. 2024, p.4.

([90]) NBS, 2024. Financial Stability Report, May 2024, p.43.

([91]) NBS, 2024. Macroprudential Commentary, Dec. 2024, p.4.

([92]) NBS, 2024. Macroprudential Commentary, Dec. 2024, p.4.

([93]) NBS, 2024. Financial Stability Report, Nov. 2024, p.44.

improvements. Slovakia has agreed to amend its main AML/CFT Act by the end of 2024 to address the Commission's concerns. Similarly, following 2022 AMLD IV Slovakia Final Report Slovakia has compliantly reported – on a 6-month basis - about the necessary actions to remediate identified weaknesses. Furthermore, in December 2024 Moneyval had concluded that progress was not sufficient to justify an upgrade for three of the Financial Action Task Force (FATF) recommendations. In particular, recommendations n°8 and n°15 are relevant for the Commission: (i) lacking supervision over Non-profit organizations (NPOs) and (ii) non-compliance with the definition of Virtual Assets Services Provider (VASP) activities provided under FATF, coupled with the absence of framework for Travel Rule's application, and lacking monitoring regarding targeted financial sanctions applied to VASPs. In addition, remaining concerns regarding beneficial ownership information obligations for trusts and similar legal arrangements, and fit and proper's requirements, in particular, appear to call for additional clarification.

Resilience of the non-bank financial intermediaries

Slovakia's insurance sector is profitable and solvent. According to the National Bank of Slovakia (NBS), the insurance sector's aggregate profit for the first half of 2024 reached EUR 149 million (annualised, an 18.4% increase compared with 2023) ([94]). Nearly all major profit components contributed to this growth, except for non-life business ([95]). The Solvency Capital Requirement ratio was at 192% in June 2024, against an EU average of 258.6% ([96]). According to EIOPA's 2024 dashboard, there is a considerable insurance protection gap for floods in Slovakia that should be monitored ([97]),

The Slovak pension (second pillar and third pillar) fund and investment fund sectors have seen strong asset growth. The total volume of assets increased by EUR 3.7 billion to more than EUR 30 billion in 2024. In sectoral terms, growth was the highest in the second pension pillar (EUR 2.1 billion), followed by the investment fund sector (EUR 1.1 billion) and the third pension pillar (EUR 0.5 billion) ([98]). The growth trend in the second pension pillar may have been further augmented by a recent law change requiring the switching of some savers' assets from bond pension funds to index pension funds ([99]).

Sources of business funding and the role of banks

Firms in Slovakia rely more than the EU average on funding from banks and far less than the EU average on capital markets. In 2023, the overall level of non-financial corporation (NFC) funding in Slovakia was equivalent to 98.7% of GDP, which is substantially lower than the EU average of 230.3% of GDP (see Graph A5.4). When looking at NFC funding sources in Slovakia, at the end of 2023, bank finance through loans constituted 39.5% of all funding sources for Slovak NFCs, which was more than the EU average of 27.2%. Listed shares and bonds represented only 2.6% of funding sources,

([94]) NBS, 2024. Financial Stability Report, Nov. 2024, p.56.

([95]) Non-life insurance includes motor insurance, motor third party liability (MTPL) insurance, property insurance, reinsurance.

([96]) NBS, 2024. Financial Stability Report, Nov. 2024, p.57.

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

([98]) NBS, 2024. Financial Stability Report, Nov. 2024, p.60. The relative growth rate in both the second and third pension pillars was 15%, while the rate in the investment fund sector was a slightly lower 12%.

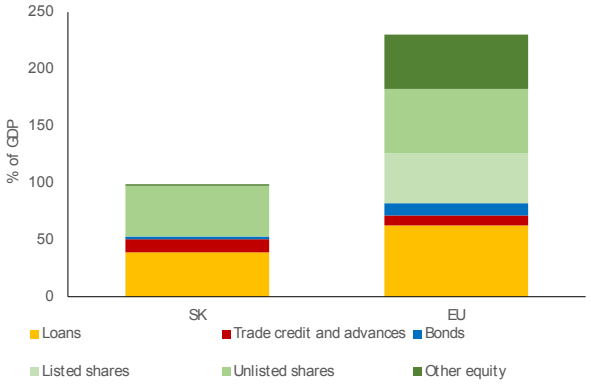
([99]) NBS, 2024. Financial Stability Report, Nov. 2024, p. 61.

which was a much smaller share than the EU average of 23.8%.

Slovak businesses rely mostly on internal financing, as do their peers in the EU. According to the 2024 EIB Investment Survey, the investment needs of 66% of Slovak firms' re covered by internal funding, equivalent to the EU average of 66% ([100]). At the same time, 82% of Slovak firms believe that their investment activities over the last three years were sufficient (close to the EU average of 80%), suggesting that there is no material financing gap relative to investment demand ([101]). However, this may not be the case for firms with no or limited capacity for internal funding, such as innovative start-up firms (see further below).

Credit growth has been on a general downward path for NFCs due to weak demand and an uncertain economic outlook. For NFCs, the annual credit growth rate in the corporate loan portfolio fell to -2.5% in Q3-2024. Although corporate lending has also slowed in other EU countries, the trend is far more pronounced in Slovakia, partly because the country previously experienced higher cyclicality in corporate lending ([102]). According to the October 2024 bank lending survey conducted by the NBS, banks do not expect any notable turnaround in corporate lending in the near term due to elevated interest rates (even if rates have fallen to some extent recently). Lending activity is higher among smaller firms than larger due to their reliance on a different internal financing structure ([103]).

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



(1) Reference period 2023
Source: Eurostat

As a result of falling interest rates and shifting prospects in the housing market, demand for mortgages has picked up, albeit modestly for now. Most banks anticipate a further increase in mortgage demand in the coming months ([104]). For households, the annual credit growth rate for adjusted loans was 3.3% in Q3-2024.

Capital markets and the participation of retail investors

Slovakia's capital markets remain under-developed. The main stock exchange in Slovakia is the Bratislava Stock Exchange (BSSE). The use of equity by SMEs is very low, as only 2% of SMEs indicated in the 2023 SAFE survey that equity was relevant for them, compared to an EU average of 10.1% ([105]).

In the past, Slovakia prepared a concept report on the development of capital markets, but this has not been updated. In April 2014, the Ministry of Finance, together with the Ministry of Economy, the NBS, the BSSE and the Central Securities Depository of

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

([101])Ibid, p.7.

([102]) NBS, 2024, Financial Stability Report-Nov 2024 , p.27.

([103])Ibid, p.29.

([104]) NBS, 2024, Financial Stability Report-Nov 2024 , p.18.

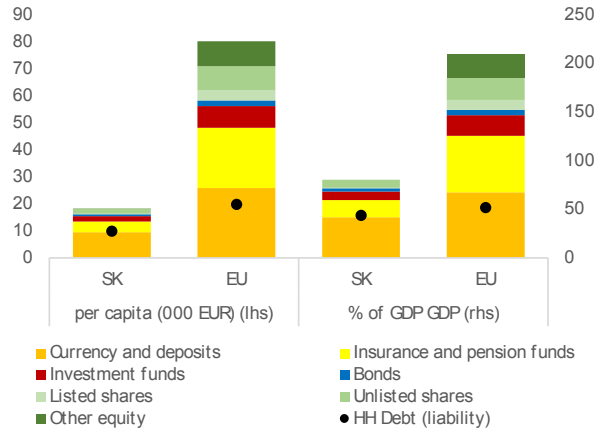
([105])European Commission, 2023, Data and Surveys-SAFE, Results by country, T27.

the Slovak Republic (CDCP), developed a concept report for the development of the capital markets ([106]), which put forward a number of measures to modernise the capital market infrastructure. Moreover, in 2023 the Slovak Business Association prepared an analysis on how to promote alternative forms of raising capital for SMEs ([107]).

Slovak households have a low savings rate, with a high share of cash and deposits in households' assets, which implies that there is scope to further increase the level of direct or indirect retail investments. Further 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. Slovak households have a stronger-than-average holding of cash and deposits, which accounts for 52.1% of household assets compared to the EU average of 32.3%. In 2023, 37.5% of households' financial assets were held in pension and investment funds or held directly in financial investment instruments ([108]), but this still falls short of the EU average of 45.4% (see Graph A5.5). In Slovakia, direct and intermediated retail investment by households was 41.9% in 2023 (EU average: 56.2%) ([109]).

Recent policy initiatives are aimed at boosting the level of retail participation. The Slovak government is scheduled to launch two government bond issuances for retail users during the first half of 2025 (with maturities up to five years). 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 Slovak fund management industry is quite small, with rising demand in investment funds. In Q3-2024, the largest portion of total assets was allocated to investment funds (39.1%), followed by stocks (24.4%), bonds (18.2%) and deposits and loan claims (16.4%) ([110]). This trend towards investment funds may be a result of a recent pension system reform.

The Slovak insurance sector has an investment portfolio that is mostly composed of bond holdings, and cash and deposits. By mid-2024, the insurance sector portfolio held most assets in government bonds, at 34% (EEA as a whole: 19%) ([111]), followed by corporate bonds at 26.1%, and cash and deposits at 5.3%. Investment funds accounted for 23.9% of insurers' investment portfolio (of which 52.6% is in equity funds and 0.1% in private equity funds) ([112]). Equity

([106]) Ministry of Finance of the Slovak Republic, 2014, Concept for the development of capital market.

([107]) BSA, 2023, Alternative forms of raising capital for SMEs through the capital markets.

([108]) The breakdown: insurance and pension funds 21.8%, investment funds 10.8%, bonds 4.1%, listed shares 0.7%

([109]) European Commission, 2024, Overview of CMU Indicators – 2024 Update, Indicator 22.

([110]) ECB, 2024, Euro-Area Investment Funds, Q3-2024.

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

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

accounted for 4.6% of the total assets of the insurance sector.

The domestic pension fund industry has an investment profile that relies more on investment funds than bonds, owing to a recent pension system reform. Investment fund shares accounted for 62.4% of the total assets held by pension funds as of Q3-2024 ([113]). Debt securities are the second largest investment asset held by pension funds at 29.4%, while bank currency and deposits account for 6.2% and equities account for 1.5% of their total assets. The trend towards reliance on investment funds may be due to the recent legal change for pillar II, which supports the switch from bond to index pension funds (a type of equity fund) on a phased basis according to the saver's age, with these funds offering potentially higher returns and carrying a corresponding higher level of risk ([114]). 'Overall, a better developed pensions sector could help develop the domestic capital market.

The participation of domestic institutional investors in providing funding for start-ups and venture capital investors is low. A 2024 paper by think tank CEP showed that pension funds in Croatia, Slovakia, and Slovenia accounted for only 6% of private equity and venture capital funds raised annually between 2007-2023, a figure that falls substantially short of the 19% for the Baltic states or 20% shares for Nordic Member States ([115]). In this regard, over time, revised limits for pension funds to invest in private equity and venture capital funds could help to facilitate more funding for Slovak startups.

Recent policy action may facilitate a shift towards more dynamic investment strategies. These measures include:

On 1 January 2023, a pension system reform took place that introduced changes to pillar II of the Slovak pension system. First-time workers under the age of 40 were enrolled automatically (with the option to opt-out after two years), and the default investment option was changed from guaranteed-return bond funds to index funds unless otherwise selected by the new participant. All participants will gradually move to guaranteed bond funds from the age of 54 ([116]).

As a way of promoting wider participation in pillar III of the pension system, the government gradually lowered the maximum annual management fees of supplementary pension companies from 1.20% of the pension fund assets in 2024 to 1% in 2025.

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 increased from 0.02% in 2022 to 0.03% in 2023 (EU average: 0.41%) ([117]), which is among the lowest in the EU. The value of annual venture capital investment relative to nominal GDP dropped from 0.02% in 2022 to 0.01% in 2023 (EU average: 0.05%) ([118]). Given the limited venture capital (VC) and private equity (PE) activity in Slovakia, there is a financing gap for early-stage innovative firms in need of capital.

There are some initiatives in place to promote start-up funding. For instance, there is a crowdfunding platform available to enable

([113])ECB, 2024, Euro-Area Pension Funds, Q3-2024.

([114])NBS, 2024, Financial Stability Report – Nov. 2024, p.61.

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

([116])NBS, 2024, Financial Stability Report – Nov. 2024, p.61.

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

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

Table A5.1: **Financial indicators**

		2017	2018	2019	2020	2021	2022	2023	2024-Q3	EU
Banking sector	Total assets of MFIs (% of GDP)	91,4	90,8	91,5	99,2	104,6	103,5	99,8	92,8	248,4
	Common Equity Tier 1 ratio	16,2	15,5	15,8	16,8	16,7	16,8	17,3	17,7	16,6
	Total capital adequacy ratio	18,6	17,8	18,0	19,3	19,4	19,5	20,1	20,3	20,1
	Overall NPL ratio (% of all loans)	3,7	3,2	2,9	2,5	2,0	1,7	1,8	1,9	1,9
	NPL (% loans to NFC-Non financial corporations)	4,9	4,0	3,5	3,4	2,8	2,3	2,5	2,5	3,5
	NPL (% loans to HH-Households)	3,8	3,4	3,0	2,6	2,2	1,8	1,9	1,9	2,2
	NPL-Non performing loans coverage ratio	65,6	69,8	68,7	68,4	71,1	69,4	60,1	61,5	42,1
	Return on Equity[1]	9,3	9,3	8,3	5,3	8,4	9,4	11,5	10,2	10,0
	Loans to NFCs (% of GDP)	20,7	20,5	20,3	20,8	20,0	20,7	18,9	17,5	30,0
	Loans to HHs (% of GDP)	38,6	40,5	41,7	44,4	44,7	45,7	42,6	41,0	44,5
	NFC credit annual % growth	7,8	6,4	4,2	4,3	6,0	9,8	2,8	-2,5	0,8
	HH credit annual % growth	12,4	10,7	8,5	6,6	9,1	10,0	3,8	3,3	0,7
Non-banks sector	Stock market capitalisation (% of GDP)	5,3	5,3	2,9	2,8	2,0	1,8	1,5	1,7	69,3
	Initial public offerings (% of GDP)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-	0,05
	Market funding ratio	29,8	28,4	27,5	24,7	23,6	21,7	20,4	-	49,6
	Private equity (% of GDP)	0,01	0,03	0,04	0,02	0,05	0,02	0,03	-	0,41
	Venture capital (% of GDP)	0,00	0,00	0,02	0,02	0,02	0,02	0,01	-	0,05
	Financial literacy (composite)	-	-	-	-	-	-	45,0	-	45,5
	Bonds (as % of HH financial assets)	3,3	3,7	3,9	3,9	3,3	3,7	4,1	-	2,7
	Listed shares (as % of HH financial assets)	0,6	0,2	0,4	0,5	0,7	0,6	0,7	-	4,8
	Investment funds (as % of HH financial assets)	7,5	7,3	7,4	7,7	9,1	9,3	10,8	-	10,0
	Insurance/pension funds (as % of HH financial assets)	19,4	19,0	19,6	19,9	20,8	21,0	21,8	-	27,8
	Total assets of all insurers (% of GDP)	7,8	7,1	7,3	7,5	6,0	4,8	4,4	4,1	54,8
	Pension funds assets (% of GDP)	-	-	12,4	13,9	15,1	13,6	14,4	15,5	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.

some businesses to access venture and growth capital but the financial offer is limited. The NBS has established an innovation hub and a regulatory sandbox to facilitate innovation in financial services. However, there is no comprehensive legal framework to facilitate the creation and growth of start-ups. Further measures to promote and facilitate initial public offering (IPO) activity could also improve the ability of successful start-ups to scale-up, while offering an attractive exit option to VC and PE investors.

Financing the green transition

The financing needs of Slovakia's green transition may pose a challenge. The Slovak government has already prioritised the transition to a greener economy in its recovery and resilience plan (RRP), and allocates over half of the total RRP funding to support this transition ([119]). The financial sector can also help the transition to a green, low-carbon and climate resilient economy by scaling up capital directed towards low-carbon activities. In Slovakia, the issuance of bonds with environmental, social, and governance objectives as a share of total bond issuance was very low in H1 2024 at around 3% (Slovakia's three-year average: around 5%) and is very low compared to most of its EU peers ([120]).

Financial literacy

Although financial literacy in Slovakia has improved over the years, more can be done in terms of depth of knowledge for retail investors and SMEs. Financial literacy is crucial

([119])European Commission, 2024, RRP Scoreboard.

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

to promote retail-investor participation in capital markets but also to familiarise SMEs with alternatives to bank financing. The July 2023 Eurobarometer survey shows that only 20% of Slovaks have a high level of financial literacy, 63% a medium level, and the remaining 17% a low level, compared to the EU average of 18% for high literacy, 64% for medium, and 18% for low ([121]). This leads to an overall financial literacy indicator (the average of the financial knowledge and financial behaviour indicators) of 45% vs an EU average score of 45.5% ([122]).

In Slovakia, recent initiatives have sought to improve financial literacy. The Ministry of Education prepared the national financial literacy standard (NSFL), which entered into force on 1 September 2017. The NSFL focuses on topics such as financial responsibility, money protection, credit and debt, savings and investment, risk management and insurance, etc. In addition to the NSFL, many other activities aimed at increasing financial literacy in Slovakia are now being developed by the NBS ([123]) alongside the Finance Ministry as well as by universities, business entities and non-profit organisations.

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

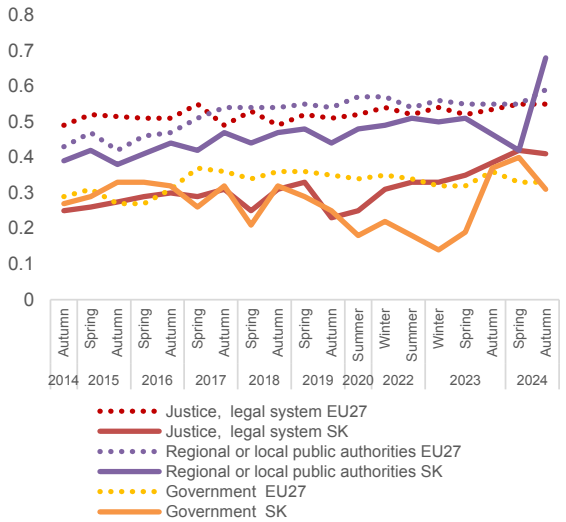
([122]) European Commission, 2024, Overview of CMU Indicators – 2024 Update, Indicator 27.

([123])NBS, 2019, The NBS financial literacy support strategy.

Slovakia's institutional framework influences its competitiveness. Slovakia faces many challenges with regulatory governance, effectiveness and strategic potential of investments, and absorption of EU funds. Effectiveness of justice and the anti-corruption framework have not increased. Slovakia would benefit from reducing administrative burdens, improving the quality and predictability of the legislative and regulatory environment, increasing the professionalism of the civil service and making it more attractive as an employer. A reform of the local governance structure may also be warranted to address structural challenges in implementing viable investment projects and absorbing EU funds.

Public perceptions

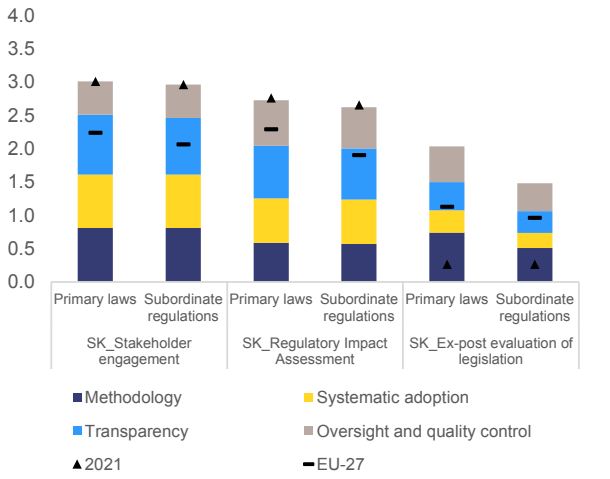
Graph A6.1: **Trust in justice, regional / local authorities and in government**



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

Trust in public institutions is below the EU average. Trust in local authorities has seen a significant increase and ranks higher than central government and the judiciary (GraphA6.1). In Slovakia, 60% of citizens believe that reducing bureaucracy would enhance trust in public administration (compared to the EU's 52%), 42% prefer easier interactions with the administration (compared to the EU's 28%), and 37% desire better-skilled civil servants (compared to the EU's 30%) ([124]). Overall, the perceived quality of government remains below the EU average and has deteriorated slightly ([125]). The structural weakness of local government remains. 84% of municipalities have less than 2000 inhabitants and only 2% have more than 20,000 inhabitants. The high fragmentation and limited capacity of municipalities lead to regional disparities in delivery of services and management of investments ([126]). The underfunding of local government was aggravated in recent years by the transfer of new responsibilities from the central level. The government plans to set up centres for shared services in municipalities within the least developed regions. Efforts to encourage inter-municipal cooperation however face barriers ([127]).

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).

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

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

([126]) Švikruha M, Bardovič J. Malé Obce A Problém Poskytovania Vybraných Služieb: Prípad Slovenska. Central European Papers. 2024;12(1):39-62. Doi: 10.25142/Cep.2024.003.

([127]) J. Nemec, Nikoleta Jakuš Muthová, Beáta Mikušová Meričková, 2023, Barriers to inter-municipal cooperation

Table A6.1: **Slovakia. 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: OECD (2025), Regulatory Policy Outlook 2025 [https://doi.org/10.1787/56b60e39-en] and Better Regulation across the European Union 2025 (forthcoming)

Quality of legislation and regulatory simplification

Despite a generally well-defined formal framework for regulatory governance, its implementation remains ineffective. Impact assessments are conducted for draft primary and secondary legislation, with a focus on administrative burdens. Despite of efforts to strengthen analytical capacity, ministries still struggle to assess wider social and economic impacts ([128]). Also, the quality of impact assessments is often limited, and enforcement is ineffective. In 2023, more than half of the impact assessments of draft laws presented to the legislative council of the government received a negative opinion ([129]). However, as these opinions are not binding, the effectiveness of the rules is marginal. Trainings on better regulation rules have been initiated. These cover topics as gold-plating and the "one in, two out" principle and could help improve the quality of impact assessments ([130]). At the same time, the regulatory governance procedures are not obligatory for the parliament, which affects the quality of legislation. In 2023, 53% of the legislative initiatives were tabled by members of the parliament ([131]). The lack of effective rules and their enforcement also has a strong impact on the business environment (Annex 4).

The swift adoption of legislation in recent years has negatively impacted its quality. There is a tendency to divert from the standard procedure and adopt laws without proper impact assessment or parliamentary oversight.

([128]) OECD Regulatory Policy Outlook 2025.

([129]) Výročná Správa Stálej Pracovnej Komisie Legislatívnej Rady Vlády Sr Na Posudzovanie Vybraných Vplyvov Za Rok 2023

([130]) Opatrenie Ex post | Podnikateľské prostredie | MHSR

([131]) Staronova K, Lacková N, data] Sloboda M. Post-crisis Emergency Legislation Consolidation: Regulatory Quality Principles for Good Times Only? *European Journal of Risk Regulation*. 2024;15(3):637-655. doi:10.1017/err.2023.69

As a result, public consultations and stakeholder involvement remained limited ([132]).

Social dialogue

Although social dialogue in Slovakia experienced challenges during the Covid-19 pandemic, it returned to its usual practice afterwards. Social dialogue in Slovakia is institutionally anchored in bodies like the tripartite Economic and Social Council, which comprises representatives from the government, employers' organisations, and trade unions. As an advisory body to the government, the Council discusses legislative proposals and provides a platform for dialogue on various issues related labour market and employment regulations, minimum wages, or social protection. The Council adopts only non-legally binding recommendations. The social partners play a crucial role in forecasting skills for the labour market (through the Alliance of Sectoral Councils) ([133]).

The government has signed up to supporting social dialogue and collective bargaining, especially its quality and employee participation in decision-making. In August 2024, the government and the social partners signed a declaration on the development of social dialogue in Slovakia. Nevertheless, challenges remain especially in the private sector. Especially in small businesses, the absence of union organisation persists. With the use of targeted support from ESF+, the Ministry of Labour launched a national project in June 2023 aimed at supporting social dialogue. The project´s budget is EUR 23 million, channelled through the Alliance of Sectoral Councils to the social partners.

Efficiency of selected administrative procedures

Selected indicators point to Slovakia's public administration taking longer than average to complete procedures. For example, public buyers take longer than the EU average to award procurement contracts (122 days from the deadline to submit offers in Slovakia vs 99 days in the EU-27). This contributes to uncertainty for companies. Moreover, the B-READY indicators ([134]) show great potential for cutting the time needed to obtain a building permit and an environmental licence, as well as the time needed to draft, file and pay and to complete a generic tax audit. According to a report monitoring implementation of the Commission Recommendation and Guidance on faster permit-granting procedures for renewable energy and related infrastructure projects ([135]), there is clearly scope for further aligning national practices in Slovakia with the guidance, to support faster and shorter procedures for the licensing of renewable energy projects. Lastly, while the OECD product market regulation indicator shows that while Slovakia´s licensing system is less burdensome than the EU average, there is still some room for adopting best practices. 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,

([132]) See the 2024 country-specific chapter for Slovakia of the Rule of Law Report.

([133]) For an analysis of the involvement of Slovakia's social partners at national level in the European Semester and the Recovery and Resilience Facility, see Eurofound (2025), National-level social governance of the European Semester and the Recovery and Resilience Facility.

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

([135]) European Commission: Directorate-General for Energy, *Monitoring the implementation of the Commission recommendation and guidance on speeding up permit-granting procedures for renewable energy and related infrastructure projects – Final report*, Publications Office of the European Union, 2025, link.

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

		Slovakia			EU-27	Digital Decade target by 2030
		2022	2023	2024	2024	EU-27
Digitalisation of public services						
1	**Digital public services for citizens**	**65**	**67**	**72**	**79**	**100**
	Score (0 to 100)	2021	2022	2023	2023	2030
2	**Digital public services for businesses**	**75**	**78**	**79**	**85**	**100**
	Score (0 to 100)	2021	2022	2023	2023	2030
3	**Access to e-health records**	**na**	**42**	**66**	**79**	**100**
	Score (0 to 100)	2021	2022	2023	2023	2030

Source: State of the Digital Decade report 2024d

there is no requirement for the government to regularly review it and assess whether such licences and permits are still required or should be withdrawn (see also Annex 4).

Digital public services

Slovakia is approaching the EU average in providing digital public services to citizens and businesses (table A6.2). On digital public services for citizens, Slovakia scores 72/100, against the EU average of 79/100. For availability of digital public services for businesses, Slovakia scores 79/100 (against an EU average of 85/100). To advance in this area, Slovakia is working on digitalising its company register ([136]). Slovakia has made considerable progress as regards access to electronic health records (from 42% in 2022 to 66% in 2023) but is still considerably below the EU average (79%).

Slovakia is advancing towards seamless, automated exchange of authentic documents and data across the EU. It has developed the necessary infrastructure and is beginning the process of connecting the first authorities to the Once-Only Technical System ([137]). As part of its RRP, Slovakia is working to consolidate access to services via the central government portals and to increase the online delivery of life events. Specific programmes have been put in place increase digital skills of elderly and marginalised groups.

The share of e-government users is relatively high in Slovakia (80.5%), above the EU average of 75%. Yet the use of eID to access public services (8%) remained considerably lower than the EU average (36.1%). Only 2% of eID users are estimated to have accessed their electronic health records, pointing to a need for increased awareness about the service ([138]). Slovakia has also not yet set up and notified eID schemes for legal persons under the eIDAS Regulation ([139]). This means that Slovak 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 ([140]).

([136]) National reform programme 2024

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

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

([139]) European Commission, eIDAS Dashboard.

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

Civil service

Some major challenges are affecting the quality of the civil service in Slovakia. The share civil servants with higher education (52.8%) is around that of the EU-27 (52.8%), as is the participation rate of civil servants in adult learning (20.6% in Slovakia and 18.9% in EU-27) ([141]). The attractiveness of the public administration has declined ([142]) and the proportion of staff below the age of 49 years is decreasing. The decentralised human resources management creates disparities in remuneration and appraisal across administrations ([143]). The lack of dedicated training policy and clear responsibility for assessing skills gaps creates additional barriers to improving productivity of civil servants.

Previous reforms promoting merit-based recruitment of civil servants may be significantly weakened. The amendments to the Civil Service Act in 2021 relaxed the rules for removal of senior civil servants. This was followed by the replacement of staff at some management positions. In 2024, the Civil Service Council, which monitored civil service policy in Slovakia was abolished ([144]). Its control functions were transferred to a newly established civil service control and monitoring department in the government office. The Council's role in coordinating the human resources management, promoting integrity, depoliticisation and motivation of civil servants will not be transferred to another body.

Integrity

Although corruption is considered widespread and a problem when doing business, Slovakia relaxed its laws punishing corruption and dissolved specialised anti-corruption entities. In Slovakia, 85% of companies consider that corruption is widespread (EU average 64%) and 63% consider that corruption is a problem when doing business (EU average 36%) ([145]). Moreover, only 9% of companies believe that people and businesses caught for bribing a senior official are appropriately punished (EU average 31%) ([146]). The criminal law reform raises serious concerns regarding the robustness of Slovakia's legislative framework against corruption, reducing sanction levels for corruption crimes and shortening the period in which they can be brought to justice. As a result of amendments to the Criminal Codes, several high-level corruption cases have been dropped in 2024 ([147]). Besides, throughout 2024, Slovakia dissolved the autonomous Special Prosecution Office, the specialised police National Crime Agency (NAKA) and the Department of Corruption Prevention of the Government Office in 2024 ([148]) and subsequently reorganised both prosecution and police. Decentralisations of investigations and turnover of employees responsible for these had a largely negative impact on the adequate follow up of ongoing cases. There are thus newly arisen, as well as persistent serious concerns about the effectiveness of the fight against corruption. These include the impact on

([141])Eurostat. 2025. European Union Labour Force Survey.

([142]) JAHODA, Robert et al. The Low Demand for Public Administration Programs in the Czech Republic and Slovakia: What May be Behind it?. **Transylvanian Review of Administrative Sciences**, [S.l.], p. 99-117, dec. 2022. ISSN 1842-2845. <https://rtsa.ro/tras/index.php/tras/article/view/715>.

([143])Kahancová, M., & Staroňová, K. (2023). Arms-length influence: Public sector wage setting and export-led economic growth in Czechia and Slovakia. *European Journal of Industrial Relations*, *30*(1), 97-119. https://doi.org/10.1177/09596801231215901

([144]) Act No 201/2024 Coll., amending Act No 575/2001 Coll.

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

([146]) Ibid.

([147])See the 2024 country-specific chapter for Slovakia of the Rule of Law Report, pp. 14 et seq.

([148]) Ibid., pp. 10 et seq.

the degree of specialisation and capacity that was built over the past years, funded by the RRF (e.g. ensuring the training of police officers in the area of anti-corruption, as well as the discretionary power of the Prosecutor-General in particular to annul any final decision by lower-ranking prosecutors or the police in the investigations of high-level corruption cases. Foreign bribery remains an area with low enforcement levels, with one case being reported ([149]).

Public procurement remains an area at high risk of corruption in Slovakia. 45% 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 ([150]). Amendments to the Public Procurement Act aim to simplify public procurement rules. However, stakeholders report that the amendments may not address the actual challenges, including systemic misuse of tenders and levels of professional expertise, which affect the quality of public tenders. ([151])

The influence of businesses on Slovakia's legislative process remains untransparent, with lobbying being unregulated. Slovakia has reiterated but postponed its commitment to adopting lobbying rules. Amendments tabled in 2024 would regulate exclusively lobbying by non-governmental organisations and not corporate lobbying, and risk creating an unequal level playing field.

Justice

The justice system continues to face challenges as regards its efficiency and judicial independence. The estimated time for resolving civil and commercial cases at first instance increased (from 168 days in 2022 to 173 days in 2023). As regards administrative cases, the estimated time at first instance increased significantly from 648 days in 2022 to 1 040 days in 2023 and is one of the highest in the EU. Also, the clearance rate for resolving administrative cases dropped from 93% in 2022 to 74% in 2023. The judicial map was reorganised in 2023, and a dedicated administrative court system was established. The quality of the justice system is good overall. The level of digitalisation of the justice system is advanced but work on developing a new digital court management system has faced setbacks. Some digitalisation efforts are being supported by the recovery and resilience plan. Concerns regarding judicial independence persist. Safeguards in the dismissal procedure of the non-peer elected members of the Judicial Council are missing, while the Government, the Parliament and the President dismissed their nominees ahead of the end of their term. The lack of safeguards exposes judges to prosecution for the content of their decisions ([152]).

([149]) Ibid., p. 18.

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

([151]) See the 2024 country-specific chapter for Slovakia of the Rule of Law Report, pp. 27-28.

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

Slovakia faces significant challenges regarding its clean industry transition and climate mitigation. Clean technology manufacturing has potential to strengthen industrial diversity in Slovakia. Its automotive sector is currently undergoing a profound transformation, and energy-intensive industries have been challenged by high energy prices and global competition. Slovak manufacturing is heavily reliant on importing critical raw materials. Mixed municipal waste is still allowed to be landfilled without pre-treatment. Slovakia still has not remediated numerous contaminated waste sites, and its industry continues releasing large amounts of air and water pollutants.

Strategic autonomy and technology for the green transition

Net zero industry

Slovakia's manufacturing capacity across net zero technologies remains modest.([153]) Slovakia's manufacturing capacity amounts to between 5 and 5.25 GWh/y (2% of EU capacity) for battery and storage technologies and between 50 and 150 MW/y (0-1% of EU capacity) for solar PV modules. Additionally, there are at least 12 facilities in Slovakia producing heat pumps.

Slovakia could benefit from manufacturing clean technologies, which is a newly emerging and promising segment of its domestic industry, helping to diversify the industrial sectors of the economy. In Slovakia, an EUR 1 billion state aid scheme under the Temporary Crisis and Transition Framework was approved by the European Commission in December 2023 to support investment projects in strategic industrial sectors for the transition to a net-zero economy. These include the production of batteries, solar panels, wind turbines, heat pumps, electrolysers, carbon capture equipment, key components for these technologies and the production or recovery of related critical raw materials. In March 2024, the government included the production of batteries, solar panels, wind turbines, heat pumps, electrolysers and equipment for carbon capture and storage among its strategic sectors ([154]). Businesses from those strategic areas will thus be able to receive increased state incentives. After several large investors have in recent years announced significant investment in producing heat pumps, photovoltaic panels ([155]) could also be developed and produced in Slovakia. Based on the action plan for the 2023-2026 National Hydrogen Strategy ([156]), the government also supports the development of hydrogen infrastructure and technologies in Slovakia. Investment in these new industrial segments and in strategic goods could support the transition towards a net zero economy and further strengthen industrial diversity in Slovakia.

Public and private investment in energy research and innovation is very low in Slovakia, with an R&D intensity of just below 1% in 2022. This limits the country's ability to develop and deploy advanced clean technologies. The lack of private sector investment in R&D combined with a lack of cooperation between industry and academia, and a shortage of startups and innovative

([153]) European Commission: Directorate-General for Energy, The net-zero manufacturing industry landscape across the Member States 2025, https://data.europa.eu/doi/10.2833/2181110

([154]) Ministry of Industry: Detail materiálu | Portal OV, March 2024.

([155]) Minister of Industry signed a Memorandum of understanding with the innovative japanese producer of photovoltaic panels, February 2024.

([156]) Action plan of the National Hydrogen Strategy for 2023-2026

ventures, is also reported to be hindering Slovakia's battery industry.

Transforming the car industry

Slovakia's automotive industry – its largest industry - is facing strong competition and significant challenges regarding the transition to electric vehicles. Car manufacturing employs more than 260 000 people and produces up to 12% of GDP. It accounted for 42% of exports and almost half of industrial sales (46.5%) in 2023. The sector is undergoing a profound transformation, driven by digitalisation, automation and the shift towards electric vehicles and away from internal combustion engines. Nevertheless, Slovak carmakers remain cautiously optimistic about their near-term outlook. This resilience is largely due to the country's highly modern manufacturing facilities, lower labour costs that provide a competitive edge and the fact that all Slovak automotive plants are currently working on electric car models whose production is relatively stable. In addition, the Slovak automotive industry will be strengthened by the significant investment announced in 2024, including in a gigafactory for batteries, which will facilitate the country's shift to electric models and boost the entire automotive sector in Slovakia. Based on calculations ([157]), the sector received 96% of the investment aid in 2024 and 84% in 2023. However, supporting the diversification of the Slovak economy could end its dependence on one dominant industry and thus reduce its vulnerability to supply-chain disruptions and global uncertainty.

To address barriers and challenges facing the automotive industry, further efforts could be made, including creating a space for discussion and cooperation with the industry. According to industry representatives, there is a lack of cooperation between government and industry, resulting in the adoption of crucial legislative proposals affecting the industry without adequate consultation with the key industrial stakeholders. The competitive advantage of production in Slovakia is being reduced by consolidation measures that will increase costs and taxes for companies (see Annex 4: Making Business Easier). Further impediments for the industry to grow and remain competitive in the long term include the lack of waste processing capacities in Slovakia, the obstacles to meeting the EU's "green goals", the shortage of skilled workers but also the insufficient attractiveness of STEM studies (see Annex 12) and an extensive brain drain. In addition, Slovakia needs to step up its support for zero-emission vehicles on its own roads. In 2023, battery electric vehicles made up just 2.9 percent of new car registrations, placing Slovakia in last place among EU countries.

Despite the adoption of the Action plan for the development of e-vehicles in Slovakia in 2023 and its revision later in 2024, the country experienced the third sharpest decline in the battery-electric vehicles market share from July to October 2024([158]). Many of the proposed measures including subsidies for the purchase of electric cars, exemption of electric cars from highway fees and tolls or support for charging infrastructure have either been delayed or remained unimplemented.

Decreasing inefficiencies in rail transport

Despite important steps taken under the RRP, significant efforts are still needed to prepare and implement further investments in railway transport. In particular, a more long-term funding approach and strategy for financing would be important to optimise governance and strategic investments, to be focused on electrification, digitalisation, reconstruction, and optimisation of the rail network and its better interconnection and interoperability with the trans-European

([157]) Institute for Strategies and Analyses (ISA): Ekonomický prehľad 41, October 2024.

([158]) DG GROW "CET Quarterly Bulletin" on industrial performance, based on ACEA (European Automobile Manufacturers' Association), December 2024.

network for transport. A centralised national fund, in addition to improvement of the infrastructure project lifecycle, which exist in neighbouring Member States, is currently missing in Slovakia. This would allow for a more effective medium to long-term planning of transport infrastructure works, and better use of national and European streams of funding that finance most of these projects in Slovakia. This could be accompanied by a reform of national railway infrastructure management, to accelerate and streamline investments in modernising rail physical and digital infrastructure.

Critical raw materials

Slovak manufacturing depends heavily on imports of critical raw materials (CRMs) that are needed for the green and digital transitions. While Slovakia produces several such materials([159]), such as silicon metal, coking coal, and aluminium, it is still heavily reliant on imports of CRMs for the transitions. In 2023, the main CRM imported by Slovakia from non-EU countries, in terms of trade values, was coking coal from the USA, Australia, and Canada. Slovakia's Import concentration Index([160]) was the highest among the EU countries in 2023, which creates significant challenges regarding sustainability and resilience, such as supply chain risks, environmental degradation and social concerns. With 43.3% of material inputs coming from imports in 2023 (EU average: 22%), Slovakia is particularly vulnerable to supply chain disruptions. Moreover, the circular use of material, which is key to reducing dependence on raw materials imports, remains well below the EU average, even though it has increased since 2018. Improvements are therefore needed towards more sustainable material management practices in Slovakia.

Slovakia could play an important role in addressing strategic dependencies by developing value chains in critical raw materials. Slovakia has a long-standing mining and metallurgy tradition and good mineral potential. It is the most significant EU producer of magnesite and magnesium compounds. However, the Slovak mining industry faces significant challenges due to high energy prices, the Russian invasion of Ukraine and efforts to achieve climate neutrality. In October 2024, production in the mining industry dropped by a fifth (y-o-y)([161]). As a result, the industry warns that it may be forced to shut down factories or relocate production to countries outside the EU. Slovakia's 2021-2025 waste management programme identified CRM-relevant areas requiring further investment and development. These include electrical equipment, batteries and accumulators and vehicles, for which the principles of extended producer responsibility apply. Investment in new processing capacity is needed for end-of-life vehicles, while for construction and demolition waste, batteries and waste from electrical and electronic equipment, the focus should be on modernising existing facilities and improving recycling rates. Slovakia has initiated or is considering measures to increase the use of secondary CRMs, such as mandatory green public procurement, increasing the content of recycled materials in products and setting standards for the quality of recycled materials from waste. Some of the CRMs or CRM-rich products are addressed in Slovakia's Act No. 79/2015 on waste.

Slovakia scores well in recycling e-waste and end-of-life vehicles. It is a frontrunner as regards the recycling rate for e-waste, a key source of critical raw materials, with 92.5% in

([159])EC, Raw material Information System, country profile Slovakia.

([160]) The import concentration measures how much a country relies on a limited number of sources for a basket of critical raw materials. Source: COMEXT.

([161])Statistical Office of the Slovak Republic: Priemyselná produkcia, October 2024.

2021 (the EU average was 81.6%). The reuse and recycling rate for end-of-life vehicles in Slovakia is above the EU average (95.9% vs. 89.1% in 2022).

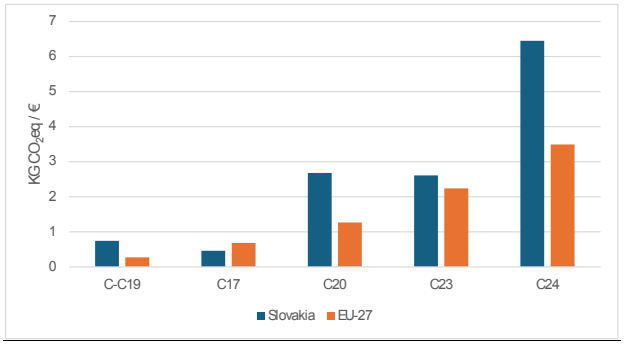
Climate mitigation

Industry decarbonisation

Manufacturing is a significant source of greenhouse gas emissions in Slovakia; the country ranks fourth in emissions intensity in the EU. At 35%, the share of manufacturing in Slovakia's total greenhouse gas emissions is the highest in the EU ([162]). Slovakian manufacturing emits 740 g of CO2eq of greenhouse gases per euro of gross value added, 2.7 times the EU overall (270 g/€) and the third highest in the EU. Since 2017, the greenhouse gas emissions intensity of manufacturing in Slovakia improved by 20%, similar to the EU average. 56% of manufacturing emissions in Slovakia relate to energy use, with 44% associated with industry processes and product use. In the EU overall, these shares are the inverse.

The greenhouse emissions intensity of manufacturing in Slovakia improved (albeit less than in the EU overall). One driver appears to have been rising energy efficiency. Between 2017 and 2022, the energy- and process and product use-related emissions intensities in Slovakian manufacturing declined by 18% and 19% respectively ([163]). For energy use, this was slightly above the EU average (16%); for industry process and product use-related emissions, EU-wide reductions were higher, at 23%. In the same period, the share of electricity and renewables in manufacturing's final energy consumption fell by 3 percentage points, to 38% – the fifth lowest in the EU. In the same time period, the energy intensity of manufacturing has improved by 10%, with the final energy consumption of manufacturing falling from 2.5 GWh per euro of GVA to 2.3 GWh/€. In the EU overall, improvements in energy efficiency in those years amounted to 15%, resulting in 1.1 GWh/€ in 2022.

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



Source: Eurostat.

The greenhouse gas emissions intensity of Slovakia's basic metals sector is the fourth highest in the EU, emitting 6.5 kg of CO2eq per € of GVA: Slovakia's chemical industry is the sixth most emissions intensive among EU Member States, with 2.7 kg CO2eq/€. Energy-intensive industries ([164]) account for 13% of

([162]) 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.

([163]) 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.

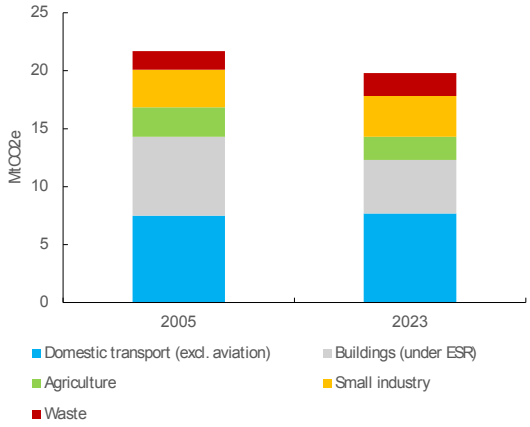
([164]) Notably, the manufacture of paper and paper products (NACE division C17), of chemicals and chemical products (C20), "other" non-metallic mineral products (C23; this division includes manufacturing activities related to a single substance of mineral origin, such as glass, ceramic products, tiles, and cement and plaster), and basic

Slovakia's manufacturing gross value added (2022). As an important component of production costs in the above industries and others, in recent years Slovakia's electricity prices for large consumers increased to become the fourth highest in the EU by 2023; gas prices too have risen to among the highest in the EU ([165]). In September 2024, the steel mill U.S. Steel Košice announced it had prepared a decarbonisation plan, resulting in a 70% reduction in emissions with unchanged production volume, but it may only be launched once the ongoing ownership changes are clarified.

Reduction of emissions in the effort sharing sectors

To attain its 2030 effort sharing target, Slovakia needs to swiftly implement the planned climate mitigation measures ([166]). In 2023, GHG emissions from Slovakia's effort sharing sectors are expected to have been 14.3% below those of 2005. By 2030, current policies are projected to reduce them by 19.9% relative to 2005 levels; additional policies considered by Slovakia are projected to add reductions of 11.6 percentage points. Consequently, Slovakia is projected to overachieve its effort sharing target of 22.7% reductions by 8.8 percentage points ([167]).

Graph A7.2: **Greenhouse gas emissions in the effort sharing sectors, 2005 and 2023**



Source: European Environment Agency

Sustainable industry

Circular economy transition

Despite positive trends, there is room for improving Slovakia's circularity transition. At 10.6% in 2023, Slovakia's circular material use is below the EU average and far behind EU leaders. Slovakia's resource productivity, at EUR 1.52 per kg of material consumed in 2023, remained well below the EU average. Even if Slovakia's resource productivity has been slightly improving in the past decade, the gap towards the EU average has not decreased. Slovakia needs to boost its efforts to minimise negative environmental impacts and reduce dependence on volatile raw materials markets. Slovakia's circular economy policy framework is set in its first dedicated roadmap ([168]). The roadmap was developed in 2022 thanks to cooperation with the OECD and the European Commission's Technical Support Instrument. It introduces more than 30 concrete policy recommendations, supported by an

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.

([165]) For a detailed analysis of energy prices, see Annex 8 on the affordable energy transition.

([166]) 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).

([167]) 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 Slovakia's final updated NECP.

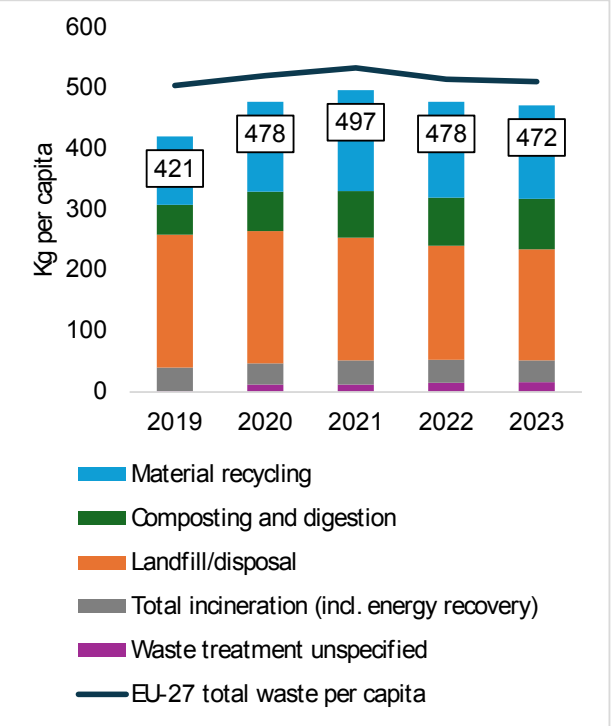
([168]) Closing the Loop in the Slovak Republic - A Roadmap Towards Circularity for Competitiveness, Eco-innovation and Sustainability, 2022 https://www.oecd.org/environment/waste/highlights-closing-the-loop-in-the-slovak-republic-roadmap_EN.pdf.

implementation plan and a monitoring framework, all to be introduced by 2040. Priority areas are food and biowaste, the construction sector, sustainable production and consumption and economic instruments as cross-cutting measures. Slovakia's recovery and resilience plan includes one circular economy-related reform on the management of construction and demolition waste. Circular economy targets have been introduced as part of the country's wider 2019 environmental policy strategy ([169]), but they relate more to waste.

Slovakia needs to do more to ensure that all landfilled waste has been (pre-)treated and increase its efforts to meet all waste targets. With 472 kg of municipal waste in 2023, Slovakia produces slightly less municipal waste per capita than the EU average (see Graph A7.3). With a recycling rate of 49.5% in 2022, Slovakia is slightly above the EU average for municipal waste recycling. However, it is at risk of missing the municipal waste and packaging waste targets, and of not meeting the 2035 target of maximum 10% of municipal waste being landfilled. Also, mixed municipal waste is still allowed to be landfilled without pre-treatment and Slovakia repeatedly postponed the introduction of a pre-treatment obligation. At 60% in 2022, Slovakia's recycling rate for plastic packaging waste was above the EU average, though this figure is not yet based on the new calculation rules. The preparing for reuse and recycling rate of mineral construction and demolition waste in Slovakia in 2022 was 93.2%, compared with the EU average of 79.8 %. Slovakia's material footprint in 2023 was 13.8 tonnes per capita, below the EU average.

Current investment in the circularity transition has been insufficient. Slovakia is estimated to need total additional investment worth at least EUR 189 million per year for the circular economy transition, including waste management. Of the circular economy gap, EUR 43 million relates to recent initiatives, such as eco-design for sustainable products, packaging and packaging waste, labelling and digital tools, critical raw materials recycling and measures proposed under the amendment of the Waste Framework Directive. The EUR 121 million constitutes further investment need to unlock Slovakia's circular economy potential ([170]).

Graph A7.3: **Municipal waste treatment**



Source: Eurostat

Zero pollution industry

Slovakia has been making significant progress with reducing air pollution but air quality continues to give cause for concern in some parts of its territory. This pollution is now decoupled from GDP growth**.** In 2023, exceedances above the limit values set by the Ambient Air Quality Directive were registered for PM_{10} in one air quality zone in Slovakia. The

([169]) Ministry of the Environment, *Greener Slovakia*, 2019, Link.

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

target values for ozone concentrations have not been met in two air quality zones, and the target value for benzo(a)pyrene (BaP) concentration in six air quality zones ([171]). However, the 2020-2029 emissions reduction commitments for air pollutants NO_x, NMVOC, SO_2, NH_3 and $PM_{2.5}$ under the National Air Pollution Control Programme have been met, and the commitments (for the same air pollutants) for the 2030s are projected to be met as well.

Slovakia's industry still releases large amounts of air and water pollutants. As regards industrial air pollutants, Slovakia comes 7th for the emissions intensity in the EU (above the EU average of 27.5 EUR / thousand EUR of gross value added (GVA)) and it has the 13th highest damage. The main contributors to emissions to air are the energy sector as well as the metals and mineral industry for NOx emissions, the waste management and chemical industry for dust emissions, the energy sector, and the metals sector and mineral sector for SO2 and heavy metals. As regards industrial emissions of heavy metals to water, Slovakia is in 4th position in the EU for emissions intensity (below the EU average intensity of 0.864 kg / billion EUR GVA) and has the 13th highest amount of emissions. The main contributors to emissions to water in Slovakia are the chemical sector for heavy metals, nitrogen and total organic carbon, the pulp and paper industry for phosphorus and the metal production and processing sector for polycyclic aromatic hydrocarbons (PAHs).

The costs of pollution remain far higher than the investment in pollution prevention and control. Based on 2022 data, 3 700 deaths in Slovakia are attributed each year to fine particulate matter ($PM_{2.5}$); 260 deaths to nitrogen dioxide (NO_2), and 700 deaths to ozone (O_3) ([172]). The costs related to all industrial air pollutants in Slovakia are estimated to be EUR 9.3 billion ([173]). In contrast, to meet its objectives for pollution prevention and control and address the health and economic costs of pollution, Slovakia needs an additional EUR 289 million per year (0.26% of GDP), mostly related to air pollution control ([174]).

([171]) EEA, EIONET central data repository, Link.

([172]) In terms of years of life lost, this implies 41 400 years for $PM_{2.5}$, 2 900 for NO_2, and 7 800 for O_3.

([173]) Value of 2017, source: EEA, 2024, *The costs to health and the environment from industrial air pollution in Europe – 2024 update*, Link.

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

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

Strategic autonomy and technology for the green transition				Slovakia						EU-27	
Net zero industry											
Operational manufacturing capacity 2023											
- Solar PV (c: cell, w: wafer, m: module), MW	50-150 (m)				- Electrolyzer, MW		-				
- Wind (b: blade, t: turbine, n: nacelle), MW	-				- battery, MWh		5000-5250				
Automotive industry transformation	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**			**2018**	**2021**
Motorisation rate (passenger cars per 1000 inhabitants), %	408	426	439	447	459	471	487	↗		539	561
New zero-emission vehicles, electricity motor, %	0.22	0.31	0.16	1.19	1.50	1.92	2.90	↗		1.03	8.96
Critical raw materials	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**			**2018**	**2021**
Material import dependency, %		43.0	44.0	42.7	45.2	45.8	43.3	↘		24.2	22.6

Climate mitigation				Slovakia				Trend		EU-27	
Industry decarbonisation	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**			**2017**	**2022**
GHG emissions intensity of manufacturing production, kg/€	0.94	0.86	0.7	0.75	0.86	0.74	0.62	↘		0.34	0.27
Share of energy-related emissions in industrial GHG emissions	57.0	56.3	54.7	56.9	56.8	56.7	56.0	↘		44.8	42.5
Energy-related GHG emissions intensity of manufacturing and construction, kg/€	307.9	303.6	250.2	256.3	291.0	252.0	-	↘		158.4	132.9
Share of electricity and renewables in final energy consumption in manufacturing, %	41.1	41.3	42.7	39.0	39.8	37.9	37.7	↘		43.3	44.2
Energy intensity of manufacturing, GWh/€	2.52	2.35	2.11	2.19	2.27	2.26	1.70	↘		1.29	1.09
Share of energy-intensive industries in manufacturing production						12.9					7.3
GHG emissions intensity of production in sector [...], kg/€											
- paper and paper products (NACE C-17)	0.30	0.44	0.37	0.39	0.51	0.46	0.41	-		0.73	0.68
- chemicals and chemical products (NACE C20)	3.52	3.83	2.58	2.63	3.14	2.68	2.51	-		1.25	1.26
- other non-metallic mineral products (NACE C23)	2.77	2.79	2.10	2.36	2.59	2.61	1.89	-		2.53	2.24
- basic metals (NACE C24)	7.01	5.92	6.98	7.46	7.06	6.45	5.59	-		2.79	3.49
Reduction of effort sharing emissions		**2018**	**2019**	**2020**	**2021**	**2022**	**2023**			**2018**	**2023**
GHG emission reductions relative to base year, %					-12.2	-15.1	-14.3				
- domestic road transport		1.8	5.9	-7.9	-1.9	1.5	2.5	↗		1.4	5.2
- buildings		-27.3	-28.9	-30.6	-21.0	-28.2	-32.2	↘		21.4	32.9
	2005				**2021**	**2022**	**2023**	**Target**		**WEM**	**WAM**
Effort sharing: GHG emissions, Mt; target, gap, %	23.1				20.3	19.6	19.8	-22.7		-2.8	8.8

Sustainable industry				Slovakia				Trend		EU-27	
Circular economy transition		**2018**	**2019**	**2020**	**2021**	**2022**	**2023**			**2018**	**2021**
Material footprint, tonnes per person		15.1	14.3	13.2	13.2	14.2	13.8	↘		14.7	15.0
Circular material use rate, %		4.7	8.3	10.3	10.4	11.5	10.6	↗		11.6	11.1
Resource productivity, €/kg		1.2	1.4	1.4	1.5	1.8	2.0	↗		2.1	2.3
Zero pollution industry											
Years of life lost due to PM2.5, per 100,000 inhabitants		1,066	781	815	1,025	1,120	-	↗		702	571
Air pollution damage cost intensity, per thousand € of GVA					45.4						27.5
Water pollution intensity, kg weighted by human factors per bn € GVA						1.7					0.9

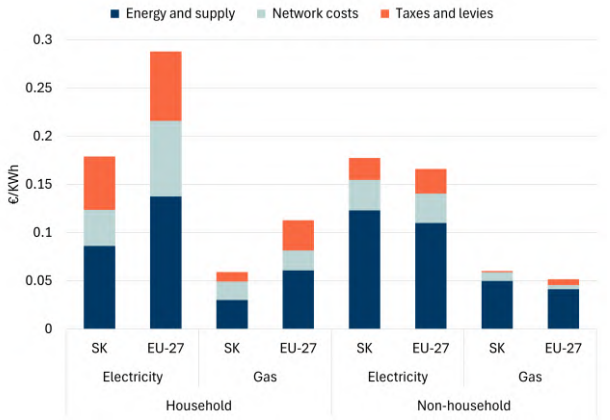
Source: **Net zero industry:** European Commission: The net-zero manufacturing industry landscape across Member States: final report, 2025. **Automotive industry transformation:** Eurostat. **Critical raw materials:** Eurostat. **Climate mitigation:** See footnotes in the "climate mitigation" section; 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.

Slovakia is facing very high energy prices, also consequently to the stop of the gas transit via Ukraine. Despite the efforts made to accelerate the decarbonisation of its energy system, there is still space for improvement. Nuclear energy still represents the main source of electricity production in the national energy mix.

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

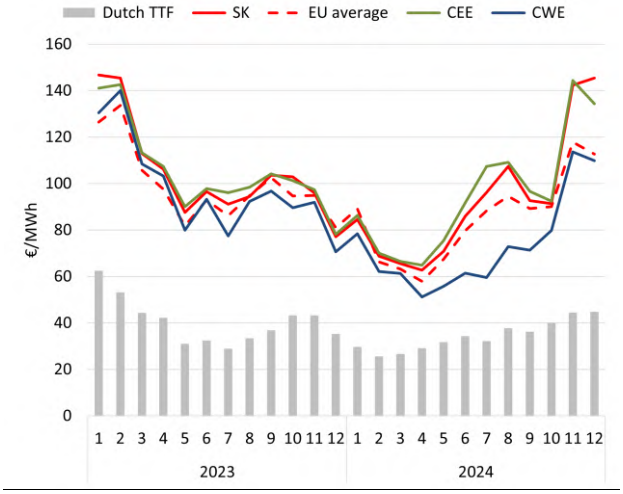
Slovakia's retail electricity prices dropped significantly in 2024 for both non-household and household consumers, but the former category climbed around 8% above EU average while the latter remained considerably below EU average (almost 39%). Similarly for retail gas prices, households' prices remained at a level almost half of the EU average when prices for non-household consumers were the 4th highest in the EU. Retail prices components (energy and supply, network costs, taxes and levies) shares in Slovakia broadly follow EU-wide trends with the exception of the share of network costs in finarul retail gas prices for household and non-household consumers which are considerably higher than the EU average (32.4% and 12.3% for an EU average of 18.3% and 7.1% respectively) and the electricity network costs for households which are significantly lower than the EU average.

Slovakia had the EU's ninth highest wholesale electricity prices, averaging 93 EUR/MWh in 2024([175]). Prices initially fell with natural gas costs, but surged during the spring/summer and winter, diverging from Central Eastern European (CEE) markets. This decorrelation was driven by factors affecting both consumption and generation. On the consumption side, prolonged and warmer summer heatwaves and a colder winter in the region led to higher consumption([176]). Generation challenge in Slovakia included lower hydropower (-55% in Nov/Dec 2024 vs same period in 2023)([177]) due to weather conditions, reduced nuclear output (-16% in summer and -4% in winter) due to malfunctions, and decreased coal production (-57% in 2024) due to rising CO_2 costs, further straining the supply-demand balance. This gap was mainly covered by costly natural gas-fired generation (+18% in 2024) ramping up especially during peak demand hours. Consequently, and more so than in 2023, these conditions drove concentrated price spikes in the evening hours (18h-21h), when solar 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

([175]) Fraunhofer (ENTSO-E data).
([176]) 2024 load was at 25.6 TWh, increasing by 1% compared to 2023.
([177]) ENTSO-E.

uptake of solar output in Slovakia (+11% in 2024) and in neighbouring markets([178]).

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

Slovakia is part of the Core([179]) capacity calculation region (CCR). Member States should ensure that a minimum of 70% of technical cross-border capacity is available for trading. Member States have a derogation in place to address specific network elements, introducing interim targets to be met only on specific critical network element and contingency (CNECs) while the 70% rule applies to the remaining network elements. A derogation enables a lower level of trades to be made for a time-limited period for operational security reasons. The ACER Market Monitoring Report shows that the network elements limiting cross-border trade mostly pertain to the internal network.

Slovakia is well interconnected with neighbouring countries and has an interconnectivity level of over 40%. However, further reinforcements of the grid are needed to support integration of renewables. Additional reinforcements on the Czech border are to be addressed by a new interconnector under consideration, which has received PCI (project of common interest) status. Further reinforcements on the border with Hungary are also being considered. Modernisation of the distribution grid is supported by two ongoing PCI smart-grid projects: ACON with Czechia and the Danube InGrid with Hungary. In addition, the upgrade of the pumped-hydro storage at Cierny Vah (which also has PCI status) is expected to improve the flexibility of the power system within the region.

Energy infrastructure permitting in Slovakia does not form part of a dedicated legal framework. While the existing framework does not pose any major concerns, there is scope for further streamlining of environmental assessments and a need to boost the resources and improve the expertise of the competent authorities. In addition, the priority status of projects of common interest/projects of mutual interest is not fully reflected in the permitting process, as these projects are not automatically given the status of highest national significance. Additionally, the designated one-stop-shop, intended to streamline the process, has limited powers and a coordinative role, further complicating the situation.

The Slovak recovery and resilience plan aims to support faster roll-out of investment in renewables. For this purpose, it has included reforms that have modernised the country's electricity market and created an appropriate

([178])Yearly electricity data, Ember (generation and consumption data throughout the paragraph).
([179])Core is the 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.

legislative environment, by improving access for new market participants, increasing certainty and confidence in state support measures and improving integration of renewables in the Slovak electricity grid. In 2023, the solar industry estimated the grid connection of solar plants to take between three and six months for utility-scale projects and one month for small photovoltaic projects, both below the EU average.

Despite the challenges that remain, Slovakia has taken steps to support non-fossil flexibility. The country does not report on the installed non-fossil flexibility capacity in the draft NECP. It has committed to further promoting the development of energy storage and energy conversion technologies (Power-to-X). Slovakia has adopted a legal framework that allows aggregation, including independent aggregation, to participate in wholesale markets. Slovakia is working to put in place an energy data centre as a central data hub for the registration of market participants and the settlement of services([180]). The country expects this to make possible the provision of services such as aggregation, energy sharing and energy communities. However, Slovakia's regulatory framework still presents barriers to the development of flexible resources. The slow deployment of smart meters in combination with regulated retail prices results in a low number of dynamic retail contracts.

Consumer engagement in the energy market remains limited. Slovakia applies regulated prices for vulnerable customers. All households are defined as vulnerable, which means that the vast majority of households are on regulated contracts. Moreover, the roll-out of smart meters for households is low. Slovakia has decided to proceed with a selective roll-out (15%) targeting prosumers and consumers connected to the distribution system at a low voltage level with an annual consumption of at least 4 MWh.

Given the low-carbon electricity mix, the challenge is the gradual electrification of transport, in particular public passenger transport. For industry to be decarbonised, all available innovative technologies and all decarbonised fuels and energy carriers need to be used. Households will also face the cost of electrification in the transport sector, but this will not lead directly to a reduction in consumption. However, household consumption will be affected by higher prices for products and services being passed on by businesses in order to recover the costs of energy efficiency investments, in particular investments in electricity generation.

In 2023, electricity accounted for 19.9% of Slovakia's final energy consumption, below the EU average of 22.9%, and this share has slightly decreased in the last decade([181])**, partly due to an unfavourable electricity-to-gas price ratio that disincentivizes electrification and cost-effective decarbonization.** When it comes to households, electricity accounts for 20.7% of final energy consumption, while in industry it represents 26.5% (see also Annex 7). For the transport sector, this share remains negligible at 2.1%. Further progress in electrification across sectors is required for cost effectively decarbonising the economy and bringing the benefits of affordable renewable generation to consumers. In 2024's second semester, Slovakia had amongst the largest fiscal disparities between electricity and gas in the EU. Before taxes and levies, the electricity-to-gas price ratio was 2,4 for households and 2.8 for energy-intensive industries, rising to 2,9 and 3.1, respectively, after taxes and levies. For households, taxes and levies accounted for

([180])Settlement of services refers to the process optimization and management of the operation of flexible consumer and producer equipment in real time and transactions regarding aggregation.

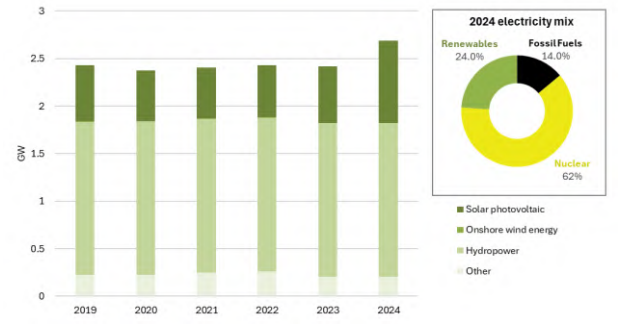
([181])CAGR (compound annual growth rate) of -0.7% between 2013 and 2023 and minimum/maximum share of 19.8% and 22.8%, respectively.

~30,9% of the final electricity price, higher than the EU average of 25%, while gas stood at ~16,7%. For energy-intensive industries, non-recoverable taxes and levies represented ~13% of the electricity price, while gas was nearly tax-exempt (~2%)([182]).

Renewables and long-term contracts

In 2024, 24% of Slovakia's electricity mix was supplied by renewable energy sources (RES), far behind the EU's overall RES share of 47%([183]). **Installed RES capacity grew by 11.34% in 2024.** The total renewable energy capacity in Slovakia in 2024 stood at 2 691 MW. As regards the acceleration of solar deployment, the total installed capacity in 2024 was 867 MW, almost an 46.2% increase from 2023. Wind capacity in Slovakia has remained stable at 4 MW since 2019([184]).

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



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

Slovakia has taken steps to digitalise the permit-granting procedure for renewables. In 2024, the Spatial Planning Portal was set up, a platform that makes it possible for applications to be submitted for all spatial planning processes in Slovakia. In addition, Slovakia has digitalised the grid connection procedure. It has also taken some steps to streamline the permitting process for renewable energy projects. An amendment to environmental impact assessment was approved in 2024, which will increase the threshold under which renewable energy projects must undergo certain environmental assessments. However, there is still room for further improvement to shorten the permit-granting procedure for RES, especially taking into consideration the guidance on speeding up permit-granting procedures. The Commission has launched infringement proceedings against Slovakia for failing to transpose the permitting provisions laid down in Directive (EU) 2023/2413 on the promotion of energy from renewable sources.

Slovakia's proposed contribution to the 2030 EU renewable energy target in its draft updated national energy plan is 23%, significantly below the 35%. Via the Union Renewable Energy Platform, Slovakia has announced auctions for other renewables in 2025 (60 MW), 2026 (100 MW), 2027 (100 MW) and 2028 (100 MW). As part of the European wind power action plan, Slovakia has committed to having 150 MW of installed onshore wind capacity by 2026.

Power purchase agreements (PPAs) are not very common in Slovakia. The first virtual PPA was concluded in 2024, with a volume of 7.2 GWh per year. 2024 has also seen the conclusion of the first cross-border PPA with Romania, with an installed capacity of 461 MW. The construction of the wind plant, which will take place in Romania, is expected to be completed by the end of 2025.

([182])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).
([183])Yearly electricity data, Ember.
([184]) Renewable Energy Capacity Statistics 2025

Energy efficiency

Slovakia has made progress towards reaching the 2030 EU energy efficiency targets. In 2023, its primary energy consumption (PEC) was 15.45 Mtoe, a 0.3% increase compared to 2022. In 2023, its final energy consumption (FEC) was 9.29 Mtoe, a 5.8% decrease compared to 2022. Compared to 2022, FEC decreased in all main sectors: in industry by 9.4%, in the residential sector by 3.2%, in transport by 1.5% and in services by 11.2%. According to the recast Energy Efficiency Directive (Directive (EU) 2023/1791), Slovakia should try to reach a PEC of 13.97 Mtoe and an FEC of 8.70 Mtoe by 2030.

According to the national energy and climate progress report for 2023, Slovakia achieved new annual energy savings of 106 ktoe/year. The top four measures were voluntary agreements in industry, promoting energy efficient transport (electromobility), increasing energy efficiency in road freight transport (modernisation of the vehicle park) and renovation of buildings (blocks of flats).

Slovakia has not 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. There is no completion date.

It would be beneficial if Slovakia were to step up its efforts in the residential sector to achieve a meaningful contribution to its 2030 reduction target for energy consumption in buildings. Although FEC in the residential sector decreased between 2022 and 2023, from a medium-term perspective it is stagnating at well above the 2018 level when climate corrections are applied. This is despite the target laid down in the long-term renovation strategy being a 16% reduction by 2030. In 2022, heating and cooling represented 84% of the country's residential FEC. Approximately 12 000 heat pumps were sold in 2023, representing a decrease of 11% compared to the previous year. Slovakia is planning to ban the sale and installation of new fuel and oil boilers. There are several measures in place to support energy renovations, including support for the installation of heat pumps. Electricity in Slovakia was 3.4 times more expensive than gas in 2023, meaning that end users save energy but will not make any significant financial savings if they choose a heat pump for heating.

Slovakia deploys an effective supportive national financing framework that mobilises energy efficiency investments and is composed mainly of grants and subsidies. It is implemented by the Slovak Innovation and Energy Agency (SIEA), or by various ministries or the Environment Fund. The use of financial instruments remains limited. In 2024, Slovakia continued implementing financing measures, including a EUR 357.3 million state aid scheme for industrial decarbonisation under the Recovery and Resilience Plan, set to run from 2022 to 2026. In terms of sectors supported, Slovakia's national financing framework focuses mainly on the building sector (both residential and public buildings) and to some extent also on industry. Slovakia continues to have a scheme to support the construction, reconstruction and modernisation of heat distribution systems, which was implemented between 2020 and 2023.

Security of supply and diversification

Slovakia's dependence on Russian fossil fuels remains high, with efforts to address this issue progressing too slowly. In 2024, around 70% of natural gas was of Russian origin. The country's energy security priorities include enhancing energy security, diversifying energy sources and transport routes, and promoting energy storage. Slovakia has reduced gas demand by 14% voluntarily since August 2022, with an improvement in demand

management being seen between 2023 and 2024. Given that the transit of Russian gas via Ukraine has been stopped, Slovakia no longer receives Russian gas directly via Ukraine but mostly from Hungary. Slovenský plynárenský priemysel (SPP)([185]) has already concluded a diversification contract for the purchase of gas with Italy's Eni. Other diversification contracts exist with BP, ExxonMobil, Shell and RWE. Alternative transit routes other than Ukraine are Germany, Austria and Czechia, which offer sufficient volumes of free transit capacity or have already been reserved. Moreover, SPP has also used the transit route from Croatia or Italy, via Austria to Slovakia. Despite Russia's war of aggression against Ukraine, Slovakia is still fully dependent on oil deliveries from Russa via the Druzhba pipeline and has an oil contract with Russia that is valid until 31 December 2029. In 2024, crude oil imports from the Russian Federation to Slovakia amounted to more than 80% of all crude oil consumed. The operator of the sole refinery in Slovakia (MOL group) announced that they will be able to fully refine from non-Russian crude oil in 2026. Slovakia has the possibility to use JANAF/Adria oil pipeline to supply non-Russian crude oil.

In 2023, Slovakia's gross inland consumption was composed of 21.6 % natural gas (3 610 KTOE), 14.4 % of solid fossil fuels (2 402 KTOE), 22.3% of oil and petroleum products (3 726 KTOW), 28.3% of nuclear heat (4 733 KTOW) and 12.3 % of renewables and biofuels (2 055 KTOE).([186])

It would be useful if Slovakia were to increase its efforts to diversify from Russian energy. According to the 2023 NECP ([187]), various forms of possible participation in different liquefied natural gas (LNG) projects (floating storage and regasification units (FSRUs)) in the EU are being considered as an additional contribution to security of supply. The Slovak gas industry has signed memoranda of understanding with a number of companies from Italy, Poland and Germany that could provide access to LNG terminals and possible gas supplies to Slovakia. The above steps have been taken to strengthen Slovakia's energy independence. In parallel, negotiations are also taking place with LNG producers from the USA, Qatar, Asia and Africa. By concluding these diversification contracts, SPP is now able to cover around 70% of its customers' consumption from a non-Russian source ([188]).

Slovakia's electricity mix has seen a growing share of nuclear energy, rising from 60.2% in 2022 to 62% in 2023. Slovakia is continuing to expand its nuclear fleet, with the newest Mochovce-3 nuclear reactor having been connected to the grid and reaching full production at the end of 2023. The construction of Mochovce-4, the fourth reactor at the site, is expected to be completed in the second half of 2025. In 2024, the government announced plans to construct an additional reactor at Bohunice, with construction to be launched in 2031. In January 2025, framework contracts were announced between newcleo and JAVYS and VUJE for the construction of advanced modular reactors (AMRs). Newcleo aims to construct four lead-cooled fast reactors (LFRs) that will make it possible for Slovak spent nuclear fuel to be used as fuel. Diversification has progressed with Slovenske elektrarne signing an alternative fuel supply contract with Westinghouse Sweden for its VVER-440 reactor fleet. In July 2024, Slovenske elektrarne also signed a VVER-440 fuel supply contract with the French company Framatome. These steps will reduce dependency on nuclear fuel originating in Russia. It is important for Slovakia 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.

([185])The state-owned gas supplier

([186]) Energy Balances - Eurostat

([187])The final 2024 NECP has not been submitted at the moment of drafting.

([188]) 2023 NECP, p. 67 (EN version).

Fossil fuel subsidies

In 2023, environmentally harmful ([189]) fossil fuel subsidies without a planned phase-out before 2030 represented 0.10% ([190]) of Slovakia's GDP ([191]), below the EU weighted average of 0.49%. Tax measures accounted for the full volume. However, Slovakia's 2023 Effective Carbon Rate ([192]) averaged EUR 64.05 per tonne of CO_2, below the EU weighted mean of EUR 84.80 ([193]).

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

[190] Numerator is based on volumes cross-checked with the Slovak 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.

[191] 2023 Gross Domestic Product at market prices, Eurostat.

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

[193] OECD (2024), Pricing Greenhouse Gas Emissions 2024

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

	Slovakia				EU			
	2021	**2022**	**2023**	**2024**	**2021**	**2022**	**2023**	**2024**
Household consumer - Electricity retail price (EUR/KWh)	**0.1647**	**0.1839**	**0.1976**	**0.1789**	**0.2314**	**0.2649**	**0.2877**	**0.2879**
Energy & supply [%]	37.0%	44.2%	43.0%	48.2%	36.6%	54.3%	55.6%	47.8%
Network costs	26.0%	25.3%	20.6%	20.8%	26.7%	25.3%	24.8%	27.2%
Taxes and levies including VAT	36.9%	30.5%	36.3%	30.9%	36.7%	20.3%	19.6%	25.0%
VAT	16.6%	16.7%	16.6%	16.7%	14.5%	13.4%	13.8%	14.6%
Household consumer - Gas retail price	**0.0415**	**0.0493**	**0.0587**	**0.0592**	**0.0684**	**0.0948**	**0.1121**	**0.1128**
Energy & supply	45.8%	51.5%	50.8%	50.8%	43.7%	61.0%	64.5%	53.9%
Network costs	37.6%	31.8%	32.5%	32.4%	22.5%	17.3%	17.1%	18.3%
Taxes and levies including VAT	16.6%	16.6%	16.7%	16.7%	33.8%	21.7%	18.4%	27.8%
VAT	16.6%	16.6%	16.7%	16.7%	15.5%	11.6%	10.2%	13.6%
Non-household consumer - Electricity retail price	**0.1483**	**0.2795**	**0.2779**	**0.2131**	**0.1471**	**0.2212**	**0.2337**	**0.1970**
Energy & supply	39.4%	63.9%	59.8%	57.8%	43.0%	66.5%	63.0%	55.8%
Network costs	20.6%	11.2%	11.4%	14.8%	15.8%	10.7%	11.9%	15.5%
Taxes and levies excluding VAT	28.1%	9.8%	14.6%	12.8%	30.4%	9.9%	11.2%	15.4%
Non-household consumer - Gas retail price	**0.0322**	**0.0909**	**0.0972**	**0.0723**	**0.0388**	**0.0836**	**0.0754**	**0.0603**
Energy & supply	66.5%	75.2%	73.1%	69.2%	66.2%	77.3%	77.3%	68.7%
Network costs	12.7%	6.6%	8.8%	12.3%	7.7%	3.8%	5.3%	7.1%
Taxes and levies excluding VAT	4.9%	1.8%	1.6%	2.3%	12.5%	6.1%	7.3%	11.6%
Wholesale electricity price (EUR/MWh)	102.4	264.1	105.0	92.8	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)	**27.738**	**26.971**	**28.434**	**28.838**	**30.016**	**26.838**	**29.903**	-
Combustible Fuels	7.367	7.542	7.953	7.897	8.999	6.254	5.882	-
Nuclear	15.081	14.843	15.282	15.444	15.730	15.920	18.333	-
Hydro	4.623	3.879	4.571	4.799	4.552	3.963	5.028	-
Wind	6	6	6	4	5	4	4	-
Solar	506	585	589	663	671	650	605	-
Geothermal	-	-	-	-	-	-	-	-
Other Sources	155	116	33	31	59	47	51	
Gross Electricity Production [%]								
Combustible Fuels	26.6%	28.0%	28.0%	27.4%	30.0%	23.3%	19.7%	-
Nuclear	54.4%	55.0%	53.7%	53.6%	52.4%	59.3%	61.3%	-
Hydro	16.7%	14.4%	16.1%	16.6%	15.2%	14.8%	16.8%	-
Wind	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-
Solar	1.8%	2.2%	2.1%	2.3%	2.2%	2.4%	2.0%	-
Geothermal	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-
Other Sources	0.6%	0.4%	0.1%	0.1%	0.2%	0.2%	0.2%	-
Net Imports of Electricity (GWh)	**3.028**	**3.682**	**1.700**	**319**	**774**	**1.412**	**-3.422**	-
As a % of electricity available for final consumption	11.2%	13.7%	6.5%	1.3%	2.9%	5.9%	-15.5%	-
Electricity Interconnection [%]	**43.3%**	**42.7%**	**45.3%**	**41.4%**	**40.2%**	**47.0%**	**50.6%**	**47.8%**
Share of renewable energy consumption - by sector [%]								
Electricity	21.3%	21.5%	22.1%	23.1%	22.4%	22.9%	24.2%	-
Heating and cooling	9.8%	10.6%	19.7%	19.4%	19.5%	19.9%	18.8%	-
Transport	7.0%	7.0%	8.3%	9.3%	8.8%	8.9%	9.2%	-
Overall	11.5%	11.9%	16.9%	17.3%	17.4%	17.5%	17.0%	-

	2020	**2021**	**2022**	**2023**	**2020**	**2021**	**2022**	**2023**
Import Dependency [%]	**56.3%**	**52.6%**	**69.6%**	**57.7%**	**57.5%**	**55.5%**	**62.5%**	**58.3%**
of Solid fossil fuels	86.2%	88.1%	96.1%	90.4%	35.8%	37.2%	45.9%	40.8%
of Oil and petroleum products	102.0%	98.3%	103.0%	105.2%	96.8%	91.7%	97.8%	94.5%
of Natural Gas	88.1%	69.0%	137.3%	105.7%	83.6%	83.6%	97.6%	90.0%
Dependency from Russian Fossil Fuels [%]								
of Natural Gas	85.4%	68.9%	38.6%	63.9%	41.0%	40.9%	20.7%	9.3%
of Crude Oil	100.0%	100.0%	96.2%	84.0%	25.7%	25.2%	18.4%	3.0%
of Hard Coal	35.0%	25.8%	8.9%	0.0%	49.1%	47.4%	21.5%	1.0%

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Gas Consumption (in bcm)	**5.0**	**4.9**	**4.9**	**4.9**	**5.5**	**4.5**	**4.2**
Gas Consumption year-on-year change [%]	5.4%	-1.2%	-0.1%	-0.4%	11.9%	-17.4%	-6.2%
Gas Imports - by type (in bcm)	**5.2**	**4.4**	**6.7**	**4.3**	**5.1**	**6.2**	**4.5**
Gas imports - pipeline	5.2	4.4	6.7	4.3	5.1	6.2	4.5
Gas imports - LNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gas Imports - by main source supplier [%]							
Russia	84.6%	100.0%	100.0%	85.4%	68.9%	38.6%	63.9%
Not specified	15.4%	0.0%	0.0%	14.6%	31.1%	61.4%	36.1%

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

Extreme weather events and nature degradation have a significant impact on Slovakia, with economic sectors such as agriculture, forestry and construction heavily dependent on ecosystem services. Despite having a large proportion of protected areas, effective conservation measures are lacking, leading to ongoing legal issues and funding gaps that threaten biodiversity and economic stability. The current Slovak government has diverted funding away from nature and diversity protection and has relaxed environmental protection laws. Slovakia is making strides in transitioning to sustainable agricultural practices, including increasing organic farming and implementing stricter environmental standards. However, these efforts are undermined by insufficient investment in biodiversity conservation, putting Slovakia's compliance with global biodiversity commitments and its long-term socioeconomic development at risk. The water quality of Slovakia's surface water bodies shows a deteriorating trend in terms of their ecological and chemical status. Its wastewater treatment also remains a cause for concern. Addressing these challenges is crucial to safeguarding Slovakia's natural resources and ensuring the resilience and competitiveness of its economy.

Climate adaptation and preparedness

Slovakia is vulnerable to the impacts of climate change resulting from extreme weather events, including increased precipitation and rising temperatures, which increase the risk of flooding. Climate risks directly affect Slovakia's economy and society. Between 1980 and 2023, Slovakia recorded EUR 1.95 billion in economic losses caused by extreme weather- and climate-related events. However, only 4% of the economic damages over that period were insured. In 2022, 20% of Slovakia's area was affected by drought.

National policy measures related to adaptation and preparedness have been further strengthened over recent years, but additional efforts are still required. Slovakia has been proactive in addressing climate-change impacts over the past few years and continued to make progress between 2021 and 2023. A crucial step was the approval of the national adaptation plan (NAP) in 2021, which sets out the priorities for adaptation in the sectors identified as vulnerable to climate change (in particular water management, agriculture, forestry, nature, health and urban planning). However, Slovakia still needs to carry out a comprehensive assessment of its vulnerability to climate change. Furthermore, progress on the new climate law, referred to in the Government Manifesto of October 2023 ([194]), has stalled in 2024. The update of its national adaptation strategy (NAS) is due in 2025. Slovakia also has yet to submit its updated national energy and climate plan to the European Commission. The most recent draft update does not take account of relevant climate vulnerabilities and risks, which may jeopardise the achievement of energy and climate mitigation objectives. In addition, adaptation policies and measures (to address these risks and vulnerabilities) are not adequately described.

Despite advances in climate monitoring and modelling, Slovakia faces challenges in the effective implementation of adaptation solutions. As mentioned in the conclusions to the assessment of Slovakia's progress towards adaptation under European climate legislation, Slovakia has continued to develop its climate monitoring and modelling tools, but methodological gaps in the monitoring of adaptation and climate risks remain. Although enhanced climate-observation tools inform decision-making in specific sectors, there is limited capacity for systemic risk assessments. Challenges in translating climate risk information into practicable solutions therefore remain. The climate vulnerability and risk

([194]) Úrad vlády Slovenskej republiky, 2023, *Programové vyhlásenie vlády Slovenskej republiky*, Link.

analysis has not identified any further risks that were not reported in 2021, and the reported risks and sectors appear to be consistent with the results of independent analysis by the Joint Research Centre and the country's own national risk assessment ([195]). Guidelines are available on how to monitor and evaluate adaptation policy, but it is still difficult to establish how much public money is spent overall on climate adaptation and to measure results. Furthermore, personnel changes at the Ministry of the Environment during 2024 have weakened the Ministry's expertise capacity and, as a result, finding sufficient financing from appropriate sources in Slovakia and via EU funding remains a challenge in sectors that need to adapt. Other barriers to successful implementation, in addition to insufficient funding, are low awareness at regional and local level and an inadequate degree of interministerial cooperation (especially for mainstreaming climate adaptation into sectoral policies and plans). Further efforts are needed to enhance the climate resilience of infrastructure and to make more progress on adaptation solutions.

Water resilience

Slovakia needs to continue its efforts to improve its floods resilience. The floods of September 2024, which caused damage in several regions of Slovakia, demonstrate the urgency. Slovakia's total economic losses caused by floods between 1980 and 2023 are estimated at EUR 603 million ([196]). Improving sustainable water management and flood protection, by prioritising nature-based solutions and river restoration, is crucial to the competitiveness of many economic sectors. Slovakia is not among the EU Member States that suffer major water stress. The water exploitation index plus (WEI+) was 0.4 in 2022. Manufacturing (51%) and public water supply (32%) had the highest water consumption in Slovakia in 2022. Slovakia's water productivity is above the EU average, standing at EUR 152 per m^3 of abstracted water in 2022 ([197]).

The water quality of Slovakia's surface water bodies shows a deteriorating trend in terms of their ecological and chemical status. Slovakia's third river basin management plans, covering 2022-2027, show a decrease in the number of surface water bodies classified as having good (or better) ecological status/potential, from 56% (second plan) to just 41% (third plan). Agricultural eutrophication still places great pressure on Slovakia's surface water bodies. Hydromorphological alterations, i.e. changes to the shape and flow of water bodies, such as breaking the continuous flow of a river, are another source of pressure. Emerging issues are invasive species, sediment management and fish management. As regards the chemical status of Slovakia's surface water bodies, the deterioration between the second and the third river basin management plans is even greater. The proportion of surface water bodies with a good chemical status fell from 98% to just 71%. This is reported to be mostly due to improved monitoring and increased confidence in classification. The pressures come from ubiquitous, persistent, bio-accumulative and toxic substances, which are difficult to address, and from pollution from industrial point sources, organic pollution from municipal point sources and industry/agriculture. 91% of Slovakia's groundwater bodies are reported to have a good quantitative status in the third plan, showing a significant improvement since the second plan. 87% of Slovakia's groundwater bodies are reported to have a good chemical status, also showing a significant improvement since the second plan. Though there has been an apparent improvement in status, a significant sustained

([195]) *SWD(2023) 932 final; p. 266.*

([196]) EIOPA, 2024, *Dashboard on insurance protection gap for natural catastrophes*, Link.

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

upwards trend in concentrations of pollutants (nutrients and total organic carbon) is reported.

The longstanding lack of environmental assessment of numerous hydroelectric power plants has resulted in the deterioration of Slovakia's rivers, especially the river Hron. Slovakia needs to remedy the situation as soon as possible ([198]).

Slovakia's wastewater treatment remains a cause for concern. Despite improvements in compliance over the years, mainly thanks to EU funding, Slovakia has experienced difficulties in implementing the Urban Wastewater Treatment Directive. Its incomplete implementation forced the Commission to take legal action against Slovakia in 2016 and again in 2021. Both infringement cases are advancing, and it is likely that they will reach the Court. In 2020, 319 agglomerations complied with the Directive's requirements in Slovakia, while 37 agglomerations, generating 246 150 p.e. of urban waste water, did not. The Directive was revised in 2024 ([199]), strengthening existing treatment standards and introducing new requirements such as additional treatment of micropollutants in urban waste water. Slovakia has until 31 July 2027 to transpose it into its legal system.

With a view to achieving the environmental targets under EU water legislation, Slovakia's water investment gap amounts to EUR 223 million per year (0.2% of GDP), with almost half relating to waste water (105 million per year). Slovakia's annual water investment needs stand at an estimated EUR 506 million (in 2022 prices), see Graph A9.2. This includes both the water industry and water protection/management. The largest part of the total annual need, EUR 231 million, relates to wastewater management, including the additional costs of the revised Directive. Slovakia's current annual water investments, over the period 2021-2027, are estimated to be around EUR 282 million per year (in 2022 prices). Of the total financing, 38.1% is provided by the EU multiannual financial framework (mostly through cohesion policy), with small support from the Recovery and Resilience Facility (2.8%). The bulk of the financing comes from national sources (59%) ([200]).

Biodiversity and ecosystems

The state of nature and ecosystems remains under pressure, affecting Slovakia's climate resilience. Infrastructure development, such as roads, motorways, small hydroelectric power plants, water reservoirs and anti-flood infrastructure, causes fragmentation of natural habitats, and thus has a major negative impact on biodiversity. According to the latest available data (2018), only 37.6% of Slovakia's habitats have a good status, higher than the EU average of 14.7%. Similarly, the conservation status of species is concerning, with 23% reported as having a good status, lower than the EU average of 27.5%. This situation has severe implications for Slovakia's 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.

Nature degradation creates significant risks to Slovakia's economy and competitiveness, as it is one of the Member States with a significant dependency on ecosystem services. 39% of Slovakia's gross value added has a high direct dependency on ecosystem services. Though this is lower than the EU average of 44%, several sectors, such as

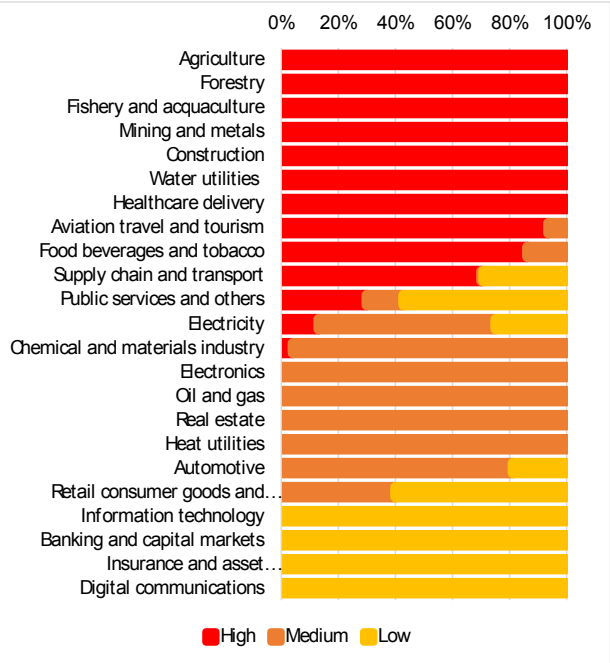
([198]) As the current situation breaches the Environmental Impact Assessment Directive, the Water Framework Directive and the Habitats Directive, an infringement case against Slovakia is ongoing.

([199]) Directive 2024/3 019 of 27 November 2024.

([200]) Water investment levels are estimated through tracking EU funds, EIB projects and national expenditure (EPEA accounts, Eurostat).

agriculture, forestry, fisheries, mining, construction, water utilities and healthcare delivery (see Graph A9.1), are particularly dependent on ecosystem services. 100% of the gross value added of these sectors is directly dependent on those 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 economic sectors is preserved.

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.

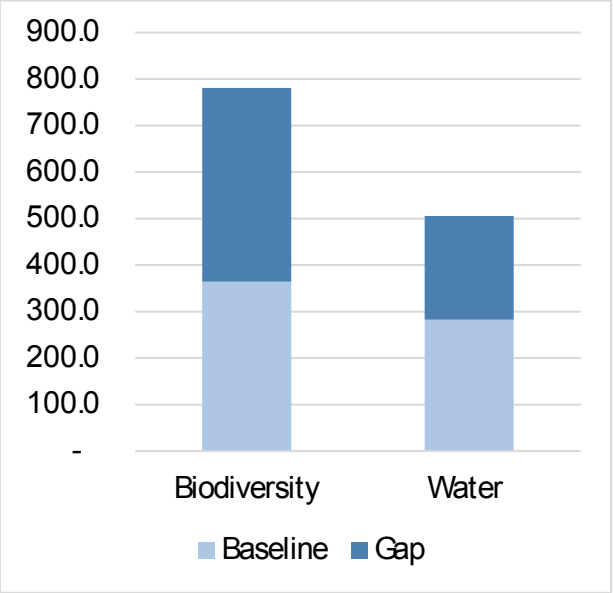
Focused action on nature protection and restoration is needed to meet Slovakia's nature restoration targets. Slovakia's 2030 National Biodiversity Strategy and Action Plan is currently in preparation. It has not yet submitted national targets to the Convention on Biological Diversity's online reporting tool. In 2022, 37.4% of Slovakia's territory was protected land area (including Natura 2000 and other nationally-designated protected areas), which is above the EU average of 26%. However, Slovakia has not yet drawn up the conservation measures to ensure those areas' effective protection and restoration. An infringement procedure concerning this matter is ongoing ([201]). Another ongoing infringement case concerns Slovakia's failure to take measures to protect the Capercaillie bird species ([202]).

Slovakia's investment needs for biodiversity and ecosystems are estimated at EUR 781 million per year (in 2022 prices) over the period 2021-2027 (see Graph A9.2). The current level of financing for biodiversity and ecosystem conservation in Slovakia is around EUR 364 million per year. The existing gap (EUR 416 million per year, corresponding to 0.38% of Slovakia's GDP) puts at risk the country's commitment to global biodiversity agreements and undermines its long-term economic and social development. Nevertheless, Slovakia recently diverted substantial cohesion funds away from nature protection and stopped the national cofinancing of several LIFE projects concerning nature protection and restoration.

([201]) European Commission, 2022, February infringements package: key decisions, Link.

([202]) Court of Justice of the European Union, 2022, Press release No 107/22, Link.

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

Slovakia'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). Removals by Slovakia's LULUCF sector have increased considerably since 2018. To meet its 2030 LULUCF target, additional carbon removals of -0.5 million tonnes of CO_2 equivalent (CO_2eq) are needed ([203]). The latest available projections show a gap to target of 1.9 million tonnes of CO_2eq for 2030 ([204]). Therefore, additional measures need to be applied to reach the 2030 target.

Slovakia's agriculture is still a major source of greenhouse gas emissions and continues to have a significant impact on air, water and soils. Slovak agriculture, together with forestry, represents around 2.2% of the gross value added of the country's economy ([205]). It plays a crucial role by utilising the resources of rural areas to provide food and public assets, including environmental, landscaping and social assets. In 2022, agriculture was responsible for a total of 1.9 million tonnes of CO_2eq, accounting for around 5.1% of the country's total emissions. This includes 1.5 million tonnes of CO_2eq from livestock. Slovakia's utilised agricultural area (UAA) decreased slightly between 2012 (1.9 million hectares) and 2023 (1.8 million hectares). Nutrient losses from agriculture, mainly from mineral fertilisers and manure, are a significant environmental concern and pose a threat to human health. This is reflected in the country's nitrogen balance of 44.9 kg of nitrogen per hectare of UAA (in 2021). Furthermore, according to data from the Nitrates Directive, 12% of groundwater monitoring stations in Slovakia recorded average nitrate concentrations above 50 mg/l between 2016 and 2019, exceeding the healthy threshold for human consumption. The livestock density index was 0.33 in 2020, and is thus below the EU average of 0.75. Ammonia emissions have shown a decreasing trend between 2018 (29.5 thousand tonnes annually) and 2022 (21.5 thousand tonnes annually). 7% of monitoring sites in Slovakia reported pesticide thresholds being exceeded in surface waters (based on 2017-2022 data), which is significantly lower than the European average of 29% ([206]).

Slovakia is transitioning to a sustainable food system by implementing policies to reduce the environmental impact of agriculture. In 2022, 4% of its agricultural land had landscape features such as woods and non-productive grasslands, below the EU average of 5.6%. Organic farming, which reduces the use of synthetic fertilisers and pesticides, has been steadily increasing in

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

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

([205]) Share of agriculture in GDP - Data Portal - United Nations Economic Commission for Europe

([206]) EEA, 2024, Pesticides in rivers, lakes and groundwater in Europe, Link.

Slovakia since 2005 and made up 13.7% of its agricultural land in 2022. Slovakia's common agricultural policy (CAP) strategic plan is aimed at ensuring the sustainable competitiveness and resilience of farms and a fairer income for agricultural producers, with particular attention paid to small-scale and young farmers. The plan also focuses on improving the protection of natural resources and the climate. It contributes substantially to improving the vitality and quality of life in rural areas through investments, knowledge transfer and innovation.

Slovakia faces major challenges relating to the management of natural resources and biodiversity loss, particularly given the intensification of agricultural production and the impacts of climate change. To deliver on higher environmental goals, Slovakia applies stricter mandatory standards to maintain the good agricultural and environmental conditions (GAECs) of farmland. More than EUR 513 million in EU funds are reserved for Slovakia's farmers who voluntarily commit to more environmentally ambitious activities on agricultural land, as part of the new whole-farm eco-scheme. This includes practices such as improving soil structure, setting aside non-productive areas and sowing them with pollinator mixtures, limiting the maximum area of cultivated land or postponing mowing. Slovakia aims to cultivate 20% of its agricultural land under organic farming by 2030. The CAP strategic plan helps this process by providing financial aid to 270 000 hectares (14% of the agricultural land). Under rural development, about 46% of funds are reserved for environmental and climate-related objectives, such as agri/forest environmental and climate measures. On more than 27% of the agricultural area, practices resulting in sustainability and the reduced use of pesticides are applied. Furthermore, following the Russian invasion of Ukraine, the plan aims to increase investments in the production of renewable energy ([207]).

([207])Slovakia – CAP Strategic Plan, Link.

Table A9.1: **Key indicators tracking progress on climate adaptation, resilience and environment**

Climate adaptation and preparedness:	Slovakia						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Drought impact on ecosystems *[area impacted by drought as % of total]*	1.4	0.38	0.02	0.6	20.26	0.67	6.77	2.76
Forest-fire burnt area (1) *[ha, annual average 2006-2023]*	29	29	29	29	29	29		
Economic losses from extreme events *[EUR million at constant 2022 prices]*	-	33	21	40	85	4	24 142	62 981
Insurance protection gap (2) *[composite score between 0 and 4]*	-	-	-	-	1.25	1.25		
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]*	16	19	19	19	16	17	41	44

Water resilience:	Slovakia						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Water Exploitation Index Plus, WEI+ (4) *[total water consumption as % of renewable freshwater resources]*	0.5	0.3	0.4	0.3	0.4	-	4.5	4.5
Water consumption *[million m^3]*	309	206	312	206	205	-		
Ecological/quantitative status of water bodies (5) *[% of water bodies failing to achieve good status]*								
Surface water bodies	-	-	-	59%	-	-	-	59%
Groundwater bodies	-	-	-	9%	-	-	-	93%

Biodiversity and ecosystems:	Slovakia						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Conservation status of habitats (6) *[% of habitats having a good conservation status]*	37.6	-	-	-	-	-	14.7	-
Common farmland bird index *2000=100*	83.5	-	-	-	-	-	72.2	74.4
Protected areas *[% of protected land areas]*	-	-	-	37	37	-	-	26

Sustainable agriculture and land use:	Slovakia						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Bioeconomy's added value (7) *[EUR million]*	3 759	3 509	3 608	4 069			634 378	716 124
Landscape features *[% of agricultural land covered with landscape features]*	-	-	-	-	4	-		
Food waste *[kg per capita]*	-	-	107	101	106	-		
Area under organic farming *[% of total UAA]*	9.9	10.3	11.7	13.5	13.7		7.99	-
Nitrogen balance *[kg of nitrogen per ha of UAA]*	50.8	51.2	42.2	44.9	-	-		
Nitrates in groundwater (8) *[mgNO_3/l]*	18.3	16.2	18.6	17.9	-	-		
Net greenhouse gas removals from LULUCF (9) *[Kt CO_2-eq]*	- 4 231	- 4 994	- 7 179	- 7 211	- 7 226	-	- 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.

Despite the strong performance of Slovakia's labour market, structural challenges are having a detrimental impact on competitiveness and economic growth. Positive labour-market developments hide regional disparities, while long-term and youth unemployment remain high. The labour market is also hampered by an ageing population, net emigration of talent and inactivity among certain ethnic groups. If we are to achieve a more inclusive labour market and boost economic growth, key challenges include: i) enhancing job opportunities, ii) addressing skill mismatches iii) strengthening training and education iv) encouraging underrepresented groups to enter work and v) better preparation for the transition to work.

The labour market is performing well overall, but challenges persist. The employment rate stood at 78.1% in 2024, remaining above the EU average (75.8%) and exceeding Slovakia's national target for 2030 (76.5%). However, regional disparities remain: in 2023, in eastern Slovakia only 71.6% of the working-age population was employed compared to 85.8% in the capital region. The unemployment rate reached a historically low level, 5% in Q1-2025 (vs 5.8% for the EU) ([208]). At the same time, spending on unemployment benefit accounted for 0.63% of gross domestic product, the highest among the Visegrad countries (vs 1.05% EU average). Regional disparities are also clear in the availability of basic services, decent housing, educational outcomes and higher poverty rates. The marginalised Roma population is disproportionately affected by these disparities.

Despite signs that shortages in the labour market are easing, the problem is still apparent in certain sectors. The job-vacancy rate dropped to 1.2% in Q3-2024, which was higher than its pre-pandemic level (1.0% in Q4-2019 and 0.7% in Q4-2020) but far below the EU average of 2.3%. In 2024, Slovakia's job vacancy rate in transformation sectors was 0.8% (EU: 1.8%) in manufacturing, 3.6% (EU: 1.7%) in electricity, gas steam and air-conditioning supply, 1.0% (EU: 1.6%) in water supply and waste management, 0.4% (EU: 3.1%) in construction, and 2.1% (2.2%) in transportation and storage. The occupational groups with the highest occurrence of shortage occupations were: stationary plant and machine operators, building and related trades workers (excluding electricians) and drivers and mobile plant operators ([209]). Despite relatively low job vacancy rates in their sectors, the proportion of employers who reported labour shortages as one of the main factors limiting their production was slightly above the EU average in construction (31% in Q4-2024), industry (23%), and services (29%) ([210]). High vacancy rates were recorded in human health and social work activities; education; arts, entertainment and recreation; public administration and defence; compulsory social security; administrative and support services ([211]). Labour market slack ([212]) decreased from 7.2% to 6.8% between Q3-2023 and Q3-2024, well below the EU average (10.9%). The fall in labour market slack was driven mainly by a decrease in the proportion of unemployed people. **Slovakia has moderate skills mismatches, with some variation by sector.** The skills-mismatch ([213]) rate has remained

([208]) Eurostat - employment and unemployment annual statistics

([209]) Eurostat, Labour Market Information: Slovakia - European Union

([210]) ECFIN European Business and Consumer Surveys

([211]) Eurostat, Labour Market Information: Slovakia - European Union

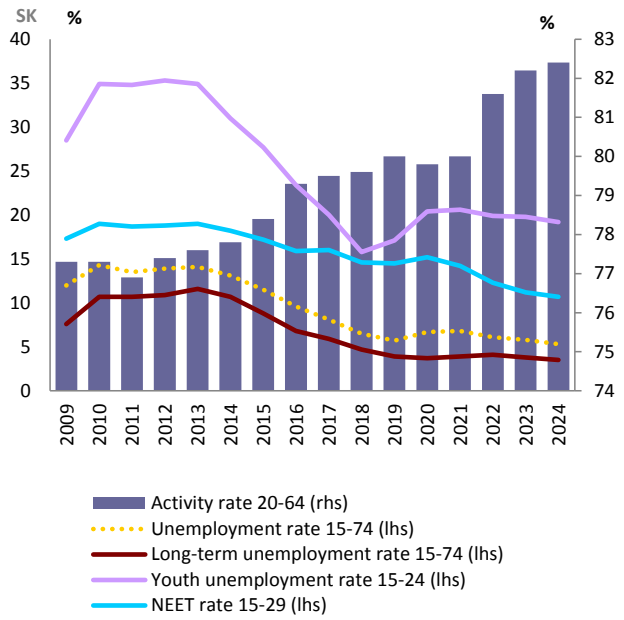
([212]) The labour market slack is the underutilisation of labour resources, including unemployment, underemployment, and those available for work but not actively seeking employment.

([213]) Skills mismatch is the discrepancy between workers' skills and labour market needs. It is not only a problem

approximately unchanged in 2023 compared to 2022, at approximately 21 points and slightly above the EU average (19.6 points). In 2023, 22.9% of workers with a higher-education qualification was employed in occupations that did not require such a qualification. This proportion was close to the EU average but varied between sectors. The over-qualification rate is particularly high in public administration, defence and compulsory social security, in which it reaches 35.9% compared to the EU average of 24.2%. For instance, the share of over-qualified workers in the construction sector, at 14.4%, is the third lowest in the European Union.

The 2023 OECD programme for the international assessment of adult competencies (PIAAC) reported substantial skill losses among adults (see Annex 12). Over half of businesses state that their workforce has some degree of skill gap (54%) ([214]). Slovakia is affected heavily by automation, a trend that is set to continue. It would be beneficial to continue to provide more upskilling and reskilling opportunities to an increasing share of the population.

Graph A10.1:**Key rates: activity, unemployment, long-term unemployment, youth unemployment, NEETs**



(1) Activity rate and Employment rate (% of population), total, ages 20-64
Unemployment rate and long-term unemployment rate (% of labour force), total, ages 15-74
Youth unemployment rate (% of labour force), total, ages 15-24
NEET: Not in employment, education or training (% of population), total, ages 15-29
Source: Eurostat, LFS [lfsi_emp_a, une_rt_a, edat_lfse_20, une_ltu_a]

Long-term unemployment and youth unemployment rates remain high. Long-term unemployed people accounted for almost two thirds of jobseekers in 2023 (65.1% vs EU: 35%)([215]). In 2024, the long-term unemployed represented 3.5% (EU: 1.9%) among all unemployed. Nearly half (46.5%) of all unemployed people have been looking for a job for two years or more. Many women and marginalised Roma communities are not active in the labour market. The youth (age group 15-24) unemployment rate in Slovakia was 16.4% in Q1-2025 ([216]), well above the EU average of

encountered by jobseekers; it also affects employees working in positions below their levels of qualification or outside their fields of study, and concerns some groups of older workers that face difficulties in keeping their skills up to date.

([214]) OECD (2024), PIAAC Employer Module, Do Adults Have the Skills They Need to Thrive in a Changing World?: Survey of Adult Skills 2023, OECD Skills Studies, OECD Publishing, Paris, https://doi.org/10.1787/b263dc5d-en, p. 175

([215]) The long-term unemployment rate represents the percentage of people unemployed for 12 months or more within the labour force.

([216]) Eurostat, Unemployment rate by sex - age group 15-24, https://ec.europa.eu/eurostat/databrowser/view/teilm021/

14.5%. The proportion of young people not in employment, education or training (NEETs) improved, falling from 12.3% in 2022 to 11.2% in 2023. The ESF+ has been funding activities to reduce the long-term unemployment rate (in the form of Programme Slovakia 2021-2027). A budget of EUR 641 million has been assigned in the form of tailored-made and individualised support to disadvantaged jobseekers. To reduce youth unemployment, Slovakia adopted a national youth guarantee plan in 2022, which includes measures such as: i) individualised counselling, ii) mentoring, iii) an information campaign, iv) tools for the profiling of young jobseekers, v) development and assessment of further education and skills (digital, green and entrepreneurial skills), and vi) support for job creation, graduate traineeships and self-employment.

Lower-skilled workers, young people and marginalised Roma communities are often inactive on the labour market. Although the gap in employment between persons with and without disabilities is narrowing, it remains significant at 22.1 percentage points (pps) (vs the EU average of 21.5 pps in 2022). Slovakia has not yet set an employment target for persons with disabilities. A third of young persons with disabilities is in the NEETs category. Slovakia has one of the highest unemployment rates for low-skilled young people in the EU. The unemployment rate among people from disadvantaged groups, such as the marginalised Roma communities, rose from 44.3% in 2020 to 53.4% in 2022 (more than double the EU average of 19%). Moreover, the share of young Roma NEETs was 65% in 2020, compared to 14% in 2020 in the overall age group (15-24); 77% of young Roma women are not in work, education or further training compared to 52% of young Roma men ([217]). The factors contributing to the high inactivity of the marginalised Roma population on the labour market include i) lack of job opportunities, ii) widespread discrimination, iii) social exclusion, iv) high rates of early school leaving, and v) lack of access to basic services such as water, sanitation and decent housing.

While the gender employment gap is relatively low, Slovakia has one of the highest gender pay gaps in the EU. With 59.9 points out of 100, Slovakia ranks low on the Gender Equality Index 2024 ([218]), which is 11.1 points below the EU average. Although the gender employment gap is relatively low (7.7 pps vs EU: 10.2 pps), the gender wage gap is significant for women (aged above 30) with childcare duties. The difference between average gross hourly earnings of male and female paid employees was 17.7% in 2022 (vs EU average 12.7%). Caring duties and household work are not shared equally between women and men: (most of these tasks are done by women) ([219]). The motherhood penalty, i.e. the loss in lifetime earnings experienced by women raising children, is one of the main causes of the gender pay gap. Increasing the availability of high quality and affordable childcare would help keep more women in work. In contrast with kindergartens for children aged 3-6, which benefited greatly from the recovery and resilience plan (RRP), Slovakia has one of the lowest enrolment rates of children under the age of 3 in formal childcare (5.1% in 2024 vs EU: 39.2% in 2024)([220]). Some progress has been made in increasing the participation rate for the under 3s (increase from 1% in 2023 to 5.1% in 2024), bringing Slovakia closer to its commitment to increase the enrolment rate based on the Barcelona target (5.8%).

Increasing the availability of childcare for children under the age of 3 and increasing flexible working arrangements, such as part-

default/table?lang=en&category=t_labour.t_employ.t_lfsi.t_une

([217]) The social and employment situation of Roma communities in Slovakia, Study requested by the EMPL committee, 2020

([218]) The data for 2024 Index is mostly from 2022.

([219]) The Gender Equality (EIGE) index, 2023

([220]) **Social Scoreboard** - Eurostat data

time work, to support women and parents with small children are key. Maternity leave in Slovakia (34 weeks), combined with the possibility of parental leave until the child turns three, is long compared to other countries. Extended maternity leave may unintentionally affect women's earnings. Although longer leaves are associated with higher wage gaps (though not statistically significant), higher nursery attendance slightly lowers gaps, highlighting the importance of early childcare services ([221]). Only approx. 6% of jobs available on the Slovak labour market are part-time and the legislation in this area is weak. In 2024, the part-time employment represented only 3.3% ([222]), with women reaching higher rates than men (5% vs 1.8% men). Employers are often not willing to create short-term work contracts due to high taxation of part-time work compared to other EU countries; often part-time is involuntary not ensuring basic living cost.

Slovakia's population is ageing rapidly, posing a challenge to the country's competitiveness. The population has been decreasing since 2020 ([223]). Additionally, between 2019 and 2050, the old-age dependency ratio of Slovakia is projected to increase at a particularly rapid pace, with the rate in 2050 projected to be 2.2 times that of 2019 ([224]). This is in part driven by the structural emigration of young people. This increases regional disparities and aggravates the shortage of skilled labour, especially in sectors such as healthcare and education, which are already understaffed. Labour shortages, which are set to continue, show the benefits of measures to encourage people currently outside the labour market into work.

Real wages rebounded in 2024, but the real growth between 2022-2025 was one of the lowest in the EU. Real wages increased by 3.4% in 2024 and are forecast to increase by 0.7% in 2025, following significant losses in 2022 and 2023 ([225]). Real wage growth is constrained by persistently high inflation, which is forecast to be among the highest in the euro area. The loss of purchasing power experienced by households between 2021 and 2023 contributed to a significant decline in real gross disposable household income. The consolidation package that took effect in January 2025 included an increase in VAT rates, directly affecting consumers.

([221]) Gender Wage Gaps in Slovakia and Europe, Policy Brief 17/2024, https://nbs.sk/dokument/3daf4133-e255-41f2-b2f6-c4ca336a5c72/stiahnut?force=false

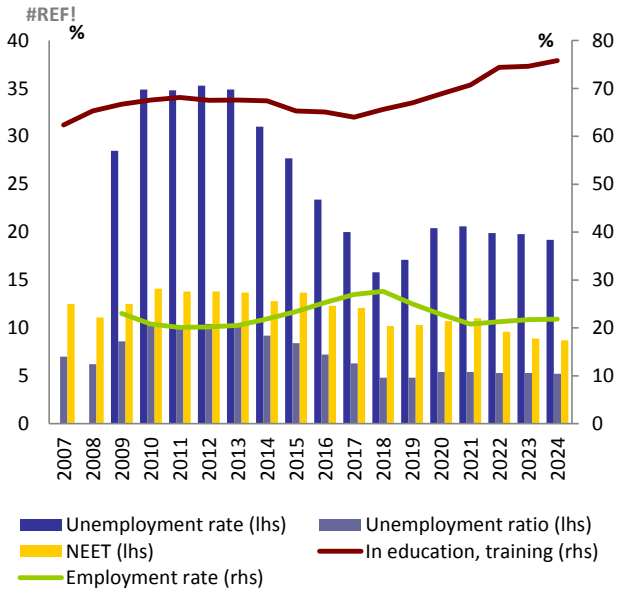
([222]) Eurostat, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Part-time_and_full-time_employment_-_statistics

([223]) Eurostat - Population change - Demographic balance and crude rates at national level

([224]) Eurostat - https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Ageing_Europe_-_statistics_on_population_developments

([225]) For nominal wage growth, pay per employee is considered. It 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 then can 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 A10.2:**Youth: in education and training, employment rate, unemployment rate, unemployment-to-population ratio, NEET**



Source: Eurostat, LFS [edat_lfse_18, lfsi_emp_a, une_rt_a, lfsi_act_a, edat_lfse_20]

The workforce lacks digital skills and ICT specialists, posing a challenge to the transition towards electromobility. The employment rate of ICT specialists (percentage of total employment) in Slovakia reached 4.6% in 2024 (vs EU: 5.0%). However, the proportion of people with basic digital skills fell in 2023 compared to 2022. The share of individuals with at least basic digital skills, fell from 55.2% in 2021 to 51.3% in 2023 (below 55.6% of EU average in 2024). It would be beneficial to bolster efforts to meet Slovakia's 2030 Digital Decade targets. Slovakia's 2030 target for basic digital skills is below that of the EU (70% vs 80% EU's target). In terms of the working population, the proportion increased to 60.5% (aged 25 to 64), although this is still below the EU level of 64.7%.

If businesses are to modernise their production processes and service delivery it would be beneficial to improve people's digital skills. Slovakia lags behind in business uptake of digital technologies (cloud, data analytics and AI). This also applies to the proportion of small and medium-sized enterprises (SMEs) with at least a basic level of digital intensity. ICT specialists in Slovakia make up 4.6% of the working population in 2024 (vs 4.2% in 2023), slightly below the EU average of 5%. The proportion of female ICT specialists is low (17.4% vs EU average of 19.4%). To meet its target of 6% of the population being ICT specialists by 2030 (the EU target is 10%), it would be helpful to strengthen initiatives in this area.

Employment in Slovakia's energy-intensive industries decreased to 6.9% in 2024 of employment (3.5% in the EU) but remains among the highest in the EU. Slovakia still has the EU's highest proportion of employment in the automotive sector as a share of total manufacturing (16.2% of employees in manufacturing). The transition towards electromobility represents a major challenge for the country. Moreover, the job-vacancy rate in construction, a key sector for the green transition, is substantially lower than the EU average (0.4% vs 3.6% in EU in 2023). Moreover, 73% of SMEs in the sector reported that skills shortages are holding them back in general business activities ([226]). According to the European Labour Authority ([227]), labour shortages were reported in 2023 in many occupations that required specific skills or knowledge for the green transition ([228]), including building and related electricians, insulation workers and house builders.

Boosting digital skills helps older people access the labour market and prevents long-term unemployment. Older people are more likely to become long-term unemployed. In 2023, 74% of unemployed older individuals were long-term unemployed, which is the

([226]) Eurobarometer on skills shortages, recruitment and retention strategies in small and medium-sized enterprises.

([227]) Based on the European Labour Authority 2024 EURES Report on labour shortages and surpluses 2023, i.e. data submitted by the EURES National Coordination Offices.

([228]) Skills and knowledge requirements are based on the European Skills Competences and Occupations (ESCO) taxonomy on skills for the green transition.

highest rate in the EU. Older people with lower levels of qualification have worse labour market outcomes and more challenging working conditions. In 2023, EU-27 figures for employment among older individuals with lower educational qualifications was 27.6 pps below those with post-secondary education, whereas in Slovakia the difference was more than 40 pps. Education and training policies – ideally including search assistance and counselling – are among the most effective tools for promoting the employment of older workers.

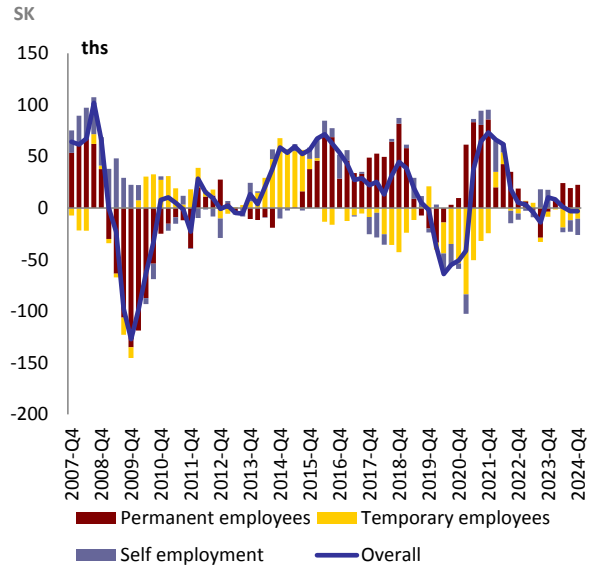
In Slovakia the rate of transition from unemployment to employment is much lower (below 10% per quarter) than in countries with high training levels (transition rate above 30%). Boosting the capacity of public employment services would be beneficial in this context. Digital skills can help people obtain jobs. Given the limited digital skills of older adults and the increasing importance of digital tools (especially since the COVID-19 pandemic), Slovakia has enacted policies to improve the digital skills of older people, supported by the digital decade policy programme, with funding from the Recovery and Resilience Facility.

Bogus self-employment remains high. The following factors increase the risk of in-work poverty: being self-employed, having lower educational qualifications, working part-time or on a temporary contract living in a household with low work intensity ([229]) and living with children. The rate of full-time workers in Slovakia increased from 4.2% in 2019 to 9.3% in 2023, indicating a rise in the proportion of vulnerable workers. In contrast, the in-work poverty rate of part-time workers decreased from 16.4% in 2017 to 3.2% in 2023. However, the positive effect of this improvement remains limited since Slovakia has one of the lowest proportions of part-time workers (3.3% in 2023) in the EU (17.1% in 2023).

Additionally, Slovakia's high proportion of dependent self-employed people creates a significant risk of poor working conditions and bogus self-employment. Slovakia has the EU's highest proportion of self-employed people who display both characteristics of dependency (economic and organisational). Self-employed people can opt out from social contribution schemes and pay six times less in tax and social contributions for the first year of activity and 2.3 times less for subsequent years compared to other workers, which has a significant impact on the state's taxation and social security revenue. The main causes of bogus self-employment are: i) the desire of firms to circumvent the legal obligations of dependent employment relationships (e.g. minimum wages, working time legislation, redundancy protection), ii) the gap in taxation between the employment and self-employment, iii) the rise in gig and platform work, iv) complex sub-contracting chains and v) the lack of a legal clear distinction between employment and self-employment.

([229]) The **work intensity** of a household is the ratio of the total number of months that all working-age household members have worked during the income reference year and the total number of months the same household members theoretically could have worked in the same period.

Graph A10.3:**Employment by type (permanent, temporary, self-employed), year-on-year changes**



(1) Employment (thousand), total, ages 20-64, year-on-year change based on non-seasonally adjusted data. Self employment is defined as the total of self-employed persons and contributing family workers..
Source: Eurostat, LFS [lfsq_egaps, lfsq_etgaed]

Despite overall good social conditions in Slovakia, the risks of poverty and social exclusion have been increasing almost among all age groups since 2020. Significant challenges remain for the social inclusion of Roma and other vulnerable groups. Sustained efforts are needed to reach the national poverty reduction target by 2030.

The rate of poverty and social exclusion remains below the EU average, but challenges persist. Although the at-risk-of-poverty or social exclusion (AROPE) rate increased to 18.3% in 2024 (from 17.6% in 2023), it remains below the EU average (21% in 2024). However, the share of people living in severe material and social deprivation (SMSD) increased to 7%, exceeding the EU average (6.8% in 2023). This was partly driven by persistently high inflation in Slovakia. The AROPE rate for people aged sixty-five years or over rose by 2.1 pps, reaching 14% in 2023. The depth of poverty is very high (29.9% vs EU: 23%) and in-work poverty increased by almost 2 pps between 2022 and 2023 (from 7.2% to 9.1%, compared to 8.3% in the EU). Mounting challenges related to poverty and social exclusion remain due to limited economic opportunities for underrepresented groups (long-term unemployed, marginalised Roma communities, young people, mothers with young children), coupled with restricted access to health, education, employment, and social services. By 2030, Slovakia aims to reduce the number of people experiencing poverty or social exclusion risks by at least 70 000 compared to the 2019 level. However, in 2023, Slovakia moved away from its target with 148 000 more people at-risk-of-poverty or social exclusion (AROPE) compared to 2019.

The risk of poverty or social exclusion among the children show a positive decrease but remain relatively high. The AROPE rate for children decreased from 25.3% in 2023 to 22.6% in 2024 (EU: 24.2%). By 2030, Slovakia aims to have reduced the number of children who experience poverty or social exclusion by 21 000 compared to 207 000 in 2019. To mitigate the impact of poverty on children, Slovakia is implementing the European Child Guarantee (ECG). The 2024 implementation report shows progress in some areas, such as access to school meals. The number of children benefiting from the food subsidy scheme (provision of meals) sharply increased from 56 786 to 491 494 in 2023 ([230]). Quality early childhood education and care for children under three would be beneficial to enhance their educational outcomes and incentivise parents to return to work. The implementation of the ECG is supported by the EU cohesion policy funds and the Recovery and Resilience Facility**.**

House prices have increased strongly over the last decade, but the growth in house prices has slowed down recently. Since 2015, house prices have increased by around 70% in nominal terms. On average, house prices decreased by 0.2% in 2023, but more recent quarterly data show a rise of 4.0% in Q2-2024 year-on-year. The recent moderation follows years of noticeable growth and is driven by the adjustment to the higher interest rate environment, as mortgage rates sharply rose from 1.0% in 2021 to 3.8% in 2023. Nonetheless, house prices are estimated to be overvalued by 10-15%. Building permits fell by a further 3.9% in 2023, following a sharp drop of 16.2% in 2022.

Overall housing affordability worsened over the past decade despite an increase in new housing supply Since 2015, house prices have grown slightly above the pace of household's incomes. As a result, there are major concerns over the affordability of housing. The standardised house price-to-income ratio increased by 28% from 2015 to 2022 before easing in 2023, with the overall growth from 2015 to 2023 reaching 7%. Taking into account the cost of mortgages, the borrowing capacity of households improved over the past decade.

([230]) Slovakia - 2024 Biennial report on the implementation of the Child Guarantee.

The ratio of dwellings per capita has remained broadly unchanged since 2015 and is the lowest in the EU. The ratio of house completions per capita has increased gradually since 2015 and stands close to the EU average. However, residential construction has been decreasing since 2023. Granted residential building permits have been decreasing as well and in terms of m2 per person attains one of the lowest values in the EU. Slovakia's inefficient permitting procedures, driven by high administrative fragmentation and inadequate resources at the municipal level, weigh on new housing supply. Additionally, there is a significant number of vacant dwellings, further reduces the supply of dwelling available for purchase. The supply of social rental housing is very low compared to the other EU average and the share of population in need.

The challenges related to the affordability of housing, the shortage of social rental housing and the inadequacy of housing allowances require more targeted support. Slovakia struggles with the affordability of housing ([231]). The housing cost overburden ([232]) increased significantly - from 2.5% in 2022 to 5.9% in 2023 and 6.4% in 2024. It was much higher among households experiencing poverty risks (34.1% vs EU: 33.5%). In 2023, 36.1% of people who live in rented housing (both at market prices and subsidised prices) lived below the poverty threshold, compared to 13.1% of people living in owner-occupied housing, and 14.1% of the total population ([233]). The municipal rental housing stock is very low. Only 1.6% ([234]) of the total housing stock is allocated as social housing. In 2022, only 1.1% of all newly constructed apartment buildings were in public ownership ([235]). Slovakia has one of the highest shares of owner-occupied housing, with 93.5% of the population living in owner-occupied housing, compared to the EU average of 69.2% in 2023. The government does not engage in building or purchasing rental flats, but is responsible for the general framework and support mechanisms of the rental housing system. Municipalities are responsible for developing social housing for rent; however, they encounter challenges, such as a lack of available land for development and bureaucratic obstacles in applying for support. The reform of the Public Procurement Act under Slovakia's recovery and resilience plan (RRP), which entered into force in 2022, should speed up procurement procedures. Moreover, in January 2025, the government approved a directive which amended the conditions for people applying to rent social housing. It also speeds up the approval of housing projects destined for rent ([236]). The requirement to have no debts to access social housing hampers access to social housing for the most deprived people. Housing allowances in Slovakia are rather low ([237]) and provided solely to low-income homeowners and tenants who qualify for 'material need' assistance ([238]).

There are significant challenges in accessing social protections for Slovakia's non-standard workers and self-employed. The country has a lower proportion of temporary

([231]) Deloitte Property Index (Deloitte, 2024), developments in European reside ntial markets.

([232]) The housing cost overburden rate measures housing affordability as the percentage of the population living in households where the total housing costs ('net' of housing allowances) represent more than 40% of disposable income ('net' of housing allowances).

([233]) DG EMPL ad hoc request for study to the Expert Network for Analytical Support in Social Policies, Social housing and housing affordability.

([234]) Eurostat 2022, Distribution of population by tenure status, type of household and income group - EU-SILC

([235]) Amnesty International (2024): Unattainable right to housing. Report on right to housing in Slovakia. Bratislava.

([236]) Vláda spresnila podmienky pre záujemcov o štátne nájomné byty, cieľom je zefektívniť ich prideľovanie aj eliminovať prieťahy - SITA Reality

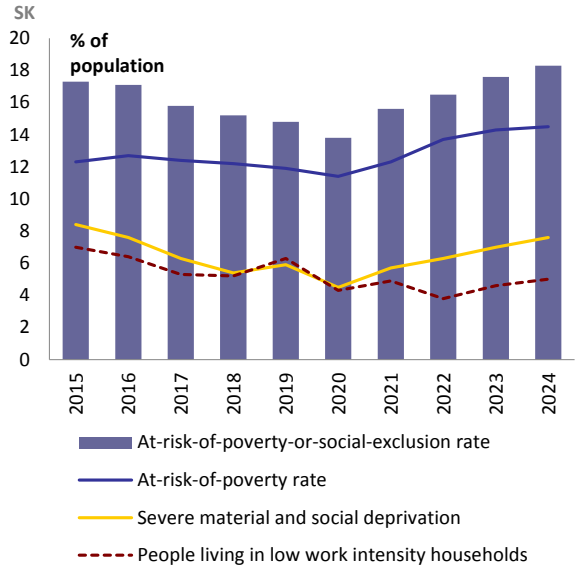
([237]) The housing allowance is intended to partially cover housing-related costs and is provided in amounts depending on the number of household members.

([238]) In-Depth Review 2024 Slovakia.

contract workers (4.4% vs EU: 13.5%) and part-time employees (3.8% vs EU: 18.6%), but a higher percentage of self-employed (12.3% vs EU: 9.4%). Within this group, a significant share is economically dependent (17% vs EU: 4%). Employees on 'work agreements with irregular income' face significant gaps in access to unemployment, sickness, and parental benefits, with negligible take-up (0.1% in 2022). Self-employed people are not covered by accident benefits and opt-in for limited unemployment (2.0% take-up) and other benefits including sickness and old-age insurance, with a take-up of 58.8% ([239]) for those above a specific income threshold. The effective access to social benefits is low, with self-employed people receiving benefits at 4.5% compared to the EU average of 12.7%, and only 10.2% of unemployed people receiving benefits vs 52.4% in the EU. Short-term unemployed benefits are also lacking, with only 30% receiving benefits, standing well below the EU average of 58%. Unemployed and temporary contract workers face high deprivation and poverty, with 45.7% and 53% respectively, which for the unemployed exceeds the EU averages of 38.3% and 47.5%. Temporary workers show a 23.9% deprivation rate. Furthermore, the at-risk-of-poverty rate among quasi-jobless households in Slovakia stood at 74.2% in 2023, compared to 61.2% in the EU-27.

Racial prejudices limit access to social housing for the marginalised Roma population. Not meeting minimum income requirements is the most frequently cited reason for rejecting social housing applications. This hinders the social inclusion of the Roma population in particular. The approach taken by the capital city, Bratislava, is an example of sound housing policy and could be scaled up to national level. Bratislava established a strategy to increase the supply of social housing for rent. Bratislava's social housing policy is inclusive and open to all people in need. These new rules were approved in 2024. Bratislava introduced new categories of state-owned flats including 'accessible housing with support', aimed at the most vulnerable groups. The housing stock in Slovakia is energy inefficient. Yet, renovation programmes are planned. New measures and investments to support vulnerable households will be compiled in the national Social Climate Plan, which is to be submitted to the Commission by June 2025, following a country-wide consultation.

Graph A9.1: **At-risk-of-poverty or social exclusion rate and its components (AROP, AROPE, SMSD, LWI)**



(1) AROPE: at-risk-of-poverty or social exclusion rate (% of total population). People wo are at-risk-or-poverty (AROP) and/or suffering from severe material and social deprivation (SMSD) and/or living in households with very low work intensity (LWI).
Source: Eurostat, EU-SILC

Policies addressing energy poverty remain limited and insufficiently address its structural causes. The share of the population which is unable to keep their homes sufficiently warm is lower than EU average, 8.1% compared to the EU average of 10.6% in 2023. This marks an improvement of 2.5 pps since 2021. Arrears on utility bills have increased, by 7.2% of individuals affected in 2023, an increase of

([239]) Take up of 58.8% of self-employed meaning persons who opt-in (voluntary) or did not opt-out on sickness and pension insurance. Majority of these persons did not opt-out, meaning they were above income threshold.

1.7 pps from 2021, standing higher than the EU average of 6.9%. Structural issues, such as leaks, damp, or rot, are present in 5.8% of housing, which is significantly lower than the EU average of 15.5%. The government has implemented several social support programmes which complement energy efficiency initiatives, such as the MunSEFF and SlovSEFF programmes. These programmes provide financial assistance to energy efficiency projects in municipalities and residential buildings. The government's actions to address energy poverty do not address the structural causes of energy poverty. However, a national action plan to address energy poverty is being prepared. The strategy aims to further integrate measures targeting vulnerable households and improve the overall energy efficiency of the housing stock. In respect to transport poverty, the share of people who could not afford a car was 10.5% in 2023, above the EU average of 5.6%. The issue becomes alarming among low-income groups in Slovakia, as evidenced by the higher share of people at risk of poverty who cannot afford a car (32.4%) which is significantly above the EU average (15.9%). The fact that low-income people have difficulties to afford a car in Slovakia is confirmed by the low share of individuals at-risk of poverty with very high expenditures on personal transport fuels (defined twice above the national median) which is at 10.4%, and it is significantly below the EU average of 18.2% in 2024. At the same time, people's reliance on personal cars for inland transport has increased over-time (from 77.4% in 2011 to 79% in 2023).

Access to healthcare and long-term care services shows improvement but remains limited for vulnerable groups. In 2024, 1.6% of the population reported to have some unmet need for medical care because of cost, distance or waiting times. This figure dropped below the EU average (2.5%) (see Annex 14) ([240]), but challenges persist. The mortality rate among infants (5.6% in 2023) remains among the highest in the EU (3.3% in 2023). The unmet medical needs were reported by 5.3% of people in the lowest income quintile compared with 2.2% among the highest income quintile ([241]). The situation is similar in terms of unmet needs in the long-term care sector, where the population over sixty-five reporting unmet needs in 2019 was 50.9% (EU:46.6%). Slovakia has some of the highest rates of mortality from preventable and treatable causes in the EU ([242]). Similarly, the cancer incidence in Slovakia is higher than the average across the EU and the mortality rate remains among the highest in the EU ([243]). A substantial number of deaths could be avoided in Slovakia through public health, prevention and healthcare interventions.

Rural and minority populations face the biggest obstacles in accessing healthcare, including the marginalised Roma community. Almost one-fifth of adult homeless people who live in Bratislava, do not have a general practitioner ([244]). Debts on health insurance contributions are the most common forms of debt among the homeless population in Bratislava, affecting 22% of adult

([240]) OECD/European Commission, 2024: OECD Health at a Glance: Europe 2024. State of Health in the EU Cycle. Paris: OECD Publishing.

([241]) Ibidem.

([242]) State of Health in the EU Country Health Profile 2023, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://health.ec.europa.eu/document/download/184d09e2-917b-4d9a-9078-a4a503e0e053_nl?filename=2023_chp_sk_english.pdf

([243]) Country Cancer Profile 2025, https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/02/eu-country-cancer-profile-slovak-republic-2025_f32af3fd/e40472f4-en.pdf

([244]) Kválová, D., Turkovič, Z., Gerbery, D., Mičicová-Luptáková, M., 2024: Záverečná správa zo sčítania ľudí bez domova v Bratislave v 2023 (Final report on counting homeless people in Bratislava in 2023). Bratislava: Institute for Labour and Family Research.

homeless people. In the 2021 census, the country specifically identified the secondary homeless, who are defined as 'residents who use various types of temporary accommodation and often move between accommodation, such as a shelter, a halfway house, an emergency housing facility, or reside in non-conventional housing.' Latest national estimates of homelessness stand at 71 076 people, representing 1.31% of the total population (2021), of which 39% are women and 61% are men ([245]).

Slovakia's healthcare and long-term care services continue to be underfunded. The ageing and declining population pose challenges to the sustainability of the healthcare and long-term care systems (see Annex 14). The RRP's reform of integration and financing of long-term social and healthcare introduces a new financing system of social services – a personal budget that should replace a large number of different contributions. Nevertheless, its entry into force might be postponed with one year, creating a pressure for finding the necessary funds in the state budget.

([245]) OECD Country Notes on Homelessness data.

A low enrolment rate in early childhood education and care (ECEC), a low proficiency of basic skills among students and adults, a low number of STEM graduates and skill mismatches in the labour market limit Slovakia's competitiveness. Weaknesses in skills development start at a very early age with low participation of disadvantaged children in quality ECEC and continue with around one third of 15-year-old students lacking a minimum level of proficiency in basic skills (mathematics, reading and science). Enrolment in STEM-related study programmes ([246]) is low and trending downwards.

Enrolment in adult learning has increased, but varies greatly across population groups. Adults' level of proficiency in literacy, numeracy and problem solving declined between 2012-2023. Support for strengthening basic skills among pupils and for training for less qualified adults is essential to match the demand and supply of skills in the labour market. Moreover, a shortage of qualified teachers continues, and pupils' socio-economic backgrounds significantly and negatively affects their upskilling and employment opportunities later. The quality of vocational education and training (VET) should also be improved, for example by increasing pupils' exposure to work-based learning.

A low enrolment rate in ECEC, especially among disadvantaged children, negatively impacts foundational learning giving rise to inequalities. The participation rate of children under three years of age increased to 5.1% in 2024 but remains among the lowest in the EU (average of 39.2%) in 2024 (see Annex 10). For children aged three or over, the enrolment rate in ECEC was 80.8% in 2023, compared to the EU average of 94.6% ([247]). Recent national data showed that the enrolment rate of 3 to 5-year olds was 85.3% in 2023. However, enrolment is lower among children from disadvantaged backgrounds ([4]), including for Roma children (33% in 2021, Fundamental Rights Agency). Under Slovakia's recovery and resilience plan (RRP), substantial investments are being made to improve access to ECEC for children older than three.

Insufficient basic skills among students is the main barrier to skills development later in life. In 2022, 33.2% of students underperformed in mathematics, 35.4% in reading and 30.6% in science (EU averages: 29.5%, 26.2% and 24.2% respectively), which are among the highest underachievement rates in the EU. Results differ greatly between rural and urban schools. Their performance gap in reading, mathematics and science is also among the highest in the EU, suggesting challenges linked to teaching quality and socio-economic aspects. A recent report from the State school inspectorate shows that memorisation is the most frequently developed cognitive ability in Slovak schools and points to alarming levels of absenteeism among pupils ([248]). The report also notes that teaching is sometimes provided by unqualified teachers (for example, ICT was taught by unqualified teachers in 48.6% of the surveyed lower secondary schools in 2023/2024).

Most students from disadvantaged backgrounds lack basic skills. More than six out of 10 students from disadvantaged socio-economic backgrounds did not achieve a minimum level of proficiency in mathematics (62.6% vs EU average of 48%, OECD Programme for International Student Assessment (PISA) 2022). This is particularly concerning in the context of the rising share of children living in severe material and social deprivation ([249]). Around 65% of Roma children aged 6-15 study in schools where most or all their schoolmates are Roma (FRA, 2021). In

([246]) Science, Technology, Engineering, Mathematics.

([247]) Eurostat: educ_uoe_enra21.

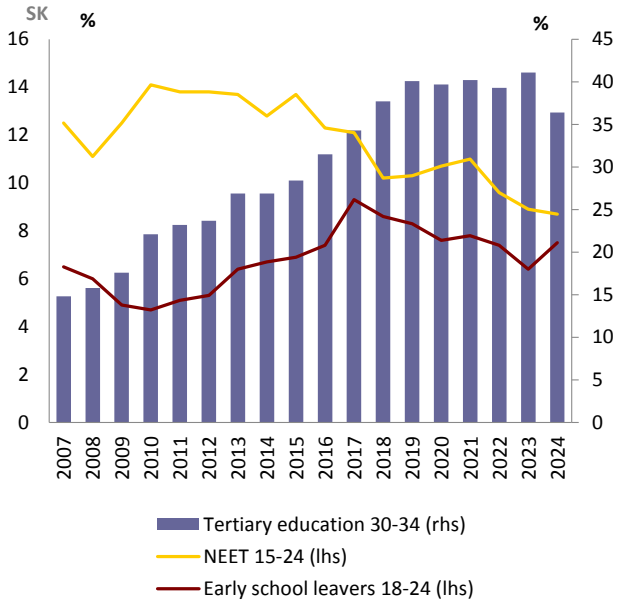
([248]) Správa o stave a úrovni výchovy a vzdelávania v školách a školských zariadeniach v Slovenskej republike v školskom roku.

([249]) Eurostat: [ilc_mdsd11].

2023, the Commission referred Slovakia to the Court of Justice of the European Union for failing to effectively address the issue, thereby breaching the Racial Equality Directive.

Slovakia has increased efforts to reduce segregation. The State school inspectorate's report ([250]) pointed out persistent challenges linked to the slow implementation of inclusive education despite policy efforts. The Ministry of Education is implementing national projects ([251]) and monitoring the implementation of desegregation measures at schools. It also plans to evaluate the implementation of 'desegregation standards' in 2025. Overcoming inequalities in primary and secondary education is key to increasing enrolment in higher education and to reducing the number of adults who lack the necessary skills to participate in lifelong learning.

Graph A12.1:**Early school leavers, not in education, employment or training (NEET) and tertiary attainment**



Source: Eurostat, LFS [edat_lfse_14,edat_lfse_20,edat_lfse_07]

Increasing the share of top performers in basic skills and performance would strengthen the pool for innovative talent. Top performance among 15-year-olds declined and it is well below the EU average (9.5% vs 12.59%) in all three basic skills domains. In reading, it is among the lowest in the EU (3.4% vs EU average of 6.5%). Slovak pupils were also weaker in creative thinking, with a top performance rate of 21% (vs EU-23 average of 25.1% in 2022.) Widespread innovative testing in Slovakia confirmed the worsening of key competences in basic schools (FinQ, 2023), including among children aged 6-10. Students' basic skills may deteriorate further in the future if no action is taken. Slovakia's declining performance in PISA 2022 can be partially attributed to the long-term underfunding of the education system and school closures during the pandemic, but teacher shortages and low attractiveness of the teaching profession also play a part.

Slovakia is rolling out a reform of the school curriculum, the success of which will depend on how teachers are prepared and supported in implementing it. The reform will be fully implemented in the 2026/2027 school year. The Ministry of Education also announced a package of 89 measures to improve education ('Velvet revolution in education,' 2024). However, the shortage of teachers and increasing demands can hinder their effective implementation. It is estimated that in the next school year there will be a shortage of around 2 000 teachers, in particular maths, science and IT teachers. This poses a risk to the ability to provide quality STEM education and subsequently foster interest among students in pursuing STEM-related higher education ([252]).

The low attractiveness of the profession, the quality of the degree programmes for teachers and in-service training affects the quality of education. More effective and better targeted support for teachers and

([250]) Based on findings in 11 inclusive primary schools in 2024.

([251]) 'Opportunity for all', 'Support for Educational Opportunities'

([252]) https://www.edujobs.sk/praca.

improved pedagogical approaches are needed to boost basic skills. Reading literacy could be improved for example by better promoting pre-reading literacy in preschool, mainstreaming reading literacy teaching across subjects and providing targeted learning support to children from vulnerable groups or to those who are lagging behind. Also, additional support to the extracurricular activities could strengthen basic and STEM-related skills.

Low level of basic skills continues in adulthood. In 2023, the PIIAC survey of adult skills recorded substantial age-related skills losses among adults (including young adults aged 27-34) in literacy. 24% of the Slovak adults can understand only short and simple sentences. Slovak adults are below the OECD average in all three skills measured: literacy, numeracy, adaptive problem solving. 36% of workers hold their highest qualification not in the field which is most relevant to their job. Over half of businesses in Slovakia reported that their workforce has some degree of skill gap (54%) ([253]).

Slovakia has a relatively large vocational education and training (VET) offer, but its potential for the labour market is not fully exploited. In 2023, 43% of 15-19-year-olds were enrolled in secondary VET. Half of 25-34-year-olds have a VET qualification as their highest level of attainment (EU average: 60% in 2022 ([254]). In 2023, almost eight out of 10 (76.5%) of recent VET graduates were in employment, below the EU average of 81%. On average, VET graduates earn about 12% more than those without upper secondary education attainment, whereas workers with finished general secondary attainment earn 13% more. Nevertheless, Slovakia lags in exposing students to work-based learning (62.1% vs EU average of 64.5%). Improving the quality of curricula and teaching, and ensuring more flexible entry paths for professionals into VET teaching profession would address skills mismatches.

The European Social Fund Plus (ESF+) supports improvements in VET. In 2024, the Ministry of Education launched a national project aiming to increase the quality, flexibility and adaptability of VET and introducing regional quality coordinators (EUR 7 million). The project also develops a national strategy for quality assurance and plans to publish an impact analysis in 2026..

Tertiary education struggles to supply the skills needed by the economy. The RRP supports reforms aimed at improving the quality of higher education. For example in 2024, in total EUR 80.4 million was allocated to universities, linked to their performance on 14 specific indicators. Only 37.2% of Slovaks aged 25-34 had a tertiary education degree in 2024 (EU average: 44.2%). The share of students enrolled in STEM programmes (21.8%) was significantly lower than the EU average (27.1%) in 2022, and had decreased compared to 2017 (22.8%). Around 38.8% of all medium-level VET pupils were enrolled in medium-level VET STEM fields in 2022 (EU-27 average: 36.2%). The number of PhD students in STEM studies decreased between 2017 and 2022 ([255]), although, as a share of total International Standard Classification of Education (ISCED) level 5-8 enrolments, the share of enrolled students in STEM remained the same (1.7%). Between 2010 and 2023, the number of STEM graduates declined in Slovakia by 46%. The low number of enrolments in STEM studies is linked to challenges at school level. In 2023, only 11.6% of graduates decided on mathematics in the Matura final examination.

([253])OECD (2024), PIAAC Employer Module, Do Adults Have the Skills They Need to Thrive in a Changing World?: Survey of Adult Skills 2023, OECD Skills Studies, OECD Publishing, Paris, p. 175.

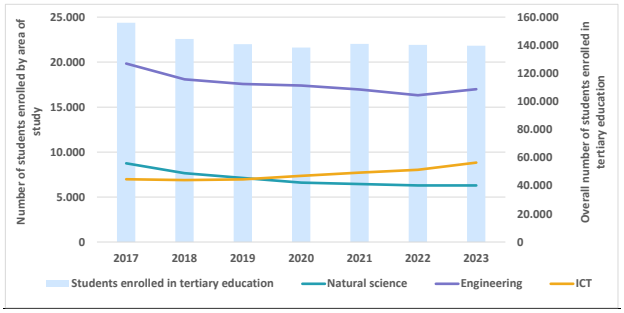
([254]) Eurostat, UOE, OECD and additional collection for the other EHEA countries

([255]) educ_uoe_entr03_custom_15132925.

Addressing gender gaps helps to increase the enrolment in STEM studies. In 2022, the share of male STEM enrolments (as a share of total ISCED 5-8 enrolments) was 15.2% in Slovakia (EU-27 average: 18.5%). The share of female ISCED 5--8 enrolments was only 6.6% (EU-27 average: 8.6%). The share of females in ICT enrolments (ISCED 5-8) was among the lowest in the EU (15.1% in Slovakia vs 20.2% in the EU) in 2022. The proportion of graduates in ICT (4.8%) was slightly higher in Slovakia than the EU average (4.5%) in 2022 (DESI, 2024). However, only 0.8% of Slovak females graduate in ICT (EU: 1%). Support for teachers to develop learning tools, video tutorials and innovative approaches, including using artificial intelligence, could help boost participation in STEM in Slovakia. Updating secondary school curricula and introducing additional support (human and financial resources) to the extracurricular activities (in maths, reading, STEM and digital competences) would improve motivation and quality.

There is scope to substantially improve green competencies and skills. Slovak students' knowledge of sustainable development issues is below the average of the 17 EU countries surveyed, and the difference in students' knowledge in this area when linked to parental educational background is the highest in the EU-17. Although school leaders have a key role in including sustainability in school practice, there are no specific provisions supporting their leadership in relation to sustainability.

Graph A12.2:**Change in the number of students enrolled in tertiary education and in STEM fields (ISCED 5-8) in Slovakia, 2017-2023**



Source: Eurostat: educ_uoe_enrt03

Training is crucial to address the shortages of skilled workers and to improve competitiveness, resilience and fairness. 68% of Slovak SMEs in 2023 reported that it was very difficult to find qualified employees (EU average: 52%). Similarly, 42% of SMEs (EU average: 21%) said that keeping qualified employees was very difficult. ESF+ funding for labour market development and skills forecasting is managed by the Alliance of Sectoral Councils, comprising 25 sectoral councils, which cover the main industries and prepare the national employment standards. The Public Employment Service supports reskilling necessary for the labour market of young people (and other job seekers) not in employment, education or training. While most SMEs do not expect skills shortages to affect their ability to use IT technologies in their operations (81% vs EU average of 75%), they report an increased workload for existing staff, loss of sales and reduced profitability and growth due to skill shortages.

Digital skills still need to be significantly strengthened. The proportion of Slovaks aged 16 to 74 who have at least basic digital skills (51.31% in 2023) is below the EU average (55.56%). Yet, 70.58% of young Slovaks aged 16 to 24 have at least basic digital skills, which is in line with the EU average. The share of students enrolled in ICT in Slovakia in 2022 was 5.7% of the total tertiary enrolments (EU average: 5.2%). Despite ongoing digitalisation of schools, the level of remote access to the school network from home is among the

lowest in the EU (3% in Slovakia vs EU average at 18%). Moreover, Slovak students' performance in computer and information literacy significantly decreased in 2023 in comparison to 2013 (by 19 points) as measured by the 2023 International Computer and Information Literacy Study ([256]). The 2024 report also highlights the need to support teachers' digital skills and promote pupils' access to distance learning.

Participation in adult learning is relatively high, but challenges persist for specific population groups. The rate of adults participating in training reached 49.5% in 2022 (compared to 42.6% in 2016), coming close to the 2030 national target of 50% and remaining above the EU average (39.5%). At the same time, participation rates vary significantly across population groups and sectors. People outside the labour market (10%), the unemployed (10.5%) and those who did not complete upper secondary education (18.6%) show much lower engagement rates. On the other hand, employees' participation in education and training in energy-intensive industries was 13.82% in 2024 (EU average: 11.67%).

Slovakia adopted a new law on adult education and an action plan for 2025-2027. It promotes a personalised approach to adult learning and introduces new elements, such as individual learning accounts and validation of previous learning outcomes. However, the law does not allow for entitlements to be transferred between financial years and does not provide for paid training leave, contrary to the Council recommendation on individual learning accounts.

([256]) Study conducted by the International Association for the Evaluation of Educational Achievement, 2023.

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

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)	49.5
	Early leavers from education and training (% of the population aged 18-24, 2024)	7.5
	Share of individuals who have basic or above basic overall digital skills (% of the population aged 16-74, 2023)	51.3
	Young people not in employment, education or training (% of the population aged 15-29, 2024)	10.7
	Gender employment gap (percentage points, population aged 20-64, 2024)	8.9
	Income quintile ratio (S80/S20, 2024)	3.28
Dynamic labour markets and fair working conditions	Employment rate (% of the population aged 20-64, 2024)	78.1
	Unemployment rate (% of the active population aged 15-74, 2024)	5.3
	Long term unemployment (% of the active population aged 15-74, 2024)	3.5
	Gross disposable household income (GDHI) per capita growth (index, 2008=100, 2023)	127.5
Social protection and inclusion	At risk of poverty or social exclusion (AROPE) rate (% of the total population, 2024)	18.3
	At risk of poverty or social exclusion (AROPE) rate for children (% of the population aged 0-17, 2024)	22.6
	Impact of social transfers (other than pensions) on poverty reduction (% reduction of AROP, 2024)	36.7
	Disability employment gap (percentage points, population aged 20-64, 2024)	23.8
	Housing cost overburden (% of the total population, 2024)	6.4
	Children aged less than 3 years in formal childcare (% of the under 3-years-old population, 2024)	5.1
	Self-reported unmet need for medical care (% of the population aged 16+, 2024)	1.6

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

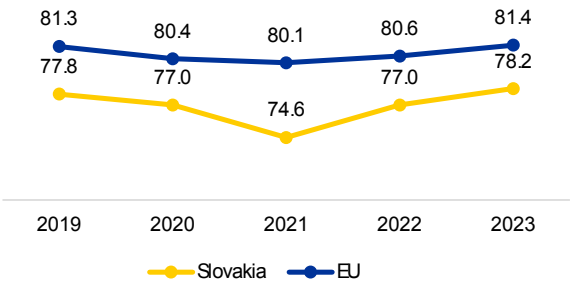
(1) Update of 5 May 2025. Members States are categorised based on the Social Scoreboard according to a methodology agreed with the EMCO and SPC Committees. Please consult the Annex of the Joint Employment Report 2025 for details on the methodology (https://employment-social-affairs.ec.europa.eu/joint-employment-report-2025-0).

Source: Eurostat

Slovakia's health system faces significant challenges that need be addressed if the country is to improve the health of its population and social fairness, while boosting the competitiveness of its economy. Key challenges include: (i) low life expectancy, linked to high treatable and preventable mortality; (ii) suboptimal funding and cost-effectiveness of the health system; (iii) an insufficient focus on disease prevention; and (iv) shortages of health workers.

Life expectancy at birth in Slovakia rebounded above its pre-COVID-19 level but was still among the lowest in the EU in 2023. Moreover, there are striking gender gaps in health outcomes. Women can expect to live 6.6 years longer than men. That said, they can only expect to live 1.4 years longer than men in good health. Treatable mortality is one of the highest in the EU, suggesting shortcomings in the effectiveness of the health system. Diseases of the circulatory system ('cardiovascular diseases') and cancer remain the leading causes of death, with mortality rates higher than the EU average.

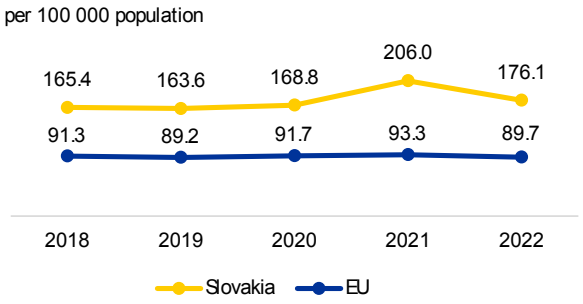
Graph A14.1:**Life expectancy at birth, years**



Source: Eurostat (demo_mlexpec)

The weak health outcomes negatively impact Slovakia's workforce, productivity and competitiveness. Mortality at working age as a proportion of total mortality is significantly higher in Slovakia than the EU average, exacerbating the effects of population ageing on a shrinking labour force. Cancer in particular has a major impact on workforce participation and productivity ([257]). Between 2022 and 2040, the population at working age in Slovakia is forecast to shrink by 0.5% every year as a result of lower birth rates (EU average: 0.3%). The number of potential productive life years lost due to non-communicable diseases such as cancer and cardiovascular diseases is higher than the EU average (1 368 per 100 000 population vs 1 017) ([258]).

Graph A14.2:**Treatable mortality**



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

Despite investment from EU funds in healthcare quality and efficiency, Slovakia's healthcare system remains underfunded, with limited cost-effectiveness. Health spending per inhabitant is one of the lowest in the EU. Spending on outpatient care, inpatient care, and retail pharmaceuticals and medical devices each accounted for around 30% of total health expenditure. Between 2016 and 2022, Slovakia allocated an average of 0.31% of GDP to capital spending in the health sector (lower than the EU average of 0.48%) ([259]), which could account for the low availability of key diagnostic technologies (medical imaging). Due to an ageing population, the projected increase in public healthcare spending raises fiscal sustainability concerns for Slovakia (see Annex 1). While the number of hospital beds is

([257])OECD/European Commission (2025), EU Country Cancer Profiles Synthesis Report.

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

([259]) OECD/European Commission, see Health at a Glance Europe 2018, 2020, 2022 and 2024.

higher than the EU average, the occupancy rate remains low (59%) ([260]). Public hospitals in Slovakia are facing financial issues, including late payments and indebtedness (see Annex 4). Reforms are under way in Slovakia to improve the efficiency and quality of inpatient healthcare by optimising the hospital network and centralising the management of the largest hospitals.

Out-of-pocket payments account for a greater proportion of spending on health in Slovakia than the EU average (19.3% vs 14.3%). More than two thirds of all out-of-pocket payments are for outpatient pharmaceuticals ([261]). In 2024, Slovakia increased its public health insurance budget by 11.5% compared to 2023. It also introduced a health system financing 'consolidation package' to reduce the budget deficit, by increasing taxes and contributions, generating EUR 1.96 billion.

Under the Slovakian recovery and resilience plan (RRP), around EUR 1.03 billion is planned for health reforms and supporting investments. In addition, complementary funding for healthcare (EUR 166 million) is planned under the EU cohesion policy funds in 2021-2027, which aim to improve health infrastructure and the accessibility of health services for vulnerable and socially disadvantaged groups.

As regards public health, Slovakia places insufficient focus on disease prevention. In 2022, spending on prevention accounted for 2.0% of total spending on health in Slovakia, much lower than the EU average. Preventable mortality was high in 2022 (245 per 100 000 population) but decreased by 6% since 2013. Slovakia is one of the countries with the lowest rates of physical activity among adults. The share of the population that is overweight has been increasing over time, particularly among men ([262]). Flu vaccination rates among older people were very low (6%) in 2021/2022 and declined sharply compared to pre-pandemic levels ([263]). Screening rates for breast cancer and cervical cancer were among the lowest in the EU in 2022 ([264]). High levels of hospitalisation for congestive heart failure and diabetes suggest a lack of care coordination, highlighting a need to strengthen primary care. Under EU4Health, Slovakia is involved in the EUCanScreen joint action ([265]) on cancer screening and the CARE4DIABETES joint action aimed at reducing the burden of diabetes ([266]). In 2023, Slovakia's government approved the general outpatient care strategy that will run until 2030 to improve access to primary care. Moreover, one of the priorities of Slovakia's RRP is to increase access to mental healthcare by strengthening community and outpatient mental health services.

([260]) OECD/European Commission (2024), Health at a Glance: Europe 2024 - State of Health in the EU Cycle, p.201.

([261]) Health at a Glance: Europe 2024, pp. 186-187.

([262]) Health at a Glance: Europe 2024, Chapter 4.

([263]) Health at a Glance: Europe 2024, pp. 214-215.

([264]) Health at a Glance: Europe 2024, pp. 162-163.

([265]) EUCanScreen - 6η Υ.ΠΕ

([266]) Home - Care4Diabetes4JointAction

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

	2019	2020	2021	2022	2023	EU average* (latest year)
Cancer mortality per 100 000 population	293.3	301.8	275.1	267.7	n.a.	234.7 (2022)
Mortality due to circulatory diseases per 100 000 population	567.8	607.1	641.2	627.8	n.a.	336.4 (2022)
Current expenditure on health, purchasing power standards, per capita	1 519	1 593	1 850	1 947	n.a.	3 684.6 (2022)
Public share of health expenditure, % of current health expenditure	79.8	80.3	79.7	79.9	n.a.	81.3 (2022)
Spending on prevention, % of current health expenditure	0.8	1.0	1.6	2.0	n.a.	5.5 (2022)
Available hospital beds per 100 000 population**	495	488	488	489	n.a.	444 (2022)
Doctors per 1 000 population*	3.6	3.7	3.7	3.7	n.a.	4.2 (2022)*
Nurses per 1 000 population*	n.a.	n.a.	5.7	5.7	n.a.	7.6 (2022)*
Mortality at working age (20-64 years), % of total mortality	23.7	21.7	22.2	21.3	21.3	14.3 (2023)
Number of patents (pharma / biotech / medical technology)	0	0	6	1	1	29 (2023)***
Total consumption of antibacterials for systemic use, daily defined dose per 1 000 inhabitants****	19.3	14.4	16.0	20.8	20.1	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.

Shortages of health workers limit the availability of care. For several years, the density of doctors and nurses in Slovakia has been below the EU average. Furthermore, in 2022, a high share of the country's nursing personnel was aged between 55 and 64 (23.7%), and a low share was aged between 25 and 34 (9.8%). This poses a significant challenge to the health system and, more broadly, the care system (see Annex 10). Since 2025, the base salaries for selected healthcare professionals have increased. Slovakia participates in the EU4Health-funded HEROES joint action, through which EU countries share best practices and expertise on health workforce planning ([267]).

The Slovak health system's potential to drive innovation and foster industrial development in the EU medical sector remains largely untapped. Slovakia is among the EU countries that report the lowest levels of public spending on health research and development. This is reflected in the low number of European patents granted in the combined areas of pharmaceuticals, biotechnologies and medical devices ([268]). Clinical trial activity in Slovakia is also limited ([269]). Furthermore, the country is facing a growing shortage of medicines.

Slovakia is also lagging behind in the uptake of e-health and the overall digitalisation of its health system. In 2024, the shares of people using online health services (excluding phone) instead of in-person consultations (15.6%) and accessing their personal health records online (16.2%) were both below the EU average. The low general level of digital literacy in Slovakia in 2023 (51.3% vs an EU average of 55.6%) may explain the low uptake of digital tools by patients. Planned investments under the RRP aim to boost the digital transformation of Slovak hospitals. In addition, Slovakia participates in the joint action TEHDAS2 ([270]) and receives direct grants under the EU4Health programme to facilitate the implementation of the European Health Data Space.

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

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

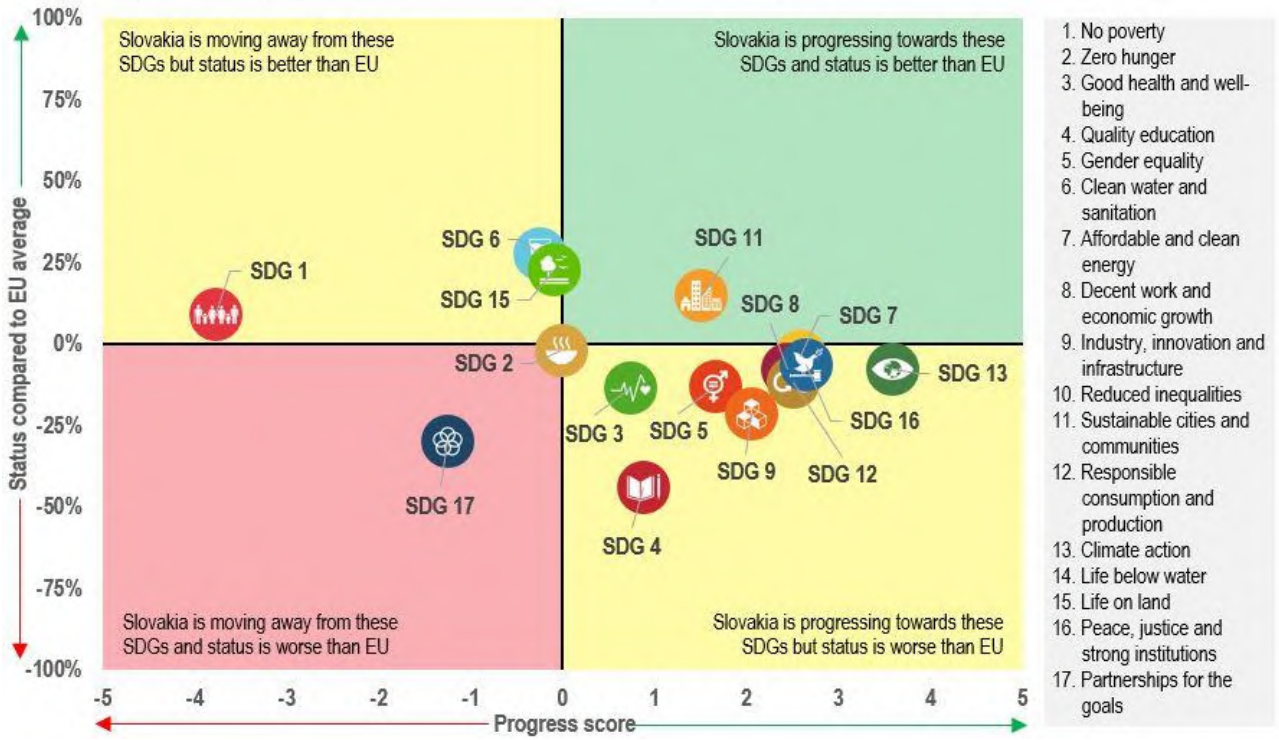
([269]) EMA (2024), Monitoring the European clinical trials environment, p. 9.

([270]) Second Joint Action Towards the European Health Data Space – TEHDAS2 - Tehdas

This Annex assesses Slovakia'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.

Slovakia is slightly improving on several SDG indicators related to competitiveness (SDGs 4, 8 and 9), but needs to catch up with the EU average. At 1.03% of GDP in 2023, R&D expenditure is significantly below the EU average of 2.24% (SDG 9). This stifles innovation and prevents Slovakia from boosting its productivity by employing more technological solutions such as artificial intelligence, digitalisation, automation, cloud systems and other scientific and hi-tech breakthroughs. Only 24 patent applications (per million inhabitants) were submitted in 2024 compared to the EU average of 156. The share of the population aged 25-34 completing tertiary education, a crucial ingredient for raising the proficiency, competitiveness, and technological aptitude of the Slovak population, has dropped to 37.2% in 2024, far from the EU average of 44.2% for this indicator.

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



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.

However, the proportion of adults participating in learning is increasing, almost catching up with the EU average. In 2024, 12.8% of the Slovak adult population had attended an education course in the previous 4 weeks, compared to the EU average of 13.3% (SDG 4). The share of households with a high-speed internet connection increased from 45.5% in 2019 to 69.1% in 2023 (just below the EU average of 78.8%). Investment in digital infrastructure and educational reforms, outlined in the recovery and resilience plan (RRP), should further improve long-term productivity.

While Slovakia is improving on several SDG indicators related to *sustainability* (SDG 7, 9, 11, 12, 13 and 15), it is moving away from others (SDG 2, 6). Slovakia performs well on SDGs 6, 11 and 15 but needs to catch up with the EU average on SDGs 2, 7, 9, 12 and 13. It performs well on sustainable mobility, with buses and trains accounting for 21% of total passenger transport in 2022, standing well above the EU average of 16.6%. Slovakia's severe housing deprivation rate was at 4.0% in 2023, at part with the EU average. Slovakia is however underperforming on indices pertaining to affordable and clean energy (SDG 7). While Slovakia's capacity for generating energy from renewable sources has increased, from 11.9% of gross final energy consumption in 2018 to 17% in 2023, this share is still below the EU average of 24.6%. Over the same period, energy productivity improved only marginally, from EUR 4.9 per kgoe to EUR 5.5 per kgoe, compared to the average EU improvement from EUR 8.1 per kgoe to EUR 9.8 per kgoe). Slovakia's dependency on imported energy as part of its overall energy mix fell from 61.9% in 2018 to 57.7% in 2023, standing just below the EU average of 58.3%. Slovakia performs well on the share of municipal waste that is recycled. The country increased the percentage recycled from 36.3% in 2018 to 50.3% in 2023, which is above the EU average of 48.2%.

Slovakia is making progress on its net greenhouse gas emissions, which have decreased from 6.9 tonnes per capita in 2018 to 5.2 in 2023, performing better than the 2023 EU average of 6.8 tonnes per capita. Investments and reforms that are set out in the RRP (sections on renewables, industry decarbonisation, energy efficiency, waste disposal and R&D) will boost Slovakia's performance on environmental SDGs.

While Slovakia is improving on several SDG indicators related to *social fairness* (SDGs 3, 4, 5, 7 and 8), it is moving away from others (SDG 1). Slovakia performs well on SDG 1 but needs to catch up with the EU average on SDGs 3, 4, 5, 7 and 8. Slovakia performs better than the EU average on poverty-related indicators (SDG 1), partly because of the relatively little variation in earnings among workers within the same industry. Although still lagging behind the EU average, Slovakia is progressing on some quality education indicators (SDG 4), such as participation in early childhood education (rising from 77.6% in 2018 to 80.8% in 2023) but the rate was still below the EU average of 94.6% in 2023. The high percentage of low achieving fifteen-year-olds in mathematics (33.2% in 2022 compared to the EU average 29.5%) is a cause for concern. On SDG 5 (Gender equality), Slovakia is improving on the ratio of senior management positions held by women. The percentage of female board members increased from 22.0% in 2019 to 22.7% in 2024, though that figure is still significantly below the EU average of 32.6%. On SDG 7, Slovakia's ability to provide affordable energy has declined. The percentage of people unable to adequately heat their homes rose from 4.8% in 2018 to 8.1% in 2023. However, this is still below the EU average of 10.6% in 2023. The RRP includes measures to improve pupils' skills and to make the various levels of the education system more inclusive and fairer. For example, by creating more places in preschool establishments, updating school curricula, tackling the segregation of the Roma population, providing specialised training for teachers and raising the

professional qualifications required of teaching staff (Components 6, 7, 8).

While Slovakia is improving on several SDG indicators related to *macroeconomic stability* (SDGs 8 and 16), it is moving away from others (SDG 17). Slovakia needs to catch up with the EU average on SDGs 8, 16 and 17. Real GDP per capita in Slovakia has been increasing, reaching EUR 19 130 in 2024. However, that figure stood below the EU average of EUR 33 530 in 2024. The investment share of GDP slightly increased from 21.7% in 2019 to 20.3% in 2024 (EU average: 21.7%). The employment rate has increased, reaching 78.1% of the population aged 20-64 in 2024, and outpacing the EU average of 75.8%. The long-term unemployment rate has fallen (to 3.5% in 2024), standing above the EU average of 1.9%. Measures presented in the RRP should stimulate much needed investment and help further reduce long-term unemployment.

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

Slovakia 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 tax system, the quality of public spending and of public procurement processes, the effectiveness of the judicial and anticorruption systems, risks related to household debt and the functioning of the housing and rental markets, the teaching of basic skills, energy and waste management.

The Commission has assessed the 2019-2024 CSRs considering the policy action taken by Slovakia to date and the commitments in its recovery and resilience plan (RRP). At this stage, Slovakia has made at least 'some progress' on 54% of the CSRs ([271]), and 'limited progress' on 89% (Table A16.2).

EU funding instruments provide considerable resources to Slovakia 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 6.4 billion funding from the Recovery and Resilience Facility (RRF) in 2021-2026, EU cohesion policy funds ([272]) are providing EUR 12.6 billion to Slovakia (amounting to EUR 16.2 billion with national co-financing) for 2021-2027 ([273]) to boost regional competitiveness and growth. Support from these instruments combined represents around 15.3% of 2024 GDP ([274]). 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 Slovakia under the 2014-2020 multiannual financial framework, which financed projects until 2023 and has had significant benefits for the economy and Slovak society. Project selection under the 2021-2027 programmes has accelerated, while significant volumes of investment are yet to be mobilised.

Slovakia's RRP contains 119 investments and 103 reforms to stimulate sustainable growth and support the green and digital transitions, social inclusion and territorial cohesion. A year before the end of the RRF timespan, implementation is on its way, with 54% of the funds disbursed. At present, Slovakia has fulfilled 33% of the milestones and targets in its RRP ([275]). Efforts are needed to ensure completion of all RRP measures by 31 August 2026. Several challenges hinder the implementation of the RRP, including inefficient public procurement processes, insufficient preparation of investment projects and a fragmented governance structure. Tackling these barriers would help accelerate the implementation.

Slovakia also receives funding from several other EU instruments, including those listed in Table A16.1. The common agricultural policy (CAP) provides Slovakia with an EU contribution of EUR 3.4 billion under the CAP strategic plan 2023-2027 ([276]). Operations amounting to EUR 49.9 million ([277]) have been

([271]) 6% of the 2019-2024 CSRs have been fully implemented, 5% substantially implemented, and some progress has been made on 43%.

([272]) 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.

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

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

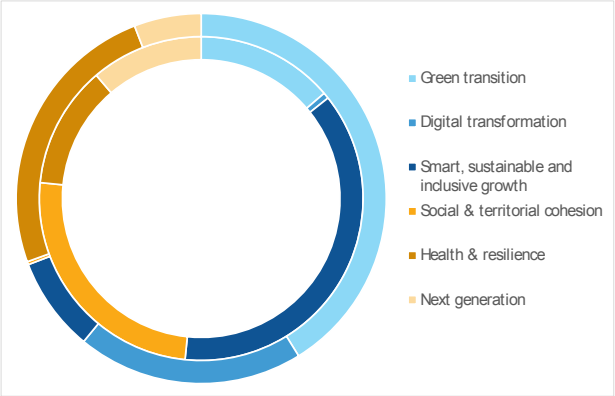
([275]) As of mid-May 2025, Slovakia has submitted 5 payment requests, the last one being under assessment.

([276]) An overview of Slovakia'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/slovakia_en

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

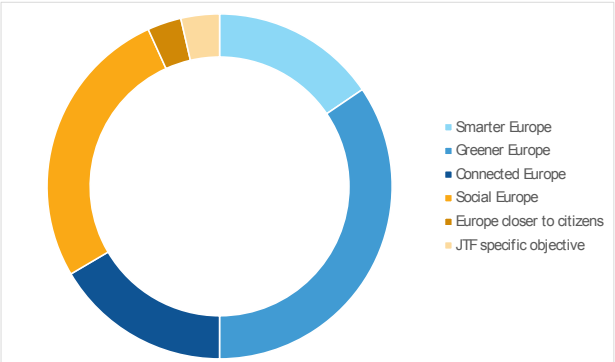
signed under the InvestEU instrument backed by the EU guarantee, improving access to financing for riskier operations in Slovakia.

Graph A16.1:**Distribution of RRF funding in Slovakia 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

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



Source: European Commission

Cohesion policy funds aim to increase the productivity and competitiveness of Slovakia's firms and improve the business environment. The European Regional Development Fund (ERDF) will provide funding for research and development investments and cooperation with research organisation to over 800 small and medium-sized enterprises (SMEs). An additional 2 700 businesses will receive grants and loans to improve their competitiveness through other investments. Over 50 public institutions will be helped to develop digital services for the public, while 53 000 dwellings will gain very high-capacity broadband access to facilitate the economy's digital transition. Under the Strategic Technologies for Europe Platform (STEP) Slovakia aims to invest over EUR 200 million in developing digital technologies and biotechnologies. The European Social Fund Plus (ESF+) will fund the introduction of individual learning accounts in Slovakia. This will serve as a follow-up to the ERDF-funded project (funding: EUR 2.3 million) aimed at establishing and testing the relevant IT platform (called EPIVU). The ESF+ project on individual learning accounts (worth EUR 15 million) will be implemented between 2025-2029 by the Ministry of Education together with specific partners (the Alliance of Sectoral Councils, the State Association of Adult Education Institutions). The project is anchored in the strategy for lifelong learning and in the new adult education law, which came into force in January 2025.

Other funds are contributing to competitiveness in Slovakia, for instance through open calls. The Connecting Europe Facility has financed strategic investments in sustainable mobility with investments in rail transport infrastructure; energy market integration with the diversification of natural gas sources and routes; and digital connectivity with terrestrial cables connecting Slovakia to Poland and advanced 5G development. Horizon Europe has supported research and innovation, from scientific breakthroughs to scaling up innovations, with research and innovation capacity and research on food and agriculture as top priorities in Slovakia. The Technical Support Instrument (TSI) has supported Slovakia in the preparation of its Social Climate Plan as well as overcoming barriers to regional development in Upper Nitra in 2024. It also supports capacity building of the public administration through the multiannual programme Public Administration Cooperation Exchange (PACE).

Slovakia's RRP also contains ambitious measures to improve the business environment and competitiveness. As part of the measures covered by payment requests submitted over the past year, major reforms have been implemented to reduce regulatory burden and improve the efficiency of the judicial system, the insolvency framework and public procurement. Slovakia put in place a unified methodology for the assessment of impacts, new tools for *ex post* evaluations of existing regulations, a '1-in-2-out' rule to ensure that new legislation does not increase administrative costs for businesses, and protection against unjustified gold-plating of legislation. Slovakia also set up a new court network by reorganising and streamlining the courts system, allowing for greater specialisation of judges in criminal, civil, commercial or family justice. The insolvency and restructuring procedures were also unified and digitalised, with Slovakia introducing insolvency specialisation at the level of business courts and early warning tools. Efforts to digitalise public procurement included the creation of a single electronic platform; ensuring interoperability with the information and data management systems; and better control and greater efficiency in the evaluation and award of contracts.

EU funds are playing a significant role in promoting environmental sustainability and green transition in Slovakia during the current seven-year EU budget (multiannual financial framework). With ERDF and Just Transition Fund (JTF) support, capacity for waste recycling will increase by 500 000 tonnes per year, while wastewater treatment will improve for 75 000 people in municipalities across Slovakia. Over 16 000 households will improve their energy performance thanks to insulation and renewable energy installations. In regions transitioning from coal mining and emission-intensive industries (Trenčín, Košice and Banská Bystrica), the JTF will support close to 200 businesses operating in green industries and build over 800 alternative fuel stations. As for the CAP strategic plan, more than EUR 513 million in EU funds are reserved for farmers voluntarily committing to more environmentally ambitious practices on agricultural land as part of the new whole-farm eco-scheme. Such practices include improving soil structure, setting aside non-productive areas and sowing them with pollinator mixtures, limiting the maximum area of cultivated land and postponing mowing. Slovakia aims to cultivate 20% of its agricultural land under organic farming by 2030. The CAP strategic plan helps this process by providing financial aid covering 270 000 hectares (14% of the country's agricultural land). Under rural development, about 46% of funds are reserved for environmental and climate-related objectives such as agri/forest environmental and climate measures. Practices leading to sustainability and reduced use of pesticides are applied on more than 27% of the country's agricultural area. Following the Russian invasion of Ukraine, the plan provides for enhanced investments in the production of renewable energy.

Slovakia's RRP, including the REPowerEU chapter, has a comprehensive set of reforms and investments for the green transition. As part of the measures covered by payment requests submitted over the past year, the Railways Act and related legislation on transport infrastructure were amended to improve the management and planning of transport investments, including through new transport methodologies to identify projects. In addition, a new law on public passenger transport was adopted to transfer traffic from cars to trains and optimise rail passenger transport through greater coordination between regional public bus and train services, as well as between the state, counties, cities and municipalities on more integrated and efficient provision of passenger transport.

Promoting fairness, social cohesion and improving access to basic services are among the key priorities of EU funding in Slovakia. As a result of ERDF support, healthcare facilities will be able to serve

740 000 more patients every year. The capacity of social care facilities will increase, covering a further 900 people, and capacity and conditions in social housing will be expanded to cover another 9 000 people. The ESF+ is providing EUR 60 million for 'Development Teams I', a project of strategic importance aimed at empowering marginalised Roma communities in 60 Roma settlements. A development team has been set up in each of the municipalities, with the support of the municipality leadership. The team then helps with the challenges the Roma population face (housing, education, health, access to the labour market, poverty and indebtedness, and planning issues in the municipality). The development team employs Roma and non-Roma field workers who assist specific families, children, young people, unemployed people, etc. The project has been running since mid-2023 and will last until 2026. The project has produced its first tangible results in the Roma settlements (e.g. more than 16 000 people have been targeted, 719 people employed, 12 000 events held for families and children, and 6 200 counselling activities for unemployed people).

Slovakia's RRP contains several reforms and investments related to fairness and social policies. As part of the measures covered by payment requests submitted over the past year, Slovakia has improved the efficiency and availability of emergency care. More specifically, it has amended legislation in the field and optimised the emergency care network by setting up a new network of ambulance stations and providing a new definition of emergency care and criteria for responding to requests for emergency care services. Slovakia also reorganised long-term health and palliative and nursing care, to improve the offer and coordination between types of care and to make financing more effective. Measures to improve equity and quality in the education system included: (i) setting up education support for children and pupils with special educational needs and experiencing obstacles to accessing education; (ii) the creation of a comprehensive system of counselling for children, pupils, students; (iii) provision for completing lower secondary education in vocational schools; and (iv) a new curriculum for all primary schools organised in multiannual education cycles. To help Slovakia implement its RRP, the TSI supported the health system performance assessment reform.

Table A16.1: **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)	6 408.5		3 471.8
RRF loans	0		0
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)	14 288.4	12 593.7	9 242.0
European Regional Development Fund (ERDF)	7 167.0	7 305.6	5 004.0
Cohesion Fund (CF)	3 991.0	2 472.8	2 052.4
European Social Fund (ESF, ESF+) and the Youth Employment Initiative (YEI)	3 130.4	2 356.3	2 033.4
Just Transition Fund (JTF)		459.0	152.1
Fisheries			
European Maritime, Fisheries and Aquaculture Fund (EMFAF) and the European Maritime and Fisheries Fund (EMFF)	7.7	15.2	4.3
Migration and home affairs			
Migration, border management and internal security - AMIF, BMVI and ISF (4)	53.5	99.2	36.8
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	3 380.0		969.9
European Agricultural Guarantee Fund (EAGF)	2 063.1		759.2
European Fund for Agricultural Development (EAFRD)	1 316.9		210.7

(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

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

Slovakia	Assessment in May 2025	Relevant SDGs
2019 CSR 1	**No longer relevant**	
Achieve the medium-term budgetary objective in 2020.	No longer relevant	SDG 8, 16
Safeguard the long-term sustainability of public finances, notably that of the healthcare and pension systems.	No longer relevant	SDG 3, 8
2019 CSR 2	**Some progress**	
Improve the quality and inclusiveness of education at all levels and foster skills.	Some progress	SDG 4, 8, 10
Enhance access to affordable and quality childcare and long-term care.	Limited progress	SDG 3, 4, 5
Promote integration of disadvantaged groups, in particular Roma.	Limited progress	SDG 1, 2, 4, 8, 10
2019 CSR 3	**Some progress**	
Focus investment-related economic policy on healthcare,	Some progress	SDG 3, 10, 11
research and innovation,	Some progress	SDG 9, 10, 11
transport, notably on its sustainability,	Some progress	SDG 10, 11
digital infrastructure,	Some progress	SDG 9, 10, 11
energy efficiency,	Some progress	SDG 7, 10, 11
competitiveness of small and medium-sized enterprises,	Some progress	SDG 8, 9, 10, 11
and social housing, taking into account regional disparities.	Limited progress	SDG 1, 2, 10, 11
Increase the use of quality-related and lifecycle cost criteria in public procurement operations.	Limited progress	SDG 9
2019 CSR 4	**No progress**	
Continue to improve the effectiveness of the justice system, focussing on strengthening its independence, including on judicial appointments.	No progress	SDG 16
Increase efforts to detect and prosecute corruption, in particular in large-scale corruption cases.	No progress	SDG 16
2020 CSR 1	**No longer relevant**	
In line with the general escape clause, take all necessary measures to effectively address the 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.	No longer relevant	SDG 8, 16
Strengthen the resilience of the health system in the areas of health workforce, critical medical products and infrastructure.	Limited progress	SDG 3
Improve primary care provision and coordination between types of care.	Some progress	SDG 3
2020 CSR 2	**Some progress**	
Provide adequate income replacement,	Substantial progress	SDG 1, 2, 8, 10
and ensure access to social protection and essential services for all.	Limited progress	SDG 1, 2, 10
Strengthen digital skills.	Some progress	SDG 4
Ensure equal access to quality education.	Limited progress	SDG 4, 8, 10
2020 CSR 3	**Some progress**	
Effectively implement measures to ensure liquidity for small and medium-sized enterprises and self-employed.	Some progress	SDG 8, 9
Close digital infrastructure gaps.	Some progress	SDG 9
Front-load mature public investment projects	Some progress	SDG 8, 16
and promote private investment to foster the economic recovery.	Some progress	SDG 8, 9
Focus investment on the green and digital transition, in particular on clean and efficient production and use of energy and resources,	Some progress	SDG 6, 7, 9, 12, 13, 15
sustainable public transport,	Some progress	SDG 11
and waste management.	Some progress	SDG 6, 12, 15
2020 CSR 4	**Limited progress**	
Ensure effective supervision and enforcement of the anti-money laundering framework.	Some progress	SDG 8, 16
Ensure a favourable business environment	Limited progress	SDG 8, 9
and quality public services through enhanced coordination and policy-making.	Limited progress	SDG 10, 11, 16
Address the integrity concerns in the justice system.	No progress	SDG 16

(Continued on the next page)

Table (continued)

2021 CSR 1	**No longer relevant**	
In 2022, maintain a supportive fiscal stance, including the impulse provided by the Recovery and Resilience Facility, and preserve nationally financed investment.	No longer relevant	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.	No longer relevant	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 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.	No longer relevant	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.	No longer relevant	SDG 8, 16
2022 CSR 1	**No longer relevant**	
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.	No longer relevant	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.	No longer relevant	SDG 8, 16
For the period beyond 2023, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions.	No longer relevant	SDG 8, 16
Make the tax mix more efficient and more supportive to inclusive and sustainable growth, including by leveraging the potential of environmental and property taxation.	Limited progress	SDG 8, 10, 12
Continue to strengthen tax compliance, including by further digitalising tax administration.	Some progress	SDG 8, 9, 16
2022 CSR 2		
Proceed with the implementation of its recovery and resilience plan, in line with the milestones and targets included in the Council Implementing Decision of 13 July 2021.	RRP implementation is monitored by assessing RRP payment requests and analysing reports published twice a year on the achievement of the milestones and targets. These are to be reflected in the country reports.	
Submit the 2021-2027 cohesion policy programming documents with a view to finalising their negotiations with the Commission and subsequently starting their implementation.	Progress on the cohesion policy programming documents is monitored under the EU cohesion policy.	
2022 CSR 3	**Some progress**	
Reduce overall reliance on fossil fuels and diversify imports of fossil fuels.	Some progress	SDG 7, 9, 13
Accelerate the deployment of renewables by further facilitating grid access, introducing measures to streamline permitting and administrative procedures	Some progress	SDG 7, 8, 9, 13
and modernising the electricity network.	Substantial progress	SDG 7, 9, 13
Reduce reliance on natural gas in heating and industry.	Limited progress	SDG 7, 9, 13
Adjust renovation policies to accelerate and incentivise deep renovations of buildings.	Some progress	SDG 7

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Table (continued)

2023 CSR 1	**Some 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 these are targeted at protecting vulnerable households and firms, fiscally affordable, and preserve incentives for energy savings.	Substantial 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 5.7%.	Full implementation	SDG 8, 16
Preserve nationally financed public investment and ensure the effective absorption of RRF grants and other EU funds, in particular to foster the green and digital transitions.	Full implementation	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, to achieve a prudent medium-term fiscal position.	Limited progress	SDG 8, 16
Make the tax mix more efficient and more supportive of inclusive and sustainable growth, including by leveraging the potential of environmental and property taxation.	Limited progress	SDG 8, 10, 12
Continue to strengthen tax compliance, including by further digitalising the tax administration.	Some progress	SDG 8, 9, 16
Reduce the risks related to household debt by supporting housing supply and the expansion of the rental market.	Limited progress	SDG 8
2023 CSR 2		
Maintain the momentum in the steady implementation of the recovery and resilience plan and, following the recent submission of the addendum, including the REPowerEU chapter, rapidly start the implementation of the related measures. Proceed with the speedy implementation of cohesion policy programmes, in close complementarity and synergy with the recovery and resilience plan.	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 with the cohesion policy is monitored in the context of the Cohesion Policy of the European Union.	
2023 CSR 3	**Limited progress**	
Reduce the economy's reliance on fossil fuels, in particular natural gas in industry and heating, and diversify imports of fossil fuels.	Some progress	SDG 7, 9, 13
Accelerate the deployment of renewables, particularly for wind, solar, geothermal and renewable gases, in line with relevant sustainability criteria.	Limited progress	SDG 7, 9, 13
Simplify permitting and administrative procedures for deploying renewables, including by establishing 'one-stop shops' and 'go-to' areas.	Limited progress	SDG 7, 8, 9, 13,
Modernise the electricity network and make the procedures for connecting renewables to the grid more efficient and less burdensome.	Some progress	SDG 7, 8, 9, 13
Accelerate and incentivise deep renovations of public and private buildings,	Some progress	SDG 7
address energy poverty through housing renovations for low-income households,	Some progress	SDG 1, 2, 7, 10
and step up policy efforts aimed at the provision and acquisition of skills and competences needed for the green transition.	Limited progress	SDG 4

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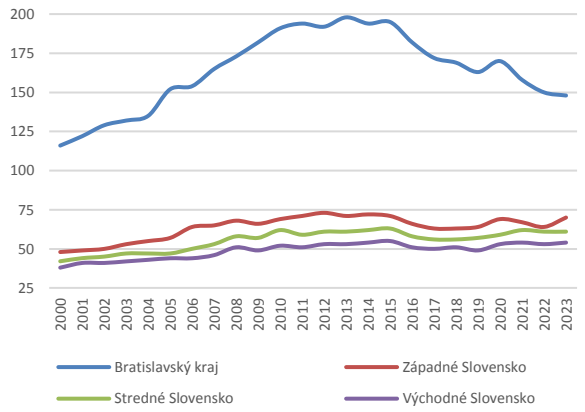
Table (continued)

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 in 2025 to a rate consistent with inter alia, reducing the general government deficit towards the 3% of GDP Treaty reference value and keeping the general government debt at a prudent level over the medium term.	Full implementation	SDG 8, 16
Make the tax mix more efficient, including by reducing disincentives on the labour market, and making a stronger use of environmental and recurrent property taxation.	Limited progress	SDG 8, 10, 12
Reduce costly spending measures, also by implementing spending reviews.	Some progress	SDG 8, 16
Continue to strengthen tax compliance, including by further digitalising tax administration.	Some progress	SDG 8, 9, 16
Reduce the risks related to household debt by supporting housing supply and the expansion of the rental market.	Limited progress	SDG 8
2024 CSR 2		
Ensure effective governance, strengthen administrative capacity to manage EU funds, accelerate investments and maintain momentum in the implementation of reforms. Address relevant challenges to allow for continued, swift and effective implementation of the recovery and resilience plan, including the REPowerEU chapter, ensuring completion of reforms and investments by August 2026. Accelerate the implementation of the cohesion policy programme. In the context of its mid-term review, continue focusing on the agreed priorities, taking action to better address the investment needs in the sustainable use of natural resources, 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 with the cohesion policy programming is monitored in the context of the Cohesion Policy of the European Union.	
2024 CSR 3	**Limited progress**	
Strengthen the effectiveness, independence and integrity of the judicial and anticorruption system	No progress	SDG 16
including by ensuring that adequate safeguards for the effective investigation and prosecution of high-level corruption cases are in place.	No progress	SDG 16
Improve competitiveness and productivity, including by ensuring transparency and competition in public procurement processes, to promote good governance and improve the effectiveness of public spending.	Limited progress	SDG 9, 16
Strengthen the teaching of basic skills,	Limited progress	SDG 4
including for children from disadvantaged backgrounds such as from marginalised Roma communities,	Limited progress	SDG 4, 8, 10
and increase the availability and use of affordable high-quality early childhood education and care for children under the age of 3.	No porgress	SDG 4, 5
Strengthen resource waste management and reuse of municipal and packaging waste,	Limited progress	SDG 1, 6, 7, 8, 11, 12, 13, 15
and the conservation of natural resources by mainstreaming nature-based solutions and finalising zonation of nature-protected areas.	No progress	SDG 1, 6, 7, 8, 11, 12, 13, 15

Source: European Commission

The degree of economic and social development is higher in the west of Slovakia than in the east. Boosting innovation capacity would help to increase the growth potential and competitiveness of the less developed regions. Many Roma communities, which are concentrated in the poorer areas of Slovakia continue to face marginalisation,

Graph A17.1:**GDP per head in purchasing power standard (PPS)**



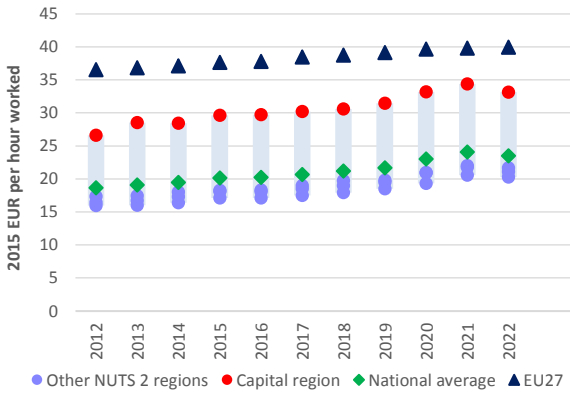
Unit: Index EU-27=100
Source: ARDECO (JRC)

Regional disparities in Slovakia have diminished but large gaps persist between the capital region, where economic activity is concentrated, and the rest of the country. In 2023, GDP per head in the capital region of Bratislava (Bratislavský kraj) corresponded to 148% of the EU average. The other three regions, Western (Západné Slovensko), Central (Stredné Slovensko) and Eastern Slovakia (Východné Slovensko), were far behind, at 70%, 61% and 54% of the EU average respectively. While GDP per head in Bratislava was boosted by commuters, the household income per head (at 108% of the EU average in Bratislava and between 61% and 69% in the other three regions in 2021) also points to significant disparities. The gap has narrowed due to the capital region's relative decline (Graph A17.1). In 2014-2023, real GDP per head growth averaged 0.4% per year in Bratislava, while in the other regions it was between 2.4% and 3.2%. More dynamic growth in the less developed regions would help them catch up and help the country as a whole to catch up with the rest of the EU.

Competitiveness

Regional disparities are closely linked to a persistent labour productivity gap between Bratislava and the rest of Slovakia. In 2022, labour productivity in the Bratislava capital region, measured as real GDP per hour worked, reached EUR 33.15, significantly higher than the national average of EUR 23.50 (Graph A17.2). Stronger productivity growth in the regions would help the country catch up with the EU average.

Graph A17.2:**Labour productivity per hour**



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

Stronger innovation performance and higher investment in R&D would support regional development. R&D expenditure in the business enterprise sector, at 0.75% of GDP in Bratislava, 0.64% in Western Slovakia and about half of that in the other two regions, is far below the EU average of 1.53%. The Bratislava region is only a moderate innovator, while the other three regions are classified as emerging innovators (the lowest category) on the regional innovation scoreboard 2023. However, there are positive trends, such as an increase in innovative activities among small to medium-sized enterprises in Central Slovakia, or rising numbers of ICT specialists and R&D

Table A17.1: **Selection of indicators at regional level in Slovakia**

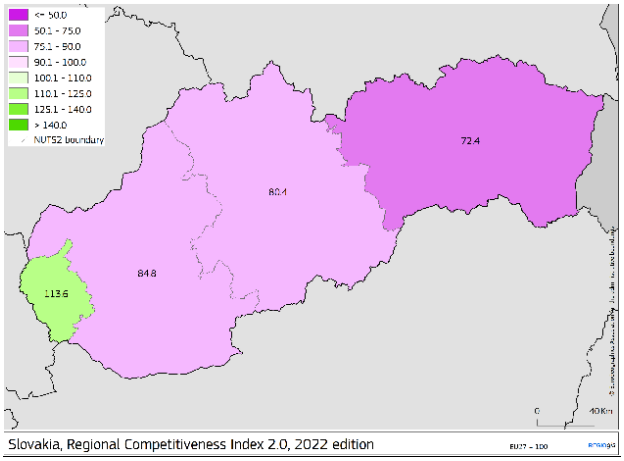
	GDP per head (PPS)	Real GDP per head growth	Productivity GDP per person employed (PPS)	Real productivity growth (per person employed)	Productivity GDP per hour worked (PPS)	Real productivity growth (per hour worked)	R&D expenditure in business enterprise sector (BERD)	Human resources in science and technology (core)	Employment in knowledge-intensive services	Gender employment gap	Unemployment rate	At-risk-of-poverty or social exclusion	Access to alternative fuel infrastructure	CO2 emissions from fossil fuels per head	Green employment - in sustainable but competitive sectors
	Index EU-27 = 100	Average annual % change	Index EU-27 = 100	Average annual % change	Index EU-27 = 100	Average annual % change	% of GDP	% of total employment	% of total employment	Difference between men and women (percentage point)	% of labour force	% of total population	Number of electric vehicles charging points within 10 km	tCO2	% of total employment
	2023	2014-2023	2023	2014-2023	2022	2013-2022	2022	2024	2024	2024	2024	2024	2022	2023	2020
European Union (27 MS)	100	1.6	100	0.6	100	0.9	1.53	49.2	41.5	10.0	5.9	21.0	287	7.1	15.1
Slovakia	74	2.4	79	1.3	76	2.3	0.56	42.8	36.6	8.9	5.3	18.3	47	8.2	7.9
Bratislavský kraj	148	0.4	111	0.7	108	2.2	0.75	68.1	58.0	1.5	2.3	8.6	220	7.7	34.7
Západné Slovensko	70	2.4	75	1.3	69	2.2	0.64	39.0	29.9	9.5	3.3	15.8	16	8.6	3.5
Stredné Slovensko	61	2.9	66	1.4	66	2.4	0.44	39.3	33.8	9.0	5.1	18.1	15	5.3	2.9
Východné Slovensko	54	3.2	71	2.1	69	2.5	0.31	37.2	35.8	11.9	9.6	25.7	28	10.5	4.6

Source: Eurostat and ARDECO (JRC)

expenditure among businesses in Eastern Slovakia.

The capital region is more competitive than the other three regions and attracts new inhabitants. Differences in the business environment, as well as transport infrastructure, human capital and labour market conditions contribute to significant gaps in competitiveness. Only in Bratislava is the Regional Competitiveness Index above the EU average set at 100. The Index measures a region's ability to offer an attractive environment for firms and residents to live and work in (Map A17.1). In 2013-2022, Western, Central and Eastern Slovakia were losing residents at an annual rate of 1-3 per 1 000 due to both natural population decrease and outmigration. Conversely, the Bratislava capital region attracted residents (+17 per 1 000 annually), primarily due to net migration.

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



Source: DG REGIO, JRC based on Eurostat

Human capital is concentrated in Bratislava. The percentage of people aged 25-64 with tertiary education was 52.6% in the region of Bratislava, above the EU average of 36.1% and far more than in the other regions, which range from 24.6% to 26.9%. Employment in science, technology and knowledge-intensive services shows a similar pattern (Table A17.1).

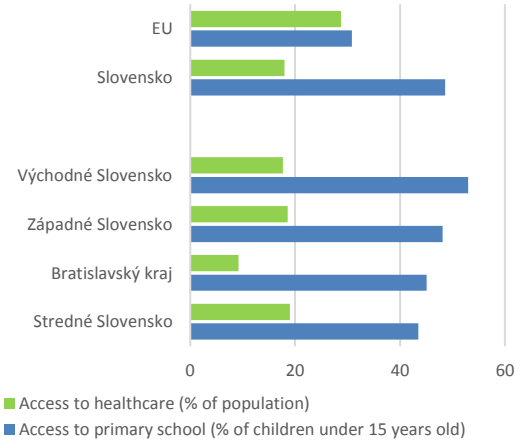
Social fairness

Slovakia's labour market has improved significantly, but joblessness in Eastern Slovakia remains a concern, especially for young people. All regions have experienced employment growth compared to pre-pandemic levels. In 2024, the capital region

boasted an impressive 85.4% employment rate. The employment rates in Western and Central Slovakia (79.4% and 79.0% respectively) were also above the EU average of 75.8%, while Eastern Slovakia lagged behind at 72.5%. The unemployment rate in Eastern Slovakia, at 9.6% in 2024, declined less and remained at a much higher level than in the other regions (Table A17.1). The percentage of young people (15-29 years old) who are not in education, employment or training, at 16.9% in Eastern Slovakia, is twice as high as in other regions. The capital region stands out, with a nearly equal employment rate of women and men, while the other regions exhibit a gender gap of 9-12 percentage points, with more men employed.

Rural areas enjoy good access to primary education, but there is room for improvement in access to healthcare. In the rural areas, 50% of children under the age of 15 live within a 15-minute walk from a school, exceeding the EU average of 31%. However, the performance gap in basic skills (mathematics, reading and science) between schools in rural and urban areas was among the highest in the EU ([278]), suggesting challenges linked to teaching quality and socio-economic aspects (see Annex 12). Less than 20% of the rural population resides within a 10-minute drive of a hospital, significantly lower than the EU average of 29% (Graph A17.3).

Graph A17.3:**Access to healthcare and primary education in rural areas, 2023**



Units: Percentage of population that can reach nearest hospital within 10 minutes by car (EU-27); Percentage of children under 15 years old who can reach primary school within a 15-minute walk (EU-24).
Source: Eurostat

Housing affordability is an issue in the capital in particular. An average household in the Bratislava region needs almost 18 years to accumulate the average price of a 100 m^2 dwelling, while in the other regions this ranges between 8 and 13 years ([279]). While Slovakia has one of the highest rates of home ownership in the EU (92.5%), housing prices relative to incomes are also among the highest. The rental market is underdeveloped, and social rental housing represents only 2.5% of the total housing stock. More people were overburdened by housing costs in Eastern Slovakia (8.6%) than in the other regions in 2024. Eastern Slovakia has the highest percentage of population unable to keep their homes adequately warm (15.8%).

While the risk of poverty is relatively low in Slovakia, improving the living conditions and social inclusion of Roma people remains a high priority. Eastern Slovakia is the only region in which the percentage of people at risk of poverty or social exclusion (23.1% in 2022) is higher than the EU average (21.6%). Worse labour market, social and education

([278]) Programme for International Student Assessment 2022 – Slovak Republic

([279]) OECD (2024), OECD Economic Surveys: Slovak Republic 2024, OECD Publishing, Paris.

outcomes in regions with a high presence of marginalised Roma communities confirm the long-standing challenges of Roma inclusion. Cohesion policy 2021-2027 allocates significant funding to projects targeting Roma communities as well as municipalities with a significant Roma population. Sufficient administrative capacity in fund management, more expedite public procurement procedures and resolving problems with land ownership rights would help to enable much-needed investments.

Sustainability

Regional disparities in greenhouse gas emissions persist and decarbonisation has stalled outside the capital region. Between 1990 and 2023, Slovakia achieved a 42% reduction in greenhouse gas emissions. In 2023, per head emissions ranged from 5.3 tonnes of CO_2 equivalent in Central Slovakia to 10.5 tonnes in Eastern Slovakia. Rapid emissions reduction occurred in the 1990s. While Bratislava achieved its record low in 2023, progress towards further decarbonisation has stagnated in Western, Central and Eastern Slovakia.

Bratislava surpasses other regions in green jobs and sustainable mobility infrastructure but lags behind regional peers. Slovakia's electric vehicle charging infrastructure requires significant development. While Bratislava, with 220 charging points within a 10 km radius, leads the way, it still lags behind neighbouring capitals like Vienna in Austria, which boasts seven times more charging points. The remaining Slovak regions fare worse, with fewer than 30 charging points within a 10 km radius ([280]). Green employment is concentrated in Bratislava, where 35% of jobs are classified as sustainable and competitive. This is significantly higher than in the other regions, where the percentage is below 5%.

([280]) Indicators of access to alternative fuel infrastructure are based on calculations by DG REGIO and the JRC, using data from the European Alternative Fuels Observatory (EAFO), Eurostat, TomTom and Eco-Movement.