INSTITUTE OF ECONOMIC RESEARCH
Slovak Academy of Sciences

Economic Development of Slovakia in 2024

Focused on:
Diagnostics in the Initial Phase of Consolidation

Karol Morvay et al.

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We respectfully dedicate this publication to the memory of Ivan Okáli, our colleague and friend, who conceived the idea of publishing this regular analysis, actively contributed to its content and shaped its final form for many years with his suggestions and guidance.

Ing. Ivan Okáli, DrSc.
1929 – 2024

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INTRODUCTION

The Institute of Economics of the Slovak Academy of Sciences prepares its evaluation view on the current development of the economy every year since the establishment of the Slovak Republic (1993). It is both an analysis of the tendencies from the last period, but also an assessment of them in a broader time frame. The period to which this analysis relates is characterised by the first phase of the public budget consolidation programme. It is therefore referred to in the subtitle of the book as 'diagnostics in the initial phase of consolidation'. Such consolidation phases are a manifestation of chronic imbalances in the economy, which become even more pronounced under the impact of shocks and bring about the need for an operation that has a large social (not only purely economic) impact. And there have been plenty of such shocks that have deepened financial imbalances in the past period.

This year's edition of our analysis is significantly expanded. We are opening up several new topics that we have covered only marginally in the past. We are confident that these new topics (whether they appear as regular chapters or as one-off thematic probes) will add highly relevant elements to our assessment of the state of the economy. This innovation has included more comprehensive views on the impact of global trends, changes in the business environment or the issue of energy availability and prices (in the form of a deeper probe into the gas market). Another innovation that has taken place across chapters is the loosening of the boundaries of the time interval in which phenomena are analysed. The observations do not end with the conclusion of the year mentioned in the main title of the publication, but are extended into the present where necessary. This is to alleviate the problem of outdating of the text.

In the context of the preparation and deployment of the consolidation operation, the publication considers a number of problems in the dynamics of the economy, in its internal stability, in its socio-economic development or in its external economic relations. In doing so, it proceeds from an initial summary view, through a series of more detailed views on partial problems, to an outlook of further developments.

1. OVERALL VIEW OF ECONOMIC DEVELOPMENT

The role of the introductory chapter is to provide a concentrated first look at the dynamics, structure and stability of the economy. It does not go into detail (which, however, a number of other chapters do go into), but tries to pick out a few important moments that definitely belong to the characteristics of recent developments.

Attention is directed here in particular to these three blocks of issues:

- The performance of the economy. Slovakia is confronted with more than a decade-long significant slowdown (or even absence) of real convergence towards the EU average. And the current developments do not change this in principle. We will examine economic growth in the short and longer term, and changes in the structure of the economy.
- The labour market, which appears paradoxical. Unemployment is at its lows, yet the labour market is suffering a downturn. The generation of new employment has slowed and the supply of labour force is in steady decline. Such a slackening is a new phenomenon on the labour market in the Slovak Republic.
- Macroeconomic stability (balance), which has been strengthened by short-term disinflation (moderation of inflation compared to the previous years 2022 and 2023) and weakened by fiscal imbalances. It was the latter that was further complicated at the time of the preparation of the consolidation program, which has been included in the subtitle of this year's edition of our assessment.

The Performance of the Economy and Its Growth: Anaemia in the Long and Short-Term

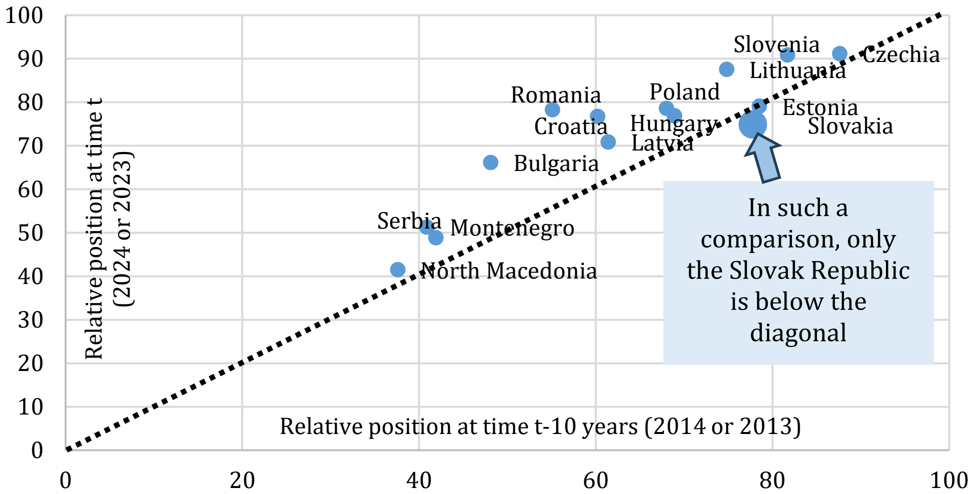
The medical term in the title of this section is meant to evoke a feeling of weakness, lack of vigour, poor energy (as phenomena usually associated with anaemia of the body). It fits as an association for changes in economic performance: economic growth was usually present but subdued; economic levels were at times catching up and at times not catching up with more advanced economies. We have also repeatedly pointed to this problem since its first manifestations (around 2012); it has gradually become a widely perceived social problem. And the causes of this phenomenon are also wide-ranging, spanning from weaker capital accumulation, to slowing productivity, to the depletion of sources of suitable labour (a look at some of these blocking factors of catch-up was provided in last year's edition of our analysis). Slačik (2024) has shown that the most important cause is the loss of dynamism in total factor productivity (TFP). Earlier work that used growth accounting to assess the determinants of growth and convergence (capital accumulation, labour quantity and total factor productivity TFP), identified TFP as the main driver of growth in the run-up to the global financial crisis (Labaj, 2007 or Zuk et al., 2018). The same TFP has become a drag in the last decade. Its transmission from the external environment has weakened and domestic support has been failing (Čekmeová, 2016).

Figure 1.1 shows the shift of Central and Eastern European (CEE) countries when measuring the level of their economies using GDP per capita in purchasing power parity.

Figure 1.1

Shift in the Performance of CEE Economies over the Decade

(relative positions, measured as GDP per capita relative to the EU average, using purchasing power standards)

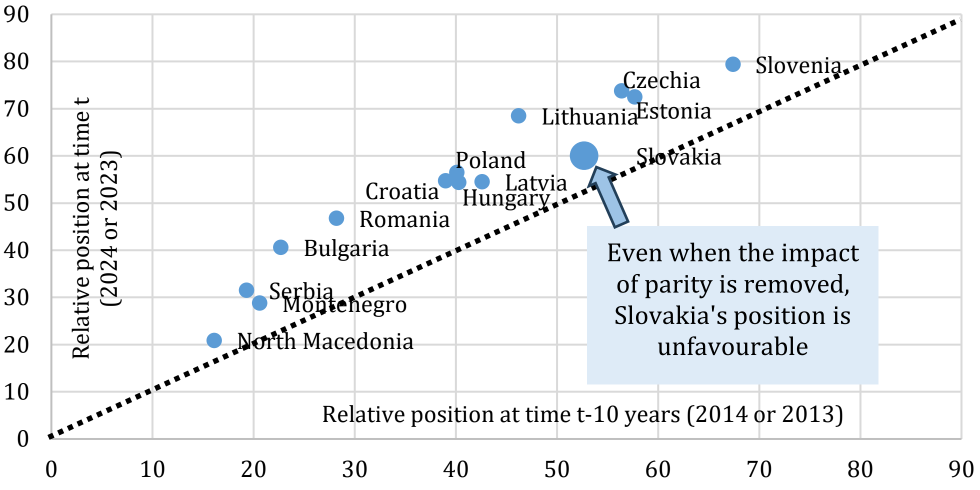


Note: Relative position is understood here as the performance of the economy relative to the EU27 average. For Montenegro, North Macedonia and Serbia these are the values for 2013 – 2023, for the other countries 2014 – 2024.

Source: Eurostat; own elaboration.

The further the economies got above the diagonal of the graph, the greater their progress in economic performance over the past decade. Slovakia was the only CEE country that did not move in the desired direction – its level in 2024 was below that of a decade ago (2014). As some relevant analysts in Slovakia have pointed out a possible bias in the parity calculation (Dujava and Žúdel, 2023 or Hlaváč, 2023), Figure 1.2 shows a similar shift of the CEE countries, but when GDP per capita is expressed in "common" euros, omitting parity. The position of the Slovak Republic is more favourable in such a view, but not substantially so. The SR shift is relatively small (SR is very close to the diagonal, which suggests little change). Moreover, even such a comparison omitting parity has its restrictions; it is affected by differences in price levels. Both comparisons have their limits.

F i g u r e 1.2
Shift in the Performance of CEE Economies over the Decade
(relative positions, measured as GDP per capita relative to the EU average, using data in euros)



Note: Relative position is understood here as the performance of the economy relative to the EU27 average. For Montenegro, North Macedonia and Serbia these are the values for 2013 – 2023, for the other countries 2014 – 2024.

Source: Eurostat; own elaboration.

Economic growth in 2024 (2.1% in constant prices) and the current growth forecast (between 1% – 2% in the available forecasts, for our forecast see Chapter 11) does not give any guarantee of a renewed catch-up with the more advanced economies. It is only marginally stronger (or similar) than the set of advanced economies. Since GDP has three methods of accounting, it is possible to assess from three perspectives what has currently (with short-term optics) driven the economy's growth. Table 1.1 summarizes such a view.

T a b l e 1.1
A view on the Drivers of GDP Growth in the Short-Term

Component of GDP that drove growth in 2024	**Characteristics**	**Assessment**
From the perspective of GDP formation		
Value added in Professional, scientific and technical services, administrative and consulting activities	This sector had the highest average growth rate of value added (5.4%) in the most recent period (2019 – 2024). In 2024, it had the highest contribution to GDP growth (0.45 percentage point).	A group of such services has the potential to be an additional pillar of growth (thus alleviating dependence on assembly industry activities).
From the perspective of GDP use		
Household final consumption, combined with the change in inventories	With disinflation, the dynamics of household consumption have changed between 2023 and 2024: from a decline of 3.1% to a growth of 2.9% (in constant prices).	- In late 2024, frontloading and accelerating consumption in anticipation of the announced increase in consumption-tax rates also boosted the value of GDP. This then dampened consumption in the first part of 2025. - In 2025 and 2026, household consumption is no longer likely to be the driver of GDP growth. It will be constrained by higher taxes, higher inflation and the impact of the "frontloading" of consumption into 2024, all linked to the public budget consolidation program.
From the perspective of income generation		
Compensation of employees	The volume of compensation of employees increased by approximately 7% in 2024 (reported in current prices only). Compensation of employees grew faster than business income (gross operating surplus).	- In the past decade, compensation of employees has been the main driver of GDP (on the income side), which has been reflected in the growth of the labor share (growth of the share of compensations in GDP, Figure 1.3c) and the retreat of the traditional competitive advantage of the Slovak Republic. The rise in labor costs was so significant that it crowded out business profits and reduced profitability. - This phenomenon is well paired with the growth in household final consumption, see above.

Source: own elaboration based on Eurostat data.

Looking across *GDP formation,* value added in Professional, scientific and technical activities, administrative and consulting services made the largest contribution to growth. This is not just technocratic statistical information. The favourable dynamics of this group of industries in both the short and long term (as can be seen by comparing Figures 1.3d and 1.6) is in fact one of the few favourable characteristics of the growth of the Slovak economy. This is a group of industries that involve more sophisticated activities and are not at risk of sudden relocation outside the Slovak Republic, as in the case of simpler manufacturing activities. The expansion of such activities generates valuable competences, enhancing human capital. The expansion of this group of industries is also discussed below in the assessment of structural change.

The fact that, in terms of *GDP use*, its growth has been driven by household consumption fits into a longer-term, problematic context. Over the past more than a decade, it has largely been household consumption that has driven GDP growth.[1] Hence, the share of household consumption in GDP has been rising (Figure 1.3a), which is a unique phenomenon in the CEE5 region (V4 + Slovenia).

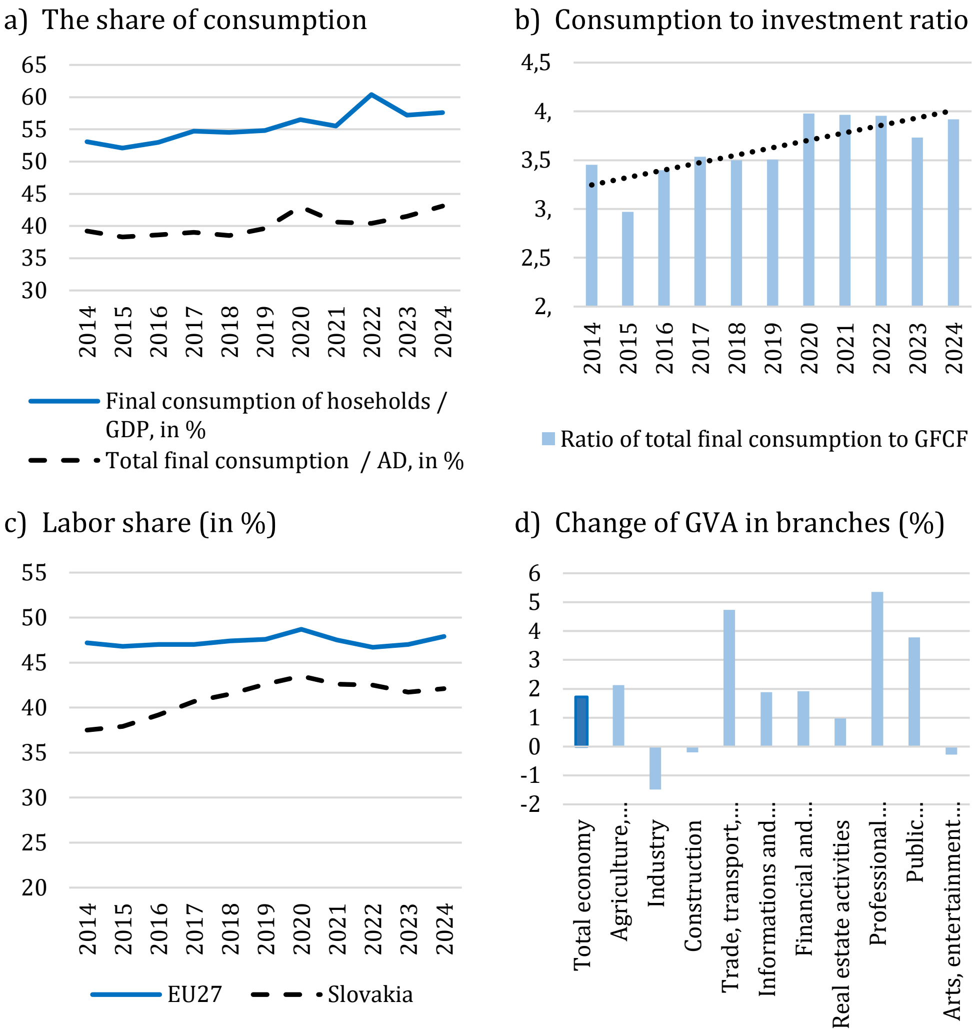
Household consumption has been crowding out fixed capital formation in the structure of GDP use, and the so-called investment rate has thus been declining (Figure 1.4). However, a higher investment rate (a higher share of fixed capital formation in GDP) is one of the supporting factors for long-term growth and continued real convergence.

The published information on the shape of the government's consolidation measures contributed to the strengthening of consumption growth, especially towards the end of 2024. These included an increase in the VAT rate on most goods as well as the introduction of a new (transaction) tax and an increase or extension of excise duties. This created the expectation that after disinflation in 2024, higher price growth would again arrive in 2025 (which it did). Such an expectation motivated an acceleration of consumption (pushing purchases, planned for 2025, already to the end of 2024).

[1] This is not to say that household consumption growth has been a drag on GDP growth every year. In some years of this period, household consumption did not grow (e.g., 2023; we interpreted the pendulum movements of this category as well in last year's analysis). But looking at the period in aggregate, it was mainly household consumption that increased its weight on GDP use and pulled its growth most strongly.

F i g u r e 1.3

Complementary Characteristics of Changes in the Structure of GDP



Notes: AD in Figure 1.3a is aggregate demand (the sum of domestic and external demand). In Figure 1.3b is the ratio of final consumption to gross fixed capital formation. The labor share in Figure 1.3c is calculated as the ratio of compensation of employees to GDP. Compensation of employees is the cost of labor (wages plus social contributions). Figure 1.3d shows changes in gross value added (GVA) by sector over the period 2019 – 2024 (calculated from data at constant prices).

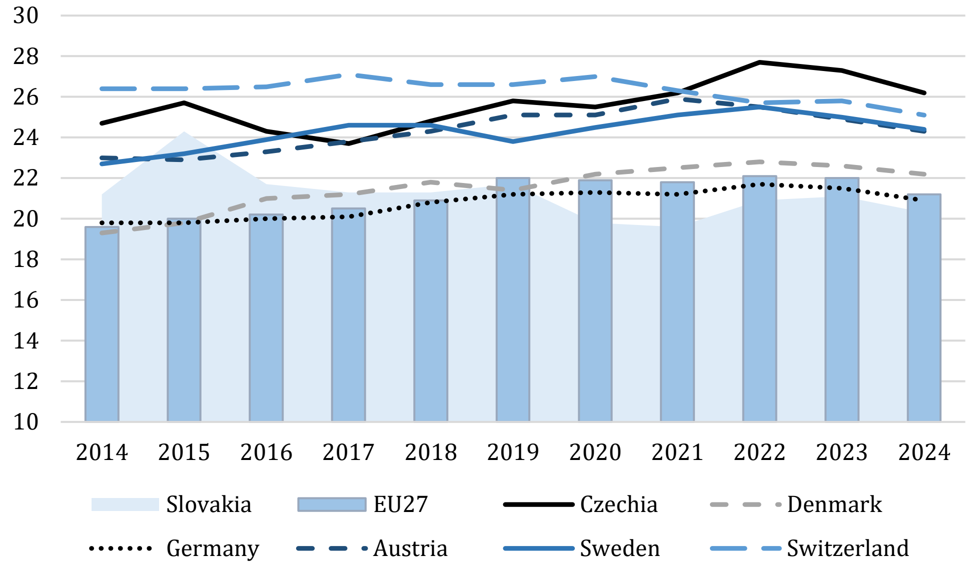
Source: own calculations based on Eurostat data.

Household consumption growth was logically linked to another driver of GDP – growth in compensation of employees,[2] which dragged short-

[2] Compensation of employees is a category of national accounts, reflecting the annual volume of wages and salaries plus social contributions. They correspond to labour costs.

term GDP growth when reported from the *income side*. Here again, the short-term phenomenon of 2024 (growth in compensation of employees as a driver of GDP) was consistent with the situation over the last more than a decade. Compensation of employees grew so strongly after 2014 that it crowded out business income in the income structure (crowding out the operating surplus). Growth in employee compensation and growth in household consumption are mutually supportive in such short-term views. Hence, the growth picture in 2024 is reasonably interpretable.

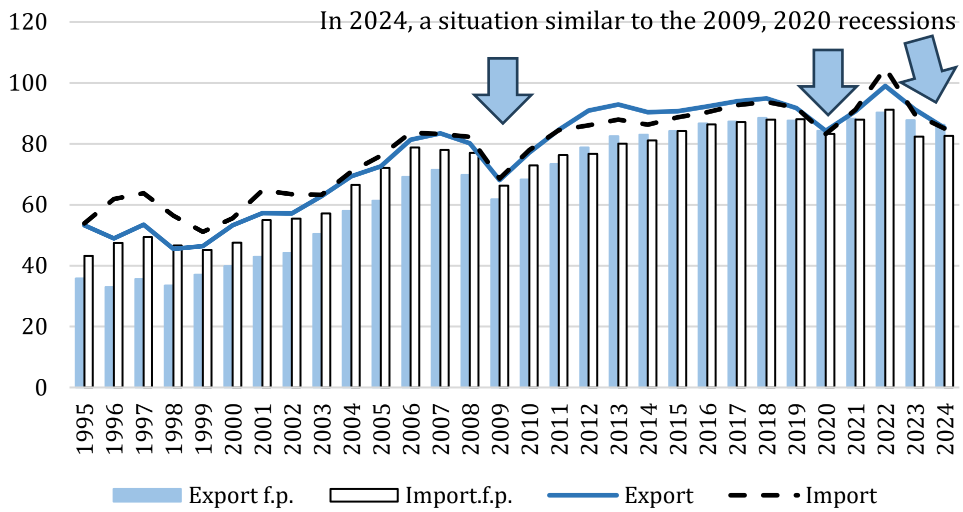
Figure 1.4
Investment Rate (in %) **in International Comparison**



Note: Calculated as gross fixed capital formation/GDP.
Source: own calculations based on Eurostat data.

The specifics of the economy's growth in the short run include a decline in the otherwise traditionally very high ratios of both exports and imports to GDP. In 2024, they have declined in a similar way to the last two recessions. Thus, the economy is not being pushed along by increasing involvement in foreign trade (Figure 1.5). In the background of this phenomenon have been stagnant trends in export markets, especially in Germany (see the chapter on foreign trade for more details). Short-term growth was all the more strongly dependent on domestic factors.

Figure 1.5
Foreign Trade as a Share of GDP: Recession-Like Decline



Note: Both exports and imports of goods and services are expressed here as a proportion of GDP, in %. Calculated from both current price and fixed price data (marked as f. p.).
Source: own calculations based on Eurostat data.

The growth characteristics of the economy in the long and short term can be summarized as follows:

- In the long run, there is an absence of real convergence. For more than a decade, economic growth has been insufficient to catch up with the economies at the performance peak. Slovakia is even losing its formerly relatively good position in the group of CEE countries. While in 2014 only the Czech Republic and Slovenia had a significantly higher economic level (GDP per capita in purchasing power parity) than Slovakia, in 2024 almost all CEE countries – members of the EU – have a higher level of this indicator. The exceptions were Bulgaria and Latvia. If purchasing power parity is excluded from such a comparison (which is not an optimal solution, as the results are affected by differences in price levels), the result for Slovakia is less dramatic, but still rather unfavourable.
- In the short run, it was a repetition of consumption- and wage-driven growth. The positive side of this constellation is the current favourable impact on material living standards.[3] The downside is a crowding out

[3] The extent of household final consumption can be seen as an indicator of material living standards.

of investment, with a possible constraining effect on competitiveness and long-term growth.

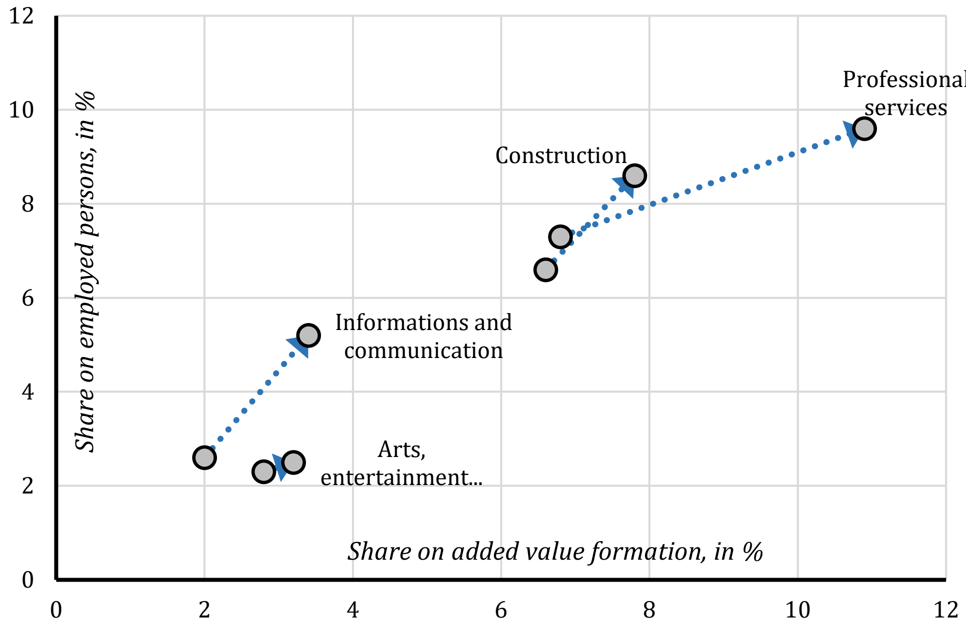
Movements in the Structure of the Economy

Economic growth is linked to structural changes; a typical sectoral structure usually corresponds to a certain level of economic achievement (Dujava, 2015). It was noted above that in the recent period, the Professional, scientific and technical activities... (abbreviated name) in particular showed high growth rates. The weight of this segment of the economy, however, has been growing for a long time. It is professional services that have grown most significantly in the structure of the economy over the past two decades (Figure 1.6).

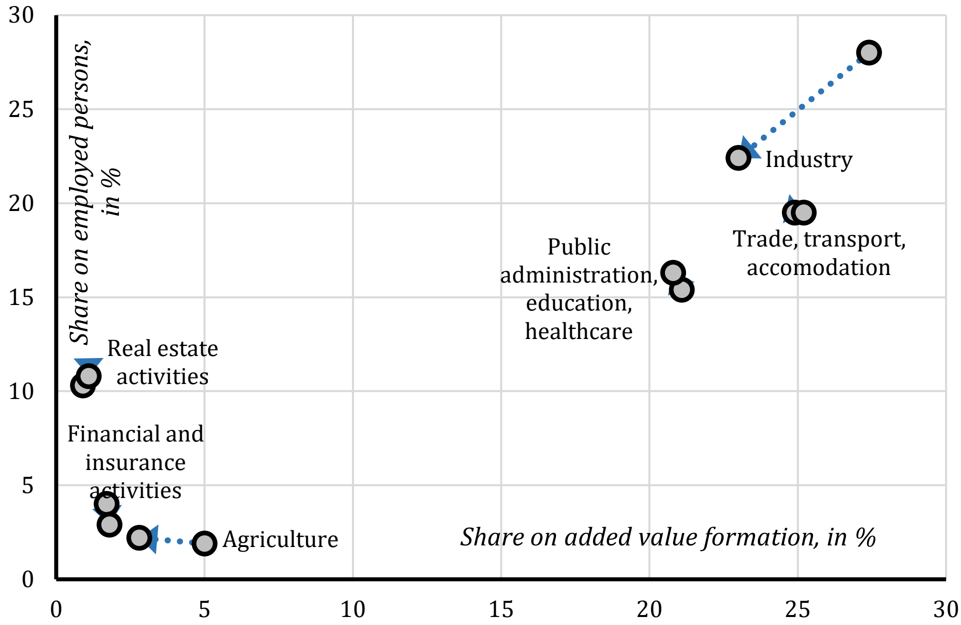
Figure 1.6

Shift in the Position of Industries over a 20-Year Period: Changes in Shares in Value Added and Employment

a) Cases of sectors with a growing weight in the Slovak economy



b) Cases of sectors with a declining weight in the Slovak economy



Note: The shift for a given period is indicated by an arrow. The starting point is the average of the values for 2002 – 2004. The end point is the average for 2022 – 2024.

Source: own calculations based on Eurostat data.

This relativizes the commonly accepted claim that the assembly industries have expanded unilaterally in the Slovak Republic. A more pronounced increase in the share of value added than in employment is indicative of the increase in labor productivity in this sector. The share of industry has fallen, but still remained relatively high in the comparison within the EU.

Both Sides of the Labour Market Chilled

The usual pattern of the labour market used to be that one side was rising and the other lagging, creating serious imbalances. For about two decades since the establishment of the Slovak Republic, it was the supply of labour force that far outstripped the demand for it (the result was inevitably a shortage of jobs and mass unemployment). About a decade ago, the tide turned. It was already the demand for labour force that was expanding and the labour force supply was lagging behind (with the demographic factor having a significant impact). The current situation is strange: the downturn seems to have hit both sides of the market. While this does not increase the imbalance, it does dampen the growth prospects of the economy.

Therefore, labour market developments appear somewhat paradoxical at first sight: employment is no longer growing, yet unemployment is falling. The number of people in work is not growing, yet the unemployment rate is falling to historic lows (such a low was reached in Q1 2025). The assessment of the labour market is thus controversial: there is low and further decreasing unemployment (which in the conditions of the Slovak Republic, after periods of prolonged high unemployment rates, looks positive); but at the same time, the subdued labour market is one of the barriers to long-term growth of the economy (labour accumulation is one of the driving forces of long-term growth).

On one side of the market, growth of labour utilization is subdued (Figure 1.7). This can be seen as a slowdown on the demand side of the market. The chapter on the labour market will show that the picture is more complex (vacancies are being created and yet employment is not growing). On the other side of the labour market, there has been a long-standing trend of falling labour supply (Figure 1.8). The number of people of working age has been falling steadily. The decline in the number of working-age persons is partly offset by an increase in the participation rate[4] and also by an increase in the number of working seniors.

The number of hours worked on average by a worker has fallen significantly during the covid crisis. To date, it has not returned to its original values. This decline in hours further highlights the weakness of the supply side of the market. The downward trend in hours is long-standing (it was already present before the pandemic crisis), and the pandemic has accelerated this process. A worker in the Slovak Republic in 2024 worked on average 126 hours less than in 2015. This is almost one month less (the average monthly labor pool in 2024 was 135 hours).

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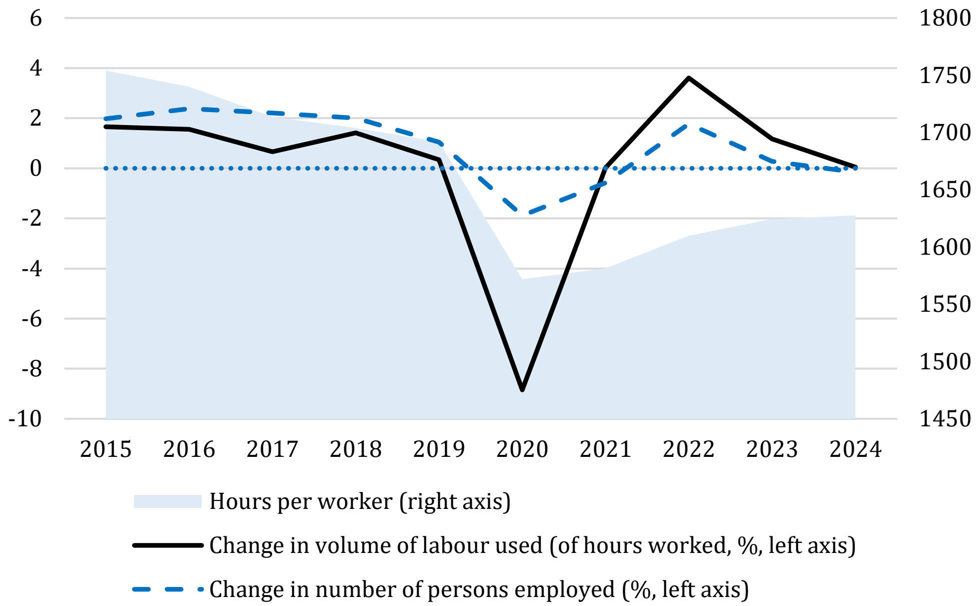
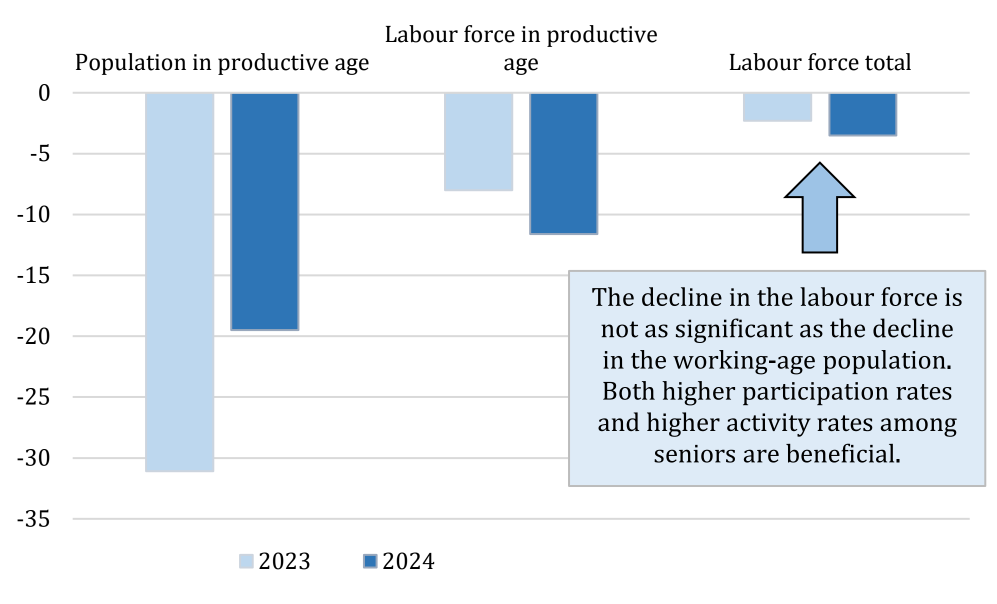
[4] The participation rate measures the percentage of the total working-age population that is economically active (i.e. working or looking for work).In the past period, increasing participation rates have partly offset negative demographic trends. The working-age population has been declining, but the share of those who were economically active has been increasing. Promoting growth in participation rates can delay the negative impact of demographic change on the labour market.

Figure 1.7
Dynamics of the Volume of Work Used



Source: own calculations based on Eurostat data.

Figure 1.8
Declining Labor Force Supply (changes in thousands of persons)



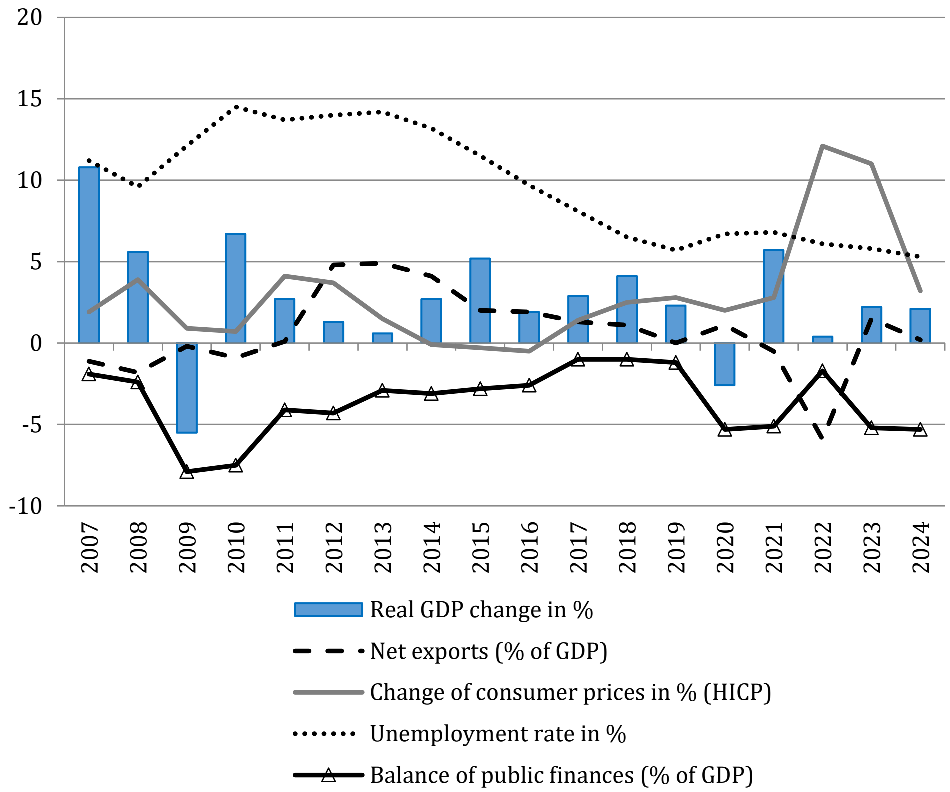
Source: own calculations based on Eurostat data.

Macroeconomic Stability: Deterioration on the Threshold of Consolidation

Issues of macroeconomic stability have attracted more attention since the inflationary surge that emerged during and especially after the pandemic crisis (Figure 1.9).

Figure 1.9

Key Parameters of Performance and Macroeconomic Stability



Notes: Unemployment rate according to the Labor Force Survey. Net exports (exports minus imports of goods and services/GDP) calculated from data at current prices.

Source: Eurostat; Statistical Office of the Slovak Republic and own calculations based on these data.

This has been compounded by the unacceptable parameters of public budget imbalances. Thus, in the period under review, two phenomena are of particular interest in macro stability:

1) Disinflation, which, however, took place in anticipation of a new acceleration in the growth of the price level. After the inflationary wave of

2022 – 2023, 2024 was a year of price level moderation (but with question marks – see the chapter on price developments). However, the moderation of inflation was accompanied by new inflation expectations at the end of the year, mainly related to tax increases (or the introduction of new taxes) in 2025. This was thus disinflation in anticipation of new inflation. It is then possible that the disinflation did not take place in full because the new inflation expectations may have limited it (this may be one of the reasons why the inflation rate did not fall even lower in 2024, especially towards the end of the year).

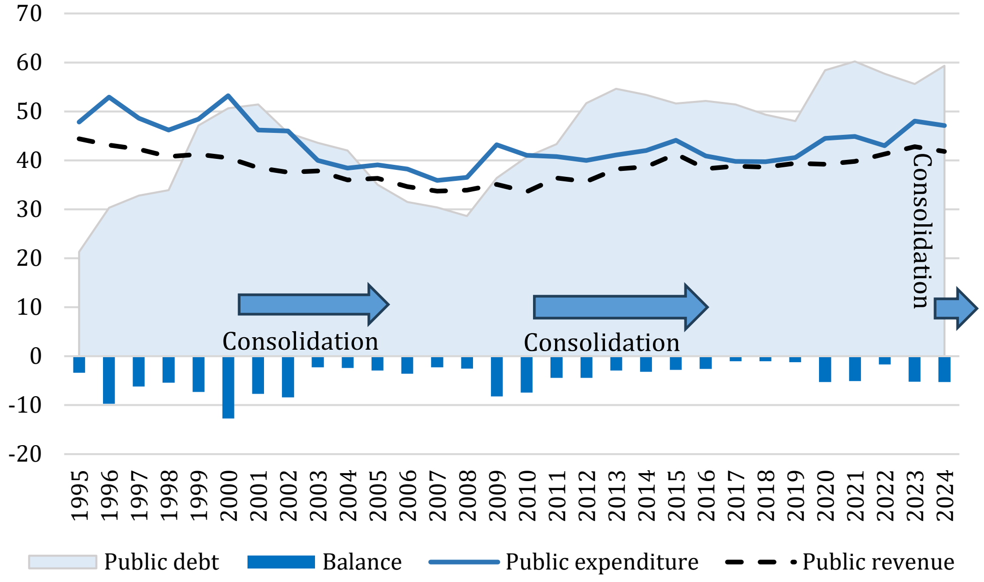
2) Imbalances in the public budget, which required another of the consolidation programs.

Although politicians like to stress the uniqueness of consolidation and portray it as the most challenging period in terms of public finances in the Slovak Republic, the consolidation program is not a unique phenomenon. Imbalances in public budgets are chronic (in Figure 1.10, either a balanced budget or a surplus is never present). It is thus a predominantly structural imbalance, present in all phases of the cyclical development of the economy (even in periods of strong growth). To this is added a cyclical widening of deficits in times of adverse economic shocks (the cyclical component in recessions). Consolidation processes have been implemented repeatedly after periods when the confluence of long-term structural deficits and additional cyclical deficits created an unacceptable situation.

However, the current consolidation has, of course, its own uniqueness. One specific feature is the additional significant increase in public social security spending at a time when the need for a major consolidation was already known (Figure 1.11).

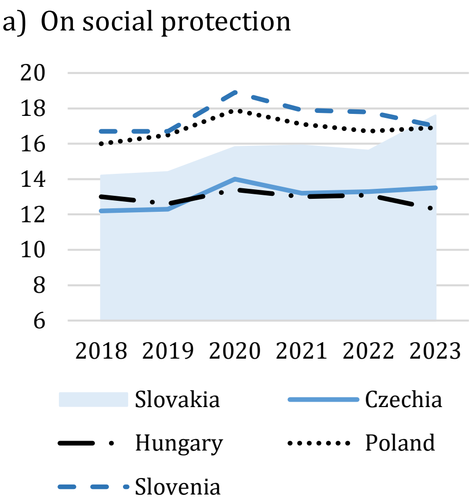
Another specificity is the "pre-round" of consolidation in 2024 (the full process runs only from 2025). Already in 2024, several measures were taken to increase budget revenues; however, their effect was erased by other deficit-increasing measures (see the chapter on public finances for more details). And unlike previous consolidation programs, the critical issue is not so much the size of the public deficit itself (these have been repeatedly larger in the past), but the size of the deficit combined with the critical size of the public debt.

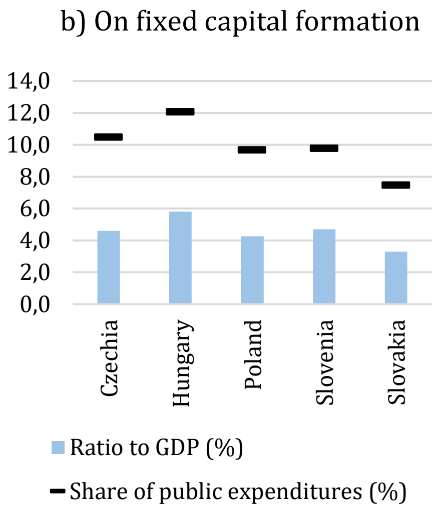
Figure 1.10
Main Parameters of the General Government Budget (% of GDP**)**



Source: own calculations based on Eurostat and Ministry of Finance of the SR data.

Figure 1.11
"Specific" Public Expenditure in the SR (% of GDP)





Notes: Figure 1.11a shows the share of social protection expenditure (COFOG class 10) in total government expenditure. Figure 1.11b is the share of public expenditure on gross fixed capital formation (average value over the period 2019 – 2023).

Source: own calculations based on Eurostat data.

The increase in social protection spending at the time of the covid crisis (2020, partly also 2021) was natural. Recessions usually bring the need to strengthen this category of public spending. This is linked to the need to compensate for shortfalls in household incomes. A gradual decline in such spending can be expected once the recession is over. Such a decline has also occurred in the CEE5 countries, with the exception of Slovakia. In the Slovak Republic, social protection expenditure has increased further.

On the other hand, public expenditure for investment purposes (on gross fixed capital formation) has a relatively low share in the Slovak Republic. This also contributes to the already mentioned lower investment rate and to the strengthening of the consumption position at the expense of investment.

* * *

Characteristic features of the economic development in the SR in the recent period have been weak growth with the absence of significant real convergence and the accentuation of problems with imbalances in public budgets (and the complication of this problem also in parallel with the preparation of the consolidation program).

The year 2024 in the macroeconomic development of the Slovak Republic can be seen as the starting phase of consolidation. However, there is a risk that addressing one problem (macroeconomic imbalances) with a consolidation program will lead to a worsening of the second problem – insufficient dynamics of the economy. Current developments in 2025 give indications that some of the measures chosen as part of the consolidation may be blockers of economic activity – and this is how the conflict in meeting the objectives arises.

2. FOREIGN TRADE AND FOREIGN INVESTMENT

Although Slovakia's foreign trade balance remained in positive figures in 2024, the export growth rate slowed down year-on-year. In the following text, we will focus on the factors that contributed to this development. We will also look at the foreign trade balance from a territorial perspective, highlighting the markedly different development of Slovakia's trade with the European Union (EU) and non-EU countries. The final part of the chapter will focus on inflows, outflows, and the current state of foreign direct investment (FDI).

Slowdown in Exports and Decline in Foreign Trade Balance Surplus

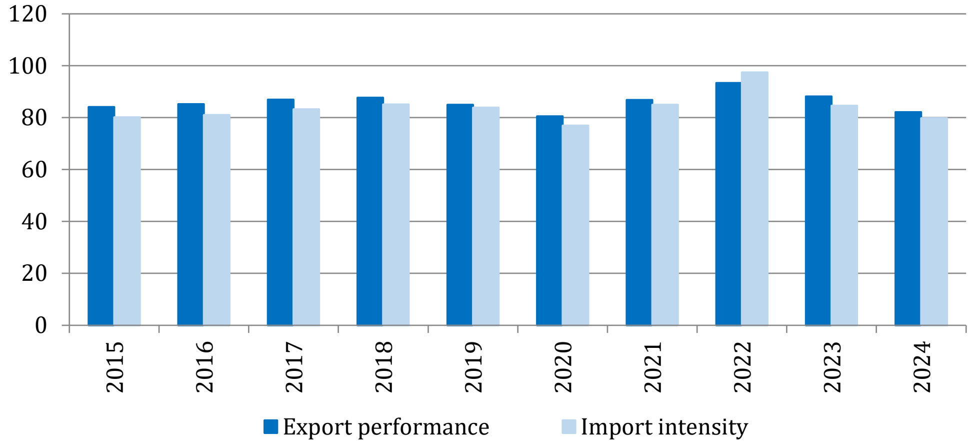
While there was a certain "correction" in the development of Slovakia's foreign trade in 2023, following the energy crisis in the previous year, its dynamics slowed down in 2024. The value of exports at current prices amounted to EUR 106.6 billion, representing a year-on-year decline of 1.5%. A significant contributor to this decline was the reduced export performance in the most traded category – SITC 7, which includes automobile exports. The value of imports remained largely stagnant at EUR 103.3 billion (a decrease of 0.2%).

Thus, in an environment of GDP growth, both the Slovak economy's export performance (measured as the share of exports of goods in GDP at current prices) and its import intensity (measured as the share of imports of goods in GDP at current prices) declined. This in itself need not be a cause for concern. However, export performance fell to 82% of GDP, the second lowest level in the last decade (Figure 2.1). A weaker performance was recorded only in 2020 due to the pandemic and related restrictions. Developments in the coming years will reveal whether this was merely a temporary decline.

As illustrated in Figure 2.2, Slovakia last recorded a year-on-year decline in exports during the pandemic (a drop of 5.5% in 2020) and prior to that during the global financial and economic crisis, when exports fell by almost 20% in 2009. In 2024, the foreign trade balance decreased by approximately one quarter to EUR 3.3 billion, mainly as a result of a slow-down in exports compared to the previous year (Figure 2.3).

Figure 2.1

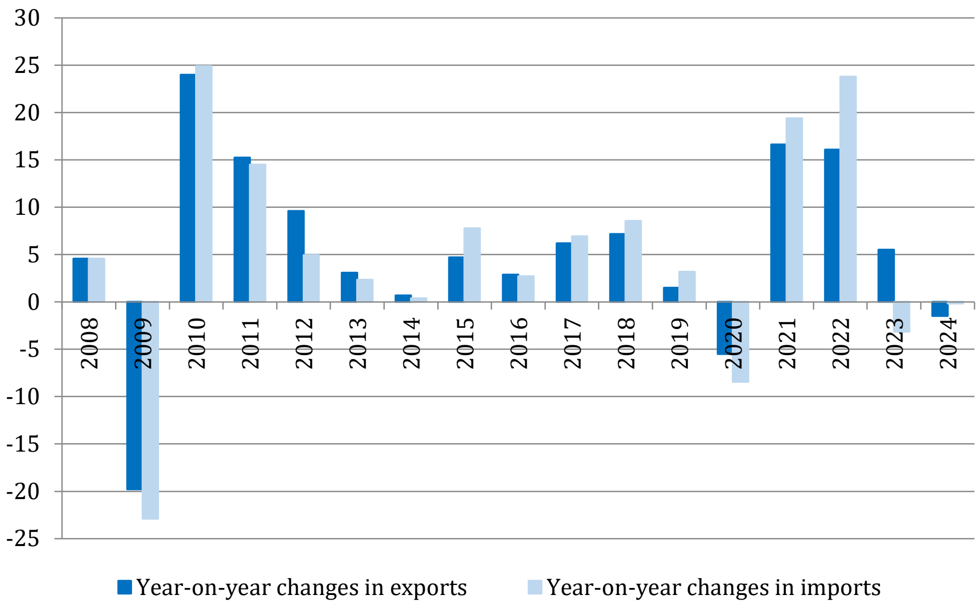
Export Performance and Import Intensity of the Slovak Economy (% GDP)



Source: based on NBS data (2025b).

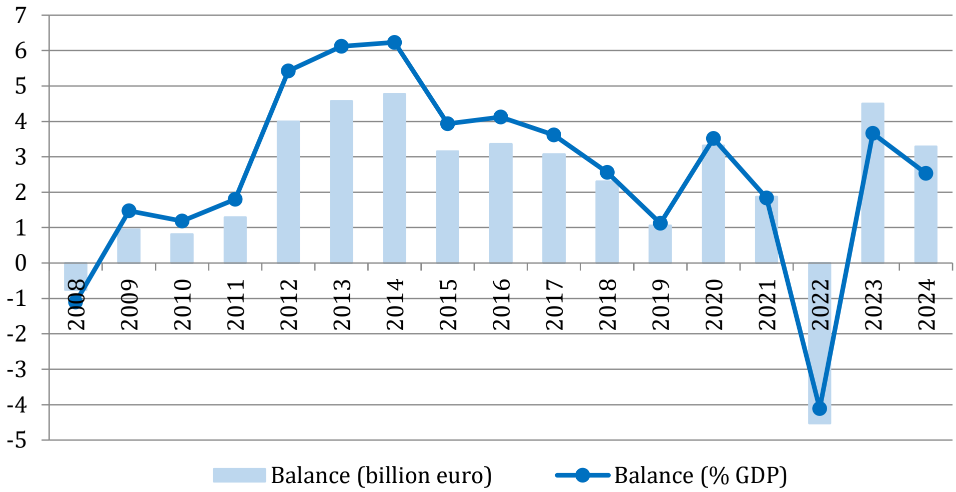
Figure 2.2

Year-on-Year Changes in Exports and Imports (current prices, %)



Source: based on NBS data (2025b).

F i g u r e 2.3
Foreign Trade Balance (billion EUR, % GDP)



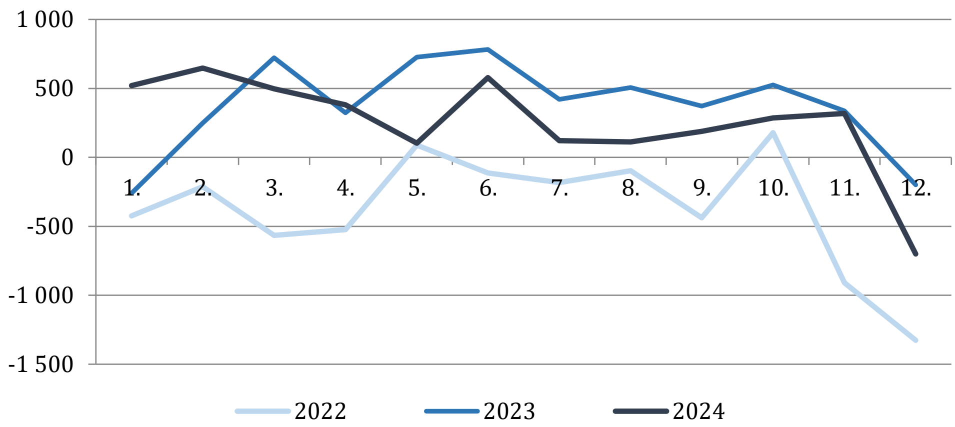
Source: based on NBS data (2025b).

Over the course of the year, the trade balance deteriorated (Figure 2.4). In the first quarter, the foreign trade balance was not supported by stronger export performance, but rather by reduced import intensity – in particular, by a year-on-year decline in the value of imported energy commodities. This unfavourable trend had already emerged in the second half of the previous year, when even modest year-on-year export growth or a slight decline in exports combined with a more pronounced fall in imports was sufficient to maintain monthly surpluses. Although the overall development of foreign trade in 2024 was not particularly optimistic, it still stood in contrast to 2022, when rising prices of imported energy raw materials resulted in a negative trade balance in ten months of the year.

Automotive Industry Did Not Drive Slovak Exports This Time

The most traded category in Slovakia's foreign trade has long been SITC 7 – *Machinery and transport equipment*, which also includes automobiles and their components. The overall development of exports is therefore significantly determined by the situation in the automotive trade. While in 2023 Slovak exports were strongly supported by car exports, which recorded a year-on-year increase of 15%, the opposite was true in 2024 – the decline in total exports was driven by a drop of more than 4% in car exports (Figure 2.5).

Figure 2.4
Foreign Trade Balance in the Individual Months of the Years 2022 – 2024
(million EUR)



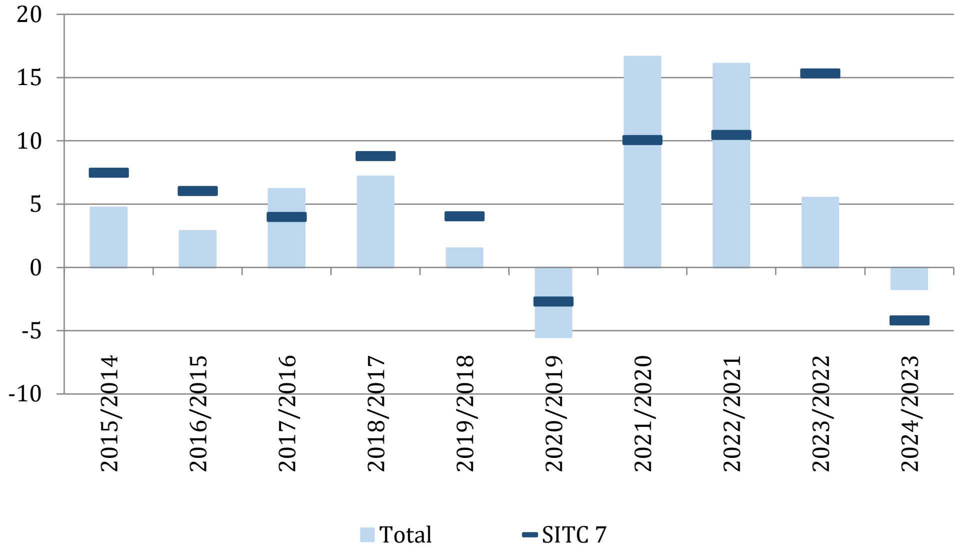
Source: based on NBS data (2025b).

In nine months of the year, exports in SITC 7 recorded a year-on-year decline, and their share of total exports decreased from 63% in 2023 to 61% in 2024. As already mentioned above, Slovakia's total exports also declined year-on-year in 2020, a year marked by the pandemic. However, unlike in 2024, car exports at that time fell less than overall exports, helping to cushion the overall downturn.

Table 2.1 presents the shares of each SITC category in exports and imports, as well as year-on-year changes in their values. The overall development was mixed – on the one hand, there was a slowdown in exports and imports, especially in SITC 7, on the other hand, this was offset by an acceleration of the dynamics in the third most traded category, SITC 8 – *Miscellaneous manufactured articles*.

The continued (though milder compared to 2023) year-on-year decline in imports in SITC 3, which includes crude oil, natural gas, and electricity, was accompanied by an almost 15% increase in exports within this category. This contributed to a reduction in the negative trade balance of this "traditionally" deficit category. The double-digit growth in exports of mineral fuels and lubricants was driven not only by price developments, but also by higher electricity exports and the continued export of petroleum products.

Figure 2.5
Year-on-Year Changes in Exports in SITC 7 Compared to Total Exports
(current prices, %)



Source: based on ŠÚ SR data (2025).

Following the launch of the third reactor unit at the Mochovce nuclear power plant in 2023, Slovakia became a net exporter of electricity (ENERGIE-PORTAL, 2024).[5] In addition to increased output from nuclear power plants, the year-on-year growth in electricity exports was also supported by higher production from hydropower plants. In recent years, domestic electricity consumption has also been declining. Exports of petroleum products were positively affected by exemptions in the sanction regime, which allow the export of products made from Russian oil to the Czech Republic and Ukraine.

[5] The fourth reactor unit is currently in the non-active testing phase and is not expected to be commissioned before 2026. Its future output will further strengthen Slovakia's self-sufficiency in electricity supply and positively affect the trade balance in SITC 3.

T a b l e 2.1

Year-on-Year Changes in Imports and Exports by SITC Rev.4 Categories and the Commodity Structure of Slovakia's Foreign Trade (%)

		Index 2024/2023	Structure 2024 (%)
Total	Imports Exports	99.4 98.3	100.0 100.0
SITC0 – Food and live animals	Imports Exports	107.4 101.9	6.0 4.0
SITC1 – Beverages and tobacco	Imports Exports	105.5 115.9	0.9 0.3
SITC2 – Crude materials, inedible, except fuels	Imports Exports	106.0 97.9	2.2 1.7
SITC3 – Mineral fuels, lubricants and related materials	Imports Exports	94.5 114.5	8.3 4.1
SITC4 – Animal and vegetable oils, fats and waxes	Imports Exports	85.6 92.6	0.3 0.1
SITC5 – Chemicals and related products not classified elsewhere	Imports Exports	106.2 98.0	8.6 4.0
SITC6 – Manufactured goods classified chiefly by material	Imports Exports	94.3 99.5	12.9 14.9
SITC7 – Machinery and transport equipment	Imports Exports	97.4 95.8	48.2 61.5
SITC8 – Miscellaneous manufactured articles	Imports Exports	107.2 106.3	12.3 9.3
SITC9 – Commodities and transactions not classified elsewhere	Imports Exports	163.4 93.2	0.3 0.2

Source: ŠÚ SR (2025).

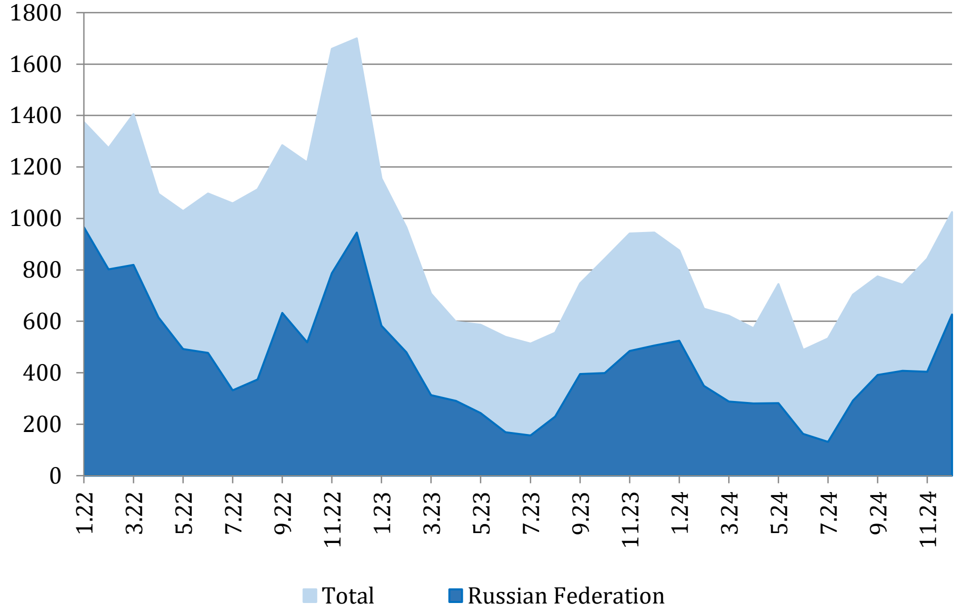
As illustrated in Figure 2.6, imports in SITC 3 more or less stabilised following the turbulence observed in 2022. In 2024, the share of the Russian Federation in imports within this category remained roughly unchanged from the previous year (48%) and was 3 p.p. lower than in 2022. Prior to the energy crisis, this share had been above 60%. Based on these figures, no further reduction in dependence on energy commodity imports from Russia was recorded in the past year.

The energy situation remains uncertain. As of January 1, 2025, the transit of natural gas from Russia through Ukraine to Europe has been halted, as Ukraine did not extend its transit agreement with Gazprom. Slovakia had prepared for this step in advance – SPP increased gas reserves in underground storage facilities and diversified its suppliers.[6] Nevertheless,

[6] The topic of natural gas trade is discussed in Chapter 3.

the interruption of gas transit through Ukraine will have a negative impact on Slovakia's trade balance, both due to higher import costs and a decline in transit fee revenues.

Figure 2.6
Imports of Goods in SITC 3 – *Mineral Fuels and Lubricants* (million euro)



Source: based on ŠÚ SR data (2025).

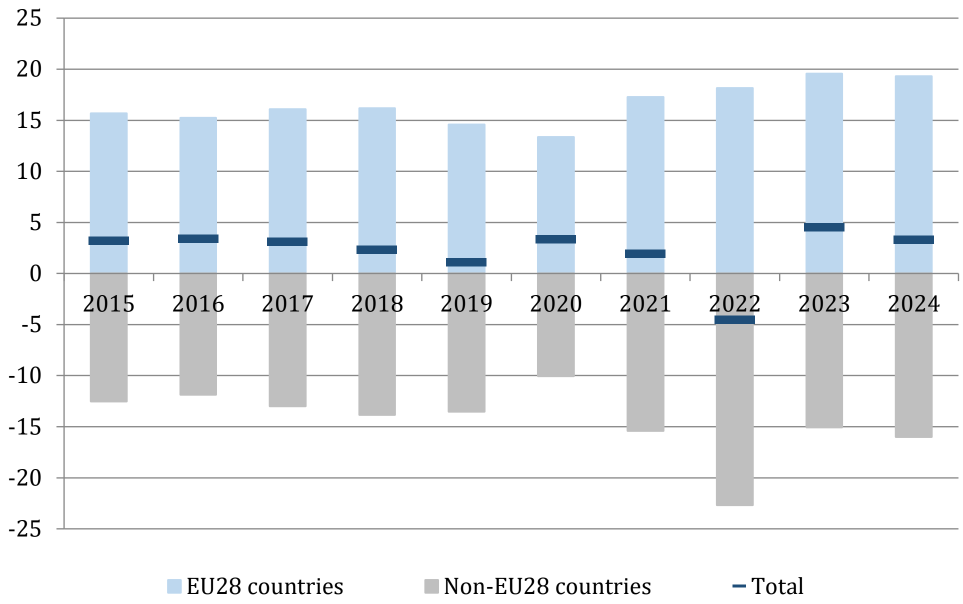
Regarding oil, Slovakia and Hungary currently benefit from an EU embargo exemption granted in 2022, allowing the import of Russian oil. The original exemption permitting the export of petroleum products made from Russian oil from Slovakia to the Czech Republic was set to expire on December 5, 2024. However, Slovakia successfully negotiated a six-month extension, permitting exports of these products to the Czech Republic until June 2025. After the exemption expires, only products made from alternative types of oil will be allowed for export to the Czech Republic. These exemptions provide Slovakia's energy sector with time to adapt to the new conditions in the oil and petroleum products market. Nevertheless, diversification of suppliers and overall energy security remain key challenges for Slovakia.

The Trade Surplus with EU Countries Continues to Offset the Deficit with Non-EU Countries

In 2024, more than three quarters of Slovakia's exports were directed to the EU, while imports from the EU accounted for nearly two thirds of the country's total imports. The overall decline in Slovak exports recorded in 2024 was largely due to a year-on-year decrease in exports to non-EU countries rather than to EU member states.

From the perspective of the territorial structure of Slovakia's foreign trade, it is also evident that the trade balance with EU member states as a whole has long been in surplus, whereas trade with non-EU countries has consistently shown a deficit (Figure 2.7).

F i g u r e 2.7
Foreign Trade Balance of Slovakia (billion EUR)

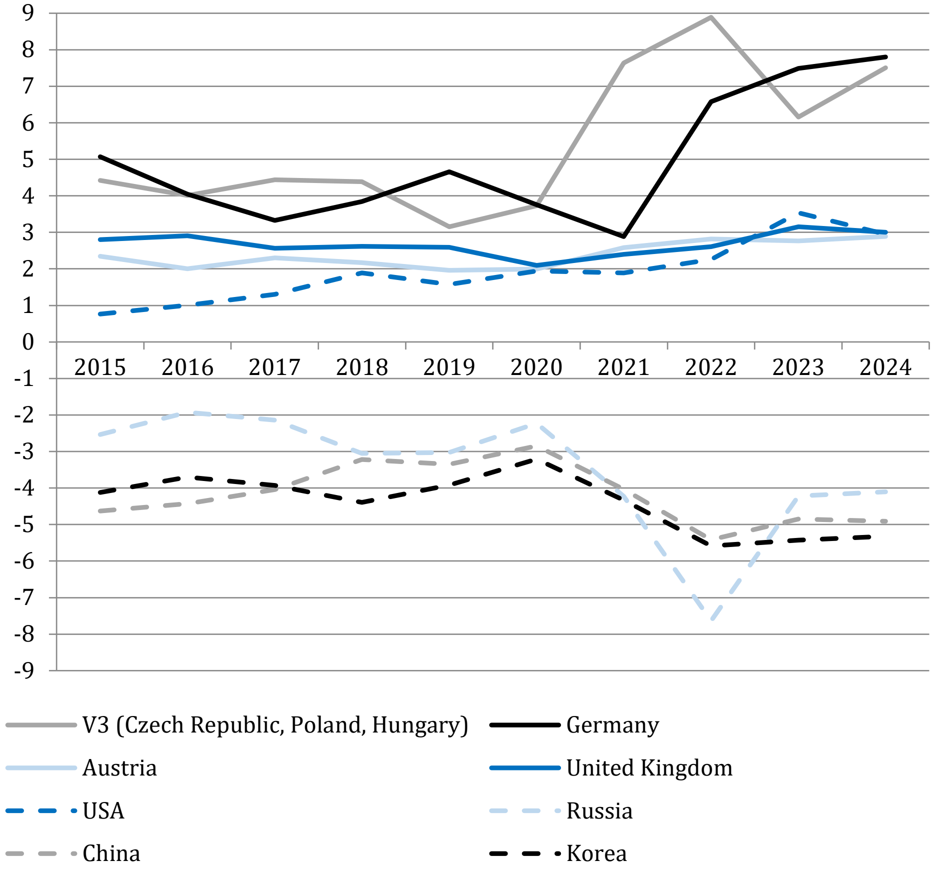


Source: based on ŠÚ SR data (2025).

The surplus with EU members, as well as the deficit with non-EU countries, tended to increase over the past decade. A decline in both was recorded in 2020, a year marked by the pandemic, which led to a drop in both exports and imports. In contrast, the energy crisis in 2022 resulted in a deepening of the deficit with non-EU countries to a record level. This development was primarily due to the sharp rise in prices of imported energy commodities from Russia, which, after thirteen years of Slovakia's overall foreign trade surplus, resulted in a deep deficit.

Figure 2.8 documents the development of Slovakia's foreign trade balance with its key trading partners and complements the previous figure with a more detailed view.

Figure 2.8
Slovakia's Foreign Trade Balance with Selected Countries (billion EUR)



Source: based on NBS data (2025b).

With its most important trading partner, Germany, Slovakia has achieved the highest foreign trade surplus, which has been growing over the last three years. A comparable surplus has also been recorded over the past decade with the V3 countries (Czech Republic, Poland, Hungary) as a group. Slovakia maintains trade surpluses with each of the individual V3 countries, with the Czech Republic remaining Slovakia's second most important trading partner. Trade with the United Kingdom, based primarily on car exports, also contributes to the trade surplus. With the exception of the first two years, this trade did not decline even after Brexit (2020).

Among its trading partners outside the EU, Slovakia has long recorded the highest deficit with Korea, China, and Russia. As mentioned above, the results of mutual trade with Russia in 2022 were significantly affected by the energy crisis, given that energy raw materials dominate imports from this country. Imports from China and Korea consist primarily of goods classified under SITC 7 – *Machinery and transport equipment* – which account for over 60% of total imports from China and more than 80% of imports from Korea.

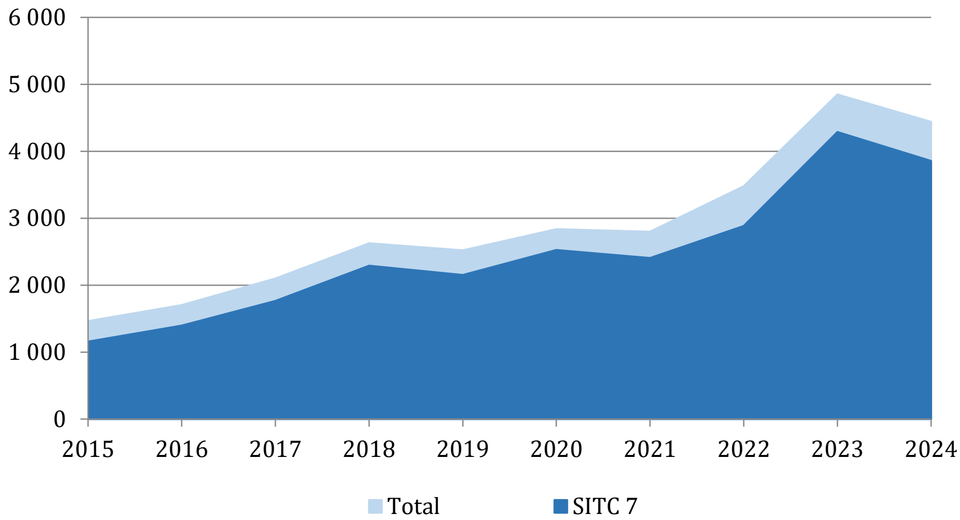
Position of the USA in Slovakia's Foreign Trade

The United States plays a unique role in Slovakia's foreign trade, primarily because – unlike other non-EU economies such as Russia, China, or Korea – Slovakia has consistently recorded a trade surplus with the US, a surplus that has shown a slight upward trend over the past decade (Figure 2.8). This surplus helps offset the overall trade deficit Slovakia records with non-EU countries. In terms of trade balance, as well as export and import values, Slovakia's trade with the United States over the past three years has been comparable to its trade with the United Kingdom. Slovak exports to the US are dominated by automobiles, tyres, and automotive components, while imports from the US mainly consist of components and technologies for the aerospace industry and pharmaceutical products.

A key question remains what impact US trade policy, which has recently increased uncertainty in relations with the EU, will have on mutual trade in the near future. The continued escalation of trade tensions between the US and the Union may have both direct and indirect effects on Slovakia. Direct effects would manifest as restrictions on Slovak exports directly to the US. Indirect effects relate to Slovakia's integration into global supply chains. These include the impact of weakened demand from Slovakia's key trading partners – particularly Germany (e.g., for components used in production destined for the US market) – as a result of rising barriers in global trade.[7] Both types of impacts (direct and indirect) will affect not only the growth rate of the Slovak economy but also developments in the labour market.

Slovakia is expected to be particularly affected by the increase in US tariffs on car imports, as SITC 7 – *Machinery and transport equipment*, which is dominated by cars and their components, accounted for 87% of Slovak exports to the US in 2024. Figure 2.9 illustrates the significance of this sector in Slovakia's foreign trade relations with the United States, as well as the overall growth in exports to this country over the past decade. This growth was accompanied by a doubling of the US share in total Slovak exports (from 2% in 2015 to over 4% in 2024), as well as in Slovak exports within SITC 7 (from less than 3% in 2015 to 6% in 2024).

Figure 2.9
Slovak Exports to the USA (million EUR)



Source: based on ŠÚ SR data (2025).

[7] According to the NBS (2025a), the decline in Slovak exports resulting from the trade war will be caused to a much greater extent by indirect effects (through global supply chains) than by direct impacts.

The introduction of 25% tariffs[8] on vehicle imports to the US at the beginning of April 2025 is expected to slow down Slovak export growth,[9] leading to a reduction in overall economic growth and an increase in unemployment. The situation is further exacerbated by the introduction of equally high tariffs on imports of car parts and spare components, which came into effect at the beginning of May.

Given the small size of the Slovak economy, its high openness, intensive integration into global supply chains, strong focus on the automotive industry, and generally high share of industrial production, Slovakia is likely to be among the most affected EU member states in the event of an escalation of the trade war between the US and the EU.[10] The overall impact of US trade policy could potentially be mitigated by negotiations initiated by the EU with the US; however, given the current developments, this appears unlikely. On the contrary, retaliatory tariffs by the EU seem more probable and could have further negative impacts on global trade.

The situation in the automotive sector could be further complicated by the adverse effects of US trade policy on exports from Chinese car manufacturers, who are likely to shift their focus to the European market, resulting in intensified competition. Slovakia nevertheless faces the challenge of seeking new export markets for its car production, potentially in South American countries (*Mercosur* – Argentina, Brazil, Paraguay, Uruguay), with which the EU reached a political agreement on a trade deal in December 2024 after more than 25 years of negotiations.[11]

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[8] The 25% tariff will be added to existing duties, raising the tariff rate on cars imported to the United States from the EU from the current 2.5% to 27.5%. In the case of light commercial vehicles, the rate increases to 50% (up from the previous 25%).

[9] The greatest impact is expected in the case of Volkswagen Bratislava, which exports a significant portion of its production to the United States, primarily luxury models under the Porsche and Audi brands. Jaguar Land Rover in Nitra will also be affected, as it likewise exports luxury vehicles to the US. However, given that demand for luxury products tends to be less sensitive to price changes, these effects may be partially mitigated.

[10] Significant impacts are also expected for the Czech Republic and Hungary, which are other relatively small open economies with a high share of industry.

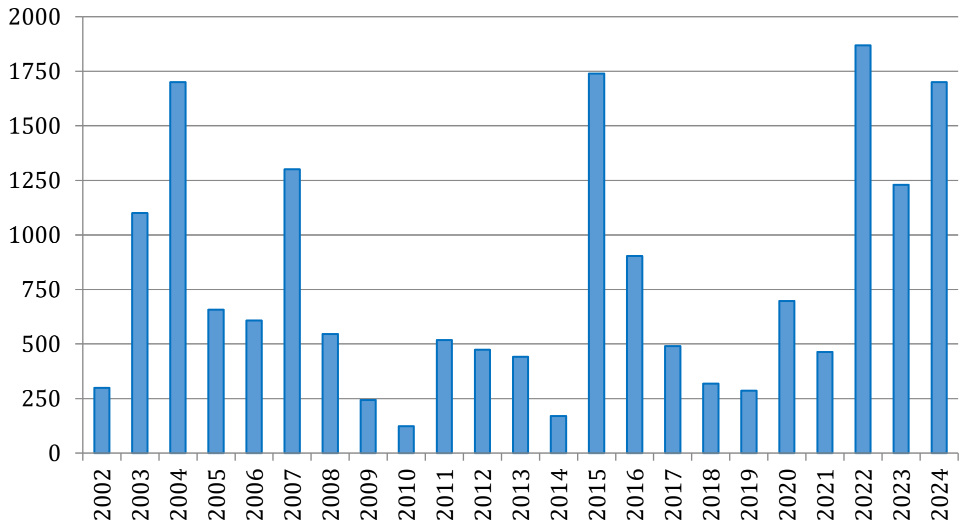
[11] Although the agreement was politically concluded, it has not yet been ratified. Its full validity requires approval from all EU member states and the European Parliament. Given the reservations of some countries (particularly regarding agricultural protection and environmental standards), this process could take several months or even years. Currently, tariffs on car imports from the EU to Mercosur countries are as high as 35%. Once the agreement is ratified, these tariffs could be gradually reduced or completely eliminated, which would significantly increase the competitiveness of Slovak production in these markets.

Foreign Direct Investment – the Rise of China

Data for 2024 on foreign investment in Slovakia are available from the *Slovak Investment and Trade Development Agency* (SARIO), which supports investment projects with significant social and economic benefits, with a particular focus on directing them to less developed regions of the country. In 2024, this state agency, operating under the Ministry of Economy of the Slovak Republic, concluded 28 investment projects with a total value of EUR 1.7 billion. These investments are expected to create more than 3,500 new jobs (SARIO, 2025b).

Compared to the previous year, there was a slight increase in the number of projects and an almost 40% rise in the value of investments, representing the third highest amount in the last decade (Figure 2.10). Of all the concluded projects, one quarter have the potential to generate higher added value, approximately half of the projects represent expansions of already established investors, and the vast majority of projects will be implemented outside the Bratislava region, with as many as 50% of projects directed to the central and eastern regions of Slovakia (SARIO, 2025a).

F i g u r e 2.10
Volume of SARIO Investment Projects (million EUR)



Source: based on SARIO data (2025b).

From a territorial perspective, in 2024 SARIO intensively supported the development of cooperation with China, which has been steadily increasing its share of global FDI. Unlike in previous years, when SARIO supported only a minimal number of projects of Chinese investors, in 2024 five investment projects involved Chinese capital. The most significant of these (also in terms of its share of the total volume of supported investments in 2024) is the investment by GIB EnergyX. Its battery manufacturing plant for electric vehicles will be built in Šurany and is expected to generate over one thousand jobs. Production is scheduled to begin in 2027 and will be entirely exported to the EU market. A positive aspect of this project is that it will also include a research and development centre. This investment project can thus significantly contribute to the transformation of the Slovak automotive industry and at the same time strengthen Slovakia's position as a centre of innovation in the field of battery technologies.[12]

The investment by GIB EnergyX further strengthens the dominance of the automotive industry, including its subcontractors (32%), in the sectoral structure of completed projects supported by SARIO over the past two decades. The automotive sector is followed by the electrical engineering and mechanical engineering industries (each accounting for 12%). At the same time, SARIO data on completed projects (2002-2024) show that China's share accounts for only 2% of total investments, with the highest share originating from Germany (19%), followed by the Republic of Korea (9%) and the United States (7%). Given the intensifying cooperation and engagement with China, a continued inflow of Chinese investment into Slovakia and a growing share of such projects can be expected.

This picture can be complemented by data from the National Bank of Slovakia (NBS, 2025c). According to the latest available figures on FDI from 2023, Chinese investments accounted for only 0.14% of the total FDI stock in the Slovak Republic. By comparison, FDI from the Republic of Korea represents a significant share of non-European investments in

[12] Further Chinese investments in the Slovak automotive sector in 2024 included those by Carcoustics Slovakia Nováky and Xinquan in the Prešov district. Carcoustics Slovakia Nováky focuses on the production of components for advanced hybrid vehicle platforms. Xinquan, a global player in automotive component manufacturing, plans to establish a plant in Petrovany focused on the production of car parts for the European market, creating several hundred new jobs. At the same time, the investment is expected to contribute to the development of the local automotive supply chain (SARIO, 2024).

Slovakia (almost 6% of total FDI), focusing primarily on the automotive sector (e.g. Kia Slovakia in Žilina, Hyundai Mobis in Nováky) and the electrical engineering industry (e.g. Samsung Electronics Slovakia in Galanta). Based on NBS data, the territorial structure of FDI in Slovakia is dominated by the Netherlands (24%), followed by the Czech Republic (14%), Austria (13%) and Germany (7%), with European countries accounting for as much as 93% of the total FDI stock.

* * *

The future development of foreign trade will be influenced by several key factors, including US trade policy and the EU's response to it, the economic performance of the euro area, particularly Germany, as well as Slovakia's ability to cope with challenges in energy imports and adapt to changing conditions in global markets. In 2025, Slovak export growth is expected to be driven primarily by the automotive sector. However, ongoing stagnation in the German economy and weaker demand across the euro area should also be taken into consideration. In 2026, Slovak exports could benefit from an anticipated recovery in the euro area and the launch of production at a new car plant (Volvo). Meanwhile, domestic demand, weakened by fiscal consolidation measures, is likely to moderate import growth to some extent in the coming period.

The automotive industry, a key pillar of the Slovak economy, is facing increasing challenges. In addition to supply chain disruptions (most severe during the pandemic), the consequences of the energy crisis, weakened demand for Slovak production from EU countries, and the transition to electromobility amid strong competition, particularly from Chinese car manufacturers, the industry is now also confronted with a trade conflict between the US and the EU.

Geopolitical tensions are also complicating the situation regarding energy commodity imports to Slovakia. This has further highlighted the need to diversify gas and oil suppliers and, above all, to reduce dependence on energy imports, particularly from Russia. Given the number of serious risks on both the export and import sides, the future development of Slovakia's trade balance remains highly uncertain in this turbulent period.

3. NATURAL GAS MARKET

The topic of natural gas has become almost as prominent in Slovakia since the outbreak of the war in Ukraine as hockey is during the World Cup. In this year's publication, we want to take advantage of the increased interest in this issue, join the many expert voices, and offer our own perspective on some frequently discussed topics. The issues we will address resonate with both professional and general audiences, often carrying an ideological undertone, whether strong or mild. The aim of this chapter is to introduce the reader to the basic functioning of the wholesale gas market in Europe, explain what the wholesale price means for end consumers in Slovakia, and show that the price of gas is not just a marginal problem. We will also discuss topics related to the Leipzig Stock Exchange, the role of speculators, and finally, we will try to answer the question of whether Slovaks pay too much for energy.

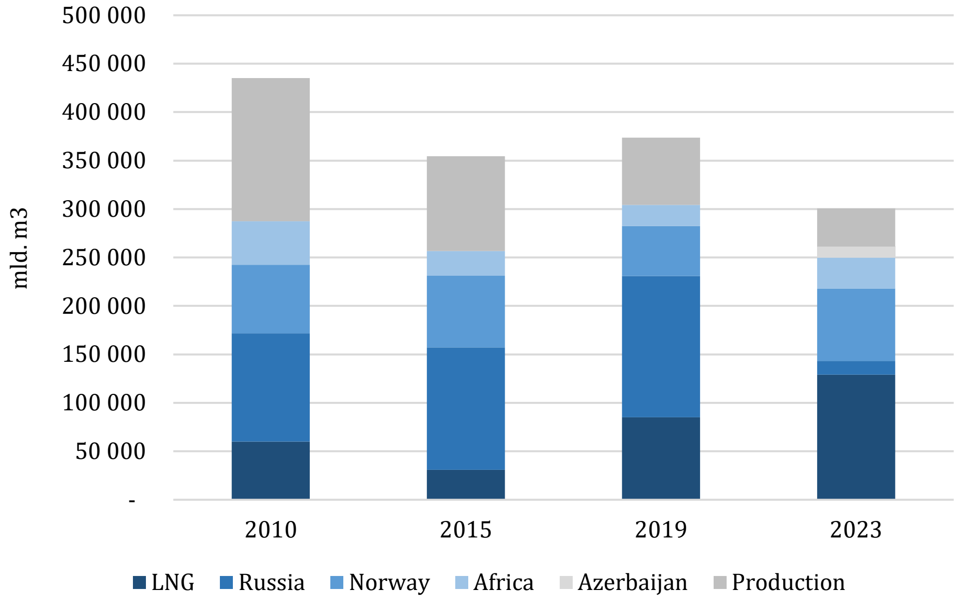
A Brief History of the EU Wholesale Gas Market

A fully functional, single gas market in Europe was created only in the past decade, even though Europe began taking its first steps in this direction as early as the late 1980s. The importance of the single gas market as an instrument of energy security was fully demonstrated after the gas crises of 2006 and 2009. Until then, the gas market was still relatively rigid, based on long-term contracts with destination clauses that prevented wider trading. The price of gas supplied under these contracts was usually linked to the price of oil or other fuels.

Following the unbundling of vertically integrated energy companies and the disadvantages of long-term, oil-linked contracts, trading on the spot gas market gained greater importance in Europe. Gas priced according to supply and demand characteristics (so-called gas-on-gas) gained a competitive advantage due to the glut in the European market during the economic crisis. Meanwhile, oil prices exceeding 100 USD per barrel at the time kept long-term gas contract prices at uncompetitive levels. This situation required the renegotiation of long-term contracts for European consumers, and oil indexation in long term contracts was largely subsequently abandoned.

The increasingly liquid European natural gas markets thus began to serve as a reference for gas pricing within Europe. The completion of interconnectors, the existence of liquid hubs – particularly the Dutch Title Transfer Facility (TTF) – and high flexibility on the demand side have made the TTF a global reference market in recent years, used for hedging by LNG producers around the world. Prices in other, less liquid European markets are highly correlated with the TTF; price differences generally only reflect varying transportation costs within the continent.

Figure 3.1
EU Natural Gas Sources



Source: author based on Eurostat.

Gas-on-gas pricing has become the dominant method of determining the commercial price in Europe, accounting for more than 90% of gas supplies, as it was the most cost-effective way of procuring gas until 2021, when Russia began limiting gas supplies to Europe. Price developments in the European natural gas market thus fully reflect the current state of the global market.[13] It is precisely this importance of the European market that meant the outbreak of the conflict in Ukraine shook not only the gas market in Europe, but also the entire world.

The Changing Gas Market Landscape

In the last ten years, the supply side of the EU gas market has undergone changes that to some extent negate the positive effects on energy security resulting from market liberalisation – such as better market interconnection and the ability to trade gas freely across Europe. The EU has significantly reduced its natural gas production. While domestic production covered a third of EU consumption in 2010, this figure will be only 13% in 2023. Before the outbreak of the war, Russian gas imports replaced declining domestic production in the EU supply mix, with their share increasing from 26% in 2010 to 39% in 2019.

The volume of Norwegian exports to the European market remained almost unchanged between 2010 and 2023 (an increase of 4 billion m^3), which, however, given the declining consumption trajectory, meant an increase in Norway's market share from 16% to 25%. African gas imports to the EU show a long-term downward trend, which has not been reversed even by the drop in Russian imports, given the growing domestic consumption in African countries. Their market share in the EU remains relatively stable at around 10%. Azerbaijan represents a new supplier for the EU, but with limited import capacity and a market share of 4%. Given the declining or stagnating gas imports via pipelines, the growth of LNG's share in the EU supply mix – from 14% to 43% – is not surprising.

It is clear, that European dependence on selected natural gas sources increased. In the case of LNG, it can be argued that this gas is coming from diversified sources, but the fact remains that in 2023 up to 71% of LNG imported into the EU came from the USA, Qatar, and Russia. At the same

[13] By the term *global market*, we mean the price relevant to regions dependent on natural gas imports, i.e. Asia and Europe. The price in the USA is currently isolated from developments in the global gas market, as insufficient export capacity creates a bottleneck and decouples US gas prices from the rest of the market when export capacity is fully utilized during periods of high demand. Other regions of the world are either exporters or self-sufficient, with pricing in these markets varying (administratively determined, market-based, indexed to other commodities, etc.).

time, LNG is the only flexible source of supply in the EU, as import terminals are typically used at less than 50% and can respond to increased demand. Other gas suppliers to the EU (except for Russia) have been operating close to the peak of their technical capacities in recent years.

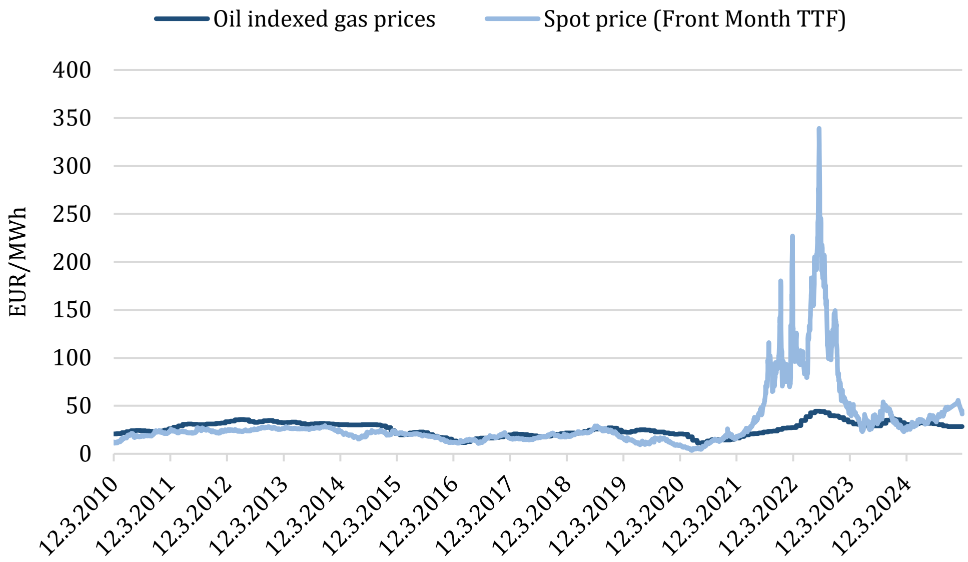
Gas consumption has fallen by almost 25% since the outbreak of the war in Ukraine, which means that flexibility on the demand side is practically completely exhausted. Overall, this means that the natural gas market has been extremely concentrated in terms of supply, tight in terms of the supply-demand balance, and highly volatile in terms of prices in recent years. These are characteristics that clearly point to a low level of energy security.

In 2021, when gas prices started to rise, the International Energy Agency (IEA) estimated that European consumers paid EUR 30 billion more for the commodity during that year than they would have paid if gas had remained indexed to oil. Nevertheless, IEA claimed that European gas consumers saved around EUR 70 billion cumulatively from 2010 to 2021 thanks to the change in indexation.

Four years later, we can say with certainty that gas-on-gas pricing has meant significantly higher costs for Europe. If gas had been priced on the basis of oil indexation over the period 2010 – 2025, its average price would have been 21% lower than the actual spot price. In an extremely simplified calculation, with average gas consumption in Europe at around 400 billion m^3 per year, this means that the creation of a liberalized market and the switch to spot pricing have cost the continent an estimated EUR 300 billion more since 2010. At the same time, however, it should be added that the fact that the price of gas reflected supply and demand fundamentals in Europe ensured that a shortfall of more than 20% of supply in one year did not result in a physical shortage of the commodity.

Just as the gas glut in the European market at the end of the first decade of this century led to the creation of spot pricing on a gas-on-gas basis and the end of the practice of indexing long-term gas prices to oil, now – with supply-and-demand pricing generating higher prices than oil indices – the idea of reintroducing long-term contracts linked to the price of oil is emerging. Such contracts could bring less volatility to the market, potentially lower prices, and at the same time limit the ability of a narrow circle of gas suppliers to influence the price level in Europe. However, this approach does not reflect the current supply-demand factors of the European natural gas market, and therefore such a transition would certainly not be smooth.

F i g u r e 3.2
Gas Price Development: Spot vs. Oil Index



Source: based on LSEG data.

What Gas Slovakia Consumes

Slovak media have recently often published information about how much gas flows into Slovakia from Russia and how much from other countries. However, these numbers often differ significantly depending on the cited source, the media outlet, and the context in which they are presented. We will look at this question using data from the only gas transmission system operator in Slovakia – the company Eustream.

First, we have to consider some basic facts. Slovakia consumes approximately 4 – 5 billion cubic meters (bcm) of gas annually, depending mainly on temperature conditions and the operation of the natural gas power plant in Malženice. Over the last few years, Slovakia has built connections to all neighbouring countries, from which gas can be transported. Slovakia has the highest import capacity in the direction of Ukraine – 67 bcm annually. The Czech Republic follows with 55 bcm, Austria with 8.7 bcm, Poland with 5 bcm, and Hungary with 1.8 bcm (Ňukovič, 2024). The existence of oversized transmission capacities from Ukraine and the Czech Republic is related to Slovakia's role as a transit country. These profiles were designed for the transport of Russian gas from the Brotherhood and Nord Stream pipelines further into Western Europe.

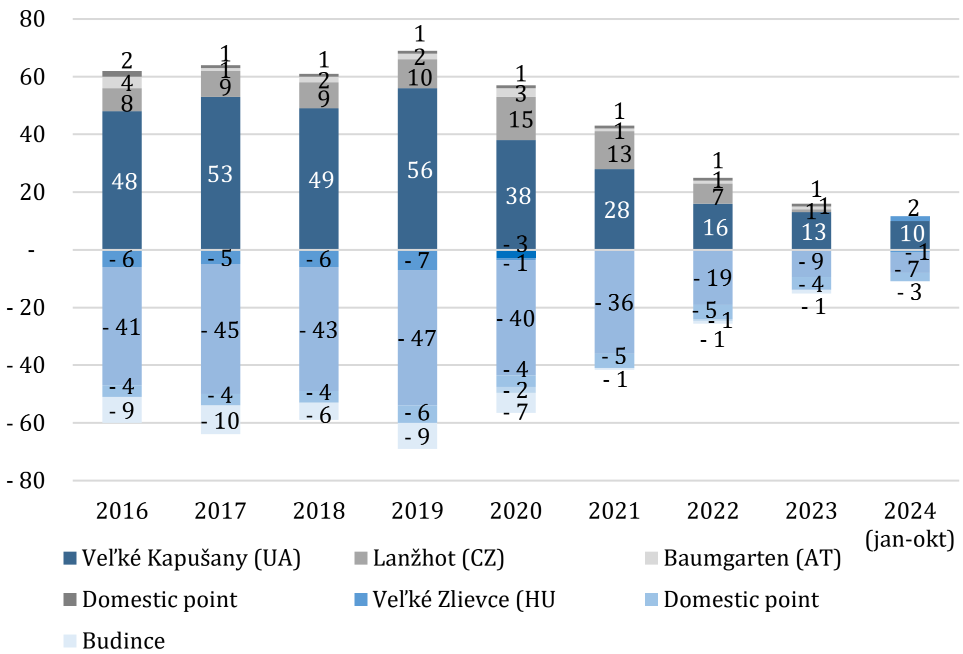
Slovakia is able to cover its gas consumption with diversified sources. However, this did not happen in practice in the past, as can be seen from Figure 3.3 – gas in Slovakia historically flowed mainly from Ukraine. The second most important source was imports from the Czech Republic, but it should be noted that the Czech Republic imported gas exclusively from Germany in the years before the war, and almost all of it was Russian gas. It flowed through the Nord Stream pipeline and then through the OPAL pipeline to the Czech Republic. From there, it continued through Slovakia to Austria and to the final customers in Italy.

At the same time, it can be observed that until 2019, these flows had minimal impact, as they were balanced by the export of Russian gas from Slovakia back to the Czech Republic. The same situation applied to Austria – any potential imports from this country were balanced by exports of Russian gas in the opposite direction. Physical gas flows from Poland have so far been almost negligible, and the same applies to Hungary, with which Slovakia has the smallest interconnection capacity. From Hungary, gas began to be supplied to Slovakia in 2023, and in limited volumes. Even in this case, given the structure of the supply mix in Hungary, it is almost exclusively Russian gas brought to the EU through the Turk Stream pipeline.

It can thus be said that physically, the Slovak market is supplied almost exclusively with Russian gas. However, this does not mean that suppliers operating on the Slovak market could not have a diversified portfolio of contracts with partners from other countries – if, for example, companies like SPP or ZSE declared that they had secured supplies from Norway or from LNG sources.

However, the reality is such that if gas flows are directed from the east of Europe to the west and Slovakia's consumption can be covered with some of these flows, it is not economically feasible to use other sources of gas in Slovakia.

Figure 3.3
Gas flows at Entry/Exit Transit Points of EUSTREAM (bcm)



Source: presentation, Ňukovič, Autumn conference SPNZ, Nov. 2024.

Mechanics of Wholesale and Retail Gas Prices in Slovakia

Almost all gas on the EU wholesale market is priced using the so-called gas-on-gas method. This means that the price of the marginal gas molecule determines the wholesale price for all supplied gas.

Gas trading on the EU wholesale market takes place primarily on exchanges, mainly ICE (Intercontinental Exchange) and EEX (European Energy Exchange), as well as through over-the-counter (OTC) trading. A key question for understanding pricing is therefore the origin of marginal demand or supply, whose interaction at any given moment determines the resulting wholesale price.

Gas consumption can be divided into three main groups: household and commercial heating, gas as an input in industrial production, and gas as an input for electricity generation. It is clear, that demand for gas for heating is highly inelastic. Gas used in industry usually represents a small part of total costs and therefore its price in many cases does not influence the decision to continue or halt production. The marginal source of demand traditionally comes from combined-cycle gas power plants, for which there is a certain substitute in the form of coal-fired power plants. In their case, gas is the primary cost, and demand for their electricity is highly volatile – depending mainly on the current production of electricity from renewable sources.

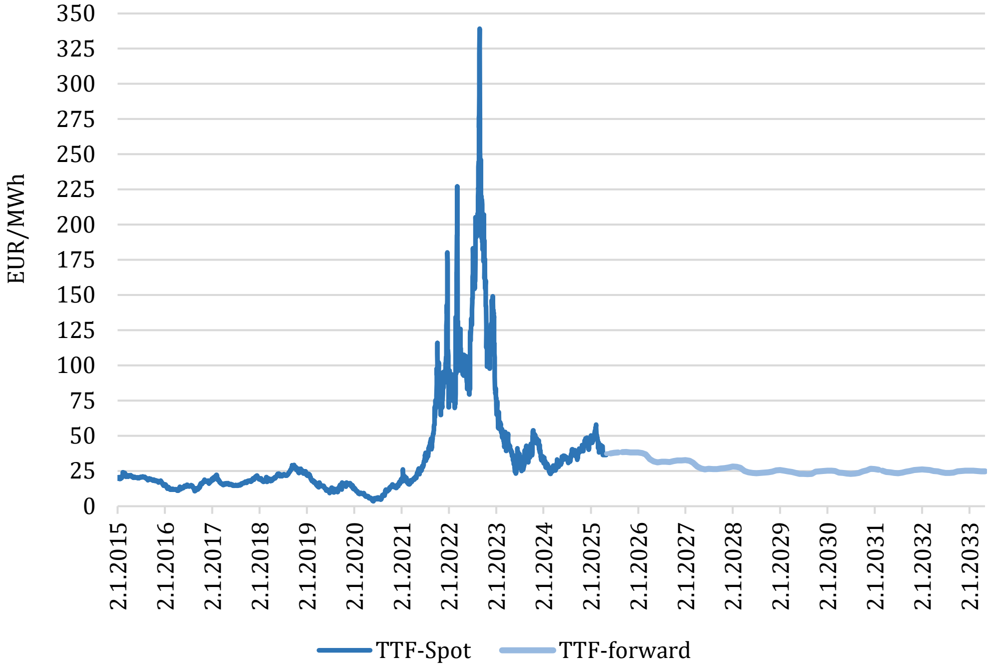
Looking at the flexibility of the gas supply from a European perspective, the basic supply consists of domestic production and long-term contracts with suppliers who deliver gas to the EU through pipelines – such as Norway, Russia, Azerbaijan, Algeria, and Libya – with variable delivery costs generally measured in single-digit euros per MWh (as evidenced by the fact that gas continued flowing to Europe even in 2020, when its wholesale price in some months dropped below 5 EUR/MWh). Supply-side flexibility thus results from the ability of European holders of long-term contracts to partially adjust their offtake within a certain tolerance bands included in these contracts.

When this flexibility is exhausted, the next and largest source of supply-side flexibility is LNG delivered by portfolio players, who have the option to change the final destination of LNG cargoes depending on price signals from different buyer markets, especially in Europe and Asia.

The complexity of the situation is increased by the possibility of storing gas in storage facilities, which in Europe can cover approximately a quarter of annual consumption, with demand and supply also largely dependent on the development of forward prices.

The result of this entire system of relationships is the forward price curve, which expresses the relationship between supply and demand at different times at a given trading hub. On the ICE exchange, where most trading activity is concentrated, we can currently see forward prices for Europe's most liquid market – the Dutch TTF – out to 2033. At present, the market anticipates that by then, gas will be about half as cheap as it is today.

Figure 3.4
Spot and Forward Prices of European Natural Gas



Source: authors based on ICE data.

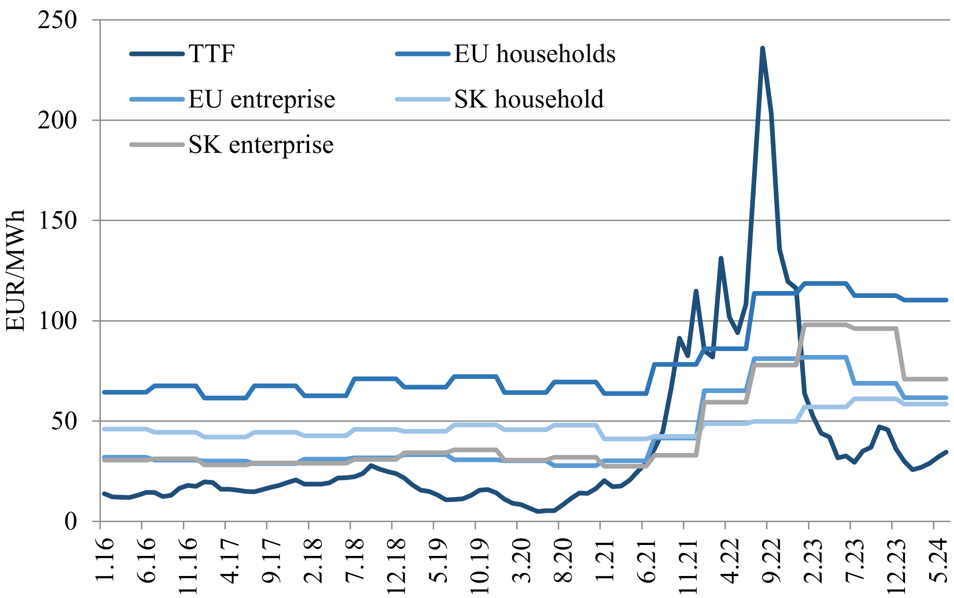
In Slovakia, there is no liquid forward wholesale gas market. Trading activity is focused on gas with delivery in the next day or month, serving primarily to balance suppliers' portfolios. The main reason for its absence is the insufficient size of the market, which does not allow for enough interaction between supply and demand to establish a local market price. As a result, gas consumers in Slovakia rely on prices from neighboring, more liquid markets when making longer-term purchases.

The most important trading points for Slovakia are the Austrian Virtual Trading Point (VTP AT) and especially the German hub Trading Hub Europe (THE). In addition to large corporate customers, who determine their purchasing strategy individually and can fix the price of gas several years in advance, the THE hub serves as the main reference point used by the Office for the Regulation of Network Industries (ÚRSO) when setting prices for households and other customers with the right to a regulated price.

ÚRSO determines a time window in which wholesale forward prices are tracked, and these prices are subsequently used as the basis for calculating the regulated price. For regulation in Slovakia, prices from the "Leipzig" EEX exchange are used; these are publicly available on the website www.eex.com.

The final price of gas paid by consumers does not consist solely of the wholesale price but also includes components related to transmission, distribution, and storage costs. These costs increase the price of delivered gas by roughly several euros and up to approximately 30 EUR/MWh, depending on the volume, type of customer, and agreed conditions. For an average customer, these components account for approximately 30% of the final price.

Figure 3.5
Retail and Wholesale Prices of Natural Gas



Source: authors based on ICE a Eurosta data.

How the wholesale price in recent years translates into the final prices paid by consumers in Slovakia and the EU is shown in the graph below. The following points are particularly notable:

a) retail prices are more stable than wholesale prices,

b) wholesale prices are reflected in retail prices with approximately a one-year delay, as a result of the aforementioned forward purchasing strategies and regulation,

c) In the aftermath of price surge in 2021 – 2022, retail prices have been declining more slowly compared to wholesale prices,

d) the development of prices for different consumer groups indicates that the EU has primarily focused on keeping prices lower for businesses, while in Slovakia, households are mainly subsidized. As a result, Slovak households paid 51% less than the EU27 average in the first half of 2024, while Slovak companies paid 13% more than the EU average.

The Importance of Speculators in the Market

In 2023, approximately 7,941 billion m^3 of gas was traded on European hubs (of which more than 80% was on the Dutch trading platform TTF, while trading on THE represented less than 5%). European gas consumption reached approximately 400 billion m^3, which means that each megawatt-hour of gas, before it was consumed, was bought and sold around 20 times – whether for hedging, speculation, or as part of more complex business operations.

More than 80% of transactions are carried out through exchanges. On the largest of these – the Intercontinental Exchange (ICE) – there are approximately 800 active participants (including suppliers, investors, and banks) trading European gas. If we do a simple arithmetic exercise, we can easily calculate that the nominal value of these transactions in 2023 could be around three trillion euros – a value comparable to the GDP of France.

The purpose of presenting these data is to highlight that the European gas market is definitely not a small market that can be easily manipulated by a few participants.

In recent years, the media have presented the opinion that speculators are responsible for the increase in gas prices in Europe, and that the only way to reduce energy prices in the EU is to limit speculation on the European gas market. This is not a universally accepted view. The study by the

European financial regulator ESMA (2023) also examined the question of price manipulation and market functioning during the period of extreme prices. It concluded that the wholesale gas market, despite the extreme conditions after the outbreak of war – when the EU suddenly lost 20% of supply – fulfilled its role and functioned correctly.

All trading that takes place in the market plays an important role in discovering the equilibrium market price, which ensures a balance between supply and demand. We are not claiming that market regulation is unnecessary or that there is no need to establish reasonable limits to prevent manipulation in less liquid, specific parts of the market. In general, however, it can be said that manipulating the market would be significantly complicated. On the contrary, greater market participation in recent times increases the reliability of the price and ensures a larger volume of information is reflected in it. The market has thus become more capable of anticipating future developments and incorporating these expectations into the price in advance.

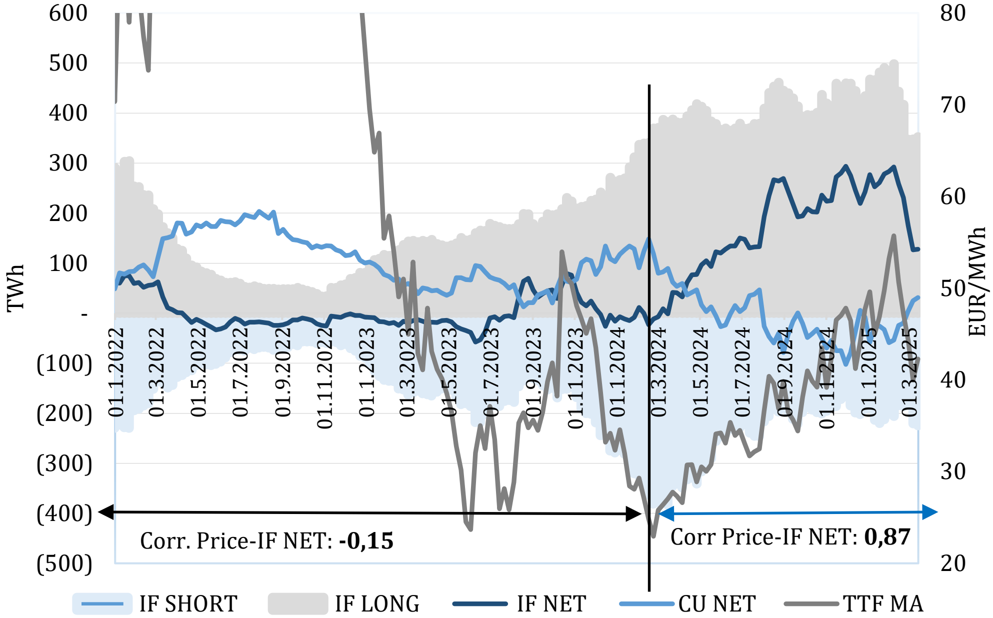
A specific example can be seen in the situation shown in Figure 3.6. It is clear that the price of gas began to rise in the spring of 2024 and this growth continued through the summer – even though demand on the gas market was low at that time. Marginal demand during that period was created by investors, not participants with physical exposure. This led several market commentators to accuse speculators of manipulating the market and deliberately raising the price.

However, when physical demand for gas significantly increased during the winter of 2024, gas prices reached even higher levels. What investors had predicted in the spring of 2024 actually happened more than half a year later.

At the same time, it can be argued that action of speculators that effectively pushed up the price of gas during the summer of 2024 actually helped to balance the market as higher summer prices reduced consumption while supporting the growth of supplies. The activity of financial investors may even have helped reduce market volatility and the price levels experienced during the winter of 2024, since the balancing was more evenly spread out during longer time period.

Figure 3.6

Correlation between Gas Prices and Trading Positions of Investors and Utilities



Legend: IF – investment firms, CU – commercial utilities, Net – difference between long and short positions, positive values represents that long positions > short positions; IF Long – agreg. Long position of investment firms, IF short – agreg. short position of investment firms.

Source: authors based on ICE a ESMA data.

How the Gas Market Affects the Electricity Market and Why It Matters When Slovakia Is Self-Sufficient

The wholesale price of electricity constitutes approximately 30% to 50% of the final price for end consumers. The spot price of electricity in the common European market, of which Slovakia is a part, is determined through auctions where demand and supply from wholesale market participants meet. The marginal pricing method means that the equilibrium price is set by the most expensive power plant that needs to be activated in Europe to meet total demand. Under normal circumstances, this role is most often played by gas (or coal) power plants.[14]

[14] The variable costs of electricity production from renewable sources are 0, and in the case of nuclear power, they are approximately 20 – 40 EUR/MWh. The efficiency of combined-cycle gas power plants is typically around 50 – 60%. This means that approximately 2 MWh of gas are

This pricing method results in gas power plants setting the wholesale price for a larger share of electricity than they actually produce. For example, in 2022, only 18% of electricity in the EU was produced from gas, but gas power plants set prices in up to 39% of cases (Zakeri et al., 2023). This pricing method, which is standard in commodity markets, came under criticism after the energy crisis erupted in 2021 and 2022. However, calls to decouple the impact of gas prices from electricity prices have largely gone unheard, given the complexity of the problem.

The country that implemented a radical solution was Spain. It introduced a maximum price for gas that gas power plant operators could use as a production input in auctions. If the wholesale price of gas was higher than the maximum price, they were compensated for the difference. While this solution managed to reduce electricity prices, it also led to an increase in gas consumption in Spain, as subsidized prices resulted in greater use of gas power plants for production. The shortage of gas was the main reason for its high price, which is why this solution could not be extended to other EU countries.[15]

In 2023, thanks to the launch of the third nuclear unit at the Mochovce nuclear power plant, Slovakia once again became a net exporter of electricity after seventeen years. In 2024, it exported approximately 3 TWh of electricity, while total consumption reached 27.4 TWh. Up to 60% of electricity was produced from nuclear power, 20% from hydroelectric power plants, and only 10% of electricity in Slovakia in 2024 came from gas – approximately as much as Slovakia exported.

At the same time, it should be noted that Slovakia imports electricity if it can be obtained more cheaply than domestic production, and vice versa, it exports electricity when it is advantageous for domestic producers.

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required to produce 1 MWh of electricity, while gas power plants in the EU are also required to pay the cost of emission allowances for emitted CO_2 in addition to the cost of gas. In price terms, this means that in a model example where gas costs 40 EUR/MWh and an emission permit costs 70 EUR/ton, if a gas power plant with 50% efficiency needs to be turned on to meet demand, the variable costs of this power plant will be calculated as $(40/0.5 + 0.18/2 \times 70) = 105.2$ EUR/MWh.

[15] It should be added that the situation in Spain was more complex. The connection of the Spanish electricity grid to the rest of the EU is relatively limited, and at the same time, Spain has significant excess capacity at LNG terminals where it can receive the commodity. The current solution proposed by the EC for decoupling gas and electricity prices is focused on the retail market, through greater use of PPAs.

In 2024, wholesale electricity prices, as well as prices paid by companies in Slovakia, were the ninth highest in the EU. However, household prices were capped by the government, and last year Slovakia was among the countries with the lowest prices for households – specifically, it had the fourth lowest prices within the EU.

* * *

The European gas market has undergone a fundamental transformation since the gas crises in the first decade of this century and has been able to cope with the significant reduction in gas supplies from Russia after the outbreak of war. Even the interruption of gas supplies via Ukraine to Slovakia – after more than half a century of continuous operation – did not lead to any emergency situations.

The liberalization of the wholesale market in Europe has ensured that even in the Slovak market, without significant domestic gas production and with complete dependence on imports, it is possible to purchase gas at prices comparable to the rest of the EU. The developed infrastructure and the ability to trade freely thus form the basis of Slovakia's energy security.

The differences in the actual costs that consumers in Slovakia pay compared to the rest of the EU are today primarily determined by the different degree of market regulation and the relatively high level of concentration among energy suppliers.

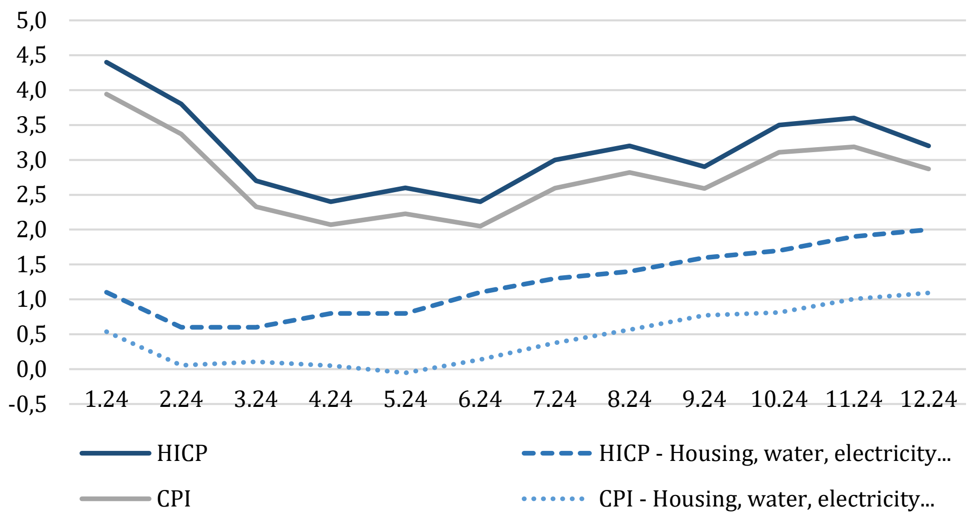
4. PRICE DEVELOPMENTS

In 2024, the inflation returned to more common levels. Although it continued to attract considerable attention in coverage of the country's economic developments, it was several times lower compared with previous years. Measured by the domestic consumer basket (CPI methodology), the annual average reached 2.8%, the lowest value since the COVID-19 pandemic. On a monthly basis, a divergent pattern was observed: a declining trend in the first half of the year followed by a moderate increase in the second half.

When measured by the harmonized European methodology HICP (Harmonised Index of Consumer Prices), average inflation was higher, at 3.2%. The difference between the two methodologies lies mainly in the different weights assigned to the category "*Housing, water, electricity, gas and other fuels*." The European methodology assigns a lower weight to this category (17.2% of the basket compared with 25.8% under the national methodology), which results in a broadly similar price trend but a different impact on overall inflation (Figure 4.1).

F i g u r e 4.1

Developments in Inflation According to CPI, HICP and the Housing Category
(year-on-year change by months, in %)



Source: Eurostat (2025); ŠÚ SR (2025), own processing.

Only a mild increase in the prices of construction materials, which partly feed into the evolution of imputed rents (a component included in the national but not the HICP methodology), caused this category's contribution to be more moderate under the national methodology than under HICP.[16]

In general, it can be concluded that despite minor methodological differences, consumer price developments in 2024 overall stabilized and returned to the more moderate levels that had prevailed before 2022, when the impacts of the war in Ukraine, the ensuing energy crisis, and subsequently food price inflation began to manifest fully.

Relative Calm with Concerns about What Comes Next

After last year's uniform positive contribution of all consumer basket categories to overall inflation, a similar trend could be observed in the current year, with a single exception – Transportation. In this category, average prices even declined year-on-year during several months. A positive development, however, is that the contribution of none of the consumer basket categories reached double-digit values, as had been the case in previous years.

The main factors determining the course of inflation can be considered as follows:

- *Moderation in the pace of food and non-alcoholic beverage price growth* – the development of food prices played an important role in overall inflation throughout the year. While at the beginning of the year the effect of high food inflation was still fading, by April the contribution of this category was almost zero. However, this changed again in the summer and autumn with the emergence of several unexpected price increases in some basic food items, such as eggs, fruit, and butter. The factors that reignited food price growth in the second half of the year will be examined in more detail in the second part of this chapter.

[16] We addressed this topic in greater detail in the previous publication mapping developments in 2021.

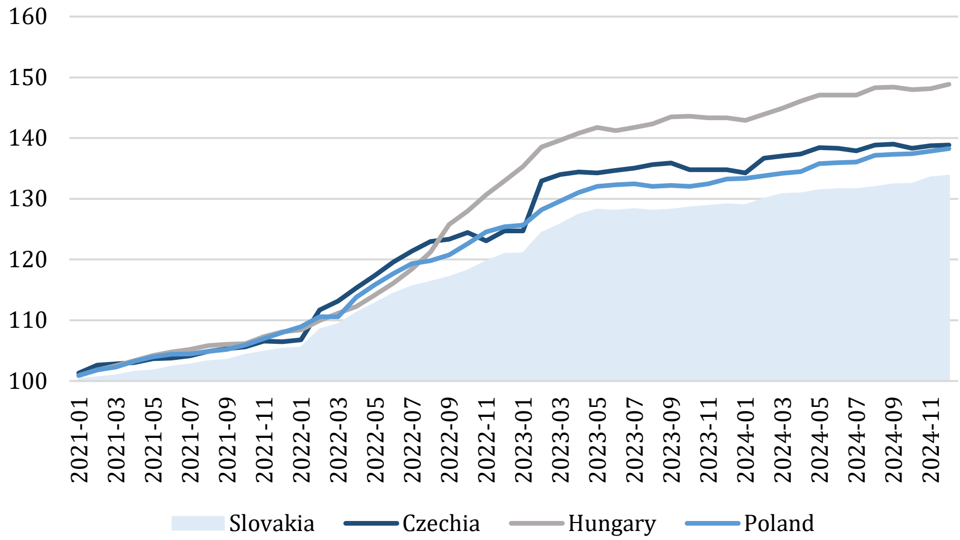
- *Stabilization of housing and energy prices* – as already noted, the evolution of housing prices (both actual and imputed rents), together with government measures to protect households from rising energy costs through the capping of electricity, gas, and heat prices, resulted in only marginal growth in this category. Overall, prices increased by just 0.5% year-on-year, well below the overall inflation rate. On the other hand, the energy price caps carried an indirect cost in the form of public expenditures, which translated into a higher public finance deficit and thus necessitated consolidation measures.
- *Service prices grew more rapidly* – although overall inflation declined significantly year-on-year, the prices of certain selected services accelerated into double-digit growth. For instance, prices of regulated transport services rose by as much as 17% year-on-year, while market-based transport services increased by 7%. Legal and administrative fees rose by around 20% as part of the 2024 consolidation package. Overall, the year-on-year growth in market service prices outpaced that of goods and regulated prices, services rose by 3.9%, compared with 2.6% for goods and 1.4% for regulated prices.
- *Decline in fuel prices* – although the overall change in fuel prices was not as dramatic as in the previous year, average fuel prices were nonetheless slightly lower over the year. Overall, fuels fell by 1.7%, with the most commonly used fuels, such as petrol with an octane rating of 95, declining by 1.3% year-on-year, and diesel even by 3.2%. In magnitude, however, this cannot be compared with the highly volatile developments of previous years, when fuel prices first rose by 26% in 2022 and then fell by 7% in 2023.

Overall, the pace of price growth moderated in 2024; however, the weak state of public finances forced the country and continues to force it to undergo a process of fiscal consolidation, whose measures indirectly affect price developments. Changes in VAT rates, increases in excise duties, and the introduction of a new financial transaction tax will to some extent determine the trajectory of inflation in the coming year, when a renewed acceleration of price growth is expected.

Slovakia, the Notional Winner in the Region

A similar pattern to that observed in Slovakia occurred in the surrounding V4 countries. After the dynamic years of 2022 and 2023, overall consumer price growth slowed, and in the case of Hungary and the Czech Republic it was accompanied by a gradual easing of monetary policy. In Poland, however, the central bank's key interest rate surprisingly remained unchanged throughout the year. From a cumulative perspective on price level developments over the past four years, Slovak consumers experienced the lowest increase in prices, although still by roughly one third. By contrast, consumer prices in Hungary rose the most, being nearly one half higher than in December 2020 (see Figure 4.2).

F i g u r e 4.2
Index of Cumulative Inflation Developments in the V4
(2021 – 2024, December 2020 = 100)



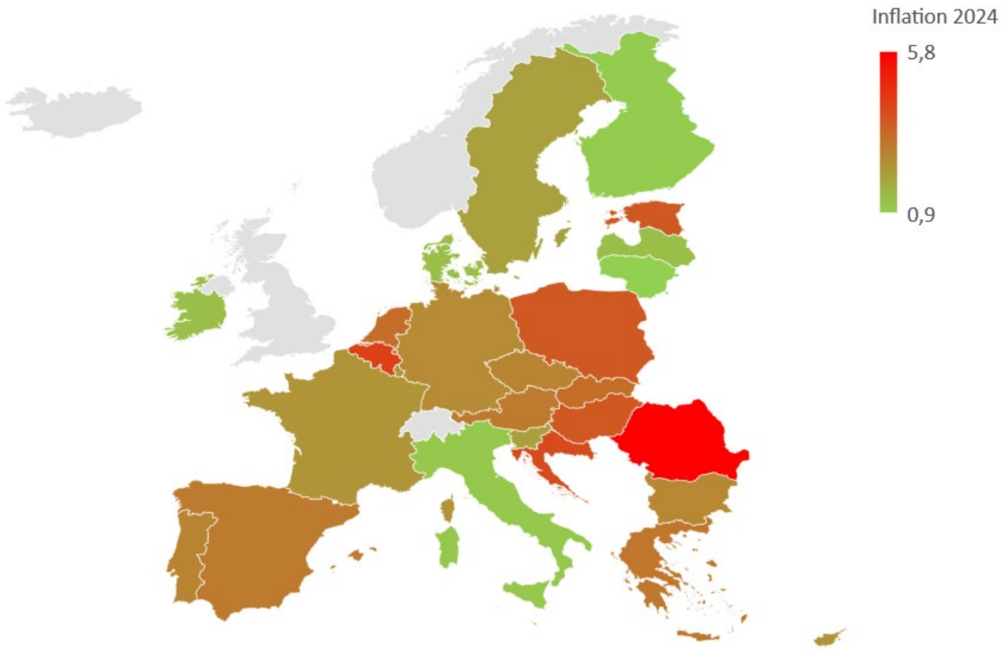
Source: Eurostat (2025); own calculations and processing.

Once again, this year, it can be stated that Slovakia owes its position in the area of inflation primarily to the government's approach to regulating household energy prices, which shielded them from higher inflation through price caps. While this measure positively affected the overall level of inflation, it must also be stressed that it represents a significant cost item in public expenditure. At the same time, it suppresses incentives to save energy and weakens the drive toward a transition to more environmentally friendly forms of production, such as household electricity generation. The use of this instrument during the energy crisis may be considered justified, but once the crisis subsided its continued application no longer carries economic rationale.

Looking at overall inflation in the EU, the lowest level in 2024 was recorded in Lithuania (0.9%), followed by Finland (1.0%) and Italy (1.1%). By contrast, the highest inflation in the EU was observed in Romania (5.8%), Belgium (4.3%), and Croatia (4.0%). At first glance, price developments, at least within the euro area, converged toward the long-term target set by the central bank, with the average year-on-year inflation rate reaching 2.4% and the median value 2.5%.

Image 4.1

HICP Inflation in the EU with the Highest (Red) **and Lowest** (Green) **Inflation Rates in 2024**

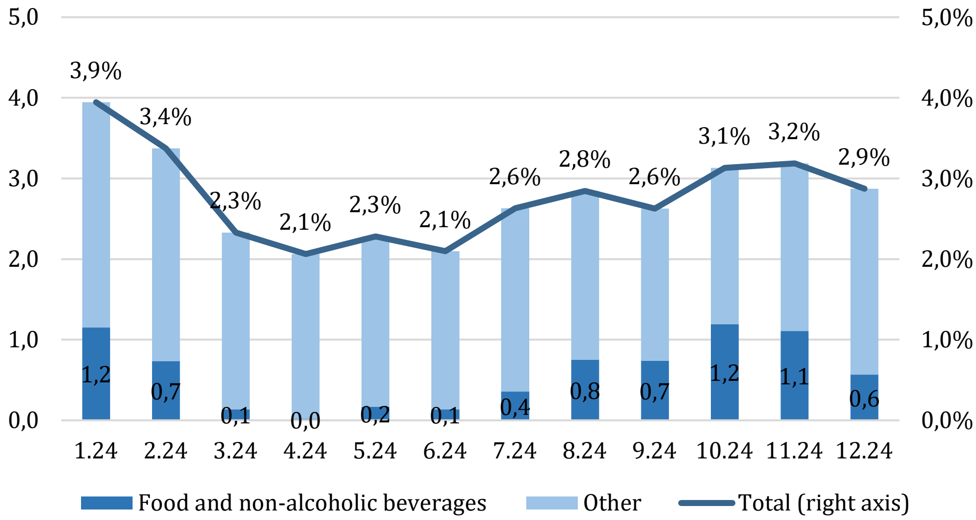


Source: Eurostat (2025); own processing.

A particular feature of inflation developments in 2024 was the overall alignment of contributions from individual categories in the consumer basket, with almost no category recording a sharp increase or decrease throughout the year.[17] The only exception was the *Transport* category, which in two months showed a marginal but negative contribution to overall inflation. Thus, all categories of the consumer basket acted as drivers of overall inflation, with *Food and non-alcoholic beverages* being the most significant contributor (see Figure 4.3). The stronger inflationary impulse from this category at the beginning of the year completely faded in the first half, but re-emerged in the second half, peaking in October 2024.

Figure 4.3

Overall Year-on-Year Inflation Developments by Months and the Contribution of the Category Food and Non-Alcoholic Beverages to Overall Inflation (in p.p. and %, 2024)



Source: NBS Macroeconomic Database (2025); own calculations and processing.

The inflation rate also significantly influenced household purchasing power through the pace of wage growth. In nominal terms, wages continued to grow at an above-average rate after the very dynamic developments of

[17] The only exception is the category of Food and non-alcoholic beverages, which will be described in more detail in the following section.

2023, rising by 6.6% year-on-year. In real terms, adjusted for the effect of inflation, the pace of wage growth returned to positive territory after two years, reaching an increase of 3.7%.[18]

T a b l e 4.1

Overview of Basic Price Development Indices in the Slovak Republic (in %)

	2021	2022	2023	2024
Inflation rate (HICP):				
Euro area	2.6	8.4	5.4	2.4
Slovakia	2.8	12.1	11.0	3.2
Czech Republic	3.3	14.8	12.0	2.7
Hungary	5.2	15.3	17.0	3.7
Poland	5.2	13.2	10.9	3.7
Industrial prices:				
Industrial producers' prices – total	6.8	29.3	6.9	–4.5
Industrial producers' prices – domestic	5.5	43.3	13.9	–10.1
of which: Manufacturing	5.8	18.1	2.4	–2.0
Industrial producers' prices – export	7.6	20.5	3.4	–1.1
Construction work prices	3.8	18.3	11.3	5.3
Construction material prices	11.5	22.5	3.2	–0.6
Agricultural products prices	12.3	36.5	–11.4	–3.4
Deflators:[19]				
GDP deflator	2.2	7.5	10.1	3.7
Government consumption deflator	3.9	11.5	10.2	5.3
Private consumption deflator	3.2	11.8	10.3	3.1
Fixed investments deflator	1.9	10.1	9.2	–1.5
Export deflator of goods and services	5.1	14.6	4.5	–1.7
Import deflator of goods and services	6.0	19.3	4.2	–2.7
Terms of trade	–0.9	–3.9	0.3	1.0

Source: Eurostat (2025); NBS Macroeconomic Forecast of MF SR (February 2025); ŠÚ SR (2025).

Producer Prices Declined

The energy crisis of previous years had a dramatic impact on input costs for producers in the country. While consumer inflation reached 10 – 15% annually in 2022 and 2023, industrial producers faced a multiple times higher increase in prices. As a result, the overall rise in producer

[18] A more detailed description of wage developments in the economy can be found in the chapter on the labour market.

[19] The data for 2024 are preliminary and will be subject to further revision in the future.

prices was not fully transmitted into consumer inflation. This observation is important for explaining the relatively loose relationship between industrial product prices and consumer prices. In 2024, industrial producers recorded a decline in prices, which, however, did not materialize in consumer prices.

Producer prices stabilized and, in some areas, even recorded an overall year-on-year decrease. On the domestic market, they fell by more than 10%, driven mainly by prices in the *Electricity generation, transmission, and distribution* sector, which declined by more than one quarter, following previous increases of 98% in 2022 and 23% in 2023. Prices of industrial products intended for export also fell year-on-year, though only slightly, by just over one percent. Among manufacturing products for export, the most significant decline was seen in the *Manufacture of wood and paper products and printing*, where prices dropped by more than 10% after a 40% increase in 2022.

The shortage of workers in construction also signalled a continued rise in construction work prices, which, although no longer growing at double-digit rates as in previous years, still recorded a year-on-year increase of more than 5%. Construction material prices stagnated, which, as already mentioned, was reflected in imputed rents and therefore also in consumer inflation in the category "*Housing, water, electricity, gas and other fuels*."

In 2024, global food prices began to rise again, although only moderately, and this increase started to be reflected in food inflation with a time lag toward the end of the year. However, its impact was not strong enough to significantly influence the annual average, in which agricultural producer prices recorded a year-on-year decline of more than 3%.

The overall GDP deflator ended almost one percentage point higher than consumer inflation, at 3.8%. This development was driven mainly by faster growth in public consumption prices. In contrast, investment prices recorded a general decline in the deflator. A moderate decline was also observed in the prices of exported goods and services, while imports experienced an even sharper decline. As a result, the terms of trade improved slightly, by one percentage point, which is unusual in the Slovak context. For one unit of exports, more units of imports could thus be purchased.

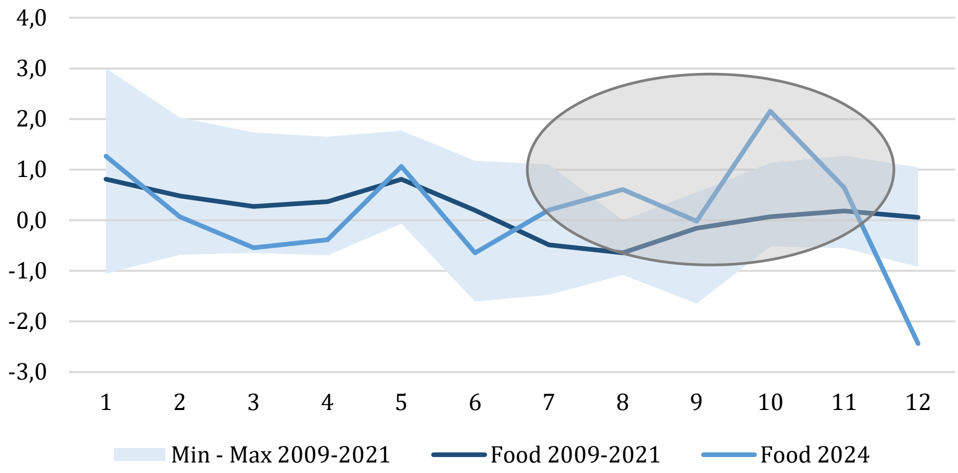
While the first part of the chapter focused mainly on a descriptive analysis of the components of inflation, the second part will deal more with analysing the impact of food price developments on household inflation.

Acts of Force Majeure Reignited Food Price Growth

The second half of 2024 was marked by a renewed increase in food prices following a long-anticipated period of temporary stabilization that, however, lasted only a few months. Although these were not extreme cases of price growth as in 2022, attention is given to several food items that contributed to the overall reversal of the trend and the subsequent rise in the general price level. The exceptional nature of this situation is also evidenced by the following chart of month-to-month changes in food prices, where developments in several months deviated significantly from the long-term average recorded between 2009 and 2021.

F i g u r e 4.4

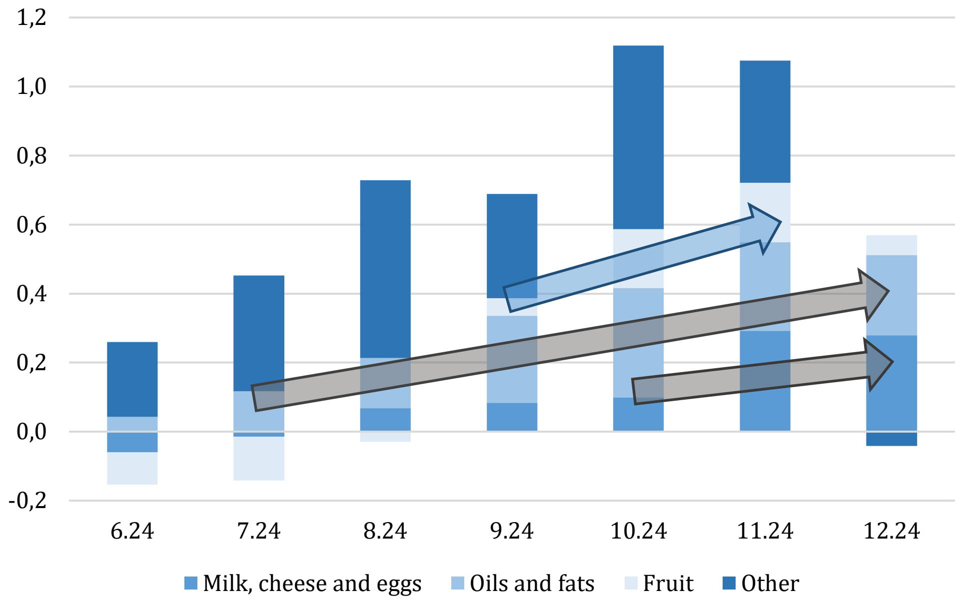
Month-on-Month Price Developments in the Category Food and Non-Alcoholic Beverages (in %)



Notes:
Category Food 2024 represents the month-to-month price developments in 2024.
Category Min – Max 2009 – 2021 represents the corridor of the lowest and highest recorded month-to-month change in the period 2009 – 2021.
Category Food 2009 – 2021 represents the average month-to-month price developments of food between 2009 and 2021.
Source: NBS Macroeconomic Database (2025); own calculations and processing.

There are three types of food, each of which contributed to inflation growth in a different month of the second half of the year, with their effects often overlapping or following one another – oils and fats (especially butter), fruit, and finally eggs. All three food types experienced production shortfalls to some extent (for various reasons), which subsequently exerted pressure on their consumer prices. The course of their contributions to overall inflation in the second half of the year (Figure 4.5) shows the onset of the impact of oils and fats (especially butter) already during the summer months. This was later followed by the atypical contribution of fruit in the autumn, and finally by the contribution of eggs at the end of the year.

Figure 4.5
Year-on-Year Contribution of Subcategories to Overall Inflation
(in p.p., 2024)



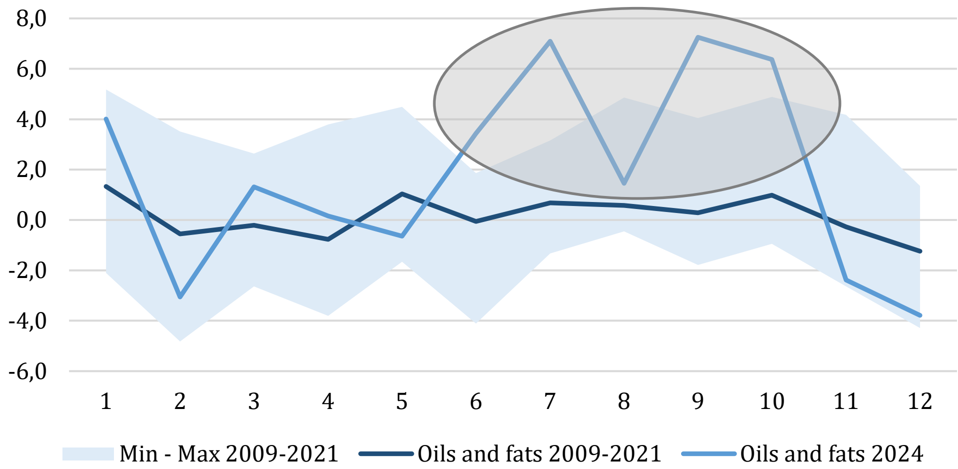
Source: ŠÚ SR (2025); own calculations and processing.

Butter began to rise in price unusually already during the summer, with month-to-month increases exceeding 5% (Figure 4.6). Overall, the average consumer price of fresh butter increased by more than 54% between April 2024 and December 2024. Several concurrent factors can be identified behind this development.

First, there was a decline in the availability of milk on the European market caused by the so-called bluetongue disease, which reduces milk production. Although this disease did not occur in Slovakia, it limited the amount of milk available in the EU, leading to historically record-high cream prices, the primary raw material for butter production.

The second factor was producers' preference to direct milk processing toward cheese production rather than cream and subsequently butter. Cheese production provides producers with higher margins, which allowed them to at least partially offset rising costs of fresh milk. This shift in production further deepened the upward pressure on cream prices and, consequently, on butter.

Figure 4.6
Month-on-Month Price Developments in the Subcategory Oils and Fats
(in %)



Notes:
Category Oils and fats 2024 represents the month-to-month price developments in 2024.
Category Min – Max 2009 – 2021 represents the corridor of the lowest and highest recorded month-to-month change in the period 2009 – 2021.
Category Oils and fats 2009 – 2021 represents the average month-to-month price developments of oils and fats between 2009 and 2021.
Source: NBS Macroeconomic Database (2025); own calculations and processing.

During this period, an unusual phenomenon in consumer behaviour also emerged: as prices rose, demand for the product increased as well. Driven by fears of further price hikes and butter shortages, consumers were motivated to purchase it in advance and stockpile (the "bank run" and “bandwagon” effect).[20] Butter price developments were also partly influenced by the announcement in autumn of a change in the tax rate on basic foodstuffs effective from 2025 and the subsequent response of retailers through marketing campaigns. These factors caused the month-to-month price trend of butter to turn negative from November. However, this effect was partly offset by seasonally higher demand for butter before Christmas, when its consumption traditionally rises.

At the same time, fruit prices also developed unexpectedly. Toward the end of summer and in autumn they usually do not record significant month-on-month increases for seasonal reasons, as this is the harvest period and consumer supply tend to be abundant. The year 2024, however, was an exception. From August through October, the Fruit category registered an average price increase of around 5% each month.

This was largely caused by extreme weather conditions, both abroad and in Slovakia. For apples, which carry the largest weight in this subcategory, neighbouring countries recorded significant production losses due to late spring frosts and a hot summer that negatively affected crop quality. As a result, the harvest no longer met quality standards. In the Czech Republic production fell by 50%, and in Austria by 40% (HN, 2024). Hot weather also affected the harvest in Slovakia, though in the case of apples to a lesser extent. However, production losses were recorded for other fruits—apricots were damaged by late spring frosts, while grape production was negatively influenced by spring rains and the spread of vineyard diseases. Table grapes from domestic production were therefore available only in limited quantities, which translated into higher prices.

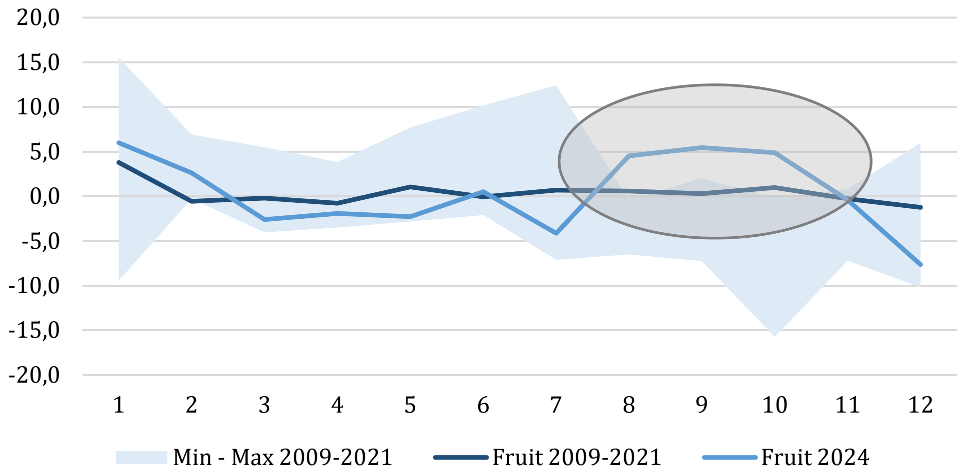
These factors, beyond the control of producers, caused autumn – traditionally a period of moderate fruit price developments – to exert a pro-inflationary effect in 2024.

The last analysed group of food products that contributed to the renewed increase in inflation in the second half of the year were eggs. Although the month-to-month prices in the category Milk, cheese and eggs rose only slightly above the historical maximum, this was mainly due to

[20] Historically, we addressed a similar topic of the “run on butter” in a publication of the same name mapping economic developments in Slovakia in 2017.

the fact that after the previous sharp rise, milk and cheese prices had already stabilized, with the price increase being driven primarily by eggs.

Figure 4.7
Month-on-Month Price Developments in the Subcategory Fruit (in %)



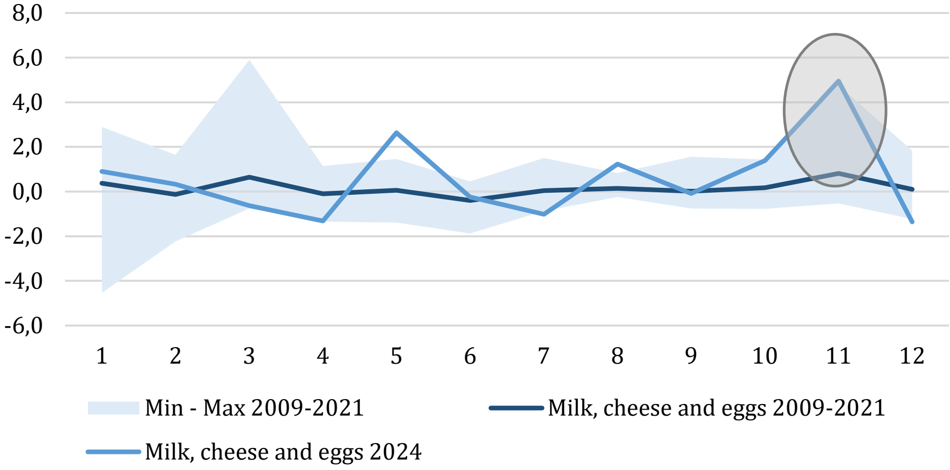
Notes:
Category Fruit 2024 represents the month-to-month price developments in 2024.
Category Min – Max 2009 – 2021 represents the corridor of the lowest and highest recorded month-to-month change in the period 2009 – 2021.
Category Fruit 2009 – 2021 represents the average month-to-month price developments of fruit between 2009 and 2021.
Source: NBS Macroeconomic Database (2025); own calculations and processing.

The rise in egg prices was caused by the outbreak of avian influenza in October at the largest egg producer in Slovakia, which had to destroy approximately 1.5 million eggs and its entire flock of laying hens (385,000 birds), representing about 10 – 15% of total egg production in the country. This production shortfall immediately created upward pressure on prices, although its full impact was not felt until the beginning of 2025.

The shortfall was temporarily compensated by increasing imports of eggs from neighbouring countries, especially Poland, Hungary, and the Czech Republic. However, sudden fears of shortages in the pre-Christmas period triggered panic buying and stockpiling – similar to the case of butter – to such an extent that some retailers had no eggs available for several days. The seasonal effect of higher demand for eggs during the pre-Christmas period further reinforced this price pressure.

F i g u r e 4.8

Month-on-Month Price Developments in the Subcategory Milk, Cheese and Eggs (in %)



Notes:
Category Milk, cheese and eggs 2024 represents the month-to-month price developments in 2024.
Category Min – Max 2009 – 2021 represents the corridor of the lowest and highest recorded month-to-month change in the period 2009 – 2021.
Category Milk, cheese and eggs 2009 – 2021 represents the average month-to-month price developments of milk, cheese, and eggs between 2009 and 2021.

Source: NBS Macroeconomic Database (2025); own calculations and processing.

Egg prices can be expected to rise further in the coming year, partly due to the transitional period needed to restore production at the domestic producer, but also in connection with the commitment of foreign retail chains to gradually phase out eggs from caged farming during 2025. In 2024, as much as 60% of domestic egg production still came from caged farming, while the pace of converting intensive farms to barn and free-range systems significantly lags behind.

As summarized in this part of the chapter, the renewed increase in food prices in the second half of the year was the result of a combination of events that were partly or entirely beyond the control of producers. Whether it is the occurrence of diseases affecting livestock production (such as avian influenza or bluetongue disease), or climatic phenomena negatively impacting crop production, it can be assumed that the increasingly rapid pace of climate change will in the future contribute more strongly to volatile price developments than we have been accustomed to in the past.

* * *

As anticipated in the previous edition, inflation in 2024 indeed eased and returned to its standard levels, even approaching the inflation target. In the upcoming year 2025, however, price growth is expected to accelerate again, reaching around 4%, despite the continued protection of consumers through household energy price regulation, which would otherwise have pushed inflation even higher.

One of the factors that will exert upward pressure on prices is the impact of the 2025 consolidation package, in particular the increase of the standard VAT rate to 23% and the introduction of the so-called “non-standard” tax on financial transactions. In the same direction, a surprisingly strong labour market with a dynamic pace of wage growth will raise supply-side costs. These higher costs are likely to be passed on to consumers to a large extent, leading to year-on-year acceleration of inflation.

The overall inflation developments in 2024, together with the outlook for 2025, thus resemble the situation of a firefighter who almost managed to extinguish the fire, but a sudden wind rekindled the smouldering embers and delayed its complete extinction.

5. MONETARY POLICY OF THE EUROPEAN CENTRAL BANK AND THE SLOVAK BANKING SECTOR

In the previous edition of Economic Development, we called the 2023 the year of textbook performance of the ECB's restrictive monetary policy (Morvay et al., 2024). If we decide to continue with the established trend, then the 2024 could be called the "year of achieving balance". Interpreting the concept of a soft landing as the achievement of the target inflation rate under conditions of economic equilibrium,[21] in the following text we will show that the ECB pilots successfully managed the landing of the Eurozone economy in 2024.

Going into 2024, the euro area economy was facing a steady inflation rate close to the 2% target, positive short-term real interest rates and a slightly negative economic growth outlook (see Figure 5.1). The output gap was in low negative territory, which was to be expected after almost a year and a half of restrictive monetary policy. From the perspective of anchoring inflation expectations, after a relatively surprising overestimation of the actual inflation rate by professionals in 2023 (Figure 5.2), 2024 saw a stabilization of short-term expectations in a range that is desirable for the central bank – close to 2%.

On the other hand, however, consumer perceptions of inflation continued to show interesting deviations from the decisions of professionals. While households were able to estimate the maximum inflation rate achieved at the end of 2022 almost accurately, the relative inertia in their perception of the actual inflation rate was evident not only in 2023 but also persisted into 2024. Even though the average inflation rate was already approaching 3%, households still perceived a significantly higher rate of price growth, somewhere between 3% and 5% on average. At the beginning of 2024, it was still possible to observe increased short-term inflation expectations (one year ahead) [22] above the target limit of two percent,

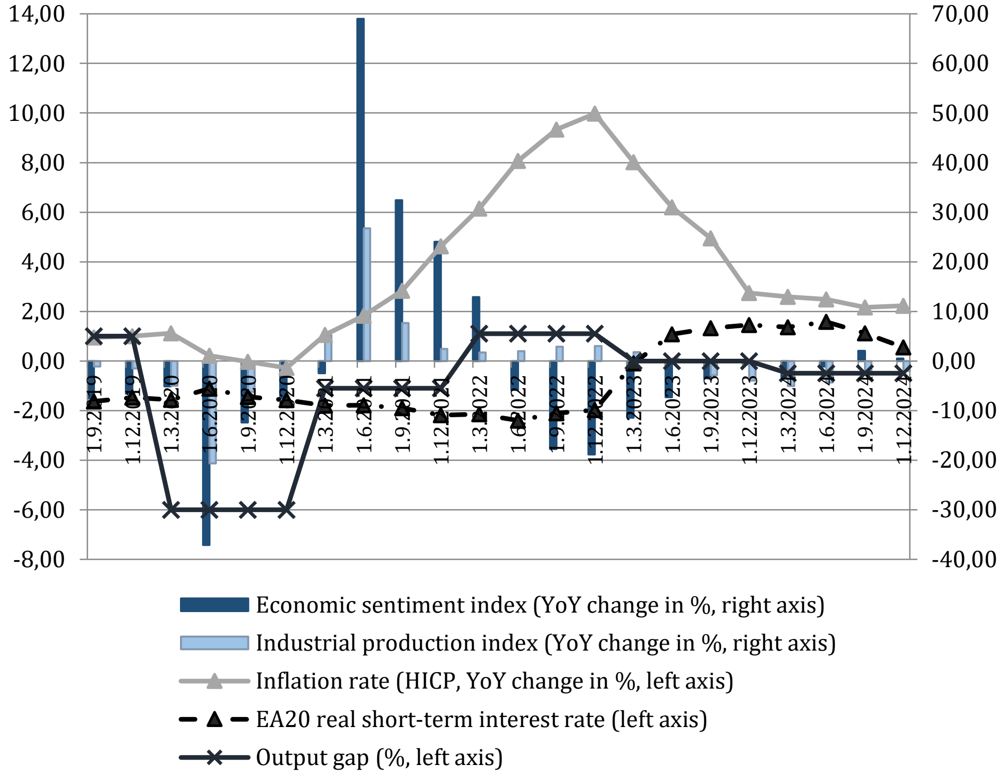
[21]In this context, precisely the kind of economic activity that does not create additional pressure for unsustainable price growth.

[22] There is an ongoing debate in academic research on how consumers form inflation expectations, including on the relative importance of past information (backward-looking consumers) versus forward-looking information (forward-looking consumers). Thus, in the case of only a gradual elimination of information about a high realized inflation rate in 2022, the group of backward-

which may have led central bank representatives to strike a cautious tone in their statements regarding the easing of strict monetary policy settings.[23]

Figure 5.1

Key Monetary Policy Indicators in the Euro Area



Note: Real long-term interest rates are calculated as the difference between the yield on 10-year German government bonds and 5-year inflation expectations of professionals. EA20 real short-term interest rates are calculated as the difference between 12-month money market interest rates and 1-year inflation expectations of professionals.

Source: ECB; Eurostat.

looking consumers may bias the perceived inflation rate upward. The significant decline in professionals' inflation expectations in early 2024 may point to faster processing of real inflation information relative to the household sector. The mechanism of expectation formation through the adaptive learning model may also suggest a lagged response to observations of actual realized inflation, which will be reflected with some delay in consumer decision making (see, e.g., Angeletos et al., 2021). As an alternative explanation, the question of the structure of the consumption basket of the two groups surveyed may also serve as an alternative explanation, especially with respect to the higher weight given to food and energy prices.

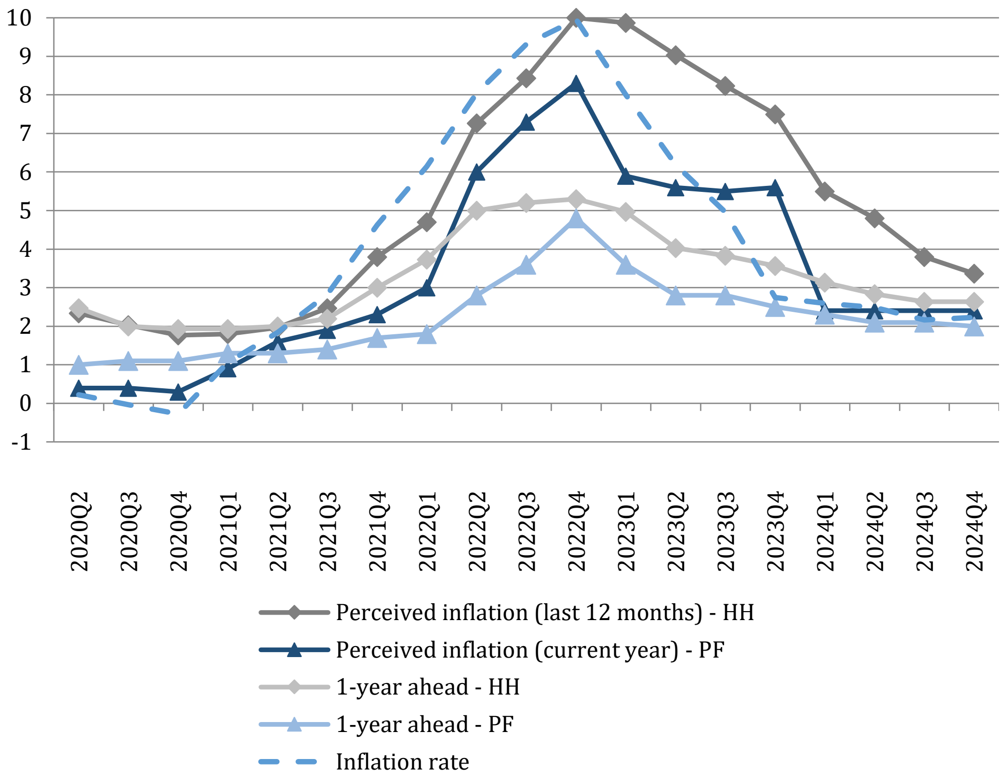
[23] According to ECB Governor Christine Lagarde, in March 2024, the bank was "not yet confident enough" and "clearly needs more evidence and data" to make a decision on easing monetary policy. *Source*: <https://www.ft.com/content/b03ce54c-7c6d-45e2-ae79-4b7129841f1a>.

Key interest rates were therefore kept at their maximum level during the first half of 2024 (see Figure 5.3), and the first easing only took place at the ECB's June meeting. It should be noted that the exact moment of the first decline in key interest rates was communicated by the ECB's main officials well in advance and well in advance. This communication strategy is one of the informal but increasingly used tools of monetary policy and thus fulfils one of the unwritten objectives - to achieve a targeted inflation rate without significantly disrupting the normal functioning of the economy. In other words, a sufficiently "soft" – transparent and systematic – communication of the central bank's intentions is needed to achieve a "soft landing".

Figure 5.2

Inflation Expectations of Professionals and Households and Inflation Rate

(%)



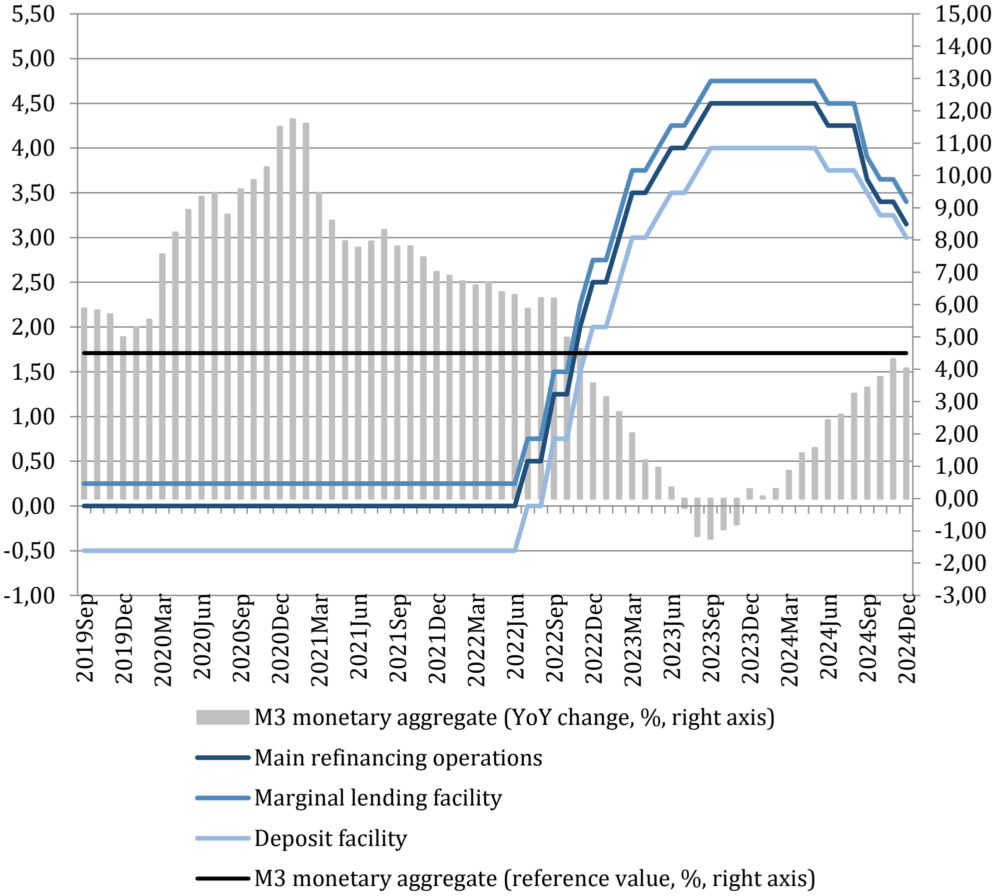
Note: PF – professional forecasters inflation expectations, HH – households inflation expectations. Inflation – actual rate of YoY inflation (HICP).

Source: ECB; Eurostat.

The subsequent repeated decline in key interest rates at ECB meetings in the second half of 2024 coincided with the achievement of an "equilibrium" growth rate of the M3 monetary aggregate, i.e. 4.5 percent (Figure 5.3). This was accompanied by a continuing reduction in the ECB's balance sheet through the tapering of refinancing operations and a decline in the volume of securities accumulated as a result of quantitative easing, the volume of which gradually decreased as they reached maturity (Figure 5.4). Thus, as we wrote in the introduction to this chapter, the achievement of monetary policy equilibrium by the end of 2024 has become a reality in terms of monetary categories.

Figure 5.3

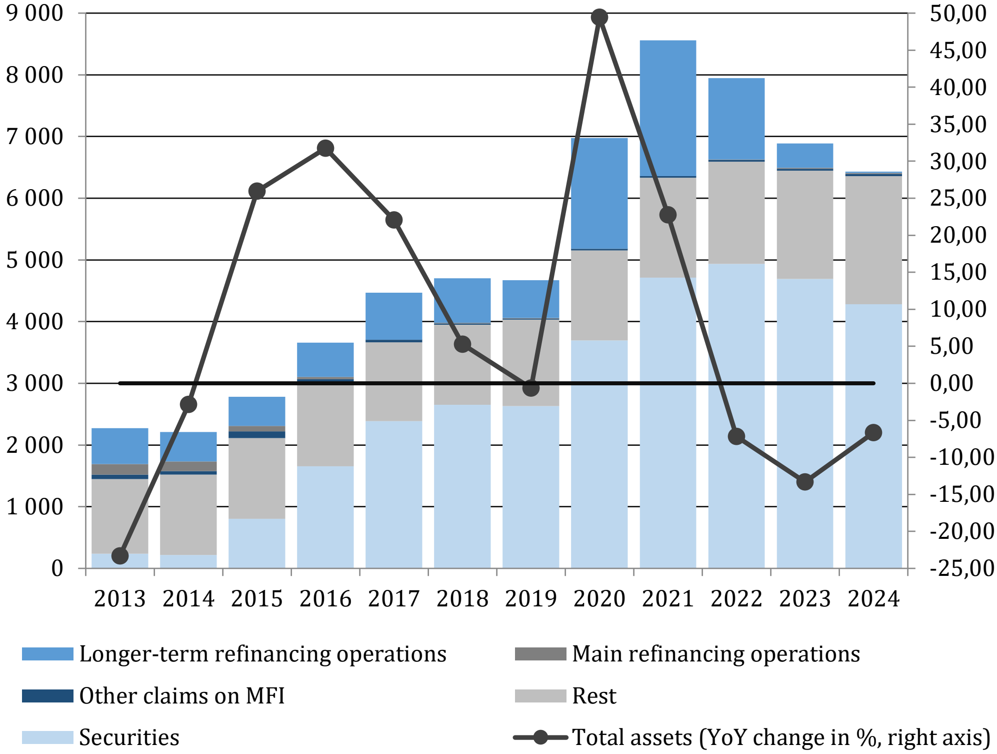
Key ECB Interest Rates (left axis) **and Growth Rate of M3 Monetary Aggregate** (%, right axis)



Source: ECB.

F i g u r e 5.4

Eurosystem Balance Sheet Structure (EUR billion, %)



Note: MFI – monetary financial institutions (commercial banks).
Source: ECB.

Following on from the expected effects of monetary policy, an important issue appeared to be the effect of achieving monetary balance in the banking sector, as one of the main transmission elements of the entire economic system. After reaching a low point in the credit cycle at the turn of 2023 and 2024 (Figure 5.5), which occurred approximately 1.5 years after the start of the restrictive phase of monetary policy, 2024 was (once again) marked by complete stabilization. Unlike in previous years, both the volume of loans to households and the corporate sector were synchronized – in terms of the frequency of the cycle and its size.

One interesting phenomenon that stands out from the overall "perfect" monetary development in 2024 is the continued complete change in the structure of commercial banks' deposit accounts with the central bank (Figure 5.5). Whereas before the period of restrictive monetary policy most of the free liquidity was held in the form of current (mandatory and voluntary) reserves, from 2022 onwards commercial banks have transformed these funds into overnight sterilisation deposits.[24]

Unsurprisingly, this move was linked to the possibility of generating short-term profits, which were created as the difference between stable interest income from funds deposited with the ECB and (still) low interest costs paid to commercial bank customers (households and businesses). But what appears to be even more interesting, this sharp increase in interest income on the safest and most liquid asset has also created an alternative investment to (risky and not very liquid) bank lending. When the deposit rate peaked and was maintained at 4.00% in 2023, this return significantly exceeded the average interest rate on loans to households by almost one and a half percentage points (2.66%, Table 5.1). From the perspective of monetary policy performance, this was a possible additional effect of restrictive monetary policy, which operated through a preference for depositing free liquidity with the central bank rather than providing loans to the private sector (the so-called portfolio effect).[25]

The year 2024 brought stabilization within this phenomenon, as the ECB deposit rate fell to 3.00%, which in Slovakia meant a decline below the average yield on household loans (3.31%, Table 5.1). At the same time, the volume of total deposit accounts at the ECB also declined, although it still exceeded pre-COVID levels in 2024 (Figure 5.5).

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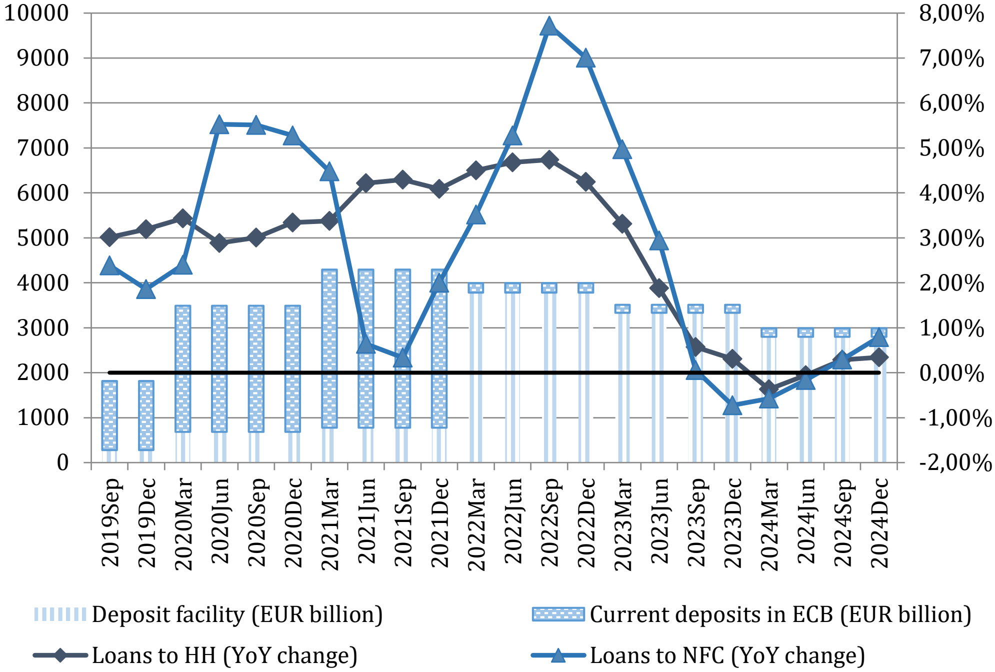
[24] If we take the volume of money held in the form of current accounts for monetary purposes in 2022 as an upper estimate of reserve requirements, it is possible to see how a relatively huge amount of voluntary reserves remained unused in the CB even in 2019 – 2021. The issue of voluntary reserves and the resulting disruption of the monetary policy credit channel has been the subject of much discussion in academic literature.

[25] While the mechanism of the ECB's monetary policy operations in the excess reserve system has been described in detail in De Grauwe and Ji (2024), for the purposes of this discussion we will highlight one particular aspect. The policy of significantly higher interest rates on deposits held at a central bank has been criticized from the perspective of a possible "transfer" of profits between the central bank and commercial banks. In the case of high interest rates on deposits at the CB, commercial banks earned a return that was perceived as a risk-free transfer between the state (the central bank is a public institution) and the private sector. Given that part of the central bank's profit/loss may be included in the state budget, increased interest payments to commercial banks could indirectly cause a shortfall in this part of the revenue as a result of a significant loss incurred by the central bank. This aspect is related to the discussion on the introduction of a so-called bank tax, described in the previous issue of the Economic Development, where one of the arguments in favour of its introduction concerned the existence of excessive profits generated outside their main business activity.

F i g u r e 5.5

Credit Aggregates and Deposit Accounts of Commercial Banks in the ECB
(EUR billion, %)



Source: ECB.

The possibility of achieving such short-term "excessive" profits is closely related to the issue of the effectiveness of the interest rate channel of monetary policy. We debated the topic of the profitability of the Slovak banking sector from the perspective of concentration in international comparison in the previous issue of the Economic Developments. In this issue, we take a closer look at the (limited?) strength of transmission of monetary policy shocks to the interest rates of commercial banks in Slovakia as one of the possible sources of additional profits in the commercial banking sector.

Strength of Transmission of Monetary Policy Shocks

In Table 5.1, we provide an overview of the relevant characteristics of the Slovak banking sector related to lending to firms and households. The iron rule of a stable interest margin in the non-financial corporations

(NFC) sector has been violated, and the near doubling in 2023 and 2024 was mainly driven by a significantly strong increase in the yield on loans. While there was also an increase in interest rates on long-term time deposits, these account for only about one-third of total deposits, and so the increase in their interest rates was not fully passed through to the aggregate figures. This significant increase in the interest margin was also accompanied by a more pronounced fall in total lending, with 2024 seeing the first decline in total NFC lending over the period.

Table 5.1

Selected Characteristics of the Banking Sector Balance Sheet

	2019	**2020**	**2021**	**2022**	**2023**	**2024**	**2025***
Panel A: Loans to Non-financial Corporations							
Loans growth rate (YoY, %)	4.29	3.56	0.22	10.75	6.94	–1.77	1.03
Interest rate – term deposits (%)	0.15	0.07	0.00	0.33	2.96	3.52	2.62
Interest rate – sight deposits (%)	0.00	0.00	–0.01	0.00	0.23	0.43	0.37
Interest rate – loans (%)	2.39	2.31	2.29	2.56	4.91	5.31	4.57
Interest margin	2.38	2.30	2.30	2.54	4.09	3.96	3.53
Short-term deposits/Long-term deposits	10.91	10.81	14.13	11.17	3.63	2.33	2.35
Short-term loans/Long-term loans	1.15	1.10	1.04	1.08	1.07	1.03	1.14
Deposits/Loans (coverage)	0.69	0.72	0.74	0.73	0.78	0.86	0.83
Long-term loans/Long-term deposits	8.05	7.87	10.01	8.02	2.85	1.90	1.89
Panel B: Loans to Households and NPISH							
Loans growth rate (YoY, %)	8.65	7.41	6.80	10.76	6.40	3.75	6.37
Interest rate – term deposits (%)	0.78	0.71	0.61	0.61	1.35	2.09	2.05
Interest rate – sight deposits (%)	0.03	0.02	0.01	0.01	0.03	0.07	0.08
Interest rate – loans (%)	3.13	2.71	2.35	2.20	2.66	3.31	3.72
Interest margin	2.83	2.48	2.18	2.05	2.30	2.69	3.11
Short-term deposits/Long-term deposits	1.76	2.37	2.89	3.33	2.93	2.65	2.70
Short-term loans/Long-term loans	0.06	0.05	0.04	0.04	0.04	0.03	0.03
Deposits/Loans (coverage)	1.02	1.02	1.03	0.95	0.89	0.91	0.92
Long-term loans/Long-term deposits	2.55	3.15	3.61	4.40	4.28	3.89	3.90

Source: NBS; ECB; own calculation. *as of March 2025.

Deposit and lending activity in the household sector followed a similar trend, albeit with much less vigour. Compared with the NFC sector, the increase in interest margins was not only delayed by an average of one year, but was also much smaller in scale. As in the case of NFC deposits, households have only about one-third of their savings in term deposits, so only a very limited increase in interest rates on current accounts resulted in a slight increase in the aggregate deposit rate. However, as banks did not resort to a sharp increase in interest rates on loans to households (whether due to competition and market share retention, stable profit generation with low deposit rate elasticity, or as a result of multi-year interest rate fixation),[26] the increase in the interest margin was relatively weak and only gradual.

Statements by the National Bank of Slovakia during 2024 confirmed the trend of reaching the limit of the negative effects of restrictive monetary policy and subsequent stabilization within the financial cycle. For this reason, no macroprudential policy measures were taken during 2024. The main factor behind the decline in corporate financing was weak demand from companies themselves, precisely as a result of the increase in the cost of financing, i.e. the interest rate on loans (NBS, 2024). In this case, too, it can be concluded that the expected effects of monetary policy aimed at limiting corporate investment activity have worked.

In this context, it is also important to note the very limited response of households to the increase in interest rates on term deposits. While in 2019 the share of term deposits in total household deposits exceeded 36%, at the beginning of 2025 it stood at 27%, even after more than 24 months of restrictive monetary policy by the ECB with maximum key rates at 4.50%. This trend continues to exacerbate the problem of low gross savings among Slovak households, which we have already addressed in previous issues of the Economic Developments.

The question of how the prices of loans and deposits in the household and corporate sectors reacted differently to the ECB's restrictive policy is an interesting one, both theoretically and empirically. In order to assess whether the situation in the Slovak banking sector was exceptional compared to the euro area economy, we decided to test the strength of the response of bank interest rates using the local projection method. This method allows us to track the evolution of the response in commercial bank interest rates across different time horizons. In our example, we will

[26] For a more detailed discussion of profitability developments in the Slovak banking sector, see Box 3 in NBS (2023).

model the response for the 18 months following a change in the key interest rate.[27] Figures 5.6 – 5.8 illustrate the strength of the response of selected interest rates in Slovakia to a change (increase) in the key ECB interest rate over the period of EMU membership (2009 – 2025).[28]

As can be observed for the aggregate of loans (Figure 5.6, left-hand Figure), an increase in the key interest rate is passed on to the price of corporate loans almost immediately, with the maximum strength of the pass-through being reached after four to six months and gradually fading away after about one year. In contrast to the euro area as a whole, while the path of the shock's unwinding is very similar for Slovakia, the strength of the transmission reaches almost twice as high approaching a unit response.[29]

Conversely, in the case of the household sector (Figure 6.6, right-hand Figure), the strength of the pass-through is statistically insignificant (unlike in the euro area) and thus reaches a pass-through strength of almost zero. In the case of the euro area, the pass-through to deposit rates for households is statistically significant, but its strength is also relatively low.[30] The period of restrictive monetary policy of the ECB thus manifested itself in

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[27] Given that we are working with the cyclical part of the time series, the interpretation of the results will be based on the transmission of short-term shocks to commercial bank interest rates. In other words, we will look at the transmission of the cyclical part of the key interest rate, i.e. deviations from the long-term trend, to the cyclical part of long-term interest rates. Since monetary policy mostly focuses on short- to medium-term effects, this method of analysis is appropriate for our discussion. Tests of the existence of a long-term (theoretical) relationship between the key interest rate and bank interest rates are usually performed using long-term equilibrium models; see Domonkos et al. (2023).

[28] As part of the sensitivity analysis, we also made estimates using a variable capturing change in macroprudential policy. The estimates remain virtually unchanged, even with the shortening of the time period to 2023.

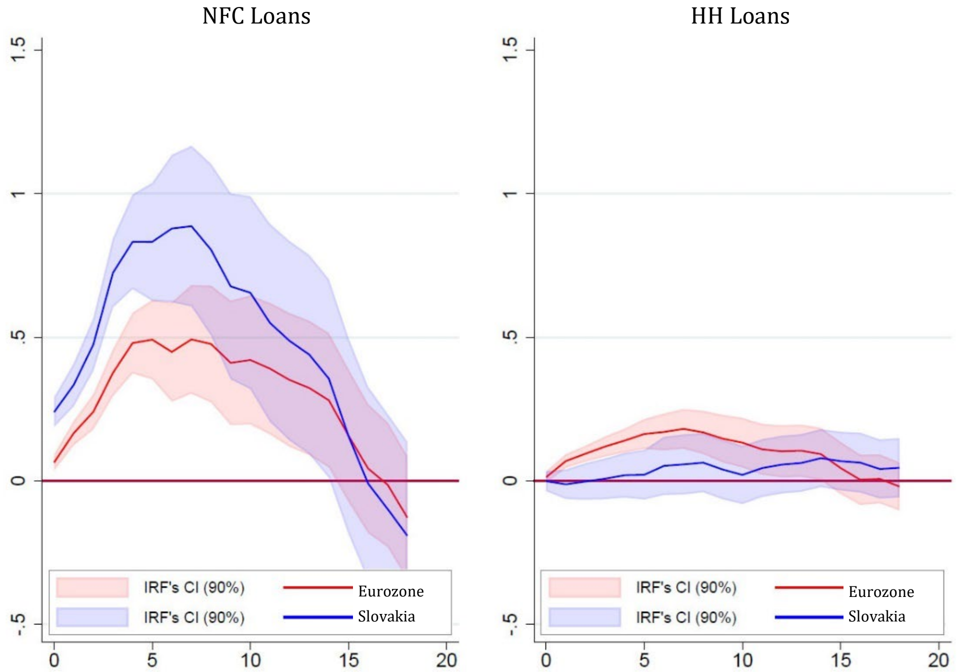
[29] A review study by Iorngurum (2024) documents that scientific literature generally reports the strength of the transmission of the short-term effect of interest rate increases at a level of approximately 50%. Our results for the euro area confirm these estimates, but the response of Slovak corporate lending rates is considerably stronger.

[30] The low pass-through to deposit interest rates for households was also a topic of economic policy in other individual euro area countries. Possible responses and measures included, for example, persuasive discussions between central bank representatives, finance ministry representatives and commercial banks (in the form of moral suasion) regarding stronger transmission (*Source*: <https://www.thebanker.com/content/7eee286b-c82a-59d2-a0c7-a10cfe03aba8>), the issue of raising interest rates on deposits at a systemically important local player (potentially a state-owned bank) to trigger a market response from competitors (*Source*: <https://www.hnb.hr/en/-/uhvati-me-ako-mozes-rast-kamatnih-stopa-na-orocene-depozite>), or the issuance of government bonds for small investors, which were intended to serve as an alternative yield asset (Rašic and Hinger, 2025).

the lending activity of Slovak commercial banks not only through a more pronounced drop in corporate funding (Table 5.1), but also through a significant increase in the cost of lending. The household sector was significantly insulated from similar developments, with only a decline in the growth rate of lending at, on average, unchanged funding prices.[31]

F i g u r e 5.6

Impulse Response Functions (IRF) to Changes in the ECB Key Policy Rate for the Next 18 Months (left figure – average interest rates on loans to the NFC sector; right figure – average interest rates on loans to the HH sector)



Note: IRF generated through local projection method (Jordá, 2005). The variables enter the model as their cyclical component estimated using the Hodrick-Prescott filter. The dependent variable is the average interest rate on loans to the corporate sector (NFC – non-financial corporations) and the household sector (HH – households). Control variables include the VIX index and three variables capturing unconventional monetary measures obtained from central bank balance sheet information (holdings of government securities, holdings of MFI securities, MFI loans). The estimation is performed on monthly data for the period 2009 – 2025, with both the shock and control variables entering the model with a 1- to 6-month lags.

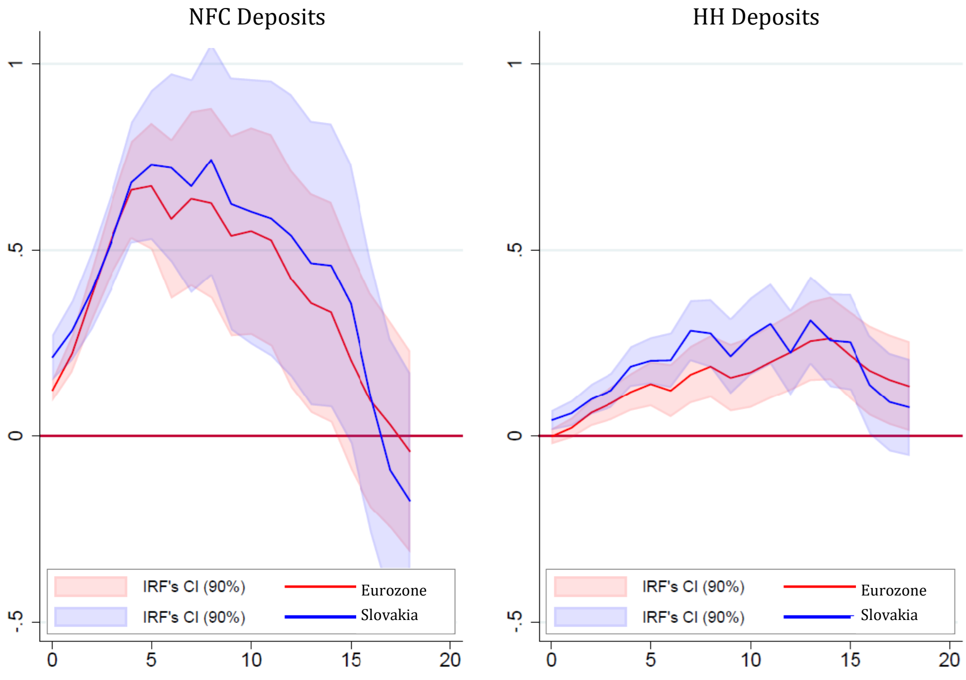
Source: ECB; FRED; own computation.

[31] A review study by Gregor et al. (2021) points out that most research studies document the observation that the pass-through into corporate loans tends to be generally stronger than the pass-through into mortgage loans to households, which may be related to the length of the loan maturity as well as its fixation.

Figure 5.7 provides the same view of the pass-through of interest rate changes, but in this case to the prices of term deposits. The corporate sector in the euro area, but also in Slovakia, benefits relatively strongly from a higher ECB key interest rate, as on average 70% of the shock is passed on to deposits in the event of a rise in this rate. In this case, Slovakia does not differ statistically from the euro area. Taking into account the strength of the pass-through to lending rates (Figure 5.1), it can be concluded that interest margins in the NFC lending sector in Slovakia are increasing in response to a more restrictive monetary policy.

Figure 5.7

Impulse Response Functions (IRF) to Changes in the ECB Key Policy Rate for the Next 18 Months (left figure – average interest rates on term deposits for the NFC sector; right figure – average interest rates on term deposits for the HH sector)



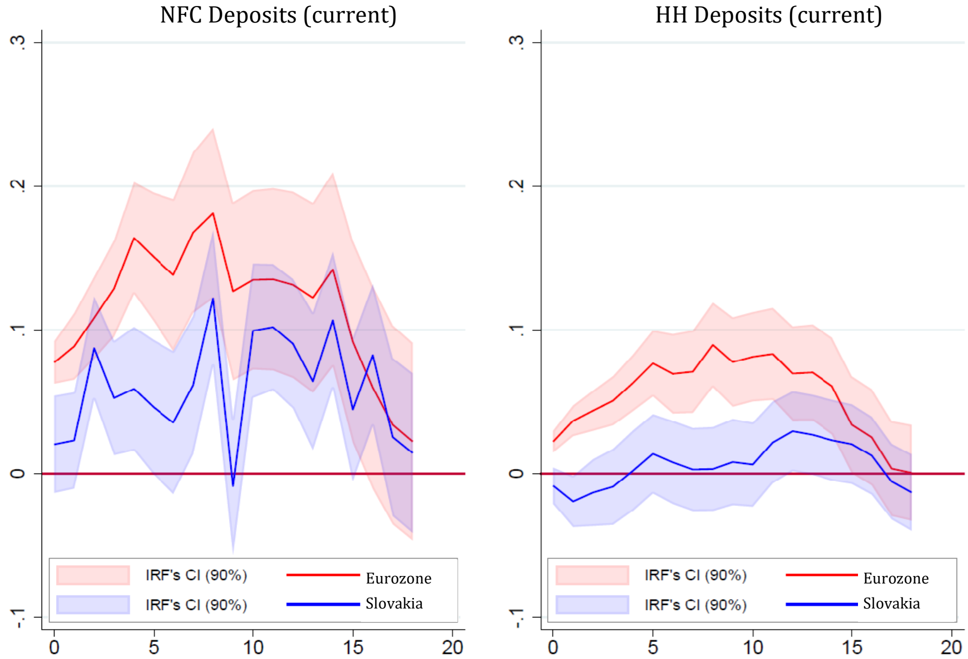
Note: IRF generated through local projection method (Jordá, 2005). The variables enter the model as their cyclical component estimated using the Hodrick-Prescott filter. The dependent variable is the average interest rate on term deposits to the corporate sector (NFC – non-financial corporations) and the household sector (HH – households). Control variables include the VIX index and three variables capturing unconventional monetary measures obtained from central bank balance sheet information (holdings of government securities, holdings of MFI securities, MFI loans). The estimation is performed on monthly data for the period 2009 – 2025, with both the shock and control variables entering the model with a 1- to 6-month lags.

Source: ECB; FRED; own computation.

Households benefit at least partially from restrictive monetary policy, with the strongest transmission occurring only after more than half a year after the initial shock. In terms of the strength of the transmission, there is only a very modest impact on commercial interest rates in this sector, up to a maximum of 30 percent. This weak pass-through is even more pronounced for sight deposits (Figure 5.8), where the strength of the pass-through reaches a maximum of 10 percent. In the specific case of this shortest and most liquid segment, the response in the price of deposits offered to Slovak households turns out to be close to zero and thus statistically insignificant.

Figure 5.8

Impulse Response Functions (IRF) to Changes in the ECB Key Policy Rate for the Next 18 Months (left figure – average interest rates on sight deposits for the NFC sector; right figure – average interest rates on sight deposits for the HH sector)



Note: IRF generated through local projection method (Jordá, 2005). The variables enter the model as their cyclical component estimated using the Hodrick-Prescott filter. The dependent variable is the average interest rate on sight deposits to the corporate sector (NFC – non-financial corporations) and the household sector (HH – households). Control variables include the VIX index and three variables capturing unconventional monetary measures obtained from central bank balance sheet information (holdings of government securities, holdings of MFI securities, MFI loans). The estimation is performed on monthly data for the period 2009 – 2025, with both the shock and control variables entering the model with a 1- to 6-month lags.

Source: ECB; FRED; own computation.

Empirical evidence shows that the strength of the transmission of the ECB's restrictive monetary policy to deposit rates is half as strong in this financial cycle as it was during the last key interest rate hike in 2006 – 2007 (Messner and Niepmann, 2023). The paradox is that, since the interest rate on household loans in Slovakia responded only to a limited extent to restrictive monetary policy, the main "winners" from this phase of the ECB's tight monetary policy were, perhaps less surprisingly, Slovak households.

The reasons for the varying strength of monetary policy transmission to commercial banks' deposit and lending rates across countries and sectors are an active area of current academic research. Within the ECB, this research topic is receiving special attention in the newly established working group "Challenges for Monetary Policy Transmission in a Changing World Network".[32] Given the current state of knowledge, it can be concluded that the pass-through of changes in the key interest rate to bank interest is influenced by a number of factors – whether it is the extent of development of domestic financial markets (as an alternative form of investment), the size the domestic banking sector, or the degree of central bank independence (Gregor et al., 2021). In the case of determinants from the real economy, FDI inflows and economic development help to increase the strength of the transmission, while in contrast, the strength of the response decreases in periods of elevated inflation (Iorngurum, 2024).[33] The deterioration in the transmission of restrictive monetary policy shocks in 2022 – 2023 can also be partly explained by the accumulation of high volumes of liquidity in the banking sector, which has persisted in the system since the central bank's pandemic measures (PEPP program).

In the case of Slovakia, the (in)possibility and (in)availability of alternative forms of financing for the household sector may prove to be an important factor. In view of the above-average response in the corporate sector in Slovakia vis-à-vis the euro area, the possible interpretation of

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[32] <https://www.ecb.europa.eu/pub/research-networks/html/champ.en.html>.

[33] A more detailed discussion of the possible factors behind the weak transmission of the key interest rate increase to deposit interest rates in an individual euro area country – the Netherlands – is available in the NACM report (2024). This report was produced in response to an inquiry from the Dutch Ministry of Finance, which pointed to the weak response of commercial banks to the ECB's key interest rate increase.

this phenomenon may depend on market factors, such as the direct link between lending rates and market rates, and the (low) duration of the fixation period.

* * *

Monetary policy performance in 2024 has had a successful year of sailing into a harbour called "soft landing". After years and decades of unusual economic situations and even more unconventional monetary policy, 2024 has brought a semblance of normality for the first time. Monetary policy has been given room to use all instruments, including the key interest rate, the inflation target has been achieved and expectations in this area are favourable for the euro area. On the other hand, developments towards the end of 2024 in some individual economies suggest that significant geopolitical uncertainty arising from, among other things, the outcome of the US presidential election could significantly disrupt this safe haven in 2025.

The year 2024 also marked consolidation and stabilisation around equilibrium in the Slovak banking sector. However, the way in which the sector reached this equilibrium is interesting. While corporate sector financing fell into the red and was associated with a significant increase in the interest margin, household financing experienced a relatively gradual decline with a slight increase in the interest margin. Moreover, the early signs from 2025 indicate that the trend of focusing on financing the consumption desires of the population is back with undiminished force. A certain "recovery" in household lending and a significantly stronger transfer to the corporate sector is partly specific to Slovakia, as pointed out by an analysis of the response to shocks generated by the local projection method.

From the perspective of the future financing of Slovakia's economic development, these tendencies may thus imply negative prospects. The already below-average levels of investment activity reflect the lower gross savings of the population, which have responded only to a limited extent to two years of key interest rate increases.

The tendency towards today's rapid consumption or the replacement of investment activity in the form of real estate ownership may appear to be a certain reaction to a period of high inflation (for more details, see Chapter 4 – Price Development). An alternative explanation is the lack of investment alternatives for the general population due to a dysfunctional capital market, which results in a vicious circle: banks are not motivated to increase deposit interest rates because households do not react and "do not complain," and households do not generate sufficient gross savings because they are not motivated by rising interest rates. The issuance of government bonds to the general public can mobilize savings and bring competition to the deposit accounts segment for households.

At the same time, as we are already at the beginning of the monetary easing cycle, from the banking sector's point of view, there should be a faster and more pronounced response in the financing of the corporate sector – but there is no need to be overly optimistic. The Iorngurum (2024) study points to markedly asymmetric effects of monetary policy, whereby a cut in key interest rates will only translate into lower interest rates of up to 30% on average. Combined with the effects of the bank levy (see previous Economic Developments) and the financial transaction tax (see Chapter 6 – Public Finance for more details), this makes the recovery of private corporate sector financing one of the key economic policy issues. Also in view of the broader discussion on the lost investment and innovation capacity of the euro area economy (and Slovakia), we will see in the near future how economic policy and the Slovak economy will deal with the issue of development investment financing.

6. PUBLIC FINANCE

The development of public finances in the Slovak Republic in 2024 was marked by continued budgetary tension, reflecting long-term structural problems and the need for consolidation. The first wave of consolidation measures, however, was not sufficient to reduce the structural deficit, and the government adopted several additional measures, primarily on the revenue side of public finances, effective from 2025. Public finances were significantly influenced by the domestic political process as well as external factors due to instability in Europe (Russian aggression in Ukraine, risks in energy markets, and the decision to further subsidize them for households).

Development of General Government Budget

The public administration deficit for 2024 reached 5.27% of GDP. This was confirmed by the Statistical Office of the SR in its latest report. This is significantly less than the approved budget anticipated. The budget had estimated the deficit at 5.97%. The better financial result was primarily due to better tax collection and higher non-tax revenues. On the expenditure side, positive factors included lower state budget expenditures related to the purchase of defense technology, as well as lower contributions to the EU budget. The actual deficit achieved was also positively influenced by the financial management of several public administration entities. Conversely, energy price compensation costs were notably higher than budgeted. At the same time, the set public expenditure limit for 2024 was evaluated for the first time, and its value was adhered to.

Since 2020, there has been a significant deterioration in Slovakia's public finances. The state budget deficit deepened from –1.21% of GDP in 2019 to –5.30% of GDP in 2020 due to the COVID-19 pandemic. After a temporary improvement in 2022 (–1.67% of GDP), it rose again to –5.21% in 2023 and an anticipated –5.78% in 2024. The primary balance has been consistently negative since 2020, with the exception of 2022 (–0.63% of GDP), and is expected to be –4.35% in 2024. The structural balance has been negative throughout the entire period and will reach –4.81% of GDP in 2024, signaling serious problems in budgetary policy settings. Public debt increased from 49.3% of GDP in 2018 to 60.2% in 2021. After a slight decrease, it will reach 58.9% of GDP again in 2024. Net debt is expected to be at 50.1% of GDP. This development points to the increasing vulnerability of public finances and the need for fundamental reforms to ensure their long-term sustainability.

Table 6.1
Key Public Finance Indicators in 2021 – 2024

Indicator	2021	2022	2023	2024
Net lending (+)/net borrowing (–) (mil. EUR)	–5187.2	–1837.7	–6399.4	–7590.7
Net lending (+)/net borrowing (–) (% GDP)	–5.1	–1.7	–5.2	–5.8
Primary balance (% GDP)	–4.0	–0.6	–4.0	–4.4
Structural primary balance (% GDP)	–0.4	–0.1	–1.9	–3.4
Structural balance (% GDP)	–1.5	–1.2	–3.1	–4.8
General government gross debt (Maastricht) (mil. EUR)	60.2	57.7	56.1	58.9
General government net debt (% GDP)	48.9	47.6	48.4	50.1

Source: Ministry of Finance of the SR (2025a).

Table 6.2
Impact of Local Government Management on the Public Administration Budget in 2022 – 2024 (in thousands of EUR)

	2022	2023	2024 Budget	2024 Actual	Difference
Municipalities and their budgetary organizations	–287 784	124 779	–283 250	35 270	318 520
Self-governing regions (VÚC) and their budgetary organizations	–141 839	–89 995	–115 617	–59 167	56 450
Contributing organizations of municipalities	–1 694	1 213	–323	1 386	1 709
Contributing organizations of self-governing regions (VÚC)	–1 050	11 419	–175	–7 623	–7 448
Transport companies	–9 411	71 771	–13 136	–74 632	–61 496
Healthcare facilities of local government	29 023	–13 115	–2 017	–2	2 015
Other local government entities	2 091	–24 817	0	–24 817	–24 817

Source: ŠZÚ (2025).

In 2024, local government achieved a better financial result than budgeted – the deficit according to ESA methodology was almost EUR 285 million lower. Municipalities recorded a surplus of over EUR 146 million instead of the planned deficit, thanks to higher shared taxes, corporate income tax compensations, EU grants, and an increase in local revenues. Expenditures grew, especially for wages and investments, but the surplus remained significant, though lower according to ESA due to an increase in liabilities. Self-governing regions (VÚC) also managed their finances better, with a lower cash deficit (EUR 42 million). Revenues were strengthened mainly by taxes, grants, and transfers, while expenditures were primarily directed towards capital investments. The ESA deficit was higher than the cash deficit, influenced by accounting movements.

T a b l e 6.3

Impact of Social Security Funds Management on the Public Administration Budget in 2022 – 2024 (in thousands of EUR)

Social Security Funds	2022	2023	2024 Budget	2024 Actual	Difference
Social Insurance Agency	191 323	51 561	140 099	316 996	176 897
Public Health Insurance	552	224 675	179 010	53 103	–125 907

Source: ŠZÚ (2025).

The Social Insurance Agency achieved a surplus of EUR 317 million in 2024 according to ESA methodology, which is EUR 177 million more than the planned budget. The main reason was a higher transfer from the state budget (by EUR 1.12 billion), related to rising pension expenditures. Conversely, premium revenues were lower, especially from economically active persons. Higher revenues came from outstanding premiums, and the deleveraging of hospitals also had a positive effect. The ESA surplus was also influenced by the imputation of receivables from healthcare facilities and the accrual of premiums. Total expenditures reached EUR 14.07 billion, which is EUR 1.07 billion more than the budget, mainly due to the 13th pension and the increase in early retirements. Expenditures for sickness and maternity benefits were lower due to a decrease in birth rates. Health insurance companies achieved an overall surplus of EUR 53.1 million, which is EUR 125.9 million less than planned. A significant impact was a lower collection of premium revenues by EUR 42.4 million. Expenditures of public health insurance for healthcare were higher than budgeted, especially in the area of medicines and shared diagnostic and therapeutic components. There was also a high increase in other healthcare. In inpatient healthcare, there was no significant overall budget overrun, but Všeobecná zdravotná poisťovňa (General Health Insurance Company) recorded a significant exceeding of minimum amounts.

Medium-Term Trends in Public Finance Development

Based on a long-term analysis of data for the years 2018 to 2025, we can observe a clear upward trend in both revenues and expenditures throughout the monitored period. Total revenues increased from approximately EUR 37.1 billion in 2018 to a planned EUR 55.2 billion in 2025. Similarly, total expenditures rose from EUR 37.8 billion in 2018 to a planned EUR 61.2 billion in 2025. Expenditures are systematically growing faster than revenues. This trend is reflected in the persistent and even deepening budget deficit, which is planned to reach EUR 6.0 billion in 2025.

On the revenue side, key items are tax revenues and social security contributions.

- *Tax revenues*: Show stable growth, with the most significant being value-added tax (VAT) and income taxes (corporate and personal). For example, VAT increased from EUR 6.7 billion in 2018 to a planned EUR 10.8 billion in 2025.
- *Social security contributions*: Form an increasingly significant part of revenues and show very dynamic growth – from EUR 11.4 billion in 2018 to an expected EUR 20.4 billion in 2025.
- *Grants and transfers from the EU*: These revenues are more volatile, with a peak in 2021, and a slight decrease is expected in 2024 – 2025 compared to previous years due to the still slow absorption of cohesion policy funds.

On the expenditure side, social benefits and employee expenditures dominate.

- *Social benefits*: Represent the largest expenditure item, and their volume is growing dramatically – from EUR 14.8 billion in 2018 to a planned EUR 27.2 billion in 2025. This increase is the main factor in the overall growth of expenditures.
- *Compensation of employees (wages and salaries)*: Also show stable growth, reflecting salary increases in the public sector, especially in 2022 and 2023.
- *Interest costs*: After a period of relative stability, a significant increase in planned expenditures for state debt servicing is observed from 2022, which is expected to reach EUR 2.6 billion in 2025. This is related to increasing indebtedness and rising interest rates on international financial markets.
- *Capital expenditures*: These expenditures (investments) fluctuate, indicating variability in state investment activity, but for 2025, a volume of only EUR 4.0 billion is planned.

Rising debt service costs are another warning sign for future fiscal stability. In response to the reform of European fiscal rules, the Government of the Slovak Republic submitted its first National Fiscal-Structural Plan (MF SR, 2024), which aims to ensure the sustainability of public finances and adapt them to expected challenges, especially in connection with population aging. The plan covers the period 2025 to 2028 and focuses on gradually reducing the deficit and stabilizing public debt below the EU reference levels of 3% of GDP for the deficit and 60% of GDP for public debt. The main pillars of the plan include:

- *Fiscal consolidation*: The government commits to reducing the deficit by approximately 1% of GDP annually, with the aim of reaching 2% of GDP in 2028.
- *Application of expenditure limits*: According to § 30aa par. 1 of Act No. 523/2004 Coll., the public expenditure limit means the maximum amount of expenditures expressed as a sum determined in accordance with the permitted year-on-year growth of net expenditures with reference to Art. 2 par. 2 of Regulation (EU) 2024/1263. This regulation defines net expenditures as general government expenditures excluding interest expenditures, discretionary revenue measures, expenditures on Union

programs fully covered by Union funds revenues, national co-financing expenditures for Union-funded programs, cyclical elements of unemployment benefit expenditures, and one-off and other temporary measures (MF SR, 2025). The maximum cumulative growth of net public expenditures is set at 8.1% until 2028. Consolidation measures totaling 4.4% of GDP (approx. EUR 7 billion) are needed to achieve the 2028 target. Expenditure limits will be the basic binding rule instead of the previous complex structural balance framework. The plan includes investments in defense, renewable energy sources, railway infrastructure, energy security, and green transformation. In the area of digital transformation, emphasis is placed on supporting innovation and research. Education, social inclusion, and energy poverty are other priorities, as is the modernization of public administration.

The plan assumes an average GDP growth of almost 2% annually in the period 2025 – 2028. Inflation is declining after the shocks subside, creating room for real wage and consumption growth. Unemployment remains at historical lows, but demographic developments are reducing labor supply. The plan is based on forecasts from autumn 2024. It presents ambitious consolidation goals that should ensure the long-term sustainability of Slovakia's public finances while supporting strategic reforms and investments. The assumptions of falling inflation rates are questionable, as the adopted measures have an inflationary effect.

According to the latest evaluation report by the European Commission (EC, 2025), Slovakia faces high risks to public finance sustainability in the short, medium, and long term. In the short term, these risks are mainly driven by unfavorable macroeconomic and financial factors. In 2024, financing conditions are relatively strict, the current account showed a high deficit, and household savings rates were low. Added to this is a high government deficit, which further increases budget vulnerability. Although rating agencies still assess Slovakia as an investment-grade country, there have been rating downgrades – first by Fitch and later by Moody's. Moody's lowered Slovakia's rating to A3 and changed the outlook from negative to stable. It also expects Slovakia's public debt to exceed the level of similarly rated countries in the coming years.

The medium-term outlook is not more optimistic. With unchanged fiscal policy, government debt could increase to 96% of GDP by 2035. The key factor in this increase is a structural primary deficit of 3% of GDP, without accounting for aging-related expenditures. This deficit is unusually high compared to the past, suggesting that Slovakia has had significantly stricter budgetary policies before. An important risk factor is also the growth of aging-related expenditures, which will significantly burden public finances in the coming decades. A rise in gross financing needs is also expected, which could reach up to 14% of GDP in 2035. The Commission tested several alternative scenarios – most of them assume even higher public debt than in the baseline scenario, with the only exception being a return to the historical average structural balance, which could slightly reduce the risks.

Long-term risks also remain high. The assessment is based on two indicators that express the fiscal effort needed to stabilize debt (S2) and reduce it to 60% of GDP by 2070 (S1). Indicator S2 suggests that the structural balance would have to improve by as much as 7.8% of GDP, mainly due to the expected increase in aging-related expenditures. Expenditures on pensions, health, and long-term care alone account for more than half of this needed improvement. The rest is related to the unfavorable budgetary starting position. Similarly, S1 also points to the need for a significant improvement, specifically by 6.5% of GDP, if Slovakia were to sustainably reduce its debt to European reference values.

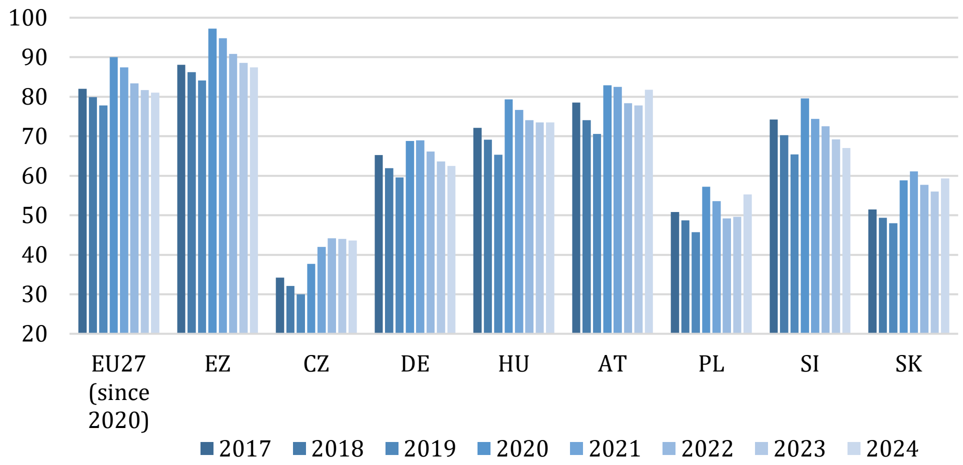
Complementary factors also play a role in risk assessment. A high share of state debt held by foreign investors poses a certain danger, which could mean greater vulnerability in the event of turbulence in global markets. On the other hand, the structure of the debt itself has a stabilizing effect – Slovakia has a low share of short-term debt, and all liabilities are denominated in euros, eliminating exchange rate risk. The gross general government debt ratio increased year-on-year to 56% of GDP. Among V4 countries, Slovakia had the second highest debt after Hungary (Figure 6.1).

By original maturity, the gross public debt consists of:

- Short-term debt of 0.6% (EUR 381.5 million).
- Debt with an original maturity of over one year of 99.4% (EUR 68.4 billion).

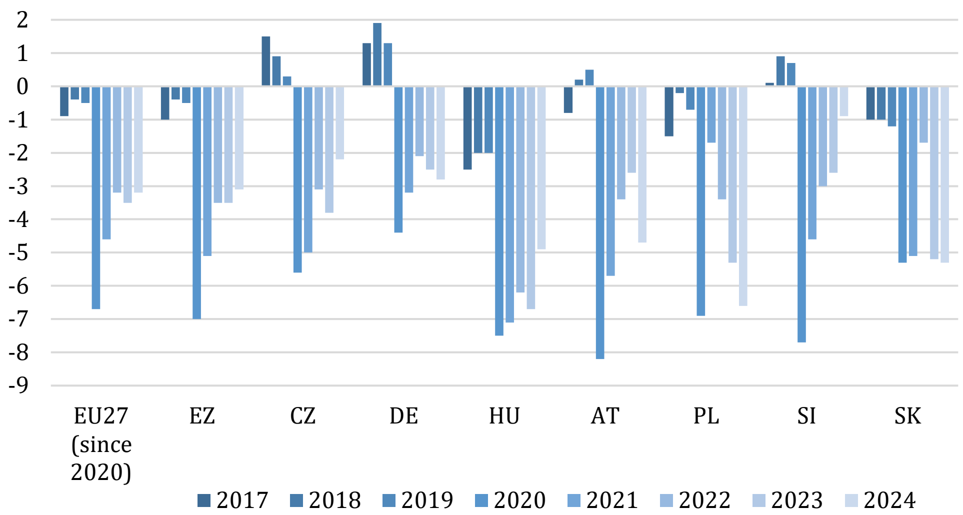
In terms of territorial structure, foreign creditors hold the majority of Slovakia's Maastricht public debt, specifically 51.9% (EUR 35.7 billion). Domestic creditors' portfolio accounts for 48.1% (EUR 33 billion) of Maastricht debt.

Figure 6.1
Comparison of Gross Public Debt in % of GDP (2017 – 2024)



Source: Eurostat (2025).

Figure 6.2
Comparison of Public Administration Deficits in % of GDP (2017 – 2024)



Source: Eurostat (2025).

The comparison of the public administration deficit with V4 countries and selected EU countries is even less favorable. Slovakia had the second highest deficit. Only Poland had a higher deficit, but it is significantly investing in strengthening its defense capabilities. This development highlights the need for public finance consolidation during the upcoming electoral cycles.

Development of Central Government Budget in 2024

In 2024, the state budget ended with a deficit of EUR 6.3 billion, a year-on-year decrease of EUR 1.3 billion. The year-on-year decrease was contributed to by higher tax revenue collection (especially corporate income tax, VAT, and excise duties). Overall, revenues were EUR 770 million higher year-on-year. On the expenditure side, there was a year-on-year decrease of EUR 540 million, but primarily at the expense of capital expenditures (EUR 876 million), which we consider a very negative development. In combination with a year-on-year decrease in revenues from the EU budget, investment activity from public sources was again dampened in 2024.

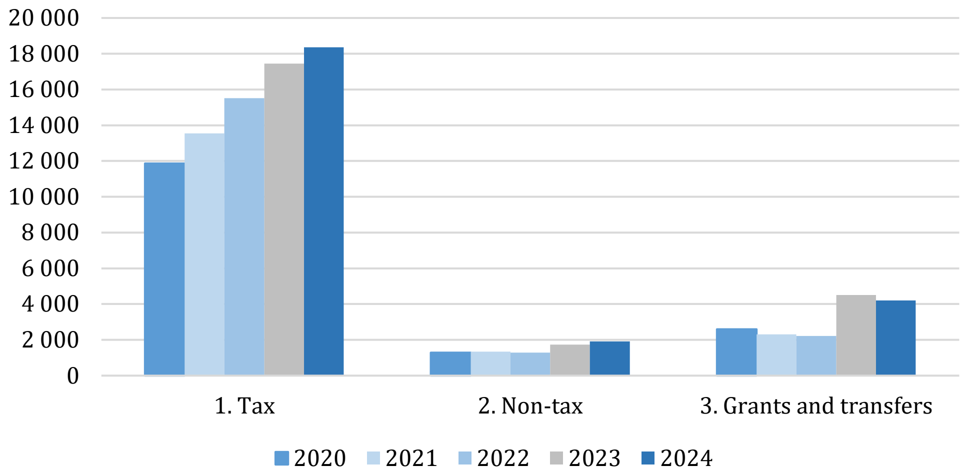
T a b l e 6.4
Development of Central Government Budget in 2021 – 2024 (in mil. EUR)

	2021	2022	2023	2024
Total Revenue	15 750	17 197	19 029	23 688
1. Tax	11 872	13 546	15 517	17 441
2. Non-tax	1 289	1 338	1 285	1 738
3. Grants and transfers	2 588	2 313	2 227	4 509
Total Expenditure	23 509	24 211	20 847	31 364
Current expenditure	20 846	21 772	20 847	26 650
Capital expenditure	2 662	2 440	2 707	4 714
Deficit/Surplus (right axis)	–7 758	–7 014	–4 524	–7 675

Source: MF SR (2025b); own calculations.

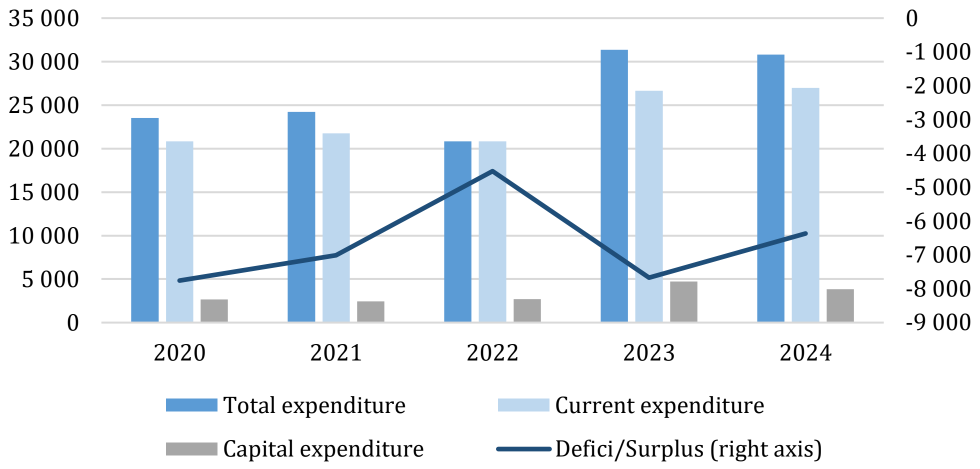
Figure 6.3 illustrates the development of state budget revenues over the past 5 years. Over the past 5 years, total revenues increased by EUR 8.7 billion, of which tax revenues increased by EUR 6.4 billion and non-tax revenues by EUR 620 million.

F i g u r e 6.3
Central Government Budget Development in 2020 – 2024



Source: MF SR (2024a).

F i g u r e 6.4
Development of Central Government expenditure in 2020 – 2024



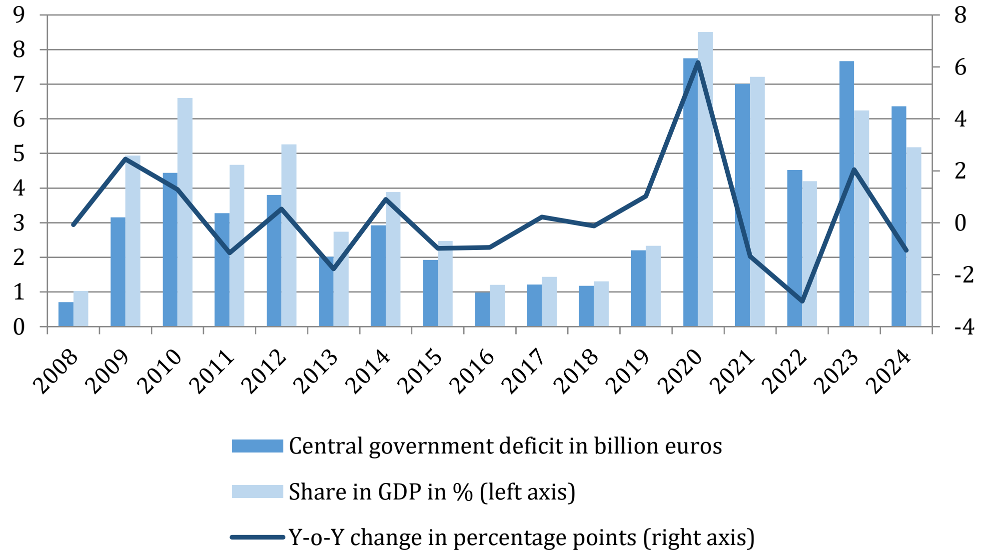
Source: MF SR (2024a).

Looking at expenditures, we can observe a natural increase over the past 5 years (Figure 6.4). Compared to 2020, total expenditures were higher by EUR 7.3 billion. Current expenditures increased by EUR 6.1 billion during this period, and capital expenditures by only EUR 1.1 billion. However, the figure for capital expenditures is distorted by the completion of cohesion policy fund absorption at the end of 2023 and absorption in 2024. Thus, the trend of relatively low capital expenditures from domestic sources continued, and after the end of the last programming period, capital expenditures were lower. There was also a year-on-year decrease in the absorption of cohesion policy funds by EUR 377 million.

Central Government Budget Deficit and Central Government Debt

During the last electoral cycle, state budget deficits reached their highest values since 2008 (Figure 6.5). This was caused by several external shocks to which the state budget had to respond with a sharp increase in expenditures. The pandemic, Russian aggression in Ukraine, and the resulting energy crisis necessitated massive subsidies for compensatory measures for several economic sectors, as well as subsidies to compensate for energy carrier prices. In 2023, energy prices were already at a level that did not require high subsidies from the state budget. As part of negotiations with the European Commission, EUR 1 billion was transferred from structural funds for energy price compensation.

Figure 6.5
Central Government Deficit in 2008 – 2024

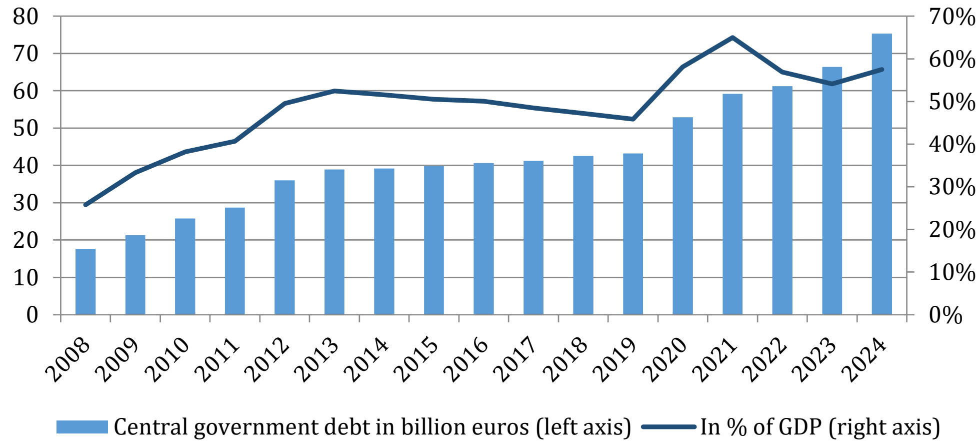


Source: MF SR (2024a); own calculations.

The volume of deficits in the last four years naturally also reflected in the central government debt, which reached EUR 75.2 billion. In relation to GDP, however, central government debt increased again from 2021, mainly due to lower economic growth.

F i g u r e 6.6

Central Government Debt in 2008 – 2024



Source: MF SR (2025c); own calculations.

Table 6.5 shows the structure of state debt by its maturity, ranging from under one year to thirty years and more. In the category of government bonds and treasury bills, the largest share is in maturities up to 15 years. In the category of bank loans and other instruments, maturities of up to 29 years and 30 years and more prevail.

T a b l e 6.5

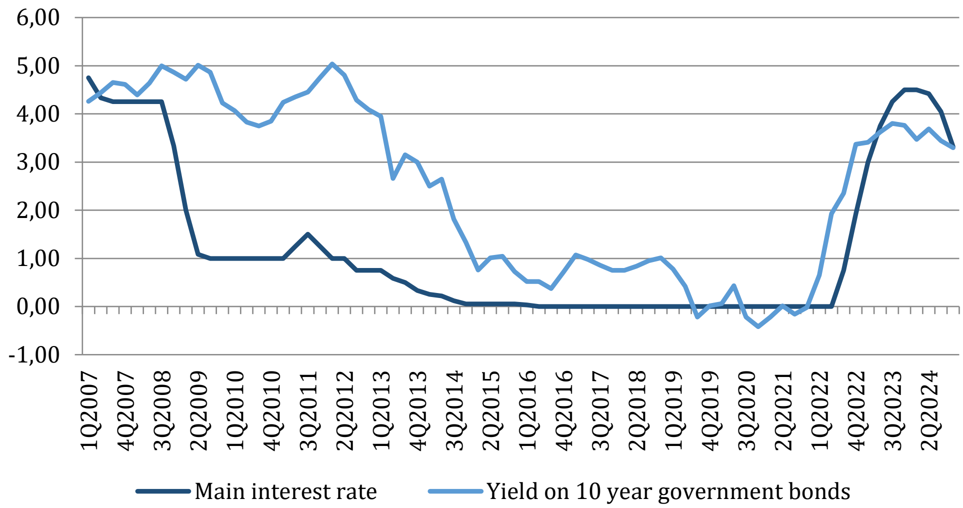
State Debt by Original Maturity in 2024

	Government bonds and Treasury bills	Bank loans and other	Other liabilities	Total
Up to 1 year	0	0	88	0.4
Up to 5 years	4.2	0	12	3.9
Up to 7 years	4.1	9.2	0	4.5
Up to 10 years	7.9	4.4	0	7.6
Up to 15 years	42.9	10.6	0	40.1
Up to 29 years	31.1	43.3	0	31.9
30 years and more	*9.8*	*32.5*	*0*	*11.6*

Source: ŠZÚ (2025).

Based on this structure, we can conclude that 72% of the state debt is covered by debt instruments with maturities from 15 to 29 years, which creates the necessary stability in the medium and long term for debt servicing. However, this share decreased year-on-year by 2 percentage points. Inflationary pressures caused by rising price levels, interventions by the European Central Bank (ECB), and naturally also increased the costs of servicing Slovakia's debt. Figure 6.7 shows the development of interest rates on Slovak government bonds with a ten-year maturity. At the end of 2024, the average interest rate on bonds reached 3.29%. This represents a slight year-on-year decrease, mainly due to the ECB's interest rate reductions.

F i g u r e 6.7
Development of Interest Rates on 10-year Slovak Government Bonds in 2007 – 2024 (in %)



Source: NBS Macroeconomic Database (2025).

Consolidation Measures Adopted in 2024

On October 3, 2024, Parliament approved a set of consolidation measures aimed at improving the state's fiscal position and reducing the public finance deficit. The projected net yield of these measures for 2025 is approximately EUR 2.7 billion. The main measures include:

Changes in VAT Rates

As of January 1, 2025, three new VAT rates will come into effect:

- The basic rate for most goods and services will increase from 20% to 23%.
- A reduced rate of 5% will apply to basic foodstuffs, medicines, books, printed materials, hotel services, restaurants, fitness center services, and sports events.
- A 19% rate will be used for other foodstuffs, electricity, and food for coeliacs, etc.

According to initial government calculations, the new rates would bring EUR 1.19 billion to the budget; however, the Budget Council forecasts a yield of EUR 712 million. While hoteliers and restaurant owners successfully lobbied for the lowest 5% rate, spas, aquaparks, and swimming pools will see their VAT increase from 10% to 23%, which poses a risk of significant price increases after considering other taxes.

Financial Transaction Tax

This tax is collected on payments from a business entity's transactional account. This type of tax does not apply to all entities or all types of payments. The FTT targets business entities and aims to tax financial flows outside of tax and levy obligations. Card payments are exempt, which may encourage their wider use. The existence of a cap on the tax amount for large transactions may be beneficial for large companies. Taxing cash withdrawals incentivizes businesses to use cashless transactions. The exemption of the non-profit sector and local government from the tax reflects an effort not to increase their financial burden.

T a b l e 6.6

FFT Rates

Transaction (amount)	Tax rate
Transaction (amount)	Tax rate
Card payment (EUR 100)	EUR 0
Outgoing payment (EUR 100)	EUR 0.40
Outgoing payment (EUR 1,000)	EUR 4
Outgoing payment (EUR 5,000)	EUR 20
Outgoing payment (EUR 10,000)	EUR 40

Source: own processing.

Taxpayers are:

- Self- employed persons
- Free professions (lawyers, doctors, architects, artists, etc.)
- Limited liability companies, joint-stock companies, general partnerships, limited partnerships, cooperatives, state-owned enterprises
- Political parties
- Independent farmers

Non-taxpayers are:

- Employees
- Pensioners
- Authors and lessors of real estate
- Civic associations, foundations, non-profit organizations
- Municipalities, self-governing regions (VÚC), schools, healthcare facilities (unless they are commercial companies)
- Slovak Academy of Sciences, Matica slovenská

Taxed are:

- Outgoing payments from a business entity's transactional accounts, e.g., payments of invoices, utilities, services, insurance
- Cash withdrawals from a business entity's transactional account
- Reclassified costs within large corporate groups

Not taxed are:

- Card payments
- Payments of taxes and levies (e.g., to the State Treasury, Social Insurance Agency, health insurance)
- Payment of benefits (social benefits, pensions, medicines reimbursed by insurance companies)
- Payments tied to third-party funds (notary escrow, bailiff accounts)

The FTT only applies to business entities, while, for example, VAT or income tax also apply to ordinary people (consumers, employees). Conversely, contributions and income tax are mandatory for every income, while the FTT is linked to expenditure transactions. For FTT, the basis is the outgoing payment itself – regardless of its purpose or whether it was profitable. Other taxes are generally linked to profit or consumption – which makes FTT less tied to the economic reality of doing business.

Table 6.7
Comparison of Financial Transaction Tax with Other Taxes

Type of Tax	Tax Subject	Tax Base	Rate/Amount	Purpose and Nature
Financial Transaction Tax (FTT)	Business entities (natural and legal persons)	Outgoing payment from a transactional account	E.g., EUR 0.40 from EUR 100, max. EUR 40 (cap)	Fee for financial movement; targeted at businesses, not ordinary citizens
VAT (Value Added Tax)	Final consumer (via business entity)	Sale of goods and services	20% (basic), 10% (selected goods)	Consumption tax, forms the largest state budget revenue
Personal Income Tax	Natural persons (employees, self-employed)	Gross income (after deductions)	19% up to EUR 38,553, 25% above this limit	Tax on income from work or business
Corporate Income Tax	Legal persons	Taxable profit (revenues – costs)	21%	Taxation of corporate profits
Social and Health Contributions	Employees, employers, self-employed	Gross wage	Social Insurance: approx. 33.15%, Health Insurance: 14%	Financing of social and health system
Motor Vehicle Tax	Owners of vehicles used for business	Engine power and vehicle category	approx. EUR 50 – EUR 2,000/year	Regional tax intended for local governments
Excise Duties	Final consumer (via seller)	Sale of alcohol, tobacco, fuels	Fixed amount per unit (e.g., EUR/liter)	Regulation and revenue – aims to reduce consumption of certain goods

Source: own processing.

The FTT rate is fixed and relatively low, but with large transaction volumes, it can have a significant impact (e.g., on cash flow). In contrast, VAT or income tax have percentage rates that are derived from the amount of income or price. The FTT is relatively easy to collect if it is automated by domestic financial institutions, which shifts the costs of collecting this tax to these institutions. Other taxes (e.g., income tax, contributions) require more complicated calculations, tax returns, and controls due to complex tax legislation. The Financial Transaction Tax is a supplementary, relatively simple tax that targets money flows in the business environment, not income or consumption like other taxes. Its low rate, specific base (outgoing payments), and exclusion of ordinary citizens and non-profit entities make it specific within the Slovak tax system.

Increase in Corporate Income Tax Rate

An important measure in terms of revenue is the increase in the corporate income tax rate from 21% to 24% for companies with annual revenues exceeding EUR 5 million. More than 5,000 entities could be affected, from which the Budget Council estimates a revenue of up to EUR 500 million. The coalition also introduced special levies for refineries (EUR 36 million) and mobile operators (EUR 25 million), but abandoned the increase in levies for energy companies due to fear of violating the memorandum with Slovenské elektrárne, thus losing a planned EUR 150 million in revenue from the package. However, the state, as an shareholder in energy companies, intends to extract dividends from them. According to the approved package, the threshold for taxable income for self-employed individuals with a 15% rate is increased from EUR 60,000 to EUR 100,000, while small companies will pay only 10% tax on income up to EUR 100,000. The withholding tax on dividends is also reduced from 10% to 7%.

Adjustments to the Child Tax Bonus

The child tax bonus for children under 15 years is reduced from EUR 140 to EUR 100 per month, for children under 18 it will decrease to EUR 50, and for older children there will be no entitlement. The entitlement to the bonus is further limited by the parent's income (completely lost if earning over EUR 3,632) and the place of taxation (min. 90% of income from Slovakia). The increase in wage contributions and the abolition of the parental pension mean an average of EUR 665 less per year for 116,000 households, with another 117,000 families losing the bonus entirely.

Changes to Parental Pension

Parliament abolished the parental pension mechanism, instead introducing the option from 2026 to donate 2% of working children's taxes directly to their parents. The government expects savings of EUR 300 million.

Changes in the Levy System

Limits for social levies are being increased already in 2025 – the maximum assessment base will rise from seven times the average wage to eleven times (from EUR 9,128 to EUR 15,730). Due to pressure from healthcare unions, the coalition adjusted the valorization of healthcare salaries from the original 3% to 6%, with a budget impact of EUR 40 million.

Changes in Road Infrastructure Fees and Taxes

From January 2025, the price of the annual highway vignette will increase from EUR 60 to EUR 90, the one-day vignette will rise from EUR 5.40 to EUR 8.10, the monthly to EUR 17.10, and the ten-day to EUR 10.80. Motor vehicle tax will decrease for trucks to minimum rates but will increase for personal vehicles used by businesses; from July 2025, tolls for trucks are also to be increased.

Implementation of European Union Cohesion Policy

The Slovak Republic has been allocated EUR 12.79 billion from the European Union budget for the 2021 – 2027 programming period. The largest part of these funds, EUR 12.59 billion, is managed by the Operational Programme Slovakia, which replaces six operational programs from the previous period. In addition, four smaller programs are also being implemented, including cross-border initiatives and the Fisheries program.

Program Slovakia draws funds from four main funds:

- EFRR (European Regional Development Fund)
- ESF+ (European Social Fund Plus)
- KF (Cohesion Fund)
- FST (Just Transition Fund)

Out of the total allocation of EUR 12.79 billion, only EUR 390.13 million had been drawn as of December 31, 2024, representing 3.05%. Program Slovakia itself reported a implementation of EUR 382.26 million, or 3.04%. Despite calls being announced for EUR 8.92 billion (70.87% of the allocation) and projects contracted for EUR 4.52 billion (35.89%), the actual implementation lags significantly, indicating considerable implementation delays, problems in project implementation, or delayed payments.

The current pace of implementation poses a risk of not meeting the *n*+3 rule, according to which Slovakia must submit expenditures of at least EUR 1.18 billion by the end of 2025 to avoid losing allocated funds. The second milestone is even more ambitious – by the end of 2026, an additional EUR 2.15 billion will need to be declared. At the current rate of drawdown, it is highly probable that de-commitment is imminent – meaning the forfeiture of unused funds back to the EU budget.

OP Slovakia has 5 defined objectives, which are divided into individual priority axes. Although the programming period began in 2021, actual implementation only started in 2023. MIRRI SR is responsible for the implementation of Programme Slovakia, but it has delegated a significant part of its competencies to 10 intermediary bodies (e.g., MD SR, MPSVR SR, MŽP SR, etc.). The fragmentation of responsibility, along with slow administration, complex public procurement, and insufficient project preparation, are significant factors in the low drawdown.

The state of implementation of Program Slovakia as of December 31, 2024, indicates serious risks in the area of drawdown, especially in the context of the *n*+3 rule. Although the allocation of calls and contracting are progressing, implementation is significantly lagging, which could jeopardize the retention of financial resources. It will be crucial to accelerate the implementation of existing projects, improve coordination between managing and intermediary bodies, and simultaneously remove administrative barriers that hinder the payment of actual expenditures. Effective use of EU funds will be decisive for Slovakia's development in the next two years, especially in the areas of green transformation, digitalization, transport, and social inclusion.

An interesting contrast is the state of implementation for the 2014 – 2020 period, where by the end of 2024, Slovakia reported a implementation of 107.41%, reflecting the use of special EU rules for the pandemic period (e.g., 100% financing in the 7th and 8th accounting years). To fully draw down the remaining funds, expenditures of EUR 158.33 million still need to be submitted, mainly from the OP Integrated Infrastructure.

Table 6.8

Structure of Operational Programme Slovakia for 2021 – 2027 as of December 31, 2024

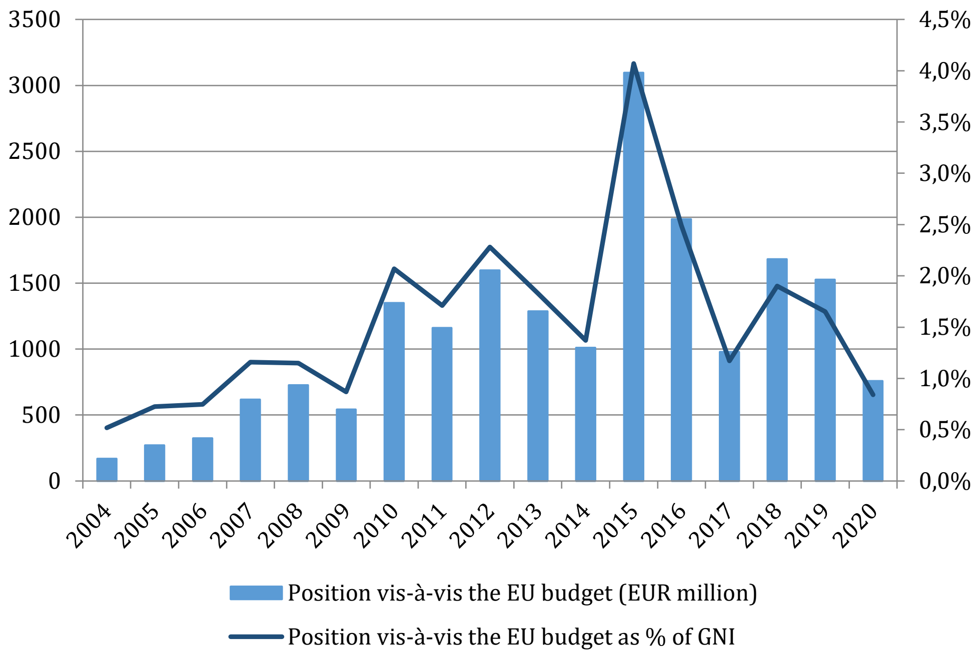
Policy objective or Technical assistance	Priority	Name of the priority	Allocation EU source	Implementation – Beneficiary level (advance payments)	
				EU source	% of total allocation EU source
1	1P1	Science, research and innovation	1 778 050 000	1 006 848	0.06
	1P2	Digital connectivity	112 100 000	0	0.00
Total CP1 – A more competitive and smarter Europe			1 890 150 000	0	0.00
2	2P1	Energy efficiency and decarbonisation	1 276 450 890	96 681 889	7.56
	2P2	Environment	2 030 497 280	50 320 941	2.48
	2P3	Sustainable urban mobility	890 600 000	0	0.00
Total CP2 – A greener, low-carbon and resilient Europe			4 197 548 170	0	0.00
3	3P1	Transport	2 003 127 273	40 376	0.00
Total CP 3 – A more connected Europe			2 003 127 273	0	0.00
4	4P1	Adaptive and accessible labour market	589 497 494	36 132 753	6.58
	4P2	Quality and inclusive education	609 293 550	103 607 535	17.43
	4P3	Skills for better adaptability and inclusion	252 906 000	743 717	0.31
	4P4	Youth Guarantee	283 969 292	1 236 909	0.44
	4P5	Active inclusion and accessible services	1 110 632 000	51 218 001	4.45
	4P6	Active inclusion of Roma communities	269 000 000	21 368 230	7.10
	4P7	Social innovation and experimentation	68 153 000	0	0.00
	4P8	Food and material deprivation	68 153 000	4 364	0.01
Total CP4 – A more social and inclusive Europe			3 251 604 336	74 452 767	2.29
5	5P1	Modern regions	400 413 611	0	0.00
Total CP5 – Europe closer to citizens			400 413 611	0	0.00
JTF	8P1	Just Transition Fund	440 658 242	10 559 749	2.40
Just Transition Fund			440 658 242	0	0.00
TA	7P1	ERDF technical assistance	255 696 315	6 285 252	2.46
	7P2	Technical assistance CF	51 632 244	320 932	0.62
	7P3	ESF+ technical assistance	84 543 983	852 816	1.01
	7P4	Technical assistance FST	18 360 759	1 878 545	10.23
Total technical assistance			410 233 301	9 337 544	2.28
Total Programme Slovakia 2021 – 2027			**12 593 734 933**	382 258 856	3.04

Source: MIRRI (2025).

Financial Position of the Slovak Republic vis-à-vis the European Union Budget

Since its accession to the EU, the Slovak Republic has been a net recipient of funds from the EU budget. Since EU accession, EUR 24 billion has been invested from cohesion policy funds within three programming periods. Figure 6.8 illustrates the development of Slovakia's net position and its position vis-à-vis the EU budget.

F i g u r e 6.8
Development of SR's Net Position vis-à-vis the EU Budget in 2004 – 2024



Source: NBS Macroeconomic Database (2025).

Upon closer look, we can observe that traditionally a large volume of resources is implemented at the end of programming periods (years 2015 and 2023). We have addressed the reasons for this phenomenon in previous editions of our publication. The decline in the net position was associated with the slow and insufficient pace of implementation in the current programming period

* * *

In 2024, public finances achieved a better-than-planned deficit, yet it remains high and necessitated the introduction of new consolidation measures. The improvement in management was due to better tax collection and higher non-tax revenues, while expenditures on defense technology and contributions to the EU budget were lower. Conversely, energy price compensation costs negatively affected the budget. Public finances showed a deteriorating trend since 2020, with the deficit increasing again in 2023 and 2024. The primary balance and structural balance remained negative, pointing to long-term problems in the structure of public expenditures and revenues.

In 2024, municipalities and higher territorial units showed improved financial management, with municipalities achieving a surplus. This positive development was due to higher shared taxes and EU grants, while higher territorial units also managed their finances better than planned. The Social Insurance Agency reported a surplus, which was influenced by higher transfers from the state budget. Overall, however, it generates an unsustainable annual deficit due to increased social expenditures. Conversely, public health insurance achieved a surplus.

Slovakia's total revenues are growing, with expenditures growing faster, leading to a chronic budget deficit. The government approved consolidation measures aimed at improving the fiscal position, with key measures including an increase in the VAT rate and the introduction of a financial transaction tax. Slovakia has been allocated EUR 12.79 billion from the EU budget for the 2021 – 2027 programming period, but the implementation of these funds is lagging, indicating a risk of not meeting the *n*+3 rule and the possibility of losing allocated funds.

Public finances in the Slovak Republic faced several challenges in 2024, including the need for consolidation and improved management. However, long-term problems with the deficit and expenditure structure require fundamental reforms on the expenditure side and effective utilization of EU funds to ensure the long-term sustainability of public finances.

7. LABOUR MARKET

While we described 2023 as a year of cooling on the Slovak labour market, 2024 might be characterised as a year of return to normality. This return was gradual, without any sharp turning points. Employment in the economy increased only slightly (by 0.4%; LFS), yet this was twice the growth rate recorded in the previous year. The stagnation in the labour market, however, was only apparent: the decline in unemployment to historical lows, the significant increase in the number of job vacancies, and the record-high demand for workers from third countries revealed, after two crises (expectedly) returning, long-standing problem of the Slovak labour market – the decline of the productive population and the shortage of labour have become the new normal.

The process of compensating for the fall in real wages was gradually concluding in 2024. The question remains whether the less favourable situation in Slovak industry is also a new normal, or whether a more pronounced recovery from the energy, geopolitical, and possibly future trade-related crises is still ahead. The following text highlights selected aspects of labour market developments in 2024 that deserve closer attention.

Structural Change in Sectoral Employment Development Continues

In 2024, it was again observed that employment growth was not driven by goods-producing sectors, but rather (this time not exclusively, yet predominantly) by the services sector. This reflects the differing developments in the services and in industry.[34]

In this publication, the unsatisfactory employment trend in industry has been closely monitored since the post-pandemic recovery of employment in 2022, when, during the rebound observed in most other sectors, the number of workers in industry continued to decline (in the second half of 2022, we even described it as a massive outflow of workers from industry – according to LFS; more than 64,000 persons represented almost a 10% year-on-year decline in the last quarter of 2022 alone). This was

[34] Within the goods-producing sectors, only industry is considered, as employment in agriculture and construction was already recovering during at least part of the post-pandemic period.

not a statistical reporting issue (LFS methodology); the temporary stagnation followed by a continued outflow of employees from industry during the recovery observed in other sectors was also confirmed by company-level statistical reporting, and ultimately by the trend in industry itself – statistical reporting revealed a continuing decline, by then for the fourth consecutive year, in the number of persons employed in industry (a continuous year-on-year decrease in industrial employment starting in 2019). While the service sectors benefited in 2022 from the easing of anti-pandemic restrictions and the rebound in consumer activity, the goods-producing sectors were affected by the consequences of the outbreak of war in Ukraine (rising energy and other input costs, renewed problems in supply chains, financial market uncertainty, etc.).

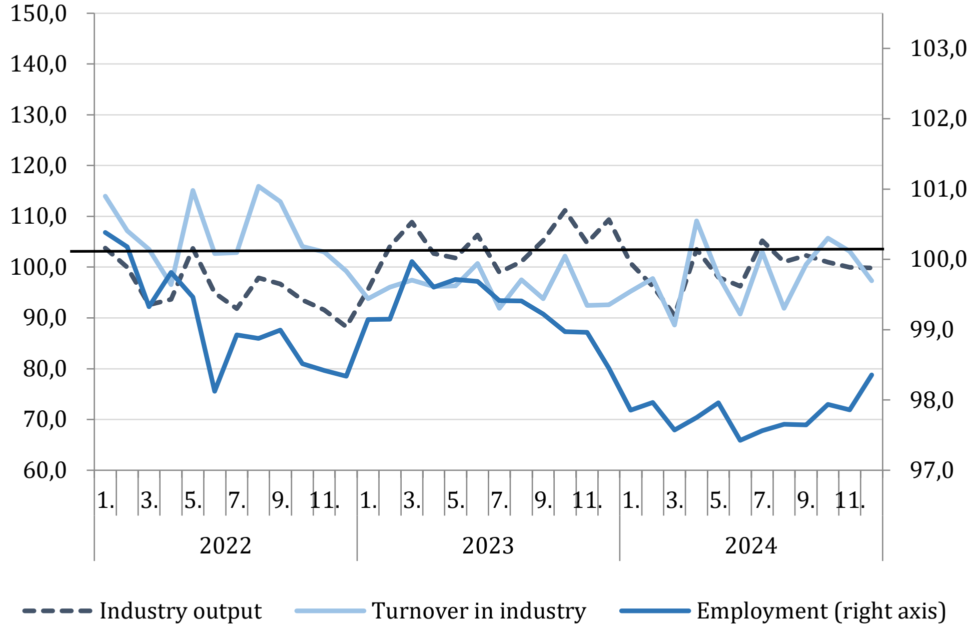
In the year of post-pandemic employment recovery, 2022, we referred to an unusual phenomenon in the Slovak economy, when the post-crisis rebound in employment was not, as was usually the case, driven by recovery in industrial sectors. On the contrary, the service sector was behind the recovery in employment at that time, compensating for the negative developments in industry and the resulting overall negative outcome for the production sectors. The continuation of this trend can be described as a period of structural change in sectoral employment, with the service sector continuously increasing its share of total employment in the economy.

In this respect, even by the end of 2024, the situation in industry had not stabilized unequivocally: Industrial production, after ten months of almost continuous decline, began to recover only intermittently with the start of 2023 (alternating decreases and increases compared with the monthly average of 2021; losses from 2022 were partially offset compared with the same period of the previous year). By the end of 2023, the cooling of foreign demand had finally reached the automotive industry as well, which had until then been supporting the overall performance of the economy (besides the drop in demand, this was driven by the re-emergence of supply chain issues and, probably, preparations for new production; NBS, 2024).[35] Since the start of 2024, the slowdown in economic

[35] In the series of NBS Quick Commentaries, this refers to the statement from the commentary dated 14 February 2024.

activity among Slovakia's trading partners had further affected export-oriented industrial sectors, and their performance throughout the year remained volatile, with negative implications for employment developments within these sectors (Figure 7.1). In comparison with 2021, industrial production showed more stable signs of recovery only in the autumn of 2024. Since the second half of 2022, the development of industrial sales had been no more convincing: their year-on-year decline had continued from the turn of 2022/2023, and – with the exception of a few monthly fluctuations – a clearer recovery did not begin until the autumn of 2024.

F i g u r e 7.1
Situation in Industry in 2022 – 2024 (year-on-year change, in %)



Notes: Indices, same period of the previous year = 100.
Employment = average number of employed persons in industry based on monthly sectoral statistical reporting (employees and self-employed).
Turnover = sales of own goods and services.

Source: processed based on data from the Statistical Report on the Economy of the Slovak Republic in Q4 2024 (ŠÚ SR, 2025a).

It is therefore unsurprising that, over the past three years, there has been no noticeable recovery in the aggregate demand for labour in industrial sectors; in 2024, the decline in the number of persons employed in industry, on the contrary, deepened further. Slightly more optimistic than the results from enterprise statistics are the extrapolated data from the sample survey (LFS), according to which the number of working persons (a broader category than employed persons)[36] in industry in 2024 did start to grow, increasing by a modest 0.6% over the year. The development of indicators in industry in the last months of 2024 could suggest positive prospects; even so, employers will face a shortage of suitably qualified labour (particularly plant and machine operators). At the beginning of 2025, the positive trend was confirmed also in the automotive industry, which supported exports, likely also thanks to the production of new models. However, the looming trade war (the announcement of tariffs by the USA), could undermine even these positive developments.

The decline in employment in industry in recent periods is a result of unsatisfactory developments in the sector, as evidenced not only by statistics but also by statements from employers' associations and key employers themselves. They also point to a mismatch between the qualification structure of the potential workforce and their needs, which is a systemic problem in Slovakia, the analysis of which requires a separate discussion. Another important topic in this context is the impact of automation and robotics on employment in the sector, which has been receiving increased attention in Slovakia at least since the publication of the well-known OECD study (2016). According to this study, 11% of job positions in Slovakia are highly exposed to automation (i.e., more than 70% of tasks in them can be automated), and another 35% of positions fall into the medium-risk category, placing Slovakia among countries with a high risk of employment being threatened by automation.

Trexima Bratislava, which addressed this topic for the Ministry of Labour within the SRI project (Sectoral Innovation Management for an Efficient Labour Market in the Slovak Republic), pointed out that a catastrophic scenario is unlikely and that already in 2019 Slovakia ranked among the world's top twenty countries in terms of industrial robot density. (According to Trexima's model, the sectors expected to experience the most

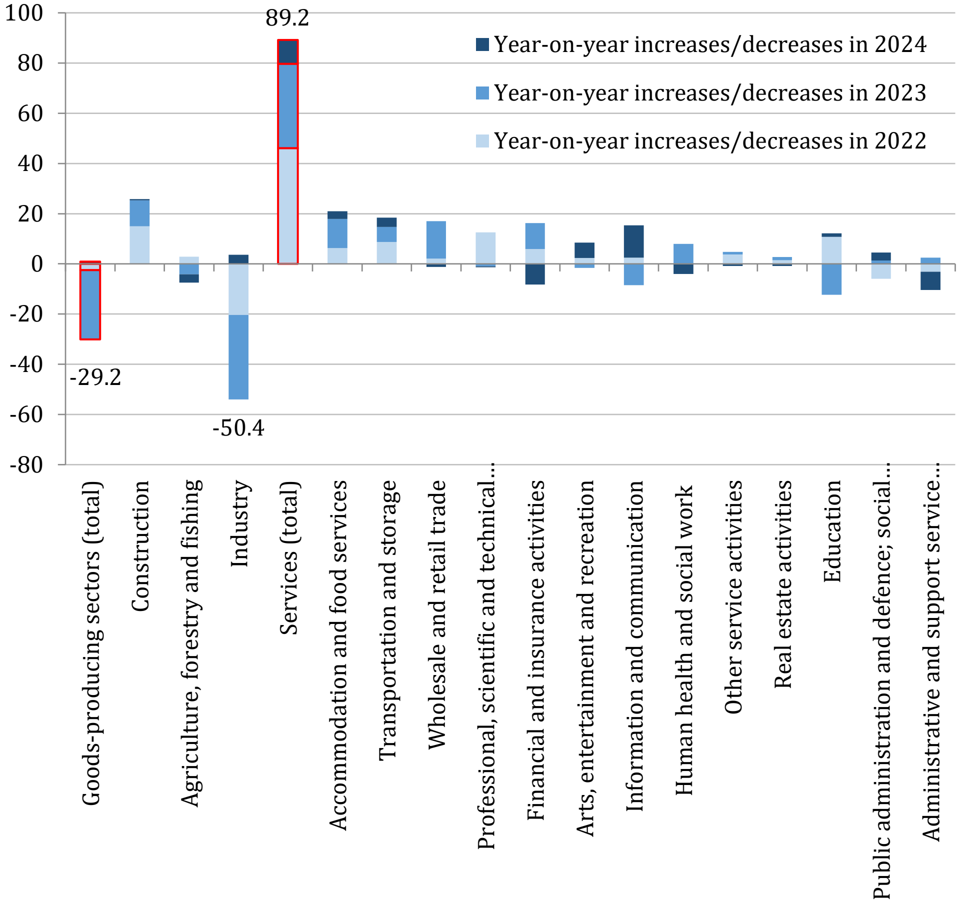
[36] All persons aged 15 to 89 who, in the reference week, performed at least one hour of work for pay, salary, or remuneration.

significant job losses due to automation include, besides industrial manufacturing, banking, financial services and insurance, agriculture and food processing, construction, and administration. Conversely, high demand is expected for software architects, data analysts, design and application developers, and systems and application programmers; Trexima, 2021). Mechanical engineering and the automotive industry are among the sectors potentially most affected, with up to 66% of employed persons in this sectors performing work with a high automation potential (the average for the Slovak economy is 49%, according to the SRI project). This could put at risk nearly 160,000 jobs in the mechanical engineering and automotive sectors, with the most affected positions being assembler/assembly line operator and metal-processing machine operator (sustavapovolani.sk). However, this will be accompanied by the creation of new positions, and the importance of the education system's design and the need for reskilling will increase even further. The shortage of specifically qualified labour is also a constraint on the automation process itself. Skills mismatch is a well-known problem in Slovak industry.

In any case, the improvement in industrial indicators at the end of 2024, as well as the results of the sample survey, slightly moderated the gloomy view of recent developments in Slovak industry. However, this does not change the fact that since the outbreak of the war in Ukraine, the main driver of weak employment growth has been the service sectors. This is well illustrated by Figure 7.2, which shows absolute increases and decreases in the number of working persons across individual sectors over the past three years. It is clear from the figure that most of the employment growth in services occurred in 2022 and 2023, primarily in accommodation and food services, transport, and trade, where labour recruitment was taking place at that time following the pandemic-related decline, which had resulted from the administrative restrictions on activity in these sectors during the pandemic. A similar replenishment of the workforce, immediately after the easing of restrictions, following the pandemic-related decline could be observed in the construction sector as well. (The columns in the figure are, within the categories of goods-producing sectors and services, ranked according to the size of their contributions to employment cumulatively over all three years, representing a sort of sectoral ranking by their contribution to total employment in 2022 – 2024). The figure also clearly illustrates the magnitude of the mentioned employment decline in the industry during 2022 – 2023.

F i g u r e 7.2

Year-on-Year Increases/Decreases in Working Persons by Sectors in 2022 – 2024 (in thousands)



Source: processed based on Datacube and data from the Statistical Report on the Economy of the Slovak Republic in Q4 2024 (ŠÚ SR, 2025a and 2025b).

As already mentioned, according to the LFS methodology the aggregated "industry" sector did already show a slight increase in the number of working persons in 2024; however, this was due to employment growth in the electricity, gas, and steam supply sector, whereas in the main sector in terms of employment size, manufacturing, employment actually continued to decline. The largest contributions to overall employment growth in the economy in 2024, apart from electricity supply, came from the information and communication sector, while, rather unusually, the arts, entertainment and recreation sector ranked third among the main drivers of employment growth. Even this representation of atypical "drivers of employment growth" (in the sense that none of them are dominant sectors) suggests that the employment situation has not been developing in an unambiguously positive way.

Overall, the number of working persons increased year-on-year by less than 11,000, corresponding to an employment growth rate (LFS) of 0.4%, only slightly higher than in the previous year. Out of the 21 NACE sectors, employment rose in 11 and declined in 10. Total employment has remained above 2.6 million for the third consecutive year.

Employment measured by the enterprise-unit reporting method (quarterly statistical reporting) did not increase at all: the number of employees and self-employed persons (together referred to as "employed persons") fell by 0.2% compared with 2023. However, it would be inaccurate to describe the labour market as experiencing a complete cooling, as this is not reflected in the development of job vacancies measured using the same methodology, which increased by more than 12% year-on-year, with the most dynamic growth compared to 2023 observed in healthcare, water supply, accommodation and food services, and transportation and storage.

Unemployment Indicators as Evidence of Labour Market Movements

Employment, according to enterprise statistics, did not increase in the economy; according to the sample survey, the number of working persons (those who performed any form of remunerated work) rose slightly, yet the fact that demand for labour did not completely cool is confirmed by the increase in the number of job vacancies as well as by the development of unemployment itself. As illustrated in Figure 7.3, the number of unemployed persons declined more markedly during the year than in 2023, decreasing by over 14 thousand overall. (To more clearly depict the magnitude of the decline in unemployment, the figure shows not only the development of the total number of unemployed persons but also their year-on-year reductions.) The number of unemployed persons (LFS) fell below a historic milestone in Q2 2024, after exactly three years of continuous decline,[37] dropping for the first time below 150 thousand. (It is also important to note for context that more than one-third of total unemployment consisted of persons who had been without work for more than four years.) Similarly, the unemployment rate fell to historic lows, reaching 5.2% in the last quarter of 2024 (LFS) (with an annual average of 5.3%, representing a decrease of 0.5 percentage points compared with 2023).

Figure 7.3

Quarterly Development of Unemployment (LFS) in 2021 – 2024

(unemployed persons in thousands, unemployment rate in %)

Notes: Because of a major methodological revision, year-on-year changes based on absolute figures for 2021 would not be methodologically valid; therefore, the quarterly declines in the number of unemployed persons for that year are not shown.

Source: processed based on data from the Statistical Report on the Economy of the Slovak Republic in Q4 2024 (ŠÚ SR, 2025a).

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[37] Prior to this period, the number of unemployed persons last increased year-on-year in Q2 2021 (by 12.5%).

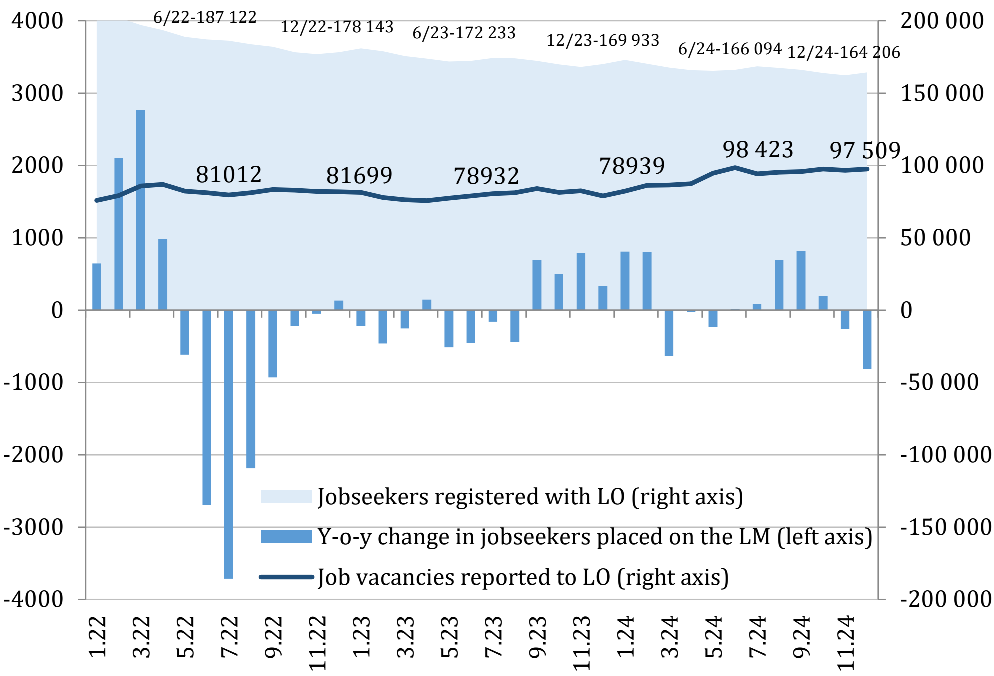
A natural question, therefore, is how such historically favourable unemployment outcomes could have been achieved without a noticeable increase in employment. The conventional explanation is that this historical success should be placed in the context of demographic developments. The population of Slovakia continued to decline in 2024 (the country has been recording a natural decrease of the population since 2020), and this occurred despite a positive net migration balance; the working-age population shrank by almost 20,000 persons. The size of the economically active population decreased by only 3.4 thousand, but within the 15 – 64 age group it fell by as much as 11.4 thousand persons (the difference being due to an increase in the economically active population aged 65 – 89). The number of persons outside the labour force (economically inactive persons aged 15 and over) increased, most notably among pensioners. In recent years, these comparisons have consistently documented both the continued decline and the ageing of the Slovak population.

Moreover, prior to the start of 2024, the situation was further complicated by more favourable early retirement conditions – applications submitted before the end of 2023 were subject to the January indexation, the exceptional summer indexation, the EUR 300 contribution, and, from January 2024, the New Year indexation as well. As a result, the average early retirement pension even exceeded the standard old-age pension, and the Social Insurance Agency recorded an enormous increase in early retirement applications in the final months of 2023. At the same time, early retirement pensions cannot be combined with employment income, so newly granted early retirees had to leave the labour market. The rising demand for labour at only minor changes in overall employment can thus be explained by the need to replace workers retiring from the labour market, further compounded by a declining working-age population.

A Closer Look at Labour Market Developments According to the Labour Office Statistics

As a result of demographic developments and labour market movements in 2024, the activity rate remained almost unchanged. More detailed statistics from the Central Labour Office can help shed light on what actually occurred in the Slovak labour market over the course of 2024. As illustrated by Figure 7.4, the number of job seekers registered with the Labour Offices continued to decline in 2024, albeit at a slightly slower pace than in the previous year. Conversely, the number of job vacancies reported to the Labour Offices increased, substantially more than in 2023 (when their number mostly declined in the first half of the year). In 2024, a gradual convergence between the number of vacancies and the number of job seekers was evident (see the trends in the area and line charts in the figure).

Figure 7.4
Monthly Development of Registered Unemployment Indicators in 2022 – 2024



Legend: LO – labour offices; Y-o-Y – year-on-year; LM – labour market.

Source: processed based on data from the Central Labour Office published in the section Unemployment: Monthly Statistics (ÚPSVAR, 2025a).

The Labour Offices succeeded in registering slightly more jobseekers as placed on the labour market than in the previous year – the most successful months in this regard were August and September; conversely, at the end of the year, a lower number of jobseekers were placed year-on-year (see the column chart in the figure). (The placement of jobseekers on the labour market began to slow shortly after the outbreak of the war in Ukraine, when the sharp rise in energy prices forced some employers to partially reduce operations; subsequently, labour market developments were influenced by inflationary expectations and overall market uncertainty – see the column chart in the figure before and after February 2022).

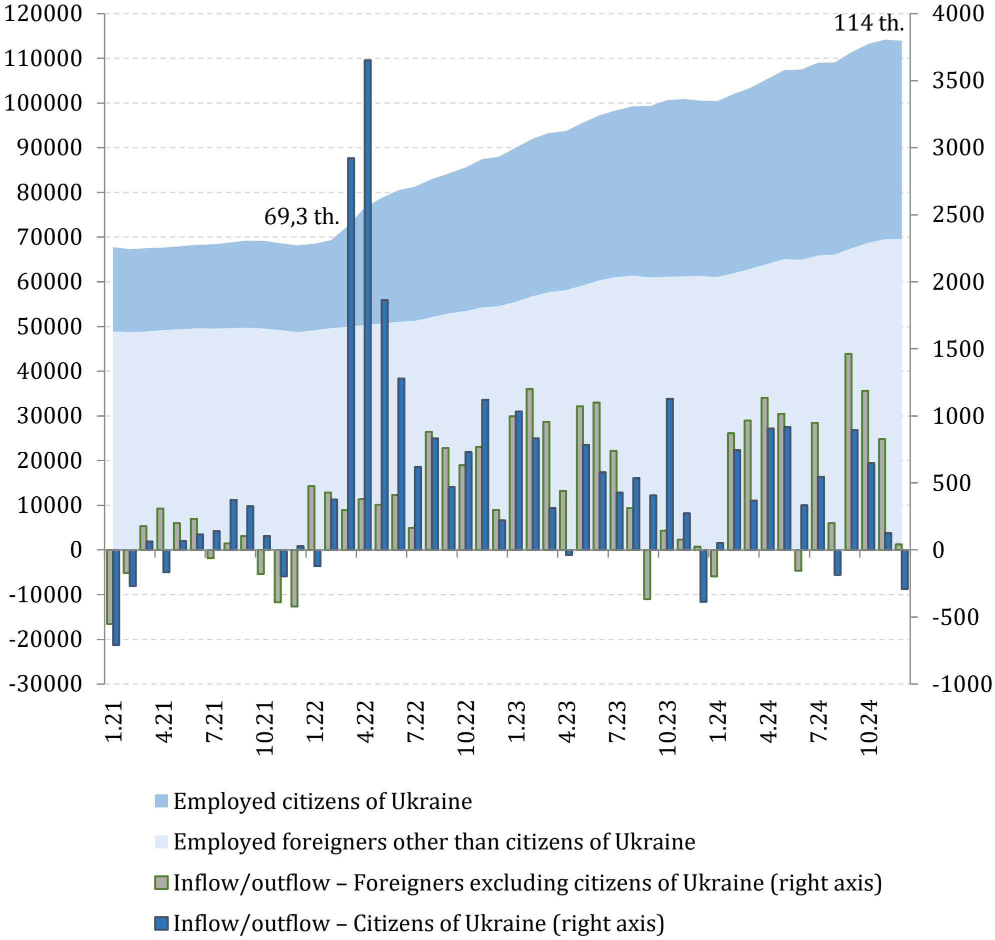
It should be noted that there was an apparent cooling of the labour market in mid-2024, when the number of unemployed persons stopped declining during the summer months (even rising slightly) and the growth in the number of vacancies came to a halt. Developments in the second half of the year remained somewhat more conservative compared with the first half.

The most notable change over the year compared with the previous year was the dynamic increase in the number of vacant positions. This trend continued into the first months of 2025, with the number of vacancies exceeding the 100,000 mark in February, thereby surpassing the pre-pandemic peak recorded in October 2019. Even despite the moderate figures from the Labour Force Survey and enterprise statistics (mentioned earlier in the text), it can thus be concluded that labour market pressure was indeed rising. Over the most recent one-year period, from February 2024 to February 2025, the number of registered vacancies increased by more than 15.5 thousand, while over the same period the number of registered jobseekers fell by only slightly more than 5.8 thousand. Employers were unable to fill the vacancies with registered unemployed persons in line with their needs, but they addressed the shortfall by employing foreign workers.

The increase mainly involved the employment of foreign workers from third countries – of the total rise in the number of foreign workers between December 2023 and December 2024, amounting to 13,400, only slightly more than 500 were EU citizens. The bulk of this increase therefore reflected a heightened interest in employing foreign workers from third countries (as well as their interest to work in Slovakia), of which more than 5,000 were Ukrainian citizens. As can be seen in Figure 7.5, unlike in the previous periods following the outbreak of the war, in 2024 the employment of third-country nationals other than Ukrainians prevailed (column chart). This indicates that the increase in foreign employment can no longer be attributed primarily to the settlement of refugees from Ukraine; it genuinely reflects the heightened interest of Slovak employers in meeting labour demand through foreign workers.

Figure 7.5

Monthly Data on Foreign Workers Employed in Slovakia, 2021 – 2024
(in persons)



Note: Inflows to and outflows from employment of foreign workers represent month-to-month changes in the number of foreign workers employed in Slovakia..

Source: processed based on data from the Central Labour Office on the employment of foreigners (ÚPSVAR, 2025b).

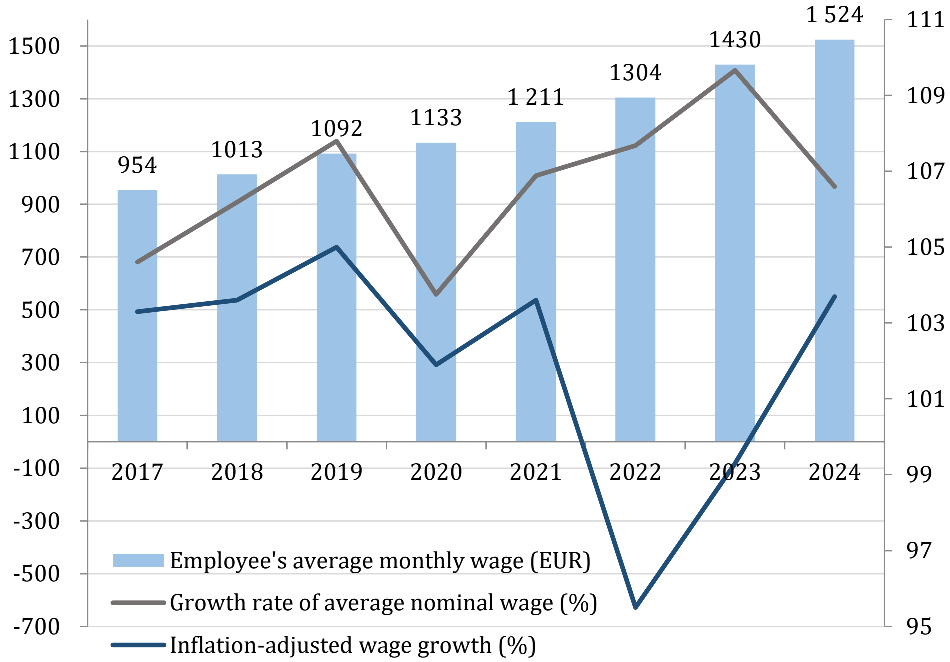
The outbreak of the war in Ukraine represented a critical juncture in the context of recruitment of foreign workers in Slovakia, as the Slovak labour market had never before experienced such a massive inflow of foreign workers. As noted in previous editions of this publication, foreign workers predominantly filled the positions most affected by labour shortages, i.e., where demand for workers had been largely unmet (machine operators and assemblers, auxiliary workers). While fewer than 70,000 foreign workers were employed in Slovakia at the onset of the conflict, by the end of 2024 their number had risen to nearly 114,000 (see graph, area chart), and by February 2025 it had reached almost 119,000, of whom more than 46,000 were Ukrainian citizens (since the end of 2023, Ukrainian citizens have consistently represented around 40% of all foreign workers employed in Slovakia, compared with just under 30% before the war).

In the recent editions of this publication, we have intentionally compared the annual increase in the number of foreign workers employed in Slovakia with the overall employment growth in the economy, even though the data are collected using different methodologies. Thus, according to the LFS, the number of working persons in Slovakia increased by 6,000 between the last quarters of 2023 and 2024 (averaging 10,800 per year), while the number of unemployed persons according to the LFS declined by 11,800 over the same period (14,200 on average per year). According to the Labour Office statistics, the number of registered jobseekers fell by 5,700 between December 2023 and December 2024, whereas the increase in foreign workers employed over the same period amounted to 13,400. As in the previous two years, it must be concluded that the employment of foreigners continues to play a significant – and for the second consecutive year, an even dominant – role in the overall balance of labour market flows in Slovakia. (In 2022, the increase in the number of employed foreign workers accounted for roughly half of the overall employment growth in Slovakia. In 2023, it was almost three times higher than the total employment growth, and in 2024 the increase in foreign employment again exceeded the rise in overall employment. The increase in foreign workers also surpassed the decline in registered jobseekers, further illustrating the growing importance of foreign employment in meeting labour demand. This completes the picture of the labour market situation in the context of the aforementioned demographic trends.)

Decelerating Growth of Average Wage

The growth of the average wage in the economy gradually decelerated over the course of 2024 from the record rates observed at the end of 2023 (when wage growth in the last quarter exceeded 10%). Overall, for the year, the average nominal wage in the economy increased by 6.6% to EUR1,524 (trends are shown in Figure 7.6).

F i g u r e 7.6
Development of the Average Wage in 2017 – 2024
(wage in EUR, year-on-year changes in %)



Source: processed according to the tabular part of the Statistical Report on the Economy of the Slovak Republic in Q4 2024 (ŠÚ SR, 2025a).

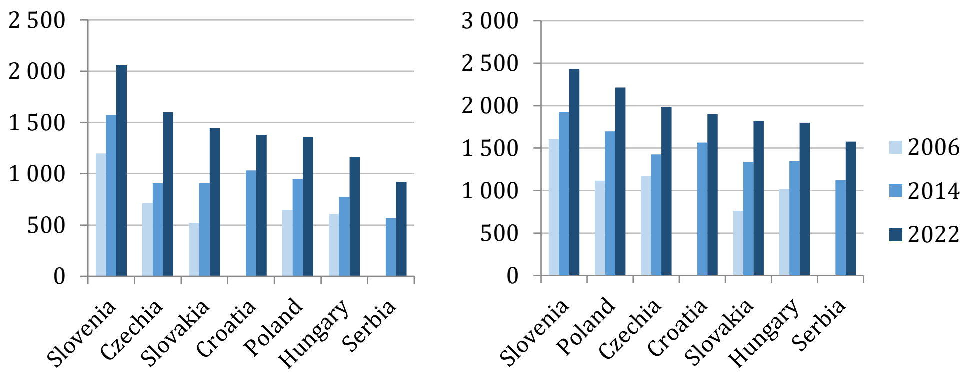
A significant change, however, is observed in the growth of real wage, since in the two preceding years inflation eroded nominal wages to such an extent that inflation-adjusted wages declined almost continuously from the first quarter of 2022 until the end of 2023, when a turnaround occurred in the last quarter. After nearly two years, real wage growth returned to positive territory – in real terms, wages increased by 3.7% in 2024, with the pace of growth gradually slowing, nevertheless, still representing the fastest annual real wage growth since the pre-pandemic year 2019. The process of compensating for the historical decline in real wages in 2022 is thus coming to a close. The easing of inflation and the already several-month-long real wage growth at that time enabled a recovery in household consumption in the early months of 2024. Households spent more year-on-year throughout the remainder of the year (on average by 2.6%), which supported domestic demand and the overall economy. A longer-term perspective on wage developments is presented in Figure 7.6.

Already in last year's edition, we devoted particular attention to the income situation of old-age pensioners, as the high inflation in 2022 affected pensions much more severely than labour income in real terms. At that time, pensions increased nominally by only 2.5%, which meant a real decline in their value of more than 12%. In the following year, 2023, the government compensated for what had by then been a two-year real decline in pensions by increasing them both at the beginning and in the middle of the year, resulting in a nominal increase of 25% in the average old-age pension (from approximately EUR 519 to nearly EUR 650). In 2024, the increase was less generous, with the average old-age pension rising nominally by 5% to EUR 683. Importantly, its real value also increased, by 2%.

It may be insightful to place wage developments in a broader temporal and geographical context. Figure 7.7 illustrates the dynamics of mean monthly earnings (as defined by Eurostat) between 2006 and 2022 (the latest available data from the SES survey) in selected European countries. As shown in the figure, over this longer period Slovakia ranked among the countries with the highest growth dynamics in earnings within the selected group. From being an outsider in 2006, by 2014 Slovakia was ahead of Serbia and also of Hungary in terms of mean earnings in EUR, and by 2022 it further surpassed both Poland and Croatia. Between 2014 and 2022, average earnings grew faster only in the Czech Republic and Serbia.

F i g u r e 7.7
Monthly Earnings According to Eurostat Earnings Survey (SES) in 2006, 2014 and 2022

a. In EUR b. In purchasing power standard



Note: Data for Croatia and Serbia for 2006 are not available.
Source: compiled from Eurostat database – earn_ses_monthly (Eurostat, 2025).

And even though a similar dynamic can be observed when adjusted for purchasing power parity (with Slovakia again being the “top gainer” in the group between 2006 and 2022), the resulting position in the ranking does not appear as favourable as in nominal terms. In terms of purchasing power parity, not only Slovenians and Czechs earn more, as is widely recognised, but also Poles and Croats.

* * *

Although at first glance it might have seemed that no major changes occurred in the Slovak labour market in 2024, it was nevertheless a year of historic achievements, at least from the perspective of the statistics. The main success consisted in reaching a record-low level of unemployment, with fewer unemployed persons in Slovakia than ever before. The unemployment rate also touched a historic minimum. At the same time, however, it must be noted that an assessment of these historically most favourable unemployment statistics would be incomplete without acknowledging that they were achieved without a significant increase in overall employment, which casts these achievements in a somewhat different light.

It should also be recognised that, even though employment growth was hardly convincing (and according to enterprise statistics, it did not increase at all), the record-high number of vacancies reported and the historically highest numbers of employed foreign workers indicated that the demand for labour in 2024 did not actually stagnate. These apparent contradictions have their explanation.

These outcomes were not achieved due to any rapid changes in the labour market; on the contrary, they reflect the result of gradual, continuous demographic and economic developments, temporarily interrupted by the pandemic crisis and, shortly thereafter, the war in Ukraine. In fact, the labour market essentially returned to its original trajectory. The labour force participation rate had already approached maximum values prior to these crises, and several other statistical indicators suggested that labour supply was nearing its limits. Internal factors (motivational early retirement adjustments) and external factors (the outbreak of the war and the interest of Ukrainian refugees in employment) simply served to accelerate this return. In the conditions of a shrinking working-age population and a temporary surge in retirements, employers replaced labour not only with jobseekers from the unemployed but also with foreign workers from third countries.

The perceived shortage of labour has been partly mitigated by the unsatisfactory developments in industry, which has visibly suffered from both crises. Employment has continued to rise in the service sectors, some of which were among the hardest hit by the pandemic. In 2024, employment finally increased also in the goods-producing sector (on average), albeit modestly. A further notable success of the year, compared with the previous period, was the return to continuous wage growth, in real terms, which means that after a sharp decline in 2022, real wage developments have effectively returned to "normal" as well.

8. SELECTED GLOBAL MEGATRENDS

Slovak society was affected by several external influences last year. These impacts have been felt throughout the European Union (EU), but also globally. It can be assumed that in the medium term they will be reflected in the dynamics and structure of the domestic economy. In 2024 and early 2025, a series of elections took place around the world that changed the political environment in several countries. Changes in political leadership in the USA, but also in France, the United Kingdom (UK) and Germany, as well as the elections to the European Parliament (EP), were important. In particular, the initiatives of the new US administration show that the global economy will undergo significant changes.

Efforts by global and regional powers to redefine global conditions, together with efforts to resolve or reduce conflicts in some parts of the world (e.g. Ukraine and the Middle East), mean that economic development is increasingly affected by geopolitical changes. In the chapter, we consider political aspects only to a minimal extent.[38] The situation is largely determined by the fact that the Union has overcome and is coping with several challenges – Brexit, migratory pressures, integration challenges (euro, tax harmonization), conflicts and being cut off from gas pipelines from the east. In addition, its ambitions are not always in line with the necessary action.

The Main Challenges that Slovakia is Currently Facing

The main challenges faced by the global economy last year and early 2025 that affected Slovakia include inflation, cyber risks, rising energy prices, a shortage of technology-focused experts, and disruptions to global supply chains and routes. While inflation has been lower globally, several economies are dealing with rising debt, weaker growth, and how to find suitable models for financing defence. At its meeting in Budapest in November 2024, the Union agreed on the need to increase competitiveness,

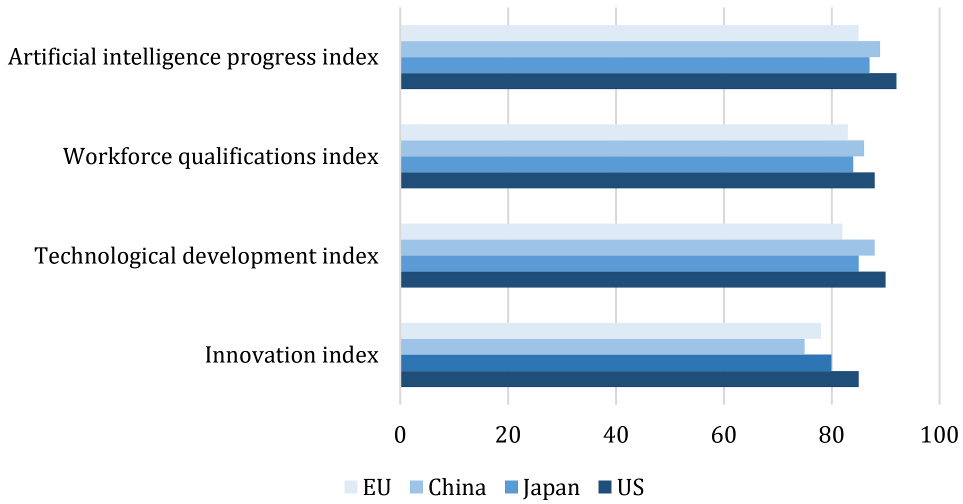
[38] The overall geopolitical and political dimension of the changes and impacts is mentioned in the introduction to the book.

reflecting the Union's lagging behind in digitalized sectors and that change is needed.

Smart manufacturing, which is gaining ground in the most advanced economies, is also a challenge for domestic producers. However, it requires significant energy resources. According to estimates by the International Energy Agency, by 2026, global electricity consumption, e.g. in data centers, could reach a thousand terawatts, which is equivalent to the consumption of Japan (Tricks, 2024). At the same time, Gen AI models consume more than thirty times the energy of special programs to perform tasks. New dynamic, innovative companies are now becoming the core of change. It will be implied that the Union is not on par with the technology leaders. As Figure 8.1 shows, there is a gap between the Union and its rivals (the US, China and Japan) in parameters such as advances in artificial intelligence (AI), workforce skills, technological development or innovation. In important segments, the performance gap is not narrowing. For example, in human resources, the situation would need to improve, and the same applies to the other segments analysed – especially innovation.

F i g u r e 8.1

Position of World Leaders in Technological, Innovative and Qualification Parameters



Note: Year 2024 or latest available data. A higher score indicates a better position of the entity.
Source: processed based on data from WB, OECD, U.S. BLS, MIAC, NBSCH, 2024.

As for the situation of the EU compared to China, Japan and the USA in segments important in terms of technological and qualification development, it is not an optimistic comparison. However, the critical assessment concerns not only the Union, but also Slovakia. Of the 27 EU countries, Slovakia belongs to the weakest group of "emerging innovators" (4th from the end) (EIS, 2024). It is not surprising that Denmark, Sweden, Finland and the Netherlands are in the group of innovation leaders. Advanced e-commerce generates data for AI, develops infrastructure (e.g. data centers) and digitizes the economy, enabling the integration of AI into business processes and government. The integration of various activities causes synergetic effects deepening technological development and their penetration into other areas (more in the chapter Qualitative Factors...).

Strategic Review: Draghi Group

The Report of the Draghi Group (hereinafter the Report, DR) provides a comprehensive view of the situation of the Union and the challenges ahead. It analyses the challenges facing Europe, such as the lack of innovation, decarbonization and the reduction of strategic dependencies. The Report was presented by the ex-President of the European Central Bank M. Draghi (Draghi, 2024) and submitted to the European Commission (EC) in September 2024. From these documents (Draghi, 2024; FEC, 2024a; FEC, 2024b), an assessment is also made that also considers critical contributions (Steinberg and Bergmann, 2024; Furfari, 2024; Lízal, 2024). After the study by E. Letta (Letta, 2024), this is another document that emerged from a European initiative.

Many member states do not share the vision and direction of the Union. Therefore, the EC tasked Draghi's team with analysing the situation and providing recommendations. The team was looking for solutions in a situation of disagreement among EU members on what, when and how to do it. According to the DR, the deepening of the single market and the integration of the capital market will make the European economy more dynamic and politicians must look to the Union for support for the adoption of strategic changes. According to the DR, the current challenges require the European institutions to shape the future of Europe more and seek consensus for further integration. The Report provided a comprehensive and critical assessment, in terms of economic performance, dynamism and outlook. However, it also addresses the issues of ecology, sustainability and social cohesion, and mentions the challenges of preserving social inclusion, closing the innovation gap (competitiveness, productivity), decarbonization, increasing security and reducing dependency.

The Report assesses various aspects of the EU's development, including sectoral and horizontal policies, and provides an overview of the situation, objectives and proposals for action. For sectoral policies, it analyses the areas of raw materials, transport, digitalization, high (and clean) technologies, energy-intensive industries, car manufacturing, pharmaceutical manufacturing and defence/space. The horizontal policy area covers innovation, bridging the technological gap, sustainable investment, improving competition and strengthening governance (e.g. simplification of rules).

According to DR, Europe is facing changes in a situation of global trade slowdown and accelerating technological change. The economic interdependence of countries is beginning to pose a geopolitical vulnerability. Among the major economies, Europe is the most vulnerable, as evidenced by its trade-to-GDP ratio (over 50%, compared to 37% in China and 27% in the US). According to the Report, the EU is dependent on several suppliers of important raw materials and imports more than 4/5 of digital technologies. It also has the highest energy prices, so its companies pay more for energy than Chinese or American ones. Europe is also lagging behind in technology, having only four of the world's top 50 tech firms.

The authors of the Report do not expect a sudden weakening of Europe in view of its strengths. However, they warn of the risk of a gradual weakening of the prosperity of its economies. The challenges facing Europe are complex and present politicians and companies with difficult choices. The Report outlines the strategy and priorities for Europe and explains the dilemmas facing the Union. It offers measures to address them in three segments: (1) catching up with the US and China in innovation; (2) a joint decarbonization/competitiveness roadmap, and (3) increasing security and reducing dependency.

The first area is aimed at narrowing the innovation gap with the US and China. In two decades, for example, the share of patents in quantum technologies is the highest in China. The country has many graduates in major STEM fields (science, technology, engineering, mathematics) – currently 4.7 million compared to 1.2 million in the US (where many students from Asia also excel). In 2021, EU firms spent about EUR 270 billion less on R&D than their US competitors, mainly because the Union has a static sectoral structure in which the same companies and technologies have long prevailed. The group of the three largest investors in R&D in Europe is dominated by automakers, while in the US technology companies are at the forefront. It is the absence of new technology companies that is a challenge for the European economy. There is a lack of companies with a large market capitalization (more than EUR 100 billion) compared to the situation in the USA, where six companies with a capitalization of more than one trillion euros were created. The weaker European momentum reflects a lack of operational synergy and a lower level of commercial exploitation of ideas. Innovative firms in Europe lack a single market for capital, which limits the innovation cycle and financing. Therefore, many European companies use venture capital from the USA and do business there. In the period 2008 – 2021, about 1/3 of startups with a capitalization of more than USD1 billion (unicorns) founded in Europe moved their headquarters abroad. Many young people from Europe have also gone to study in the USA and are doing business there. This talent outflow has further weakened the European economy. The innovation gap is slowing down Europe's productivity growth vis-à-vis the US. The reform of the innovation ecosystem will strengthen quality in universities and research and help commercialize academic inventions (only 1/3 of European university patents are used). The Union is also ready to allow young Britons and Europeans aged 18 – 30 to travel and work freely (The Guardian, 2025). In addition, the expansion of new innovative firms in Europe requires deregulation. The proposed institution of the so-called innovative European company is to enable companies to operate within the framework of harmonized legislation thanks to a digital identity valid throughout the EU. In addition, the DR calls for the efficient use of EU public resources for innovation to support the development of risky and expensive technologies that companies are not able to afford. Although the EU public sector invests in a similar way to the US, only a tenth of spending takes place at EU level. The Report calls for an increase in spending on innovation in the Union and fewer common priorities with greater resources for radical innovation.

Only the integration of the single market and European capital markets will ensure that private investment is channelled into high-tech sectors and that structural changes take place in industry. The use of advanced technologies will also help these changes, although the cost of "training" innovative AI models is an obstacle for European companies. The EU must reduce the implementation costs of AI. Therefore, the DR recommends increasing the capacity of the network of supercomputers and expanding access to it to new companies. Many industrial AI applications do not require the latest versions, and businesses can take advantage of them. The Report assumes that the transformation will create a mismatch between technological progress and social inclusion. The EU can only match the US in innovation by revising the approach to skills by linking investment in education at different levels and in technology.

A joint plan for decarbonization and competitiveness, as a second challenge, is an opportunity for the Union, although there is no consensus among the members. The priority is to reduce energy prices and dampen price fluctuations. Decarbonization, while fossil fuels will continue to drive energy prices, can help shift energy production to clean energy sources. Without a European approach, the effects will not be sufficient for clients. The Report supports the decarbonization and deployment of clean energy in a technology-neutral way (extraction, use and storage of renewable, nuclear and other energy sources). The Union should rapidly invest in adequate infrastructure (e.g. the electricity system) to realize this potential. Decarbonization is intended to help EU industry, which is successful in clean technologies and eco-innovation. More than a fifth of sustainable technologies are being developed in Europe, and success requires the timely capture of the emergence of Chinese subsidized innovative companies, whose production of e.g. solar cells is growing dynamically.

Europe must use innovations from abroad, but it must defend itself against state-subsidized competition that threatens European companies. As the example of the German conglomerate Thyssenkrupp shows, losses at traditional industrial companies can be significant. In November 2024, the company wrote off the value of its steel segment by one billion euros and reported a total net loss of EUR 1.4 billion in 12 months. (The Economist, 2024). Deciding whether Chinese companies will be seen as a threat or a chance to meet climate goals cost-effectively will not be easy. A differentiated approach by sector and technology is proposed. In certain technologies, foreign companies could supply Europe with cheaper equipment. However, the Union does not want to be strategically fully dependent on foreign technologies and resources. Europe's "young" successful industrial sectors need to be developed before they can enter the global market. The Union should demand compliance with WTO rules.39 The Report does not want the protection of national champions, but advocates a return to the state aid regime. This would help joint European investment projects.

In terms of increasing security and reducing the dependency of defence investments, they will also help develop civilian technological capabilities thanks to so-called dual technologies. The Union must be aware of emerging security threats, and the Report emphasizes the element of preparedness. The Union needs more secure supply chains for critical raw materials and technologies, which requires strengthening domestic production capacities in strategic sectors and diversifying and re-configuring the portfolio of suppliers (e.g. critical raw materials, semiconductors). The European strategy must reduce dependence on external technologies, products and important raw materials. The Report recommends coordinating preferential trade agreements and direct investment with resource-rich countries. Strategic stockpiles are to be created in important areas and partnerships are to be formed to ensure the supply of key technologies.

[39] This question has been emerging in different contexts for a long time on different platforms. For example, the Declaration of the Trilateral Meeting of Trade Ministers of Japan, the US and the EU showed that many subsidies are guaranteed through state-owned enterprises and that the term „public authority“ covers these subsidized entities. Ministers agreed that the interpretation of "public authority" by the WTO Appellate Committee in some reports reduces the effectiveness of WTO subsidy rules (Joint Statement, 2020).

This will strengthen the Union's presence even in the most advanced chip segments.

In response to the third challenge, the Report criticizes the significant fragmentation of the industrial base, weaker coordination within the Union, duplication and lack of interoperability of equipment. In the defence sector, it calls for joint planning and the use of EU countries' military spending for the effects on their own defence sector. In 2022, cooperative mediation accounted for about a fifth of the expenditure on the joint acquisition of defence equipment. The Report calls for a higher share of joint defence purchases and R&D spending. Industrialists from the UK also asked Prime Minister K. Starmer and EC President U. von der Leyen to sign a defence-security partnership agreement at the UK-EU summit in May, which will strengthen closer industrial cooperation (Foster, Fisher and Bounds, 2025). So far, there are still few orders in the defence sector in the Union.

EU legislation assumes carbon neutrality by 2050. There is also a commitment to increase public spending on innovation to 3% of GDP per year (Slovakia 1.65%). EU targets for the modernization of digital infrastructure also need to be set. The Report estimates investments for these goals at about EUR 0.8 trillion per year. In addition to increasing the share of investment in GDP, public investment, which has so far accounted for a fifth of financing in Europe, must increase. The Report concludes that large investments require public support and the integration of capital markets to encourage private investment across the Union. Joint borrowing and investment in key projects (breakthrough research, energy grids and joint purchases) can increase productivity if these resources are not used for normal government expenditure or subsidies, but are used for competitiveness-critical objectives.

The DR proposes horizontal measures involving the use of development banks for public-private partnerships, support for the creation of pension funds, a resilience assessment for mergers/acquisitions, and pressure on European strategic priorities. The Report highlights key areas of future policy, but overlooks other options and does not address financing, governance and growth factors in sectors. Rather, the proposals reflect short-term policy objectives. While more ambitious goals for the European economy are required, some of the proposals limit the vertical/horizontal cross-sectoral integration of technologically advanced segments. The Report could have provided more innovative approaches to support research and commercialize innovation.

As regards the global transformation of sectors, the ongoing changes vary at EU level and across member states. The Report examines how the European governance should be adapted to make the transition in the Union take place. The Union is a complex entity with a multitude of organizations with different priorities and funding models. A governance system that involves national and EU entities can strengthen the resilience of the European solution, improve cooperation and strengthen dynamism. A slower reform of European governance will only prolong the stagnation. The development of the Union requires an action policy and a consensus of the members of the Union on strategy. The agreement of the actors on goals considering the mega-trends indicated in the DR can ensure change and better functioning. The Report calls for a link between EU rules and other actors and for a more flexible procedure for amending EU rules. The competitiveness of EU companies will be helped by mechanisms to facilitate the acquisition of finance, competition and the formation of technological ecosystems. Diversification of supply chains will support resilience in technology segments.

Actors in the Union perceive the economic challenges associated with the European industrial policy model and have started reforms. According to the DR, the changes should mainly address weaker performance. However, decisions by European governments sometimes hamper action and increase costs for the Union. Policymakers in the EU should therefore address industrial performance more comprehensively to achieve better commercialization of innovation. The institutional development of the single market is not sufficient for the technology sector. The EU's common legislative framework is intended to harmonize different national regulations, consider national legislation and improve operating conditions. Adherence to standardized legislative principles on resilience will increase the resilience of technological systems to threats. Companies active in several EU countries must deal with cross-border issues in taxation, export control and labour law. Harmonization of rules will make the internal market for services more efficient at a time when private funding for European start-ups is facing a slowdown in terms of resources invested and the number of contracts.

Regardless of the diversity of economies, the dilemma is whether and how to support Europe's high-tech sector. Inaction means that companies can leave the Union or limit the development of strategic assets. Public intervention to support innovation in strategic areas will also help to increase competition in markets. In the US, support for military research is successful and the civilian sector also benefits from the so-called dual technologies. The European Investment Bank's risk-taking willingness to lend will make it easier for firms to finance beyond venture capital. Access to capital will be facilitated by financing advanced strategic technologies and support through long-term public programs. Although there is an effort to attract strategic companies to the European market, investors are concerned about the changes adopted at the European level.

A process of intermediation for technology systems or services allowing preferential clauses can improve the European technology market. This will bring effects to European companies and strengthen their global competitiveness. Without a business environment that allows European companies to go to mature markets, there may be a decline in performance. China, the US, India and other countries support domestic sectors and firms with different policies and hinder competition from accessing markets. By promoting competition and equal treatment, Europe is placing restrictions on other areas. According to the DR, Europe should therefore have a more balanced approach - develop cooperation and trade and support its own developed sectors. The concept of support has been discussed without success for a long time. Many EU firms are global and need access to global markets. The Report notes weak strategic cooperation between EU members in policy-making. It calls for better coordination, sharing of strategic objectives and cooperation at different levels of the industrial ecosystem. Better coordination and common strategic priorities will improve the commercial exploitation of research and the transfer of innovations to production, which will help firms' profitability and employment.

The industrial aspect of defence is related to geopolitics. While the DS calls for a medium-term implementation, other actors want a quick change in priorities with an emphasis on defence. The Union's defence investments are now lagging behind those of the US and China. A combination of forms and levels of funding will help the Union industry to innovate and make supply chains more resilient in the face of global competition. There must be a transformation, because the development of technologies depends on the Union's capacity to innovate. Innovation processes do not arise centrally, but are based on the initiatives of actors.

A summary of institutional requirements from the DS, considering the requirements of companies, can help strategists in the development of the European economy. Unlike, for example, Japan, Europe uses diplomacy less to support the global presence of its companies. Support mechanisms for access to the foreign market, together with domestic instruments, must be the basis of industrial policy in the technology sector. European technology actors need to be actively involved in global manufacturing, coordination and research networks and cooperate with leading firms. Integration with other EU policies, such as development and trade policies and mechanisms (e.g. export credits), is needed. According to DS, this will help to replace limited domestic demand by supporting companies in new markets. Effective intra-Union coordination will help to find export opportunities. The question of how to support the protection of large national companies so that they maintain their global positions and disrupt the position of non-dynamic/non-innovative companies is complex. In the long term, support for mergers may be undesirable, as the diversification of actors, competition and the removal of barriers to innovation improve the business environment and strengthen resilience. In the field of telecommunications, however, many small operators in the EU are holding back innovation and limiting investments in network modernization.

The benefit of the DS is the comprehensive identification of the weaker points of the Union's performance and the recommendation of changes. However, it puts less emphasis on how the Union promotes and should promote change. Evolutionary changes that do not lead to a fundamental transformation are recommended. The timing of the DS came at the time of the election of the new EP and the formation of the new EC. So far, the Commission's activities indicate a partial adaptation to the new challenges. Whether the increased defence spending will translate into changes and the functioning of the Union's institutions and its members remains to be seen.

The EC will also play an important role. While some considers its new composition to be a "stabilizing" factor, for others it is stiffness. A wider group of "sceptics" does not see a chance for a reversal in the functioning of European institutions that would affect the economy. At the same time, the DS's proposals for more integrated capital markets, joint financing or research development require reforms. It will not be easy to find political will and consensus in the Union due to the need to address the competitiveness of companies in the context of deteriorating national budgets. The funding for the period 2025 – 2028 indicates that the European technology ecosystem and policymakers must prevent a decline in performance by adopting an integrated strategic technology policy.

In parallel, Europe needs to address the urgent challenges of security, resilience and adaptation to climate change. It must use mechanisms and frameworks that allow for the rapid implementation of long-term objectives. The Union can use the DS strategy to increase productivity, make capital markets and the public sector more efficient, which can also reduce costs for governments. The development and production of high-tech products and the demand for scientific results will be important. The question is whether the transformation will take place and whether the position of EU companies will improve.

The future will show how DS will spur structural change. It will indicate the scope and extent to which the intensity and dynamics of the EC's actions in response to the DS will manifest themselves. Europe's prosperity requires reforms whose timing, intensity and dynamism are reflected in the effects. The document outlined the possibilities of transforming the Union's economy at a time when it faces both cyclical and structural challenges. The contribution of the DS is more in the analytical than in the normative part. The Report covers several parameters of the European ecosystem and maps negative trends. A focus on the dynamics/intensity of change, which is more typical for non-European entities, would be required. In assessing the Report, we note that (a) the Report lists many of the challenges that the Union needs to address; (b) the Report assesses some of the challenges in a simplistic way, regarding possible changes in economic policy and strategy, and (c) the Report reflects the views of a limited segment of experts and regions. However, the Report rightly argues that if the Union does not coordinate its policies, it risks weakening its competitiveness and delaying or rejecting the transition.

Possible Impacts of Changes in the US Economic Policy Concept

In November 2024, D. Trump won the presidential election, and his specific approach was immediately reflected in American politics. Even before the elections, he wanted to introduce tariffs, changes in energy, immigration, climate policy and foreign aid, which he is implementing now. The president is trying to be "strategically dramatic." It introduces changes that foreign partners cannot accept or predict. However, the success of a "change initiator" strategy depends on the layout, context, and timing. Indeed, IBM wants to invest USD 150 billion in the US over five years due to the change in tariff conditions (of which USD30 billion in R&D and quantum computers), and TSMC, Nvidia and Apple are also increasing investments there (Hamilton, 2025). Saudi Arabia plans to invest USD 600 billion in the US (and up to USD 1 trillion in the future) and the parameters of US-China relations are being modified.

The EU is likely to be affected by import duties, even though Slovakia's economy falls into the lower risk category of countries with larger exports to the United States. However, the uncertainty associated with multi-crises increases tensions and costs. The new US restrictions threaten trade and apply to the EU, China and other countries (including Canada and Mexico). Limits against China would disrupt the global trading system. Tensions in NATO and the situation in Ukraine are forcing EU members to strengthen arms production and technological infrastructure. An open

Slovak economy must respond to the regrouping of global forces. Technological change strengthens dynamic economies and changes institutional relationships. Tensions are growing in relations between the US and the EU, but also Australia and Japan. The increase in volatility in US foreign policy is eroding confidence in its reliability, giving China a chance to engage more in Europe.

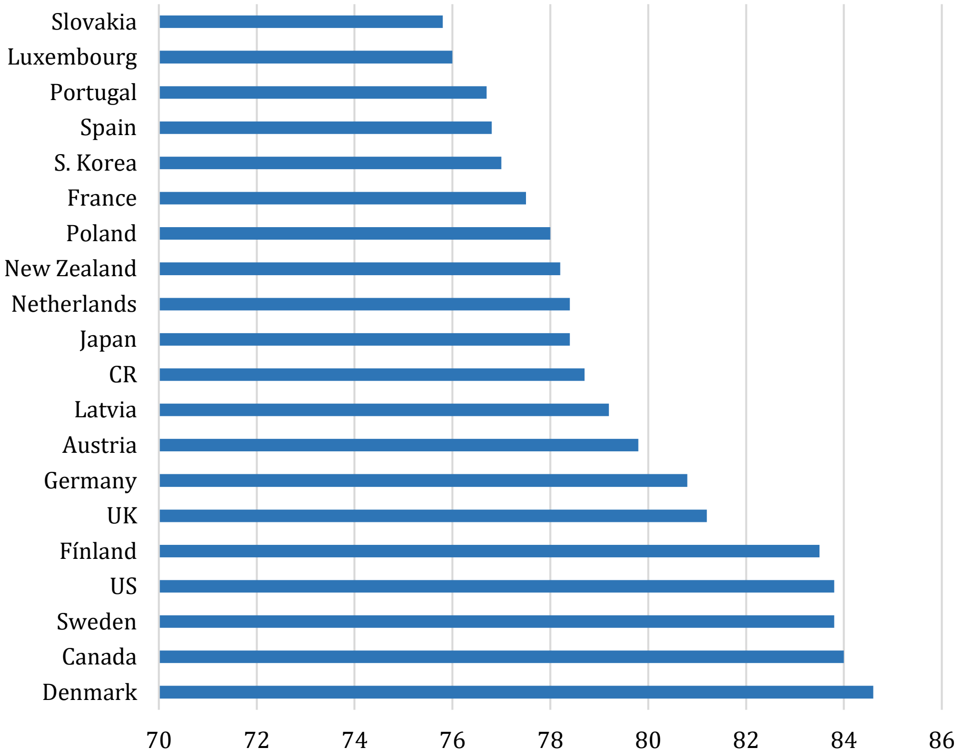
President D. Trump announced and later introduced changes in his policy. The imposition of tariffs of 25% on most goods imported from Mexico and Canada (with a deferral of cars) and the increase of tariffs on Chinese production from 10% to 20% above the current level of tariffs to which exports from China are subject are changing US trade policy. At the end of March 2025, President Trump announced the introduction of a 25% tariff on all cars that were not made in the US. He also threatened to impose tariffs on countries that buy petroleum products from Venezuela. A series of changes in decisions, postponements and modifications of these measures and new activities indicate uncertainty about further developments.

Institutional Development and Legal Framework

Few activities harm economies as much as illicit trade. This disrupts business activities, their profitability and dynamics. It distorts the space of economic activity due to the dynamics of change, the abuse of weak laws, corruption and limited control. In addition, it reduces the tax revenues of the state and requires constant institutional changes. The impacts are not only economic, but also moral. This phenomenon disrupts the functioning of the entire society.

However, the institutional environment can restrict illicit trade, and strong institutions help reduce corruption. Effective enforcement and international cooperation limit unfair practices and illegal activities. Nevertheless, law enforcement efforts often fail, and strict surveillance and overregulation affect normal economic activities. For example, the findings of Stojčić, Vujanović and Baum (2025) suggest that restrictive regulations increase the likelihood of firms withdrawing from innovation and tend to encourage incremental rather than radical innovation. However, an appropriate policy can help reduce the attractiveness of illegal activities. However, isolated measures fail and only joint efforts and ability to act lead to results. Figure 8.2 illustrates Slovakia's position in terms of institutions related to the restriction of illegal trade. Slovakia is among the top twenty countries (out of 87 monitored) and so this factor does not pose a current challenge for the economy.

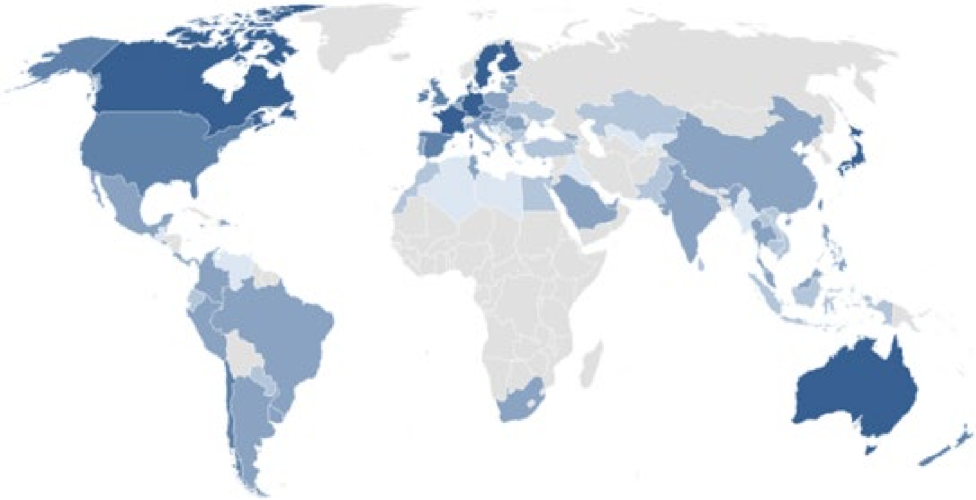
F i g u r e 8.2
Slovakia's Position in Institutions Relevant to the Restriction of Illegal Trade (Position of the Country)



Note: Slovakia's position is based on its position in the set of 87 countries. A higher point value indicates a better situation.
Source: processed based on ITE data (2025).

Institutional efficiency is slightly lower than in the best-rated countries (Map 8.1), but in the context of EU countries, the European area is in a zone of stability and is not a factor limiting entrepreneurship unlike other elements (structural, educational, etc.).

M a p 8.1
Institutional Efficiency of Countries



Note: A darker colour indicates a better position in terms of institutional efficiency of 87 countries. It is a quantitative indicator derived from EIU operational risk data, focusing on the quality of administrative systems.

Source: processed based on ITE data (2025).

While institutional parameters are good in many areas, the challenge for the Union's development is the need to reconcile the ambitions of ecological, scientific-research/technological and military transitions. All these segments need to receive significant resources. The question is which priorities need to be addressed more urgently and which should be given more resources.

The EU's Environmental Ambitions

Currently, within the global economic centers, it is rather the EU that initiates and promotes ambitious plans for greening. Measures responding to the EU's global challenges and problems are becoming more complicated due to the lower willingness of companies to invest in technology. Reactions to the goal of reducing greenhouse gas emissions and competing with China in eco-technologies are mixed. A deterioration in EU-China relations and an increase in EU tariffs on Chinese imports would threaten to increase prices. By blocking the export of raw materials, China would make the decarbonization process more expensive and jeopardize. Disagreements over technical issues are also increasing tensions between the EU and the United States and will increase the cost of eco-technologies.

The Union has been criticized for overusing regulations that burden companies, including environmental legislation. Reducing regulations would increase the flexibility of companies and strengthen their operational freedom vis-à-vis global actors. Previously, part of the legislation overlapped and the legislation was not always comprehensive. For example, the Carbon Border Adjustment Mechanism (CBAM)[40] does not include indirect emissions contained in production inputs, while the Corporate Sustainability Reporting Directive (CSRD) does. Differences in carbon impact analyses mean that the same imported materials may have different CO_2 values assigned to them, which calls into question the impact assessment. The reporting requirements in the Emission Material Recommendations Directive, in turn, differ from those in the Batteries Regulation. Adopted legislation is not always properly evaluated with the actors (e.g. EUR 7 impact assessment). The new legislation is initiated by the EC services without coordinating the timing of implementation and the impact on the sector.

The spectrum of EU environmental legislation includes CSRD, taxonomy regulation, sustainable finance reporting, the Corporate Sustainability Due Diligence Directive, the Eco-design Regulation for Sustainable Products, the Industrial Emissions Directive, the Emissions Trading System and the EU's REACH regulation (concerning the registration, evaluation, authorization and restriction of chemicals). The regulation has been in force since June 2007 and is intended to improve the protection of health and the environment against the risks posed by chemicals. It is also intended to strengthen the competitiveness of the Union's chemical sector.

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[40] The CBAM applies to imports of goods from outside the EU, the production of which emits greenhouse gases on a large scale. The following commodities are subject to it: cement, electricity, fertilizers, iron and steel, aluminium, hydrogen and products made from these commodities. An overview of the goods covered by the CBAM is provided in Regulation (EU) 2023/956 of the European Parliament and of the Council. The mechanism does not apply to goods of negligible value (under EUR 150), goods transported or used in connection with military activities, imports from certain third countries (Iceland, Liechtenstein, Norway, Switzerland) and certain territories.

Starting in 2024 and implementing in the next three years, 42,000 large companies and listed small and medium-sized firms (SMFs), subject to the CSRD directive, are required to prepare sustainability reports in accordance with the requirements of the European Sustainability Reporting Standards (ESRS), which were adopted by the Commission on the basis of the EFRAG proposal.[41] The use of the simplified CSRD standard for listed SMFs developed by EFRAG could be extended to medium-sized firms in order to reduce their reporting costs. Their frequency of reporting could also be reduced from annual to three-year. From a survey of 2.2 thousand companies, the Danish government estimates the average costs per company in Denmark of EUR 365,000 (one-off) and EUR 310,000 per year (recurring) (EFRAG, 2022). Due to value chains, sustainability reporting does not sufficiently distinguish MSF from larger companies. Therefore, simplified versions are created, for example, for voluntary use by non-listed SMFs. The CSRD demonstrates the inadequacy of the adoption of EU rules towards medium-sized companies, as compliance costs account for up to 12.5% of their investment volume (EIB and EPC, 2024). A survey of French medium-sized companies suggests that their initial costs for CSRD can be up to hundreds of thousands of euros.

Technical factors describe the parameters of actors in terms of their classification into typological groups and categories, regarding the scope and content of their activities, as well as their specificities requiring different approaches. This includes, for example, specifications and the classification of firms by size (e.g. the definition of small firms). Technical factors include dozens of parametric information, such as:

- specification of documents for the preparation of the Sustainability Report (SRe);
- specification of the scope of consolidation of the consolidated SRe;
- indications for actors excluded from the SRe;
- Determining the extent to which SRe covers value chain flows;

[41] EFRAG, formerly the European Financial Reporting Advisory Group, is an independent technical advisory body to the ESRS. These European Standards contain 1052 quantitative/qualitative information, of which 783 are intended for mandatory disclosure (80% of them, i.e. 622 types of information, are intended to be disclosed if relevant to the firm) and 269 for voluntary reporting (EFRAG, 2022; TFEC, 2024).

- assumptions, estimates and assessments related to environmental measurements;
- specification of the change in the presentation of sustainability information and its justification.

Reporting of risk management components/processes and internal control systems for SRe can be financially and administratively demanding for firms due to the risk assessment approach used. Companies should regularly report on risk assessments and internal control findings to the organizational, management and control bodies. They are intended to list significant groups of products/services offered and the main markets and customer groups, including items prohibited in some markets.

Although reporting addresses the area of sustainability and environmental protection, the degree of complexity of systematization is considerable and simplification should be made to reduce costs for companies in the EU. It would make the Union's business environment more attractive by simplifying regulation and reducing costs for companies. A simpler system would prevent failures of the control system.

An example of an effort to make a difference is that the Fit4Future platform has proposed reporting automation in CSRD. A revision of the Waste Directive would allow for digitalization, streamline reporting on the circular economy, and take a comprehensive approach to waste, products and chemicals regulations. Extending the simplified CSRD standard would reduce costs for companies. Systematization streamlines the measurement and evaluation of transformational changes. The scope of the required data, although part is optional, is considerable. It creates an excessive bureaucratic burden with regular reporting and complicates business. Characterizing the nature of activities or business relationships through which actors influence the environment is important. However, it is also necessary to see the broader context of the application of regulations and the impact of the measures on companies.

Extreme weather events due to climate change are disrupting global supply chains. The frequency of extreme climatic events is increasing, with severe droughts and heat waves affecting crop yields. Rising global temperatures will strengthen the trend, and if extreme weather events significantly affect production, it could lead to shortages. The higher costs of disrupting manufacturing and retail chains would translate into higher prices and inflation, and food shortages in parts of the world would threaten mass migration and conflict.

* * *

The US administration is changing trade policy, dampening China's ambitions and confronting the ideas of the Fed (its own central bank). It has been waiting for a long time for the country to "do its homework". With a high budget deficit and internal debt, dealing with the challenges posed by China's rival would be more complicated. In April, US President Trump presented a package of reciprocal tariffs (20% for goods from the EU and 34% for goods from China). The minimum tax for business partners is to be 10%. The US administration expects support for domestic production from this. The base duty of 10% was to enter into force on 5 April and the reciprocal duties on 9 April 2025. Tariffs on cars (25%) and nationwide tariffs on EU products (20%) introduced by the US may slightly reduce Slovakia's GDP growth this year. The modification of deadlines and rates is still underway, as shown by the development of US-China relations, and there is no need to comment on the updates. As a result of the changes, there is a risk of a global recession, although a more significant impact is not expected until next year. The growing tensions caused by the dynamic US strategy are already affecting global markets. Markets react to the measures by falling and rising the price of gold, weakening the dollar. Some bonds are losing their attractiveness. Some investors question the role of the US as a guarantor of global stability.

The EU economy will face significant challenges in 2025. Many of them are not new, but they are more serious, as the Union has long underestimated structural challenges. The dominance of the US and other non-European countries in the digitization and development of AI (e.g. Japan, China), weaker diversification of production and the absence of structural changes seem more urgent in the context of current events. The openness of the Slovak economy and the small internal market require deeper changes on a wider scale. This also applies to EU concepts and strategies, where simply declaring ambitious intentions is not enough. It is desirable to support investment projects that can kick-start transformation in both the manufacturing and services sectors. It is predicted that spending on AI-powered data centers could reach trillions of dollars between 2024 and 2027. Uncertainty about the potential of these advanced technologies (what they can do) and the efficiency of use (how to use them) is reflected in investment decisions.

However, initial hesitation is waning and key global actors are becoming active globally. This is also a challenge for the domestic industry, which, despite its modernization ambitions, remains anchored in traditional production segments. To encourage their own development of advanced technologies, the Union, Japan, Singapore and Israel are already relaxing their legislation to some extent so that they can use trademarked materials to "train" AI without permission or payment.

The Draghi Group's Report analyses the situation of the Union and identifies challenges that need to be addressed. There are also voices for change in Slovakia. Entrepreneurs associated in the National Union of Employers demand a stable business environment, predictable laws, reforms and an efficient labour market. In the context of the fact that the April forecast published by the NBS estimates a decrease in growth from last year's 2.1% to 1.4%, these are requirements that must be considered.

9. DEVELOPMENT OF QUALITATIVE FACTORS

Given the exhaustion of the low-cost competition model, it is essential for Slovakia to incorporate qualitative factors such as research, innovation, and digitalisation into its economic development. This chapter analyses selected factors of competitiveness and innovation performance of the national economy – in particular, research and development (R&D) and the use of digital technologies. The focus is primarily on the dynamics and structure of R&D expenditures in Slovakia in comparison with selected EU countries, as well as on the flow of financial resources between different R&D sectors. Special attention is paid to the role of large enterprises, the importance of foreign funding, and expenditures on defence-related R&D. The second part outlines some of the strengths and weaknesses of Slovakia's innovation profile against the background of the European Innovation Scoreboard. The chapter concludes with an overview of the level of digital development of the Slovak economy, which continues to face several persistent challenges.

Detailed Overview of Research and Development Expenditures

When assessing the innovation development of an economy, expenditures on R&D represent one of the key indicators. These expenditures directly reflect a society's capacity and willingness to invest in the creation of new knowledge, technologies, and innovations, which serve as drivers of long-term economic growth and competitiveness. According to the main indicator – gross domestic expenditure on R&D (as shown in Table 9.1) – R&D in Slovakia during the observed period 2014 – 2023 remained at levels that do not provide sufficient foundations for domestic R&D to become a potentially significant engine of economic development in Slovakia.

The average R&D intensity over the past ten years has hovered around 0.9% of GDP, with Slovakia maintaining a stable gap compared to the EU27, achieving only approximately 42% of the EU average in R&D financing. In terms of national strategic goals for R&D funding, Slovakia remains below the target level of 1.65%, as set out in the strategic document *Partnership Agreement of the Slovak Republic for 2021 – 2027.*[42]

T a b l e 9.1

Gross Expenditure on R&D and its Structure in Slovakia and the EU27, 2014 – 2023 (% of GDP)

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
SK	*Gross expenditures on R&D*	*0.9*	*1.2*	*0.8*	*0.9*	*0.8*	*0.8*	*0.9*	*0.9*	*1.0*	*1.0*
EU27	*Gross expenditures on R&D*	*2.1*	*2.1*	*2.1*	*2.1*	*2.2*	*2.2*	*2.3*	*2.2*	*2.2*	*2.2*
	By sector of performance										
SK	Business enterprise	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6
	Government	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	Higher education	0.3	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
EU27	Business enterprise	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5
	Government	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2
	Higher education	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	By sector of funds										
SK	Business enterprise	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	n/a
	Government	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3	n/a
	Higher education	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n/a
	Foreign	0.2	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.2	n/a
EU27	Business enterprise	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	n/a	n/a
	Government	0.7	n/a	0.7	0.6	0.6	0.7	0.7	0.7	n/a	n/a
	Higher education	0.0	n/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n/a
	Foreign	0.2	n/a	0.2	0.2	0.2	0.2	0.2	0.2	n/a	n/a

Source: Eurostat (2025); rd_e_gerdfund.

A certain positive trend can be observed in the gradually changing structure of R&D expenditures. While in 2014 the majority of funding was directed towards the public sector (government + higher education sectors) and only 37% of total R&D expenditures were invested in the private

[42] The quantified expected outcome is: "An increase in the share of R&D expenditure to at least 1.64% of GDP by 2030, with the ratio between private and public funding set at 3:2" (MIRRI SR, 2021).

business sector, by 2023 this ratio had reversed in favour of the private sector, which now accounts for 56% of all R&D expenditures. This indicates a modest convergence towards the target values of national innovation and R&D policies, as well as towards the EU27 average (i.e. 66%).

Given the nature of the Slovak economy – that is, a small and open economy with a particularly high dependence on external sources of investment – a greater influence of foreign funding is also expected in the area of R&D financing. Table 9.2 presents a combination of the sector of use and the source of gross domestic R&D expenditure for the most recent available year, 2022. At the same time, this table can also be interpreted as illustrating the flows between different R&D sectors or, alternatively, as the intensity of cooperation between R&D sectors.

T a b l e 9.2

Structure of Gross R&D Expenditures By Sector (2022, mil. EUR)

	Sector of performance			
Sector of funds	***Business enterprise***	***Government***	***Higher education***	***Total***
Business enterprise	500,1	5,2	1,5	506,8
Government	21,9	145,7	193,1	360,7
Higher education	0,0	0,02	20,2	20,2
Foreign – business enterprise	84,9	0,2	0,7	85,8
Foreign – European Commission	4,4	26,6	44,5	75,4
Total	611,3	177,6	260,0	

Source: Eurostat (2025); rd_e_gerdfund.

In 2022, R&D in Slovakia was predominantly carried out within the business sector and financed by resources from this same sector, which accounted for as much as 47% of all R&D expenditures. Only minimal funding from the business sector flowed into the public sector (governmental and higher education), amounting to just EUR 5.2 million and EUR 1.5 million respectively. A very similar situation was observed in the opposite direction; the public sector directed only 21.9 million to the business sector, which represents approximately 2% of total R&D expenditures.

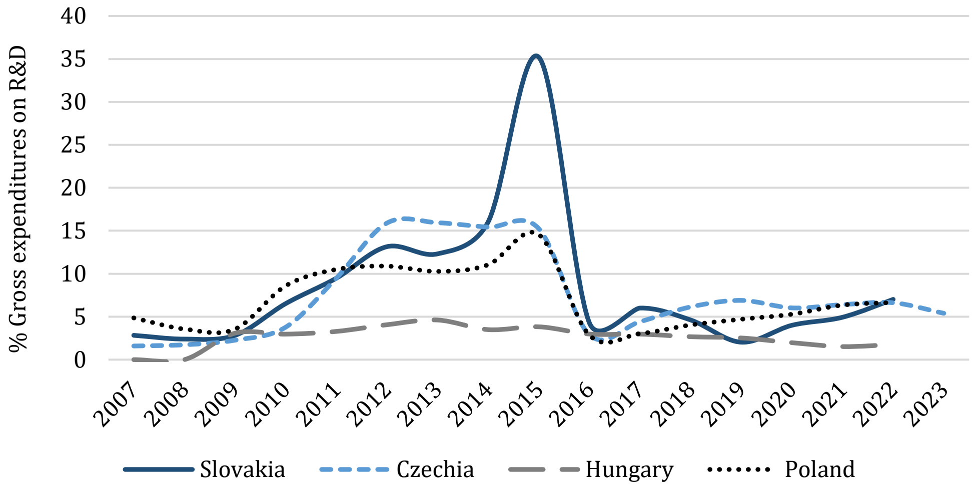
If we consider these outlined flows (e.g. in the form of grants or contractual cooperation) as indicators of collaboration or of the utilisation of scientific knowledge generated by the public sector within the private sector, then it must be concluded that cooperation between the private and public sectors in R&D remains highly insufficient.

Given the role of EU funding in financing public sector R&D, attention must also be paid to the "Foreign – European Commission" funding source. In 2022, this source accounted for 7% of total R&D expenditures. In practice, resources from the European Commission primarily refer to EU funds, which member states can draw on to support R&D activities.

Figure 9.1 illustrates the relative role of European Commission sources in R&D funding (as a percentage of total R&D expenditure). The development of these funds can be framed within the programming periods of EU fund absorption. In the case of Slovakia (as well as the Czech Republic and Poland), a certain cyclicality and concentration of fund utilisation in the final year of the 2007 – 2013 programming period (i.e. 2015) is clearly evident. The development of expenditures during the 2014 – 2020 programming period, which was extended until the end of 2023, does not exhibit such a volatile pattern as was the case up to 2015. It appears that, despite data for 2023 not yet being available, the relative significance of European Commission sources in Slovakia – as well as in the rest of the V4 countries – has been relatively weaker since 2015.

Figure 9.1

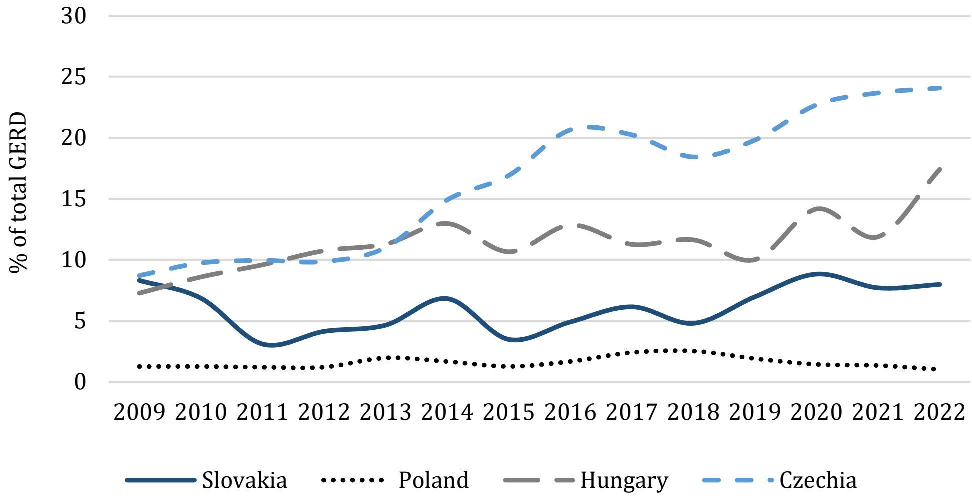
The European Commission as a Source of R&D Funding, 2007 – 2023 in the V4 Countries



Source: Eurostat (2025); rd_e_gerdfund.

F i g u r e 9.2

Foreign Enterprises as a Source of R&D (% of total R&D expenditure)



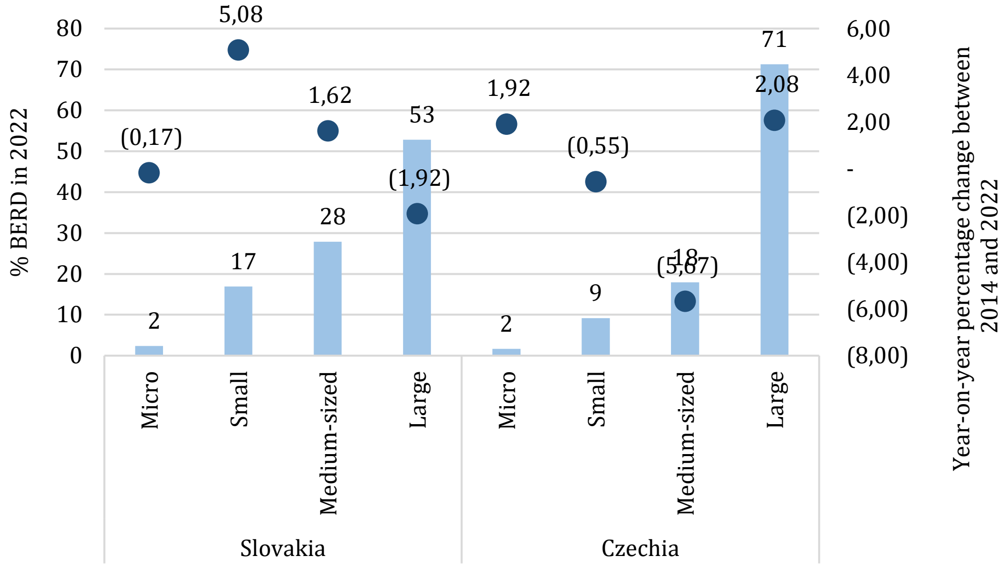
Source: Eurostat (2025); rd_e_gerdfund rd_e_berdsize.

An interesting trend among the V4 economies can be observed in the component of R&D expenditure originating from foreign enterprises. Given the high degree of internationalisation of national economies and the inflow of foreign investment over the past two decades, it is reasonable to assume that this component would show a growing tendency. This has been confirmed only in the cases of Poland and the Czech Republic, with the latter experiencing an increase in this share to nearly 25% of total R&D expenditure. In contrast, in the case of Slovakia, this value has not exceeded a 10% share. This indicator can be understood as a reflection of foreign enterprises' interest in the domestic economy – not only in terms of cost-related factors, but also in the utilisation of domestic corporate R&D capacities (the "flow" of expenditure from foreign enterprises on R&D is mainly realised within corporate groups).

In connection with business enterprise expenditure on R&D, we also examine its distribution according to the size structure of enterprises. Figure 9.3 presents the breakdown of R&D expenditure among micro-enterprises (0 – 9 employees), small enterprises (10 – 49 employees), medium-sized enterprises (50 – 249 employees), and large enterprises (more than 250 employees). The data are for the year 2022, and Slovakia is compared with the Czech economy. We focus not only on the state in 2022 (the most recent available data) but also on the year-on-year percentage change between 2014 and 2022. In this respect, the Czech economy can also serve as an example of positive development.

Figure 9.3

Business R&D Expenditure By Enterprise Size Structure

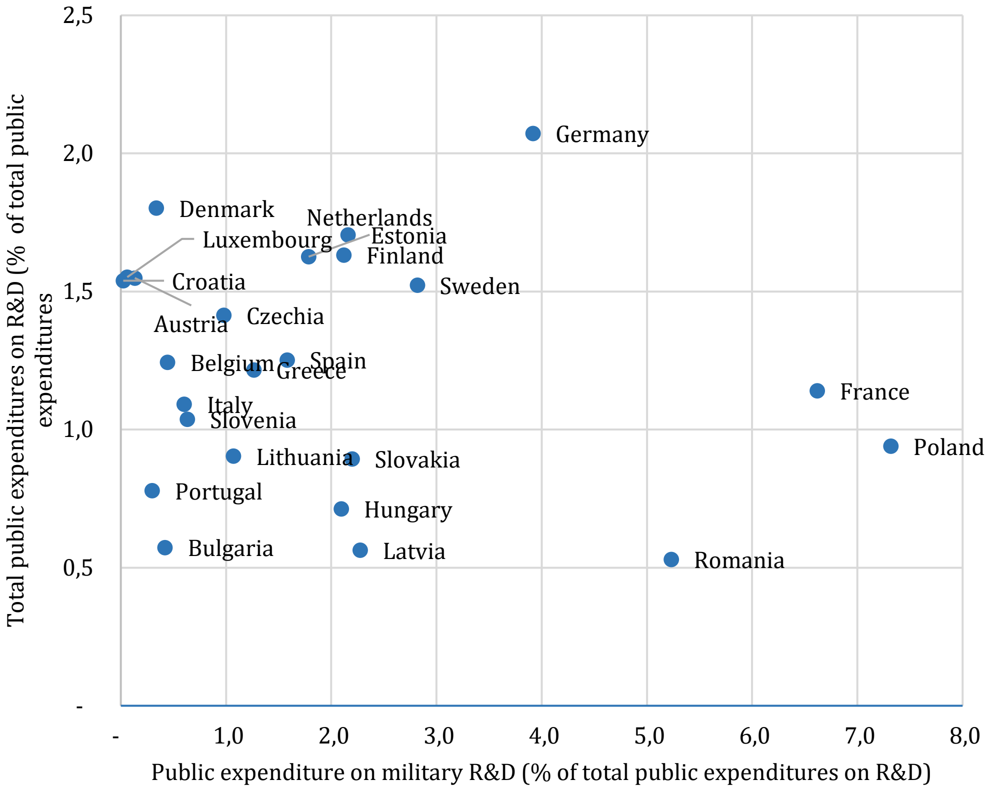


Source: Eurostat (2025); rd_e_berdsize.

The majority of business R&D is carried out in large enterprises. In Slovakia, they account for 53% of business expenditure on R&D, and the negative year-on-year percentage change in this share between 2014 and 2022 can be viewed unfavourably. By contrast, the Czech economy shows a gradual increase in the importance of this component.

Large enterprises possess several fundamental advantages that give them a competitive edge in R&D. First and foremost, they have extensive financial resources, enabling them to undertake long-term, capital-intensive research projects that would be out of reach for small and medium-sized firms. Such investments often cover not only applied research but also basic research with uncertain yet potentially ground-breaking returns. In addition, large firms have access to sophisticated infrastructure, including specialised laboratories, computing facilities, and advanced production equipment, all of which enhance the efficiency of innovation processes. They also employ sizeable, multidisciplinary research teams, increasing their capacity to address complex scientific and technical challenges. Another key advantage is their ability to manage intellectual property effectively through internal legal departments, thereby improving the protection of their innovations and patentable outputs. Moreover, thanks to their strong market position and international links, these companies can commercialise research results efficiently and transfer innovations to global markets, maximising the return on R&D investment. This combination of resources, capabilities, and a systemic approach makes large enterprises key players in innovation ecosystems and drivers of technological progress.

Figure 9.4
Public Expenditure on Defence R&D in Selected EU Countries
(average 2014 – 2023)



Source: Eurostat (2025); rd_e_gerdfund.

Given the tense international situation in Europe, questions of armament and its financing have come to the fore. In this context, it is worth devoting some attention to defence-related R&D expenditure. Defence R&D constitutes a distinct, strategically significant category of public investment. These outlays focus on the development of new military technologies, weapons systems, cybersecurity, communications, and artificial intelligence, and they often generate civil side benefits (so-called dual-use technologies).

As shown in Figure 9.4, Slovakia ranks among the countries with relatively higher defence spending as a share of total public R&D expenditure (horizontal axis – 2.2%, average 2014 – 2023). However, this relatively positive situation must be viewed in the context of Slovakia's overall public R&D expenditure, which remains among the lowest in the EU (vertical axis – 0.9% of public expenditure, average 2014 – 2023).

Selected Aspects of the Innovation Profile of the Slovak Economy According to the European Innovation Scoreboard

Slovakia, in the latest edition of the European Innovation Scoreboard (EC, 2024), is placed in the group of countries with the lowest innovation performance. The European Innovation Scoreboard captures 32 indicators – factors of innovation performance – including R&D, digital transformation, innovation support and financing, environmental technology development, and other key areas. The 2024 data, analysed in the context of Slovakia's performance compared with the EU, and the changes observed between 2017 and 2024, allow us to highlight some relative (in comparison with the EU) strengths and weaknesses of Slovakia's innovation performance, as well as certain trends over time.

Slovakia demonstrates above-average performance in the export of medium- and high-tech products, reflecting the economy's focus on industrial production (primarily the automotive sector). With a value of 115.4% of the EU average, Slovakia ranks among the countries with the highest exports of such technologies in the EU. These products include electronics, automobiles, biotechnology, and chemical products – sectors that require technological innovation and relatively high levels of professional training.

A higher indicator value suggests that a country has a strong sector capable of producing and exporting innovative, high value-added products. In Slovakia's case, this is largely due to the high share of foreign-controlled enterprises.

Another relative strength is the lower emission of fine dust particles, where Slovakia scores 101.8% of the EU average. This indicator measures emissions of PM2.5 particles, which negatively impact public health and the environment. In practice, this may indicate the implementation of innovative or efficient technologies, particularly in industry and energy production. In Slovakia's case, the improvement in this indicator can be attributed to the cessation of brown coal mining and combustion in the Upper Nitra region (a transition from fossil fuel combustion to gas/renewables) and the scaling down of aluminium production by Slovalco, the largest domestic producer. Both Slovalco and the Nováky heating plant were among the major polluters.

In terms of the sale of new-to-market and new-to-firm innovations, Slovakia scores 115.3% of the EU average. This indicator tracks the sale of products that are new to the market or new to the firm itself. A high score reflects the ability of Slovak companies to develop and introduce new innovative products, thus enhancing their global competitiveness.

A further above-average indicator relates to innovation expenditures not based on R&D, with Slovakia achieving 100.7% of the EU average. This indicates a focus on non-R&D innovation, such as design, marketing, production, and other process innovations. This indicator highlights Slovak firms' capacity to invest in types of innovation essential for improving competitiveness and efficiency.

Three of the four indicators where Slovakia exceeds the EU average – exports of medium- and high-tech goods, sales of new innovations, and non-R&D innovation expenditure – can be linked to the strong presence of foreign-controlled enterprises in the country.

On the other hand, Slovakia displays several notable weaknesses compared to the EU27. One is its low performance in public R&D investment, with Slovakia reaching only 49.2% of the EU average. Slovak firms also invest less in R&D than their EU counterparts. At just 36.1% of the EU27 average, Slovakia significantly lags behind.

Another weak point is design-based innovation, where Slovakia scores only 36.2% of the EU average. While not a “core” dimension of innovation, this metric reflects the limited development of creative and design capabilities. Design innovations can be crucial for the competitiveness and success of products, especially for SMEs, which often rely on design to differentiate their offerings.

In the field of human capital, Slovakia's innovation/education system performs poorly in the job-to-job mobility of HRST (Human Resources in Science and Technology), achieving only 29% of the EU27 average. This indicator measures how often and to what extent STEM-educated professionals change jobs within their field. High mobility suggests a flexible labour market, dynamic innovation sectors, and healthy knowledge circulation. Low mobility may instead signal market rigidity or a lack of opportunities for professionals.

Between 2017 and 2024, positive trends have emerged in certain innovation system dimensions. Business R&D investment increased by 18.0%, potentially supporting increased competitiveness and technological advancement. The share of foreign doctoral students also rose by 28%, reflecting a degree of internationalisation in higher education and research. A high share indicates the attractiveness of a country’s academic institutions and openness to global collaboration. In Slovakia’s case, this may be driven by lower study and living costs, particularly attractive to students from non-EU countries such as Ukraine, Serbia, India, or Iran, as well as geographical and historical ties. In some cases, a rising share may also result from a decline in domestic PhD candidates due to demographic trends, low interest in academic careers, or brain drain – which relatively increases the weight of foreign students.

A third positive trend is the increase in broadband penetration (+30%). This indicator measures the availability and usage of high-speed internet among households. It is a key measure of a society’s digital maturity and readiness for a digital economy. High penetration implies a well-developed digital infrastructure supporting innovation, e-government, online education, telemedicine, entrepreneurship, etc. Low penetration, in contrast, may indicate digital exclusion in rural or disadvantaged areas and hinder knowledge-based economic growth.

However, Slovakia also recorded negative developments in some key areas. A 67% decline in public research investment is an alarming sign, suggesting insufficient government support for research. A 24% drop in adult lifelong learning is also concerning. This indicator reflects the share of people aged 25 – 64 participating in non-formal education and training. High engagement supports labour market adaptability, whereas low participation suggests limited opportunities or low motivation for adult learning. Despite a rise in participation in 2022 (53.1% of adults in non-formal education), the average hours per person remain well below the EU average, indicating low intensity and effectiveness. Contributing factors include low public investment in upskilling, an absence of a comprehensive legal framework for adult education, and fragmented, low-quality offerings (European Commission, 2023).

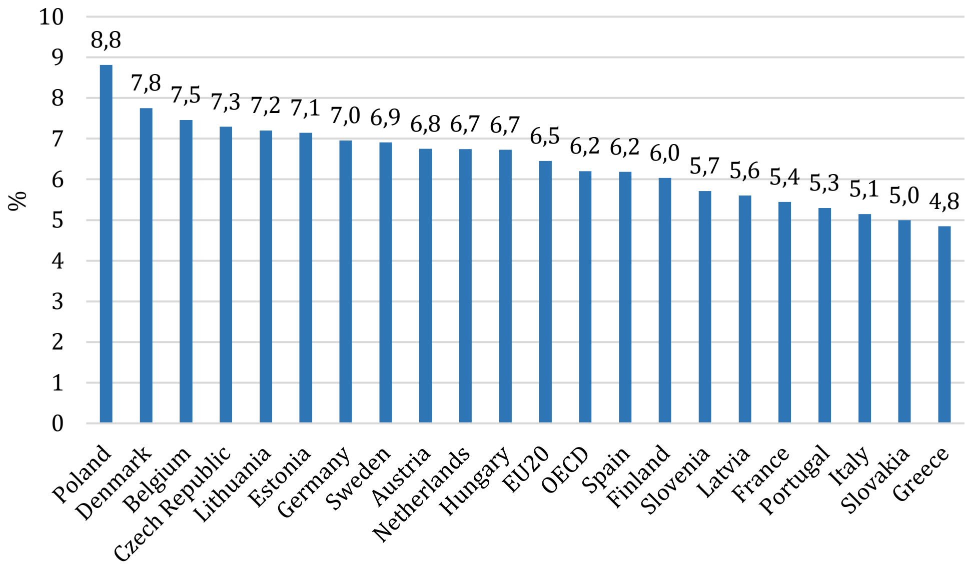
The third negative trend concerns environmental technologies, which saw a 52.3% decline. This indicator tracks the share of environmentally-oriented patents among all domestic patent applications. It focuses on innovations that contribute to environmental protection (e.g. emission reduction, renewables, eco-transport, water conservation, waste management). This is a crucial indicator of a country's ability to innovate for sustainability and contribute to green transformation.

Selected Challenges of the Digital Economy

As a country with an economy based on industry, Slovakia faces numerous megatrends associated with technological progress. One of the key trends is the digitalisation of the economy. According to an OECD study (2024), the information and communication technology (ICT) sector in OECD countries is growing significantly faster than the overall economy. Over the past decade, the ICT sector in OECD countries has expanded roughly three times faster than the rest of the economy, reaching an average growth rate of 7.6% in 2023.

However, when examining the development of the ICT sector in Slovakia in comparison with European OECD member states, the picture is rather unfavourable. Slovakia recorded one of the lowest growth rates in the domestic ICT sector between 2013 and 2023. Slovakia's lagging position in the region is further emphasised by the fact that Poland (a regional leader), the Czech Republic, and Hungary are among the countries with above-average growth in this area.

F i g u r e 9.5
Average Growth of the ICT Sector 2013 – 2023* (in %)



Note: The period 2018 – 2023 is based on forecasts.
Source: OECD (2024).

A key factor in the successful adoption of digital technologies in the economy is the availability of a skilled workforce. Slovakia's current position can be illustrated using two indicators: ICT specialists and ICT graduates.

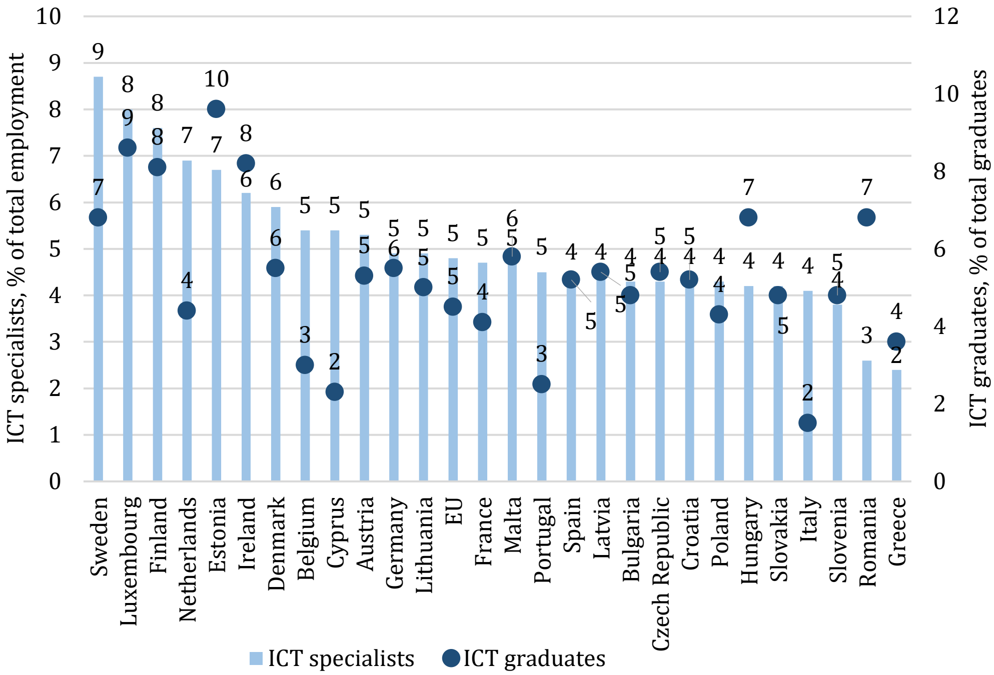
The indicator "ICT specialists" refers to the number of employed professionals in the ICT sector who perform tasks closely related to the development, maintenance, and management of information technologies. This is a critical indicator for assessing a country's digital readiness. The indicator "ICT graduates" represents the number of individuals who have obtained formal education in ICT-related fields. It is essential for monitoring the inflow of new qualified labour into the digital sector and for evaluating the effectiveness of educational systems in preparing for the digital economy.

Slovakia is below the EU average in terms of the share of ICT specialists, but slightly above average in the number of ICT graduates. This suggests that although the education system produces a relatively sufficient number of qualified professionals, many of them do not find employment in the domestic labour market or leave for better opportunities abroad.

Regarding the employment of ICT specialists in the manufacturing sector, Eurostat data (Eurostat, 2025[43]) shows that in Slovakia in 2024, ICT specialists made up 2.2% of total employment in this sector. In the EU27, this figure was 4.3%. The European leaders are Finland (9.1%) and Sweden (8.6%). The Czech Republic has a similar figure to Slovakia, at 2.4%.

F i g u r e 9.6

Human Capital in the ICT Sector



Sources: Eurostat (2025); isoc_sks_itsp, educ_uoe_grad03.

The digital maturity of countries is increasingly assessed through a range of indicators that capture the complex aspects of technological readiness (EC, 2025). We have selected three such indicators. The first is

43 <https://doi.org/10.2908/ISOC_SKS_ITSPN2>.

the share of fixed broadband connections with a speed of at least 1 Gbps, which reflects the availability of high-speed internet. The second indicator tracks the share of small and medium-sized enterprises (SMEs) with at least a basic level of digital intensity. The third indicator measures the adoption of artificial intelligence (AI) by businesses.

Compared to other EU27 countries, Slovakia ranks at the lower end for all three indicators of digital maturity. The share of fixed broadband connections with speeds of at least 1 Gbps is only 1.8%, significantly below the EU average of 18.5%. Only Greece and Austria have a lower share than Slovakia. This indicator, based on declared connection speeds, highlights Slovakia's insufficient infrastructural readiness to support the use of cutting-edge digital services, which can hinder the development of data-intensive technologies such as artificial intelligence and cloud solutions.

In terms of digital intensity among SMEs – defined as the use of at least four out of twelve monitored digital technologies[44] – Slovakia again lags behind. Only 42.2% of Slovak SMEs reach at least a basic level of digital intensity, well below the EU average of 57.7% and far behind leaders such as Finland (85.6%), Sweden (79.9%), and the Netherlands (78.6%). This data reveals that Slovak businesses face limited access to, or motivation for, implementing modern digital tools such as electronic information exchange, ERP systems, or cloud solutions.

Regarding the adoption of artificial intelligence by businesses, Slovakia scores just 6.4%, slightly below the EU average of 7.4%, but still a very low figure – especially in comparison with countries like Denmark (14.1%), Finland (13.8%), or Luxembourg (13.5%). The use of AI tools such as machine learning, natural language processing, or image recognition remains insufficient in Slovakia. The combination of low high-speed internet penetration and weak digital intensity suggests that Slovak enterprises not only lack the technical infrastructure, but also the readiness to implement AI tools.

[44] DII v3 assesses the share of companies that use at least four out of twelve digital technologies. This basic threshold corresponds to a "basic level" of digitalisation, which in practice means that a business has already integrated several digital tools into its operations. These include: high-speed internet (≥30 Mbps), a website with advanced functionalities, social media, software for electronic information sharing, ERP systems (for enterprise resource planning), CRM systems (for customer relationship management), cloud computing, big data analytics, the Internet of Things, e-invoicing, security software, or sales through e-commerce.

* * *

Qualitative factors such as R&D and digitalisation are key preconditions for Slovakia's future growth, yet current outcomes point to an underutilisation of this potential. The country's long-standing below-average performance in R&D investment limits its ability to build an economy comparable to Western European countries. Despite a moderate increase in business investment and a gradual shift in its structure in favour of the private sector, expenditure remains below the targets set in national strategies as well as the EU average.

A serious issue is the persistently weak cooperation between the public and private sectors. Financial flows between these sectors are minimal, which hampers the effective transfer of knowledge, the commercialisation of innovations, and the generation of synergies within the innovation system. Even the role of foreign enterprises in funding R&D, though important, remains weaker in Slovakia compared to other V4 countries, which may suggest lower attractiveness of the Slovak innovation environment for foreign investors in knowledge-intensive activities.

Some outcomes in the European Innovation Scoreboard can be viewed positively, such as the above-average share of exports of medium- and high-tech products, the sale of new innovations, and expenditures on non-R&D-based innovations. However, these factors are strongly linked to the presence and operations of foreign multinational enterprises.

The most significant weaknesses lie in design-based innovation, public R&D, human capital mobility in science and technology, and lifelong learning. These areas represent systemic shortcomings that limit workforce flexibility and adaptability to technological change.

The digital economy is another critical area. Slovakia lags behind in key indicators of digital maturity – from high-speed broadband connectivity to the digital intensity of SMEs and the adoption of artificial intelligence. Moreover, despite an above-average number of ICT graduates, their integration into the domestic labour market is limited, highlighting a structural imbalance between the supply and demand of digital skills.

10. LEGISLATIVE, REGULATORY AND FINANCIAL FRAMEWORK OF THE BUSINESS ENVIRONMENT IN SLOVAKIA

The discussion about a good business environment is complicated by the fact that there is no fixed and comprehensive definition of it. The first reason is objective. The list of parameters that can potentially affect the quality of the business environment is very long and includes not only economic, but also legal, political, social, technological or infrastructural factors. The second reason is subjective. Narrowing down the list is necessary, but at the same time, the choice of parameters itself affects the overall picture of the state of the business environment. In addition, the assessment of the quality of the business environment is usually based on a narrow view of the importance of some selected parameters that are important. A classic example is the excessive attention paid to personal and corporate income tax rates in discussions about the business environment, while this is not the most serious problem of the overall financial burden on business.

The text of this chapter analyses the business environment in Slovakia in the narrow sense, i.e. the legislative and regulatory framework together with the administrative and financial burden on business. These parameters are mentioned most often in discussions about the business environment. However, other factors that make up the broader framework of the business environment in Slovakia are also key to its quality. Its important parameters, some of which are analysed in the next chapters of this publication, are also the macroeconomic framework, physical infrastructure, especially transport, energy and telecommunications networks, the quality of the workforce and the flexibility of the labour market, the quality of healthcare, innovation and technological progress, as well as the attitudes of society towards business.

A good business environment supports entrepreneurship, investment and economic activities. It is an environment that allows businesses to operate efficiently, make a profit, help them increase their competitiveness, which contributes to economic growth and prosperity. The key role in its formation is played by the state and its policies, which affect the relationship of society to business, stability, transparency and predictability of the institutional framework and market conditions. Not only by minimizing barriers of doing business such as overregulation, but also by guaranteeing trouble-free market entry, promoting competition, providing companies and entrepreneurs with access to quality infrastructure, providing them with access to financial resources, but also minimizing opportunities for corrupt behavior.

All international comparisons show that Slovakia has not only been lagging behind the most successful countries for a long time, but is also starting to lag behind countries that were less competitive not so long ago. Today, they make it easier to set up businesses, while creating more favourable conditions for business growth, innovative activities and competitiveness.

The most comprehensive framework for assessing the business and investment environment in the world was the World Bank's Doing Business project, which by 2020 allowed for comparison of developments in up to 190 countries. In 2024, the World Bank introduced a new index, the so-called *Business-Ready Index*, whose methodology focuses on the microeconomic level, i.e. firms and markets. Macroeconomic conditions, the state of corruption, the quality of human capital and other factors are not part of it, as they are covered by other indicators.

According to this assessment, Slovakia has many challenges – and therefore quite a lot of room for improvement – in all three main areas, as the rating ranges from 68 to 77% out of 100.[45] The Slovak Republic achieves the best rating in the areas of public services, market entry and international trade. On the contrary, the worst rated areas are taxation, market competition and financial services.

The advantage of the Business-Ready index is its methodology, which uses the concept of a hypothetical small to medium-sized domestic firm with specific characteristics like legal structure, size, ownership, sector, etc. The disadvantage so far is the low number of countries, when only 50 countries were part of the evaluation in the first year, of which only about a tenth were European countries, so the international comparison does

[45] *Source*: The Business Ready (B-READY), World Bank, 2024.

not yet give a real picture of the country's performance in the overall evaluation and in its individual areas. The World Bank expects 180 countries to be part of the project as early as 2026.

Recently, another international organization of which the Slovak Republic is a member came up with a similar initiative. Organisation for *Economic Co-operation and Development* published its first assessment of entrepreneurial ecosystems in 38 member countries.

The indicators include the measurement of ten parameters of entrepreneurial ecosystem, which are: institutions, culture, networks, infrastructure, markets, finance, knowledge, talent, leadership and intermediary services.[46] The authors start from the reasonable assumption that deficiencies in any parameter have an adverse impact on the level of business activities, while also helping to identify potential bottlenecks in the ecosystem.

The report also includes measurement results of productive business activities that cover various aspects of business performance. OECD experts claim that their aim is to "capture the extent to which business activities are created, survived and developed in the country“. All indicators together very concisely show how well the country is doing in various aspects of entrepreneurial activities compared to others.

Ten charts for each of the ten evaluated areas, which are clearly arranged into one chart on the next page, provide a clear picture of the situation of the business environment in Slovakia. The position of Slovakia is highlighted in red on each chart.

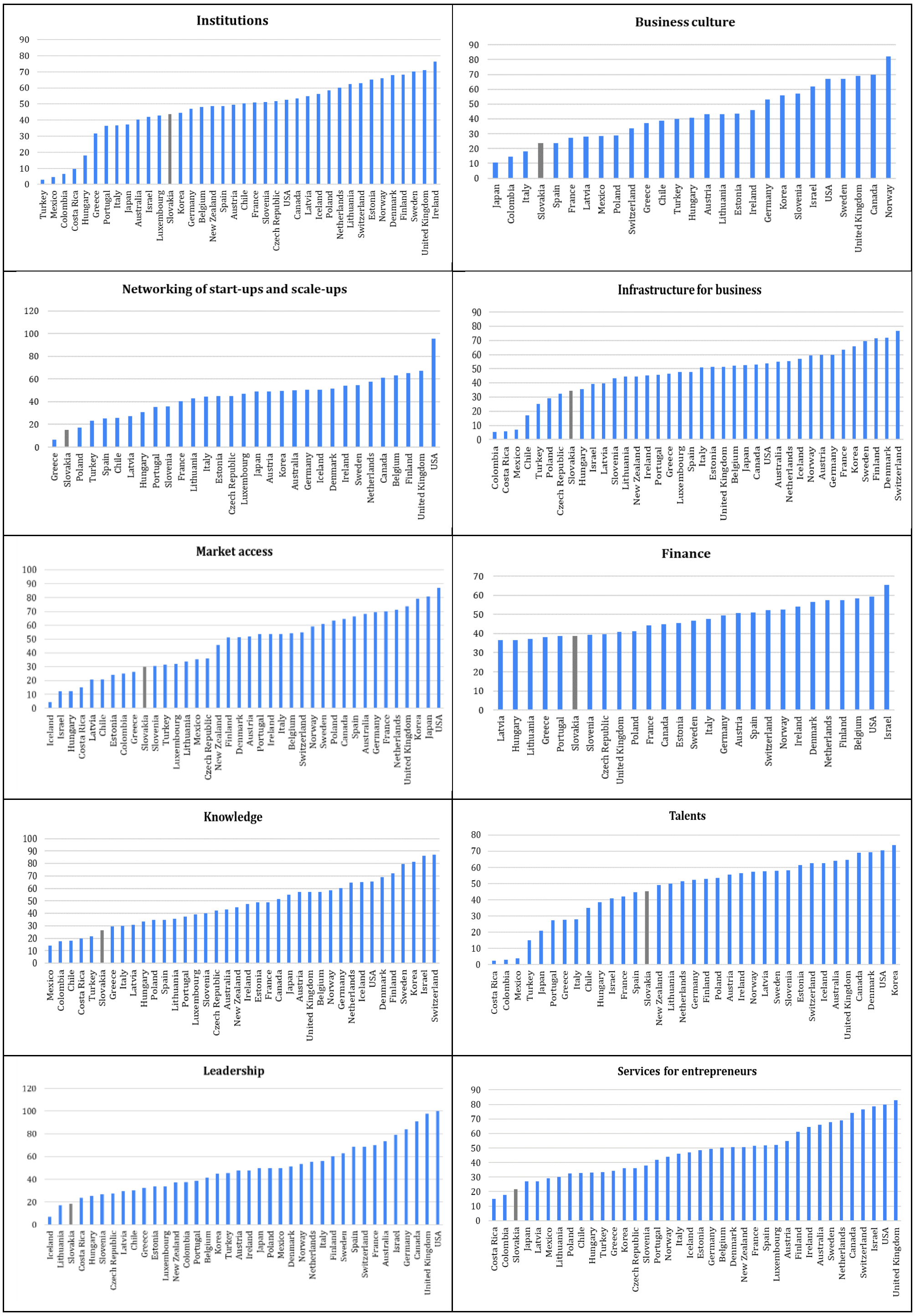
The results are literally alarming for Slovakia. In ten evaluated areas, the Slovak Republic finished 8 times in the last quarter of the ranking, 3 times even among the last three countries. Only in two indicators did Slovakia rank at least in the third ten (26th and 22nd). If we were to make a ranking out of the score, Slovakia would be around 30th place out of 38.

The OECD has proposed this analysis as a "policy support tool" – to help identify systemic bottlenecks and show the way for improvement. Since it contains evaluations of about 40 specific parameters, the Slovak government has all the relevant data on areas in which Slovakia needs to improve.

[46] OECD (2025), Entrepreneurial Ecosystem Diagnostics, OECD Studies on SMEs and Entrepreneurship, OECD Publishing, Paris, p. 8 https://doi.org/10.1787/7096961f-en.

F i g u r e 10.1

Quality of the Business Environment in Slovakia and in the OECD



Source: based on the charts of the OECD Business Environment Diagnostics Report (OECD, 2025).

Legislative Framework for Business and the Rule of Law

One of the key factors of the business environment is the quality of the legislative framework. In Slovakia, there has long been great dissatisfaction with the quality of laws and the quality of the legislative process. The reason for this is the quantity, the growing number of bills with a serious impact on entrepreneurs, but also their low quality: unclear formulations of individual provisions, indirect amendments, or serious changes adopted without expert discussion in the last stages of the legislative process.

Chronic deficiencies in the process of preparing and approving legislation important for business continued in the previous period. Companies and entrepreneurs have been complaining for a long time and justifiably about the three most fundamental problems:

Insufficient or no consultation with stakeholders in the case of the most important legal norms, which were often approved in the fast track procedure, while there were usually no objective reasons for its use. This situation was further exacerbated by a series of crises after 2020, the Covid 19 pandemic, the energy crisis, the war in Ukraine, etc. In June 2023, the VIA IURIS association stated that while before 2020 the share of laws adopted in the fast track legislative procedure was about 10% of all adopted laws, after 2020 it rose to 21%.[47] While part of the expedited procedures was actually triggered by the crisis situation, there was objectively no reason for the most of other changes to be adopted by the fast track procedure.

Insufficient or no assessment of the impact of the proposed legislation on businesses. The obligation to consider the impact on businesses is enshrined both in the legislative rules of the Government and in the Rules of Procedure of the National Council of the Slovak Republic. In practice, however, the government and parliament often do not follow their own rules, as mandatory impact clauses are either completely absent or only

[47] *"As shown by the statistics of the National Council, by April 2023, the National Council had approved a total of 508 laws in the current election period, of which 107 in the fast track legislative procedure (i.e. 21.06%)."* Proposals for a strong rule of law, VIA IURIS, <chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://viaiuris.sk/wp-content/uploads/2023/06/TS-navrhy-pre-silny-pravny-stat-01062023.pdf>.

formal when submitting laws, and there is no real assessment of the potential impacts of the proposed legislation.

Goldplating in transposing EU legislation: the transposition of EU legislation into the legal order of the Slovak Republic is often an opportunity for so called goldplating, for officials to add their own requirements to the submitted amendment, or to tighten the minimum required by the EU. If the transposition takes place earlier than in other EU countries, if the number of obligations for entrepreneurs increases, if fines increase, etc., the regulatory burden and costs for businesses in Slovakia in meeting EU legislative requirements increase.

The most significant changes to the legislative framework that took place in 2024 brought more uncertainty to the business environment in Slovakia, and more changes that had a negative impact on the business environment and the rule of law than changes that had a positive impact on the functioning of companies and entrepreneurs. Representative employers' organizations commented on individual draft laws within the Economic and Social Council of the Slovak Republic (ESC SR) as well as within the process of inter-ministerial comment procedure, while their comments were often accepted only partially and in many cases completely rejected.

Changes to the Legislative Framework Worsening the Conditions for Doing Business

Key legislative changes were not the subject of consultations at all, or there was only minimal space to discuss their impact on the business environment. This was the case with changes to criminal law, the judiciary and the consolidation package to restore public finances.

Amendment to the Criminal Code and abolition of the Special Prosecutor's Office: In February 2024, controversial amendments to criminal legislation were adopted, reducing penalties and limitation periods for corruption-related offences, but were suspended by the Constitutional Court, with a review ongoing from March 2024. In addition, in March 2024, the Special Prosecutor's Office, which was tasked with dealing with high-profile corruption cases, was abolished, potentially weakening anti-corruption efforts. This has raised concerns about the independence and transparency of the judiciary, about the fairness of the legal framework, which can increase risks for businesses, especially in highly regulated sectors, as well as discourage foreign investment.

Draft general government budget for 2025 to 2027 and consolidation package: The draft general government budget for 2025 to 2027, which was discussed in a fast-track legislative procedure, also included consolidation for 2025 in the amount of approximately EUR 2.7 billion. The mix of consolidation measures has earned criticism due to their expected major negative impacts on the Slovak economy, both on businesses and households. The negative impact of the package lies in its imbalance in terms of measures on the revenue side (EUR 2.1 billion) and on the expenditure side (EUR 0.6 billion). When the package was put together, the priority was to increase revenue, especially through tax measures, not to reduce expenditure.

Minimum wage increases and collective bargaining: The amendment to Act No. 663/2007 Coll. on the Minimum Wage (No. 289/2024) set the minimum wage at 60% of the average monthly wage and reintroduced the binding nature of sectoral representative collective agreements of a higher level for other employers in the sector. These measures increase the labour costs of companies, which can negatively affect their competitiveness, especially in sectors with low margins. The announced increase in the collective bargaining rate to 80% may limit the flexibility of employers in negotiating working conditions. Given the seriousness of the issue, the social partners representing the employers assessed the discussion with the business community as insufficient.

Introduction of a tax on sweetened soft drinks: The Sweetened Soft Drinks Tax Act (No. 251/2024) introduced a new tax that burdens producers and suppliers of these beverages.

Although the proposal takes into account the cash flow of business entities, it increases the administrative and financial burden. The tax represents an additional cost for entrepreneurs in the food sector, which can lead to higher prices for consumers.

Positive changes in the Legislative Framework

Modernization of the Construction Act: The new Construction Act (No. 25/2025) brought a comprehensive reform that eliminates the shortcomings of the previous legislation and introduces proven legal institutes from abroad. These changes simplify the processes of spatial planning and construction proceedings, which is a positive step for entrepreneurs in the construction industry.

Reducing the administrative burden resulting from the environmental legislation: The amendment to Act No. 329/2018 Coll. on Waste Disposal Fees (No. 124/2024) brought positive measures to reduce the administrative burden on municipalities and landfill operators. The removal of the obligation for municipalities to apply for contributions from the Environmental Fund and the change in the interval for reporting the amount of waste from three months to twelve months have simplified administrative processes. The proposal was eventually withdrawn from the deliberations of the National Council of the Slovak Republic for further refinement, but it is an example of an effort to increase efficiency and reduce bureaucracy, which is a positive signal for entrepreneurs in waste management.

Promoting lifelong learning: The Adult Education Act (No. 292/2024) responds to the challenges of the Industrial Revolution 4.0 and digitalization. It introduces systemic tools to support lifelong learning, which allows employees to respond more flexibly to changes in the labour market. This Act creates preconditions for better availability of qualifications and their usability in the international context, which is beneficial for employers looking for a qualified workforce.

Digitalisation and cybersecurity: the amendment to Act No. 69/2018 Coll. on Cyber Security (No. 366/2024) transposed the NIS 2 Directive, thereby strengthening the protection of so called critical entities and expanding the obligations in the area of incident and vulnerability reporting. These changes increase the resilience of businesses to cyber threats, which is crucial in the era of digitalization.

The legislative framework for business in Slovakia suffers from the fact that the comments of entrepreneurs are taken into account only to a limited extent, which weakens the predictability of the legal framework and does not contribute to the good functioning of the rule of law. To improve, therefore, it is necessary to strengthen the dialogue with the business community and ensure greater stability in the legislative process.

Regulations and Administrative Burdens on Business

Companies and entrepreneurs identify the administrative burden as one of the biggest obstacles to doing business in Slovakia. They often point to excessive regulatory requirements that burden everyone. In addition, frequent changes in regulations increase uncertainty, which hinders investment in innovation and business development.

Despite the broad social consensus on the harmfulness of excessive bureaucracy and the need to reduce it, unnecessary administrative requirements affect almost every area of business activities and companies are unable to get rid of them throughout their entire life cycle: from the registration process at the time of establishment, through the regulation of all aspects of the company's economic activities during its operation, whether internal company processes or its relationships with business partners, employees, consumers or the environment, to the point of its exit from the market either by bankruptcy or by its dissolution.

The regulation of starting a business has long been one of the unnecessarily administratively demanding acts, which is why Slovakia ranked 118th in the original Doing Business of the World Bank in this indicator. Compared to the rest of the world, the registration process requires a greater number of administrative procedures and obligations and takes more than twice as long as e.g. the OECD average.[48] Business associations are calling for the introduction of "one-stop-shop" solutions, where entrepreneurs could arrange all the necessary permits in one place.

Regulation of business activities: when it comes to the regulation of businesses after the establishment of a company, an analysis by the Slovak Business Agency, which comprehensively analysed only one area – occupational health and safety[49] – in the functioning of small and medium-

[48] OECD reports "SME and Entrepreneurship Policy in the Slovak Republic" from 2021 and later.

[49] Slovak Business Agency. Comprehensive audit of SME OSH obligations. Bratislava, 2022.

sized enterprises, identifying as many as 644 obligations under 67 pieces of legislation. The costs for small and medium-sized enterprises were estimated at EUR 332,607,419, of which administrative costs amounted to EUR 86,287,074.

In a 2022 analysis, the National Union of Employers used the example of a model company to show that an businesses can be subject to up to 945 legal obligations in one calendar year, which can cost them up to EUR 1,566,112.

The Need to Simplify the Regulatory Framework and Reduce the Administrative Costs of Doing Business

In 2020 – 2022, the Government of the Slovak Republic adopted several important measures to simplify the regulatory framework and reduce the administrative costs of doing business. Two packages of measures were approved to reduce the administrative burden on businesses resulting from the already existing legislation, which led to savings for entrepreneurs in the amount of EUR 150 million. In the first package there were more than 100 measures, in the second two hundred measures. Governments continued to adopt further packages between 2023 and 2025, as the continuation of them was one of the milestones of the Recovery and Resilience Plan.

Since 2022, the Government of the Slovak Republic has had at its disposal the system instruments approved in that year to effectively combat the increase in the regulatory burden resulting from new regulations adopted in the future. Some of the most important are:

The 1In – 1Out principle (May-December 2022) followed by 1In – 2Out (from January 2023): For every euro of new regulatory costs that the government introduces, it must repeal or ease existing regulations at twice the financial value in order to reduce the overall economic burden on business.

Virtual accounts of regulations, where the public can monitor on the website of the Ministry of Economy which ministries have increased and which have reduced the regulatory costs of doing business and by how much.

Mandatory regular ex-post regulatory evaluations: the obligation of ministries to regularly review existing laws within their competence and propose a reduction in regulatory costs.

Government Council for Competitiveness and Productivity: since 2022 a new platform for consultation with entrepreneurs, the only government council where business representatives had a majority

Increasing the predictability of approving changes in laws in the National Council of the Slovak Republic: introduction of a rule that laws that are relevant for business (e.g. tax changes) can only be changed twice a year and with a mandatory assessment of their impact on business.

A key mechanism for reducing administrative burdens is the "One In – Two Out" (1in2out) principle, which was introduced as of June 1, 2021 to compensate for new regulatory obligations by removing twice the volume of existing regulations. This principle is supported by the Virtual Account of Regulations, which monitors the impacts of legislation on the business environment. The virtual account of regulations, managed by the Ministry of Economy of the Slovak Republic, is used to record legal regulations to which this principle applies. It is maintained by the Ministry of Economy of the Slovak Republic on its website and updated on a monthly basis. It is established for each submitter separately, entries are made after the delivery of updated impacts on the business environment, the submitter is obliged to send their current version no later than 45 calendar days from the publication of the legal regulation in the Collection of Laws of the Slovak Republic.

The account is divided into two categories: preliminary one (for regulations in the legislative process) and final one (for regulations completed and promulgated in the Collection of Laws). Submitters are required to submit a Business Environment Impact Analysis (section 3.1) and a Business Environment Cost Calculator that quantifies the financial and administrative impacts. The preliminary account records proposals in the process, while the final account contains only regulations promulgated in the Collection of Laws that meet the requirements of the Uniform Methodology for Assessing Selected Impacts. For example, Acts No. 251/2024, No. 292/2024 and No. 366/2024 are in the final account, but there is no clear record of how the new obligations were compensated. The Ministry of Economy of the Slovak Republic updated the account as of 1 May 2024, but shortcomings in the quantification of impacts and the publication of compensatory measures remain.

Use of the 1in2out mechanism to reduce the administrative burden: the 1in2out mechanism has been partially applied in amendments, such as the Act on Waste Disposal Fees, where the reduction of the administrative burden was obvious. However, in many cases, such as the introduction of a tax on sweetened drinks or the increase in the minimum wage, the new regulations have not been compensated by the abolition of existing ones, which is contrary to the principle of 1in2out. According to available sources, the Ministry of Economy of the Slovak Republic records regulations in the Virtual Account, but there is no transparent evaluation of whether two regulations have been repealed for each new one. For example, the Cybersecurity Act (No. 366/2024) did not explicitly mention the compensation of new obligations.

Problems with the implementation of 1In2out: the lack of implementation of 1In2out results from several factors. Submitters often present incomplete impact analyses, which complicates the assessment of impacts on the business environment. The submitters often do not communicate sufficiently with the affected entities, do not deal with their comments either at all or reject them or only partially accept them, which indicates a lack of consultations between the submitters and entrepreneurs in the legislative process. The lack of compensatory measures in cases where new regulations have been introduced is also a problem. For example, in the case of the tax on sweetened drinks, no specific repealed regulations were identified, which weakened the 1in2out principle.

The lack of application of the 1in2out mechanism, in particular the absence of compensatory measures, undermines its effectiveness and leads to persistent legal uncertainty. The regulatory and administrative burden on business in Slovakia most likely continued to grow. Although the virtual account maintained by the Ministry of Economy shows a slightly greater reduction in costs, in reality it may be the other way around due to the fact that not all laws are part of the 1In2Out mechanism, since it does not apply to proposals submitted in a fast-track legislative procedure and to areas covered by the exemption, such as the environment.

T a b l e 10.1

Virtual Account of Regulations

COST INCREASE	COST REDUCTION
IN (in EUR per PP)	OUT (in EUR per PP)
228 033 375	238 382 233

Source: website of the Ministry of Economy of the Slovak Republic, <https://www.economy.gov.sk/podnikatelske-prostredie/virtualny-ucet-predkladatelov/virtualny-ucet-regulacii/virtualny-ucet-finalny?csrt=8337735852509542563>.

While some changes have reduced bureaucracy – such as the amendment to the Construction Act and the Waste Fees Act – others have brought new obligations without adequate compensation, such as a tax on sweetened drinks or an increase in the minimum wage. While the 1in2out mechanism is in place, its implementation is inconsistent. To improve the business environment, it is necessary to strengthen transparency, coordination with entrepreneurs and consistent application of the 1in2out principle.

Financial Burden on Business

The main part of the financial burden of business in Slovakia is the tax and social security contributions burden, which is one of the important factors affecting the competitiveness of companies and the business environment.

The tax and contribution system in the Slovak Republic is characterized by two fundamental problems that negatively affect its setting:

1. A long-term outdated and complex tax and contributions mix does not support competitiveness, which does not motivate economic activity, is user-unfriendly for taxpayers and is difficult to administer from the state's point of view.

2. The latest consolidation measures are motivated only by an effort to increase state revenues without systemic improvements in the structure or overall setting of the tax and levy system.

The Tax and Contribution Mix Does Not Support Competitiveness

Today, Slovakia has a tax and contribution system that does not contain any significant positive impulses that would encourage economic activity, investment or innovation, with the exception of tax support for research and development, the so-called super-deduction,[50] which offers the possibility of deducting 100% of research and development costs, while until 1 January 2022 it was 200%.

In the years 2004 – 2013, Slovakia had a flat tax system, a uniform tax rate of 19% for legal entities and individuals, which was also extended to include value added tax also with a rate of 19%. This system was simple and therefore attractive for both domestic business entities and foreign investors. From 2013 until today, other rates have been gradually reintroduced into the system, exceptions have been added and its complexity has grown.

In Slovakia, the tax system is deteriorating from year to year from the point of view of entrepreneurs. But in Estonia, for example, the principle has been in force since 2000 that companies and entrepreneurs do not pay income tax on unpaid profits. The income tax rate on reinvested profits is 0% and only dividends are taxed.

The growing tax and contributions burden has a negative impact on the growth potential and attractiveness of the Slovak economy, as well as the excessive weight of contributions, especially those paid by employers, in the overall tax mix.

The chart below illustrates that while countries with a higher share of contributions in GDP are trying to reduce this share, in Slovakia, on the other hand, one of the highest increases in contributions was recorded, while in 2009 this share was lower than in the Czech Republic.

Even looking at the burden on the taxpayer with the average salary, it is true that Slovakia is in the group of countries with a higher burden in the EU, with the contribution burden being the largest part of it.

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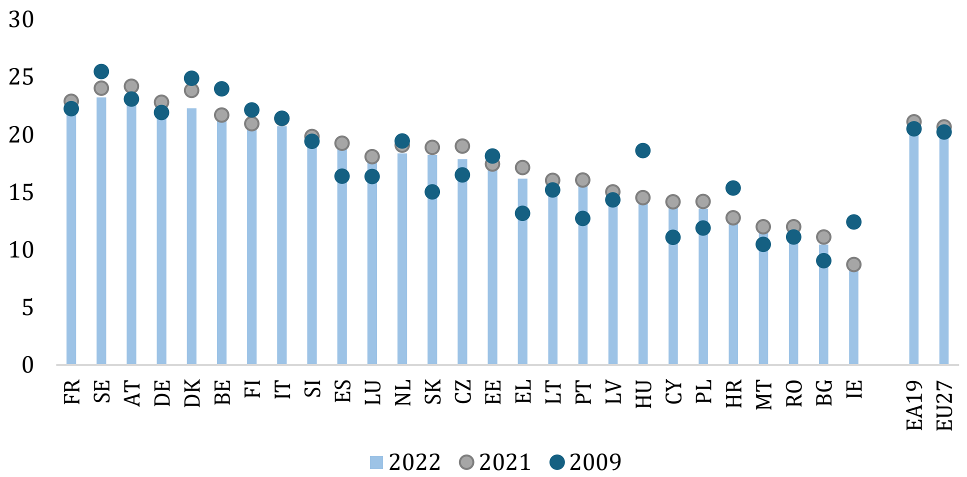
[50] According to an analysis by CRIF, Slovak Credit Bureau, *"541 entities claimed the super deduction for 2023, which is the most in history to date. Together, they drew almost 254 million euros, saving more than 53.3 million euros in income taxes."* <https://www.crif.sk/novinky-a-tlacove-spravy/tlacove-spravy/superodpocet-2023-novy-zoznam-zamiesal-aj-poradie-v-top-10/>.

F i g u r e 10.2

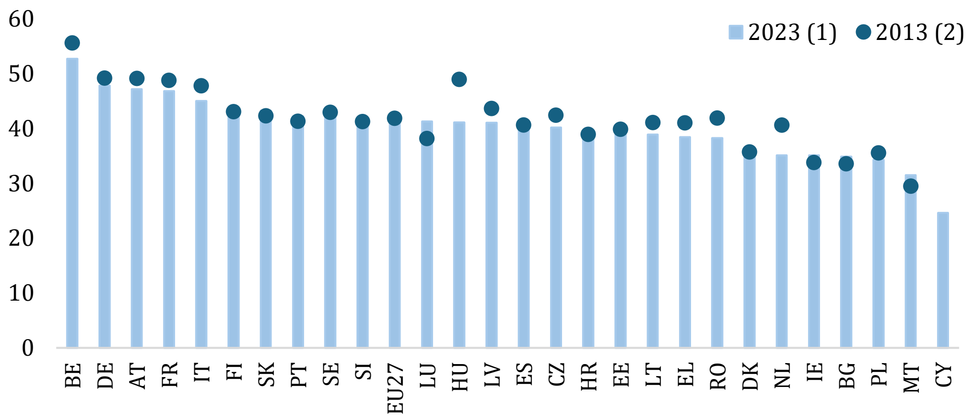
Revenue from Levies as % of GDP in EU Member States, 2009 – 2022



Source: European Commission; DG Taxation and Customs Union; based on National Tax Lists data.

F i g u r e 10.3

Tax and Contribution Burden of a Taxpayer with an Average Wage, 2013 – 2023



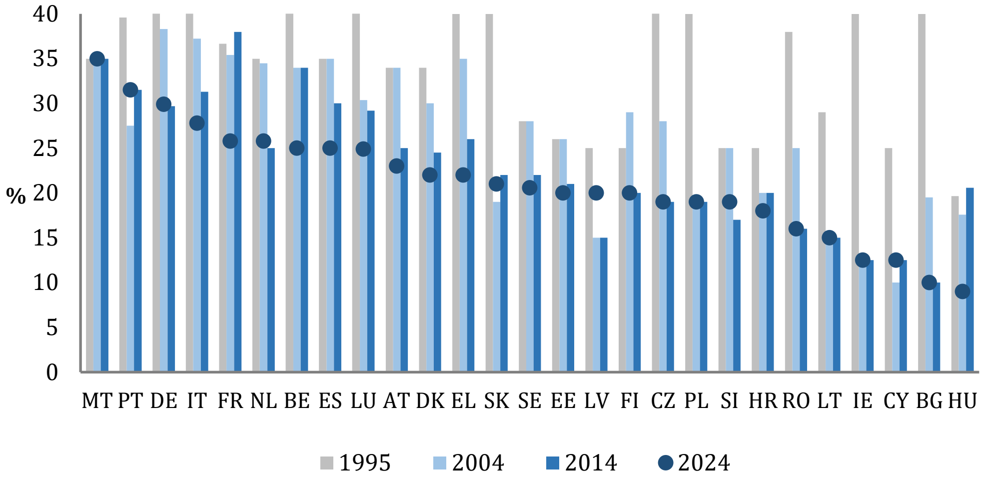
Source: European Commission; DG Taxation and Customs Union; based on DG Economic and Financial Affairs, Tax and Benefits database, and OECD tax/benefit model (updated April 2023).

The high tax and contributions burden on labour, especially for employers, reduces the competitiveness of Slovak companies. A fundamental change in the tax and contributions is needed to support economic activity and growth.

The Slovak tax system is also not very attractive when it comes to corporate income tax rates. Currently, Malta (35%), Portugal (31.5%) and Germany (29.9%) have the highest rates among EU countries, while the lowest rates are in Bulgaria (10%) and Hungary (9%). Slovakia is located approximately in the middle of the chart, but it is noteworthy that all the most comparable countries, the countries of Central and Eastern Europe, are located on the right part of the chart, i.e. they have lower rates than Slovakia.

Figure 10.4

Maximum Corporate Tax Rates, Member States, 1995 – 2024



Source: European Commission; DG Taxation and Customs Union; based on Eurostat data, ranked by highest rate in 2024, p. 94.

Unnecessarily complicated tax administration, administrative costs resulting from the lack of interconnection of systems for the collection of taxes and contributions

The current setting of the tax and contributions system not only does not support economic growth and reduces competitiveness, but the tax and payroll agenda, associated with the fulfilment of many administrative obligations, costs them considerable funds and time. In March 2026, it will be 20 years since the Slovak government approved the intention to introduce a common collection of taxes and contributions, the so-called UNITAS. It also included an intention to reduce contributions by one to two percentage points. In March 2021, the government returned to this topic in its program statement: "We will renew the reform intention to unify the collection of taxes, contributions, and custom duties (UNITAS) in order to introduce the collection of taxes and contributions by one institution..." Since this has not happened to date, the collection system is still inefficient and employers and entrepreneurs as its users, but also the state as its administrator, are forced to bear the increased costs.

Consolidation Package and Changes in the Financial Burden of Businesses Effective from 2025

The consolidation package envisages additional revenues of 2.6 – 2.7 billion euros. Most of the measures came into force on January 1, 2025, the transaction tax came into force on April 1, 2025.

Increase in the highest corporate income tax rate: from January 1, 2025 the financial burden on business increased with the increase in the highest rate from 21% to 24% for large companies, with annual taxable income of more than 5 million euros. At the same time, the rate of 21% remains in force for companies with revenues between EUR 100,000 and EUR 5 million.

A reduction in the income tax rate for small businesses and entrepreneurs: legal entities whose taxable income does not exceed EUR 100,000 in a tax period will pay income tax of 10% instead of the current 15%.

Reduction of other taxes: the compensation of measures increasing public finance revenues is complemented by a reduction in the withholding tax on dividends from 10% to 7% or a reduction in the motor vehicle tax for trucks to the level of minimum rates.

Increase in the top rate and introduction of a third rate of value added tax: the increase in the standard VAT rate from 20% to 23% will affect most goods and services. The complexity of the tax system is also increased by the introduction of a third VAT rate of 19% on part of the food and electricity expenses. From 1 January 2025, two reduced tax rates of 19% and 5% will apply instead of one reduced rate of 10%. The list of goods and services to which reduced rates are applied has been modified accordingly.

Introduction of a new tax, the Financial Transaction Tax: entrepreneurs, both individuals and legal entities, face a transaction tax with an expected revenue of EUR 700 million per year with effect from April 1, 2025. The basic tax rate is 0.4%, with a maximum of EUR 40 from the tax base. It applies to natural persons – entrepreneurs, legal entities and branches of foreign entities. There are exceptions, such as the Social Insurance Agency and budgetary organizations. At the same time, exceptions are defined for transactions that are not subject to tax, such as the payment of taxes, fees, purchase of government bonds, etc.

The new tax not only increases the costs of companies and entrepreneurs, but also increases their administrative burden, because they have a new obligation to open a special bank account, and it also increases the administrative burden on banks that calculate and pay the tax.

Most of the measures in the consolidation package are aimed at increasing public finance revenues and will negatively affect companies and entrepreneurs in two ways. It will directly increase the financial burden on business by increasing the rates of existing taxes or introducing an entirely new tax. It will indirectly affect them by burdening consumers and reducing their purchasing power. The main macroeconomic risk of most of the measures in the consolidation package is that the increased costs will be passed on to consumers in the form of higher prices for goods and services, which increases the risk of inflation.

* * *

1. The development of the business environment in the recent period only confirms the long-term trend towards its deterioration. This is also evidenced by the latest international comparisons by the World Bank and the OECD.

2. Slovakia needs not only to reverse this negative trend and make doing business and investing in Slovakia more attractive again. It is in an urgent need to modernise its business environment by the most radical and far reaching improvements so far.

3. The basic tool for making the business environment more attractive is a pro-growth tax and social security contributions mix: reform of the contributions system and reduction of the financial burden on labour.

4. In these efforts one of the "must" requirements is to stabilise legislation: ensuring the predictability of legislation and consulting entrepreneurs when drafting new changes.

5. The low-hanging – so far unharvested – fruit is the reduction of the administrative burden: Consistent application of systemic tools for better regulation, the introduction of "one-stop-shop" centers and the digitization of all administrative processes.

11. ECONOMIC OUTLOOK

Last year's edition of this assessment of the Slovak economy bore the subtitle "From the Storm towards Stability?" – and that question mark proved to be a judicious choice. The subtitle was intended to signal that, after the exceptionally volatile period of 2020 – 2023, the economy appeared to be entering a period of more subdued and predictable dynamics. Indeed, the year 2024 displayed the hallmarks of such a calm interlude, but the turn of 2024/25 abruptly reminded us that uncertainty and unpredictability remain ever-present. The opening months of 2025 have continued in this vein. Hence, it was fitting that the move toward "stability" was qualified with a conspicuous question mark.

After a series of sectional analyses from different vantage points, this chapter returns to a comprehensive perspective. Its objective is to assess the economic outlook primarily over the short-term horizon (while also contemplating longer-term trajectories). The first part of the chapter examines the array of risks and challenges that lie ahead for the economy. It scrutinizes the impact of external and domestic factors, and reviews the underlying assumptions and rationale driving the latest forecasts from key institutions. The second part then delivers the outlook itself, complete with quantified projections of the principal macroeconomic indicators.

Barriers and Drivers of Growth

The strongest themes in the current outlook are uncertainty, fiscal consolidation and labour force shortages. Uncertainty is chiefly linked to external conditions; consolidation reflects domestic policy tightness; and labour scarcity stems from demographic trends and migration (including "brain drain"). Whereas consolidation acts as a drag on economic momentum mainly over the short-to-medium term, labour shortages constrain growth both in the near term and over a longer horizon.

Uncertainty + Consolidation + Frozen Labour Market = Framework for the Outlook

This symbolic equation in the subheading signals that there is little reason to expect any sharp acceleration or economic revival.

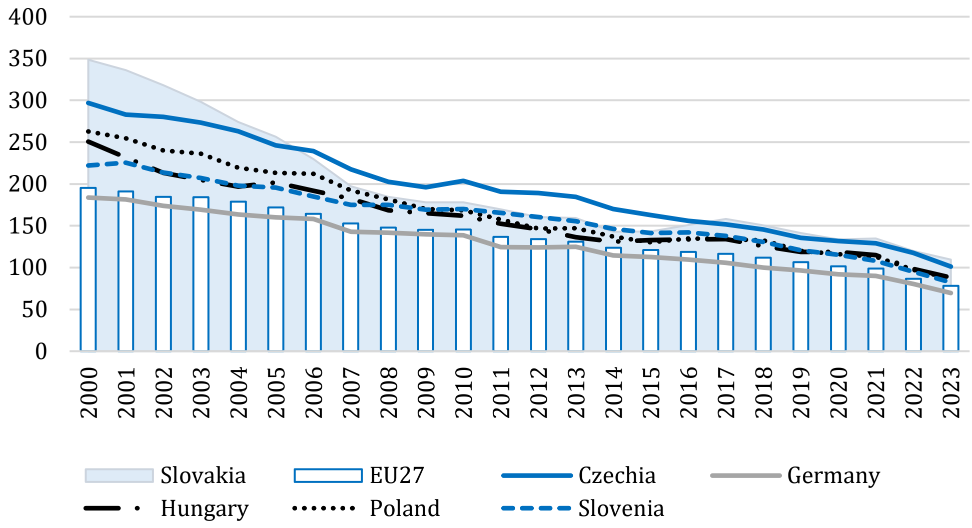
In 2025, on top of the existing sources of uncertainty (war in the neighbouring country, reduced energy availability, political turbulence), new doubts have arisen from trade wars and barriers to free trade. The unpredictability of when and how protectionist measures will be imposed in global commerce may not only directly curb export performance, but also lead firms to postpone investment. The risks posed by a wave of protectionism exacerbate the lingering malaise in European industry. In 2024, stagnation was especially pronounced in industry-oriented economies (Germany and its close trading partners being salient examples). Some leading indicators in Germany and the Eurozone (most notably industrial order books) fell in Q1 2025 to levels last seen during past crises (financial, pandemic downturns). This reflects eroding competitiveness compared to Chinese producers as well as continued difficulty in absorbing recent shocks, particularly the spike in energy prices. Only a gradual overcoming of these stagnationary pressures can be expected. A more favourable external stimulus for Slovakia comes from its Visegrád peers (especially the Czech Republic and Poland).

Longstanding doubts about energy availability and pricing are reinforced by slow progress in diversifying energy sources. Slovakia's energy intensity remains high despite a multi-year downward trend (see Figure 11.1). High energy prices combined with elevated energy intensity deter firms from investing. Sláčik (2024) notes that the mix of steep energy costs and pervasive uncertainty lies behind the subdued pace of capital accumulation (i.e. lower investment rates). The Institute for Financial Policy (IFP) in its latest forecast (IFP 2025) also warns that private investment may be paused or sharply curtailed due to unresolved questions around energy prices.

A continuing source of uncertainty is the ambiguity surrounding the shape and impact of the government's consolidation measures. In this context, it was counterproductive that the government also enacted policies that directly dampen economic activity (for example, transaction taxes depress economic transactions or push them into the shadow economy). While expenditure-side austerity packages cool the economy indirectly, transaction levies have an immediate contractionary effect. The willingness to adopt such contentious, activity-suppressing measures underscores the prevailing uncertainty and heightens associated risks. The National Bank of Slovakia (NBS) notes in its forecast (NBS, 2025) that the announcement of a consolidation package in October 2024 triggered the sharpest spike in economic uncertainty among all EU member states at that time. This elevated uncertainty was subsequently identified as one of the primary factors behind the marked slowdown in corporate investment at the end of the year.

Figure 11.1

Energy Intensity Of GDP: Declining In Slovakia But Still Excessively High
(kilograms of oil equivalent per EUR 1,000 of GDP in purchasing power standard)



Source: own calculations based on Eurostat data.

The Recovery Plan as the sole principal growth engine?

As the only significant growth stimulus in the short term, the disbursement of funds from the Recovery and Resilience Plan emerges as the principal driver of expansion (a conclusion echoed by the published forecasts of both the IFP and the NBS, as well as by our own projections presented below). In Chapter 1, we explained the role of household final consumption in underpinning growth in 2024; however, that engine is set to stall over the coming period. Consumption will be dampened by fiscal consolidation measures and by the anticipated end of universal energy-price subsidies for households (which will lift the price level and suppress household spending). We also note the acceleration of consumption before higher taxation took effect, which shifted part of 2025's spending into the prior year. Summing up the weak impulses from the external environment, the drag on consumption imposed by consolidation, and the restraint on private investment caused by lingering uncertainty and elevated energy costs, only the Recovery and Resilience Plan's resources remain as a pre-announced, material growth impulse. Such a single-pillar growth model is inherently vulnerable to risks – and, moreover, perpetuates reliance on external stimuli rather than mobilizing domestic drivers of expansion.

Unlocking Labour Supply

The decline in the unemployment rate, reaching new lows in the first half of 2025, is undoubtedly positive, but on its own it masks underlying weaknesses on both the supply and demand sides of the labour market. The workforce has shrunk so markedly that the unemployment rate falls even without any net creation of jobs. Such apparent "stability" delivers low unemployment statistics yet conceals the absence of employment growth and any real contribution to GDP expansion. Over both the short and long term, this dynamic acts as a drag on economic growth and will increasingly constrain the economy as time goes on.

This predicament poses a twofold challenge. First, the supply of labour itself must be replenished: there remains scope to activate those currently outside the labour force (caregivers, the discouraged unemployed, and others). Slovakia's participation rate (the share of the working-age population that is economically active) has risen, but still trails the levels seen in advanced economies (see Figure 11.2a). The reserve in the employment rate (the share of the labour force actually employed; Figure 11.2b) is, by contrast, minimal. Further gains could be secured by postponing the retirement age, curbing early retirements, and attracting additional foreign labour. Second, with labour in short supply, boosting productivity is essential to sustain growth: as noted in Chapter 1, total factor productivity was the main engine of expansion before the global financial crisis but has since acted as a brake. Reviving productivity growth will be critical to offset the constraints imposed by a shrinking workforce.

B o x 11.1

Are there Still Reserves in the Parameters of Economic Activity?

The participation rate, which measures the share of economically active individuals within the total working-age population (i.e., the portion of the working-age population that is either employed or actively seeking work), has exhibited a generally upward trend. In Slovakia, it already exceeds the EU average. However, there are role models (Austria, Germany, Denmark, Sweden) whose experience suggests that further gains in labour supply could be achieved by drawing more people into the workforce. This implies “pulling in” those currently outside the labour market. This will require, for example, enhancing family support services (enabling labour-market participation of parents of young children, persons caring for family members, etc.).

Had the participation rate not risen in Slovakia, the decline in the working-age population would have translated much more sharply into a reduction in the labour force. Thus, although the number of working-age individuals has steadily fallen, the share of those active in the labour market has simultaneously increased.

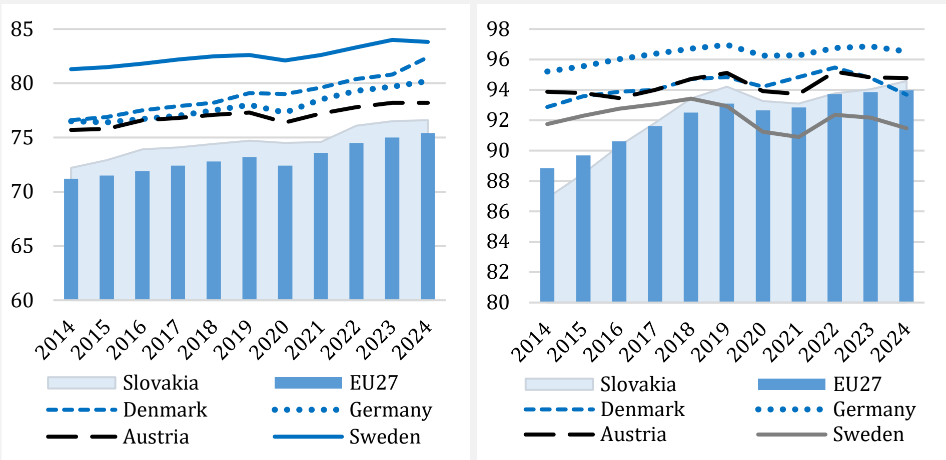
The employment rate (employed/labour force) in Slovakia has risen sharply in the past, and its room for further growth is limited (though not zero). Further increases are possible by moving more unemployed people into formal employment. Slovakia’s employment rate now reaches levels comparable to those in advanced EU economies (Germany, for example, posts an even higher rate).

There remains some room for further mobilization of domestic labour reserves, albeit not large. This reserve still lies in the participation rate.

F i g u r e

Labour Activity Indicators

a) Participation rate (in %) b) Employment rate (in %)



Source: own calculations based on Eurostat data.

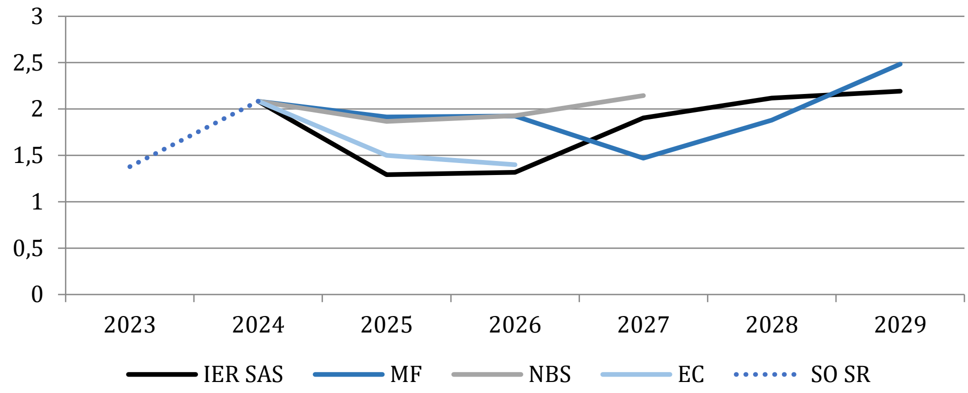
As will be shown below, economic growth will not be able to accelerate in the coming years. A major challenge is, even alongside fiscal consolidation, to work on unlocking the forces of growth and real convergence. Not after consolidation, but already during its process.

Medium Term Macroeconomic Forecast of Slovakia's Economic Development

The following section presents the spring macroeconomic forecast for the Slovak economy over the period 2025 – 2029. It forms part of a series of regular forecasts designed to provide the general public with an outlook on the principal macroeconomic variables. It also includes a summary of projections from selected institutions that have long specialized in forecasting Slovakia's economic development. The forecast below was produced as an output of the econometric ECM (error-correction model), developed for this purpose at the Institute of Economics of the Slovak Academy of Sciences. The current version of the model comprises quarterly time series from Q1 1997 through Q4 2024. Data are sourced from the databases of the Statistical Office of the Slovak Republic, the Ministry of Finance of the Slovak Republic, the National Bank of Slovakia, the Labour, Social Affairs and Family Office, and Eurostat. The model is organized into five blocks – labour market, public budget, prices, foreign trade, and GDP – and encompasses a total of 71 equations. For further details on the model's methodology, see e.g. Radvanský, Páleník and Slobodníková (2010).

GDP growth will slow to 1.3 percent in 2025, primarily reflecting adverse external developments tied to structural problems in German industry and uncertainty stemming from the US trade war. At the time the projection was prepared, final targets for individual tariffs had not yet been established, so the forecast is based largely on the communicated targets, which implied a negative outlook. Relative to 2024, household consumption will contribute less to GDP growth, as it comes under pressure from fiscal consolidation measures. Announcements of a further round of consolidation (even before its details were known) have dampened households' willingness to spend, encouraging a more conservative consumption stance. On the expenditure side, households face a higher VAT rate, and on the income side, a restriction of the child tax credit. In addition to the higher VAT, inflation will be driven up to 4.0% by rising food and service prices. Higher business costs, associated with the consolidation transaction tax and the corporate income tax, also feed through to consumer prices. Although calls to amend the transaction tax have begun to surface, no concrete changes were introduced in time to be incorporated into the forecast. The economy will receive a boost in 2025 from the ramp-up of investments under the Recovery and Resilience Plan, which we expect to occur predominantly in the second half of the year. The labour market continues to withstand negative pressures thanks to the prevailing shortage of workers. The unemployment rate will remain at historical lows. Dynamic nominal wage growth exceeding 5 percent is driven not only by tight labour market conditions but also by actual and expected higher inflation.

Figure 11.2
Forecast Of GDP Growth in Constant Prices by Selected Institutions (in %)



Note: IER SAS – Institute of Economic Research SAS, MF – Ministry of Finance of the Slovak Republic, EC – European Commission, NBS – National Bank of Slovakia, SO SR – Statistical Office of Slovakia (historical data).

Source: own calculations.

In 2026, foreign demand will remain subdued, as part of the tariffs will stay in force and international trade will adjust to the new regime only gradually. Our export growth will hover just above zero for the third consecutive year. The forecast assumes that universal household energy-price support will be phased out from 2026 onwards, as the government implements its commitment to replace blanket aid with more targeted measures.

The gradual return of energy prices to market-based levels will drive up regulated prices, keeping inflation at 3.5% in 2026 and likely causing the household saving rate to fall. Household consumption growth will strengthen slightly, as disposable incomes begin to recover following the shock of the first wave of consolidation via a lower tax credit and the temporary loss of parental benefits. The labour market will shed some workers from export firms facing order shortfalls, but this will be partly offset by demand for workers generated by activities at the peak of Recovery and Resilience Plan disbursements. The decline in employment will remain modest. We expect real wage growth to outpace real productivity growth slightly, thereby recouping losses incurred during the recent high-inflation period.

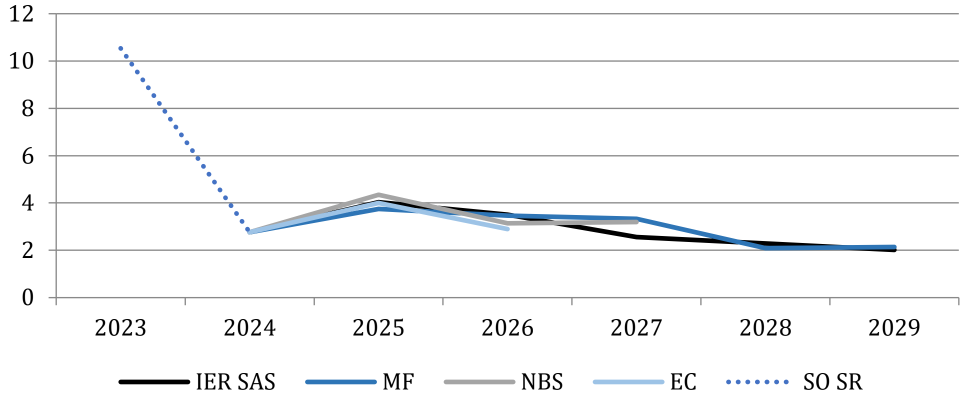
T a b l e 11.1

Macroeconomic Forecast of IER SAS, Spring 2025

	2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
	actual	*estimate*	*forec.*	*forec.*	*forec.*	*forec.*	*forec.*
Real economy							
Gross Domestic Product, constant prices	2.2	2.1	1.3	1.3	1.9	2.1	2.2
Private consumption, constant prices	–3.1	2.9	1.0	2.0	1.5	2.2	2.4
Gross fixed capital formation, constant prices	4.0	1.8	3.7	0.8	–1.6	0.3	4.1
Public consumption, constant prices	–2.5	3.7	2.0	1.6	2.2	2.3	2.5
Export, constant prices	–0.7	0.3	1.6	1.5	3.5	3.9	3.7
Import, constant prices	–7.6	2.3	2.9	2.0	2.4	3.6	4.3
Nominal activity							
Gross Domestic Product, current prices	12.5	5.8	4.4	5.1	4.6	4.3	4.1
Private consumption, current prices	6.8	6.5	4.9	5.3	3.8	4.3	4.3
Nominal production							
Gross Domestic Product, bil. EUR	123.8	131.0	136.7	143.7	150.3	156.7	163.2
Employment							
Employment (ESA)	0.3	–0.2	0.1	–0.3	–0.2	–0.3	–0.2
Average wage							
Nominal average wage	9.7	6.6	5.9	5.1	4.8	4.8	4.7
Real average wage	–0.8	3.7	1.8	1.6	2.2	2.4	2.7
Unemployment							
Unemployment rate (VZPS)	5.8	5.3	5.2	5.2	5.2	5.0	5.0
Number of unemployed (VZPS, in thousands)	161.9	147.5	143.1	144.0	141.7	135.9	137.4
Price level							
Consumer Price index (CPI)	10.5	2.8	4.0	3.5	2.6	2.3	2.0

Source: Statistical Office of Slovakia and own calculations.

Figure 11.3
Forecast of Consumer Price Inflation (CPI) by Selected Institutions (in %)



Note: IER SAS – Institute of Economic Research SAS, MF – Ministry of Finance of the Slovak Republic, EC – European Commission, NBS – National Bank of Slovakia, SO SR – Statistical Office of Slovakia (historical data).

Source: own calculations.

From 2027 to 2029 the situation abroad will stabilize, and export growth will be more strongly supported during 2027 by the start-up of new automotive production capacity (Volvo). Following the discontinuation of Recovery and Resilience Plan disbursements in 2027, funding will be replaced by resources from the new EU programming period. From 2027 onward we expect stronger negative effects on employment due to the shrinking working-age population, despite the stabilization of both domestic and foreign demand.

Forecast Risks

Escalation of the trade war may trigger larger tariff increases between the United States and China. Reciprocal duties between the EU and the US could further restrict overseas trade and provoke a recession in international commerce. Conversely, a positive risk for 2025 is front loading imports ahead of tariff imposition or during any delay in their implementation. Failure to draw down certain programmes under the Recovery and Resilience Plan may cause investment shortfalls and a lasting loss of resources, negatively impacting economic growth – even though the government has already revised the Plan to mitigate this risk. The EU's fiscal stimulus for military rearmament, particularly Germany's (as one of the EU's largest arms producers), could significantly dampen the negative sentiment spreading across Europe. For Slovakia, there is an opportunity to boost economic growth by ramping up arms-sector production.

Main Findings

- The projected GDP growth in constant prices for 2025 – 2026 is significantly lower compared to the forecasts of other relevant institutions.
- GDP growth will fall below 1.5% by 2025.
- In 2025 and 2026 we expect an acceleration of inflation primarily due to the design of the adopted consolidation measures.
- GDP growth is to a large extent dependent on the absorption of EU funds. Any failure to draw these down threatens GDP growth itself.
- The forecast risks are disproportionately large given the turbulent developments both domestically and abroad.

Sectoral Level Forecasts

The results of the macroeconomic forecast at the aggregate national level were subsequently used as inputs into the integrated econometric SLAMM – EC-IO model. This model is continuously developed at the Institute of Economic Research of Slovak Academy of Sciences; a more detailed description can be found in Radvanský et al. (2019). An alternative scenario was then constructed, in which we assume an increase in defense spending. This scenario was devised to estimate the impact of heightened armament in response to the ongoing war in Ukraine. At the time of writing, the intention to raise defense expenditures had already become a pan-European topic, and our aim was to assess the potential effects of such an increase on Slovakia's labour market.

The primary objective of the following section of the chapter is to forecast labour market dynamics and value added at the sectoral level, and to quantify the impact of demand shocks on the Slovak economy. Building on discussions about increasing defense outlays at the EU level, we have added two alternative scenarios to the baseline. In the first, labeled "Shock," we assume a permanent rise in the defense spending ratio from 2% to 3% of GDP, with the entire additional funding allocated to domestic manufacturing and service sectors, particularly those represented in the Slovak Security and Defense Industry Association. The second scenario, called "50/50," assumes that 50 percent of the increase is directed toward imported goods and services. For the baseline scenario, we present the expected development of employment and value added at the sectoral level, while the alternative scenarios sketch out the employment effects. The projections focus primarily on 2025 and 2026, although they extend through 2029. It should be emphasized, however, that without a precise specification of the allocation of individual expenditures by the EU, our estimates remain preliminary and serve only to provide an indicative mapping of potential impacts.

Baseline Scenario

In the baseline scenario for 2025 and 2026, pronounced divergences in *employment* trends across sectors come to the fore, while the medium term outlook to 2029 shows a gradual convergence of these patterns.

In agriculture, we expect a continuing outflow of labour: year-on-year losses are projected at several hundred jobs in 2025, with a slight further decline thereafter. This reflects pressure toward greater mechanization and farm consolidation, leading to the rationalization of labour processes.

The most substantial fall in employment is forecasted in the industrial sector, where the number of workers will drop by almost 6,000 in 2025, followed by milder declines in subsequent years. We base this projection on information about the planned trade war, problems in the automotive manufacturing sector, and a shortage of skilled labour. Automation of production lines, process optimization, and partial relocation of output to lower-cost regions mean that a sector that only recently hired thousands of new employees now faces significant job cuts.

By contrast, construction will generate additional new jobs in the coming years thanks to extensive infrastructure and residential projects. This is driven primarily by the anticipated faster implementation of funds from the Recovery and Resilience Plan and the new EU programming period.

This strong upswing in 2025 – 2026 helps offset job losses in heavy industry and primary production.

In trade and related services, the labour market cools only modestly in the first two years, signalling a gradual pace of digitalization and efficiency pressures but without sharp layoffs. The sector is adjusting to the impact of the transaction tax, yet we do not expect any significant reduction in employment.

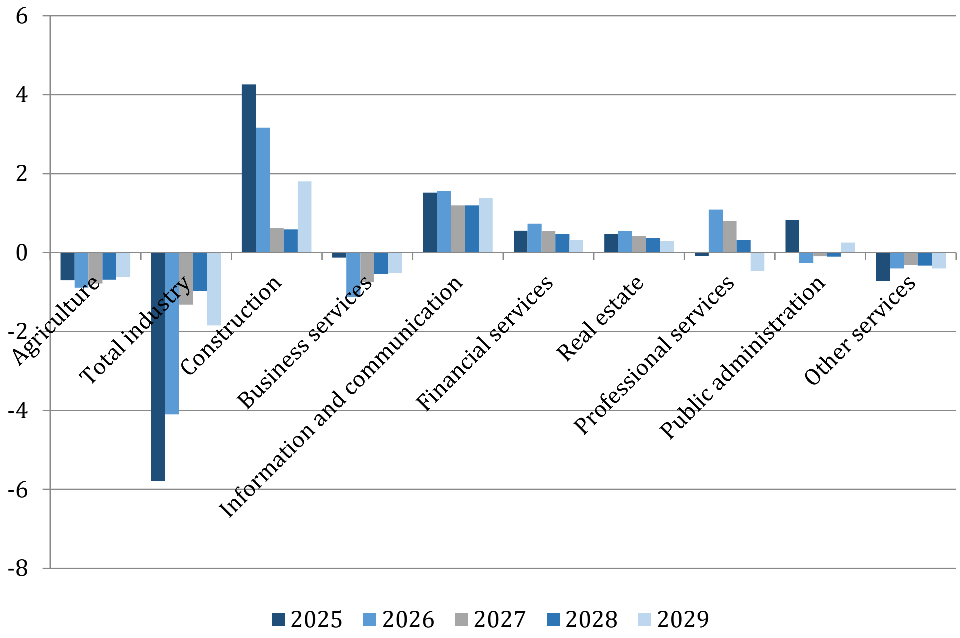
In the information and communication technology sector, we anticipate employment growth of roughly 1,500 positions in 2025, with a similar increase in the following year. Higher demand for IT specialists in digitalization, cloud services, and cybersecurity underpins stable expansion in this segment. Financial services and real estate exhibit a more conservative yet still positive trend. We expect a modest rise in employment driven primarily by a revival of the mortgage market, refinancing waves, and the development of new property projects. Professional services, encompassing legal, scientific, and administrative consultancy, will experience stagnation followed by a slight uptick in staffing levels.

In public administration, employment is expected to stagnate or grow slightly. Despite anticipated government-debt consolidation in the coming years, we do not foresee a significant reduction in positions. Previous efforts to cut headcount in this sector did not achieve the intended results, and we project the same outcome here. The “other services” category will continue with austerity trends, leading to job declines in the next few years.

Overall, net employment growth in Slovakia under the baseline scenario will be minimal in 2025 and 2026, as indicated by the ECM model outputs. The 2027 – 2029 window suggests that the initial dynamism will gradually level off: construction and ICT will retain their positive trajectories; professional services and public administration will return to modest growth; and traditional industries such as manufacturing and agriculture will continue to face pressures from modernization, automation, and a shortage of skilled labour. Expected retirements will often prove irreplaceable, mainly due to the entry of smaller birth cohorts into the workforce.

F i g u r e 11.4

Forecast of Employment Growth at the Sectoral Level
(in thousands of persons)



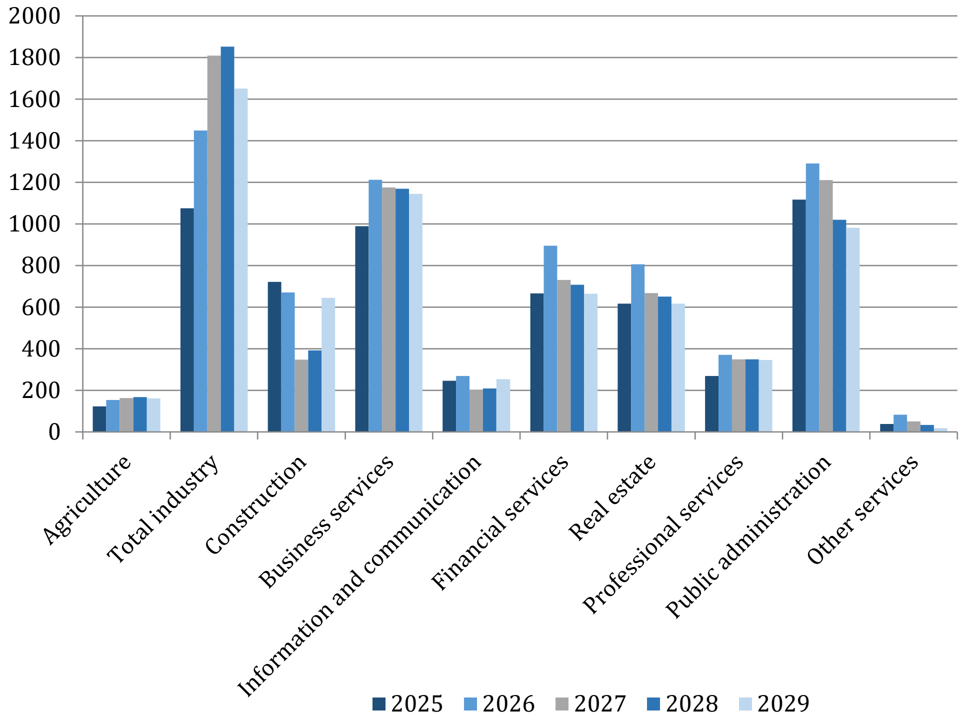
Source: own calculations.

In the baseline scenario for 2025 and 2026, *value added* in Slovakia exhibits a sharp recovery, especially in industry, construction, and public administration, while the medium-term outlook for 2027 – 2029 shows a gradual stabilization of growth rates.

In the coming years, we expect a modest increase in value added in agriculture. The industrial sector experiences an even more pronounced upswing, reflecting ongoing internal modernization of production lines, export revival, and capacity expansion in key industries such as automotive and engineering. Despite the decline in employment, we still project rising value added in these sectors.

Construction, after a strong rise in value added in 2025, will slow slightly in 2026 when the availability of new investment financing from the Recovery and Resilience Plan ends. In contrast, trade services will be driven by strengthening domestic consumer demand and the expansion of e-commerce.

F i g u r e 11.5
Expected Year-on-Year Change in Value Added (mil. EUR)



Source: own calculations.

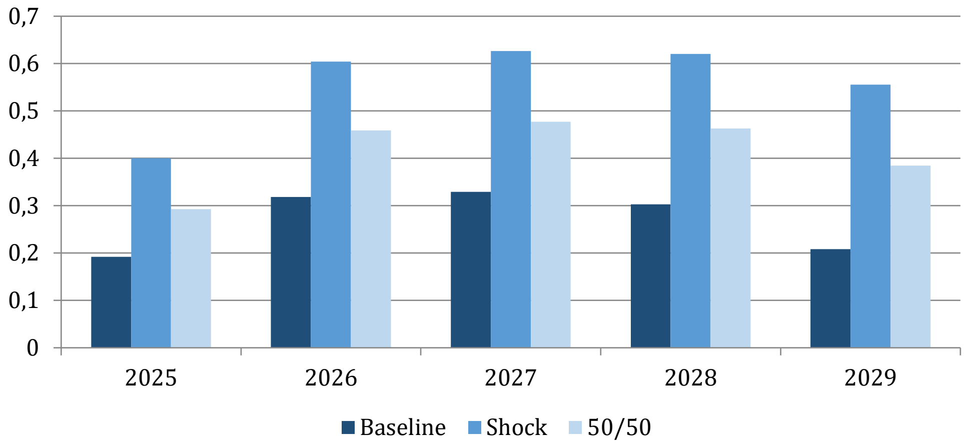
In the information and communication sector, we anticipate growth as renewed investments in digitalization and cloud platforms boost value added. Financial services will likewise accelerate their growth pace, corresponding to refinancing waves and the expansion of banking and capital-market products, effects that will also reflect in higher productivity within real estate. Professional services (legal, scientific, administrative) will record steady value added. Public administration likewise sees a significant increase in value added, reflecting one-off consolidation measures and expected gains in efficiency. In the "other services" segment, we forecast stable value added or a slight decline in later years, primarily due to fewer cultural and sports projects.

The outlook for 2027 – 2029 suggests that the initial impulses – especially in industry and financial services – gradually give way to more balanced growth. Most sectors will enter a normalization phase of incremental gains, with construction and ICT maintaining mildly positive dynamics and public administration continuing its stable contribution to overall value added.

Alternative Scenarios

In the initial phase of the forecast (2025 – 2026) under the baseline scenario, total employment in Slovakia increases only marginally. However, once we move into the "shock" scenario, where additional defence expenditures are allocated exclusively to domestic suppliers, employment growth nearly doubles its pace. In the split scenario (50 / 50 between domestic production and imports), employment follows the middle trajectory, reflecting the mixed effect of imported and domestic demand components.

F i g u r e 11.6
Expected Employment Trends by Scenario (thousands of persons)



Source: own calculations.

In the medium term (2027 – 2029), the peak year-on-year employment gain in the baseline scenario occurs in 2027 with minimal growth, followed by slight deceleration in 2028 – 2029. In the "shock" scenario, gains remain above the reference trajectory – peaking in 2027 and gradually normalizing thereafter. The 50/50 scenario maintains a similar pattern – from its peak in 2027 to gradual slowdown in 2028 and 2029 – thus combining a partial domestic-production impulse with the dampening effect of imports.

Taken together, these three trajectories provide a consistent picture of how increased defence spending affects the labour market: the baseline scenario captures pure macro dynamic without additional stimulus, the "shock" model shows the maximum potential of domestic allocation of public funds for employment growth, and the split approach demonstrates that even with partial redirection of demand toward imports, the overall effect remains significantly higher than in the baseline scenario.

From a macroeconomic standpoint, this trio of trajectories illustrates how the allocation of additional public resources influences aggregate output: the baseline scenario reflects the anticipated upswing without defence-spending increases, the "shock" model demonstrates the maximum immediate impact on GDP through domestic consumption and investment, and the split approach shows that even with partial import penetration, the total effect remains substantially above the baseline.

* * *

The projected pace of Slovakia's economic expansion is lower compared to the forecasts of other pertinent institutions. Even the most recent projection published by the European Commission anticipates slower GDP growth than national forecasters. The forecast risks are disproportionately large given the turbulent developments both domestically and internationally. A further round of fiscal consolidation remains a significant unknown – while it will undoubtedly dampen economic activity, it is unclear which groups will bear the greatest burden.

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