

SECTORAL ANALYSIS OF THE ELECTRICAL ENGINEERING INDUSTRY IN THE CZECH REPUBLIC



CARRIED OUT BY:



2025

FOREWORD

Dear colleagues, friends, supporters, and partners of the electrical engineering industry.

I believe you will agree with me when I begin this sectoral analysis by noting that without proper analytical foundations based on hard data - data that is concrete, objective, and at the same time takes into account broader economic and technological contexts - it is impossible to enhance the quality and efficiency of any process. Therefore, we are pleased to present to you this document, whether for detailed study or simply for your information. Together with BDO Audit s.r.o., we have endeavored to describe the state of one of the key industrial sectors, whose very dynamic development significantly impacts not only the competitiveness of Czech industry but also the entire Czech economy.

The Electrical and Electronic Association of the Czech Republic as an employers' and business union, defends the interests not only of its members and their business partners but also continuously supports the digital and economic transformation of the Czech industrial environment and strives for its refinement. For this reason, I believe that a broader global or European perspective appropriately frames the development and current status of our industry sector - electrical engineering and electronics.

I hope that this study offers you many insights illustrating the important factors influencing the Czech electrical engineering industry, as well as useful information for your future work, for which I wish you great success.



Jiří Holoubek
Electrical and
Electronic
Association of the
Czech Republic
President of the
Association

PREFACE

The presented study was initiated by the Electrical and Electronic Association of the Czech Republic in collaboration with the analytical team of BDO. Its aim is to provide a data-driven, clear, and professionally grounded overview of the development and structure of the Czech electrical engineering sector during the period 2020-2024.

The purpose of this study is not only to describe the current position of the sector but also to help companies, institutions, and policymakers better understand its dynamics and prepare for future development. For this reason, we decided to complement the sectoral analysis with qualitative insights obtained through a questionnaire survey among sector members. This approach provided valuable feedback from industry experts, enabling us to gain a deeper understanding of the expectations, challenges, and opportunities the sector views as key to its further direction.



Jan Prokůš
Electrical and
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director

The electrical engineering industry represents one of the key pillars of the Czech economy. According to numerous economic indicators, it ranks among the most significant sectors of domestic industry and, through its pace of innovation, fundamentally influences the development of other industrial sectors as well as the service sector. The dynamics of technological changes in electrical engineering are reflected, for example, in the automotive industry, mechanical engineering, medical technology, and energy, thereby impacting the entire economic structure.

Although there is ample information about the importance of this sector, many related aspects are often overlooked in everyday discussions. In the era of digitalization and advanced automation - often associated with the term Industry 4.0 - electrical engineering is becoming a driving force of innovation not only in industrial manufacturing but also in the fields of services and logistics.

Given the significant globalization of the sector, it is necessary to evaluate it within a broad context: although Czech manufacturers can successfully supply their products to customers on the other side of the world, they simultaneously face direct competition from foreign companies in their domestic market. Among the most significant threats are the long-term shortage of qualified workers, the complexity and unpredictability of the regulatory environment, and legislative restrictions. It is also worth noting that, within the NACE 26 sector, the Czech Republic shows a negative trade balance.

The goal of this study is to provide a comprehensive view of the state and prospects of the electrotechnical industry, thereby supporting informed decisions by entrepreneurs, investors, and policymakers in the context of a rapidly changing global environment.

The electrical engineering industry represents one of the pillars of the Czech economy. In 2024, it accounted for more than 14% of the manufacturing sector's revenues and employed over 100,000 workers. The importance of the sector continues to grow—not only thanks to its export strength, but also due to its role in digitalization, the energy transition, and the development of smart technologies.

Its development in recent years reflects the complexity of the global environment - from disruptions in supply chains and the increasing focus on sustainability to pressure for higher added value and innovation capacity.

BDO has long been involved in the transformation of manufacturing and technology companies. Our experience shows that successful companies work with data, develop new business models, and at the same time respond flexibly to geopolitical and technological changes. It is precisely in this area—whether it concerns effective restructuring, strategic planning, identifying strategic partnerships, or ESG reporting - that we see our role as a partner helping to find solutions and create value.

I believe that this study will help identify the risks and opportunities of the sector and will support the competitiveness of the Czech electrical engineering industry.

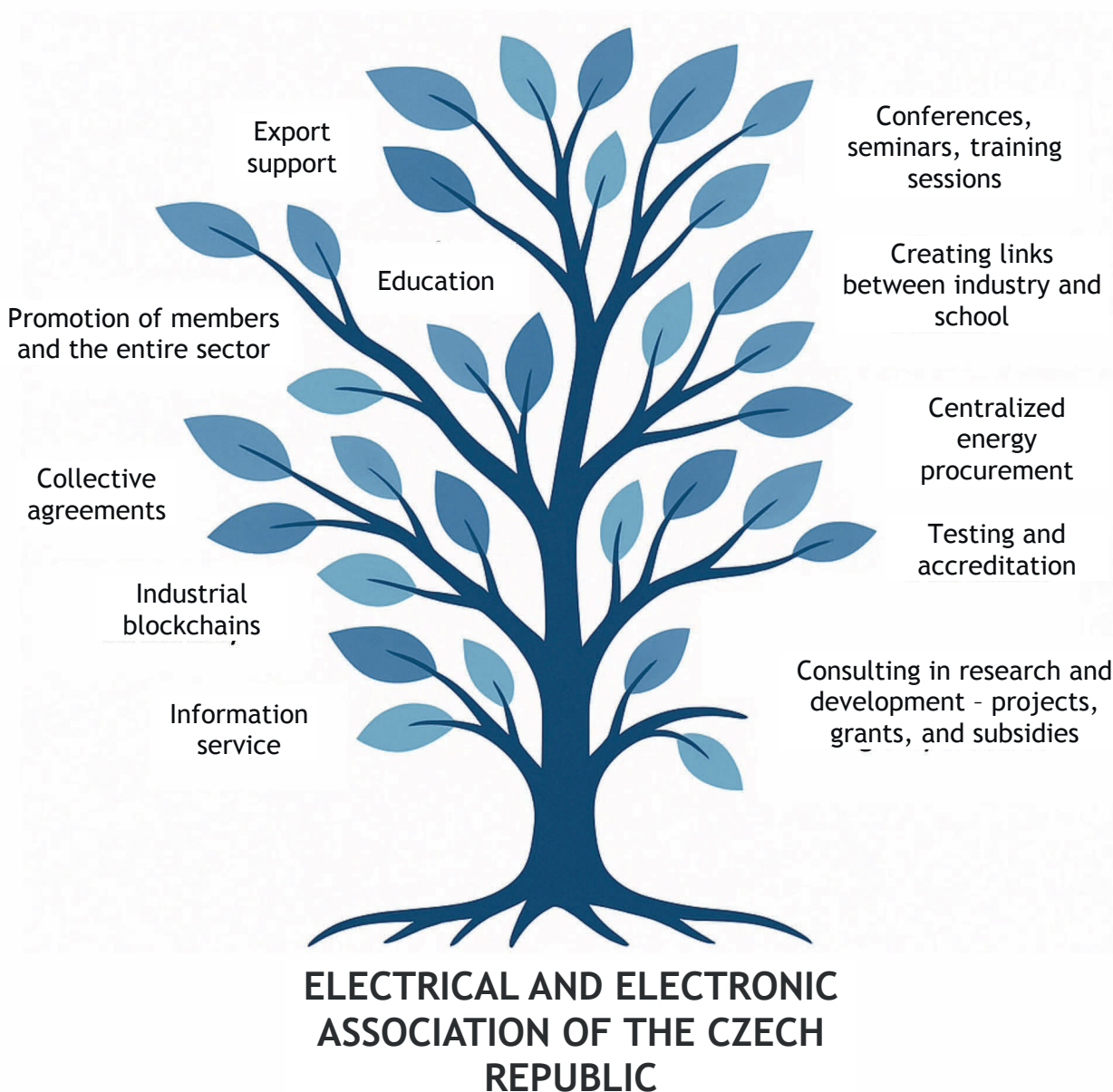


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ELECTRICAL AND ELECTRONIC ASSOCIATION OF THE CZECH REPUBLIC

The Electrical and Electronic Association is an employers' union and a professional organization that brings together companies from the fields of electrical engineering, electronics, IT and related industries. It focuses on supporting innovation, education, international cooperation and representing the sector in dealings with the state. In recent years, the topics of digitalization and energy have strongly resonated.

By joining the Electrical and Electronic Association of the Czech Republic, you gain expert know-how, valuable connections, and ethical advocacy within the industry. This enables its members to take part in the creation of new legislative standards, to participate in the work of expert groups, and to engage in other activities. It promotes ethical business practices. More information can be found at www.electroindustry.cz.



BDO IN THE CZECH REPUBLIC

BDO is the largest purely Czech audit and advisory firm on the market. We provide comprehensive services in the areas of **audit, accounting, tax, law, IT and digitalization**, as well as **strategic, operational, financial and transaction advisory** including expert appraisal services.

Our work is built on a solid foundation of family tradition, business understanding and an independent approach appreciated by clients across the **manufacturing, technology, finance, services, construction and real estate sectors**. We cooperate both with Czech companies with direct ownership and with international groups and public institutions.

Our client base includes owner-managed businesses as well as large multinational groups and public-sector organizations. We also have extensive experience in providing services to companies operating in German-speaking markets.

We are available to you through our offices in Prague, Pilsen, Brno, Domažlice, České Budějovice, Jindřichův Hradec and Ostrava.

BDO IN NUMBERS



- 600+** employees
- 38** partners
- 64** tax advisors
- 40** certified auditors
- 12** attorneys
- 6** expert witnesses



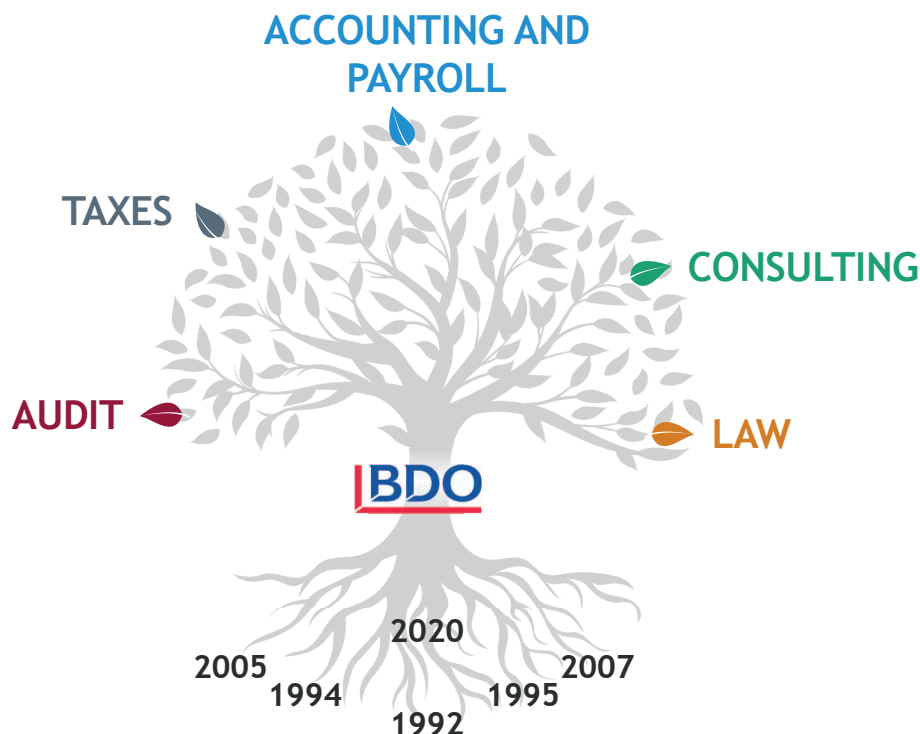
- 944** billion CZK revenue
- 14%** year-over-year growth



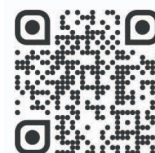
- 7** cities in the Czech Republic
- 3 000+** clients



- 119 tis.** employees
- 1 800** offices
- 166** countries
- 15** billion EUR revenue
- +7 %** year-over-year growth



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EXECUTIVE SUMMARY: THE STATE OF THE ELECTRICAL ENGINEERING INDUSTRY IN THE CZECH REPUBLIC

1. The importance and position of the sector

- The electrical engineering industry is one of the pillars of the Czech economy - in 2024, it accounted for 14.4% of manufacturing sector revenues (689 billion CZK) and employed over 100,000 workers.
- The sector is a key supplier for the automotive industry, mechanical engineering, medical technology, and the energy sector. It therefore has a significant multiplier effect on the Czech economy.
- It is a driving force behind the digital, energy and economic transformation, as well as the implementation of the Industry 4.0 concept.

2. Macroeconomic environment

- Globally: After COVID-19, growth dynamics have slowed (GDP around 3.2% annually until 2030), and market fragmentation (USA-China) and geopolitical tensions persist. This creates pressure on supply chains.
- EU: The economy is stagnating, and the industrial sector is losing competitiveness, particularly in Germany, the Czech Republic's main partner. However, inflation is declining, creating space for recovery.
- Czech Republic: After a two-year slowdown, 2024 saw a gradual recovery (GDP +2.0%, unemployment around 2.6%). The main barrier remains a shortage of qualified labor.

3. Sector development

- Revenue growth 2020-2024: +13% (607 → 689 billion CZK).
- NACE 26 (electronics, optics): 321 billion CZK in revenue (2024). After a decline until 2023, the sector has stabilized. The fastest-growing segments were measuring and testing instruments (+38%), while consumer electronics fell sharply (-46%).
- NACE 27 (electrical equipment): More stable, peaked in 2023 (410 billion CZK), then declined to 369 billion CZK in 2024 (-10%). Growth drivers include the production of motors and transformers, cables, and batteries (+58% over 5 years).
- Industrial production index: NACE 27 is one of the most dynamic segments in the EU (2020-2024 growth +18%). The Czech Republic outperformed Germany, Austria, and Poland.

4. Trade and investment

- Export character: The sector is strongly connected to foreign markets.
- For NACE 26, foreign orders have been declining long-term (-15% 2020-2024), while domestic orders have grown significantly (+59%).
- For NACE 27, development has been more stable, with foreign demand increasing (+33%), though there was a slowdown in 2024.
- Foreign direct investment remains a crucial factor for the Czech Republic.

5. Key trends and challenges

- Digitalization and Industry 4.0 - advanced automation, robotics, intelligent sensors, AI in manufacturing. Large companies are keeping pace, while small and medium-sized enterprises lag behind.
- Green transformation - EU pressure for decarbonization brings new opportunities (renewable and alternative energy sources, e-mobility, smart grids), but also requires investment.
- Labor shortage - despite growth in technical graduates, a structural shortage remains, limiting growth capacity.
- Price competition - NACE 27 (motors, conductors) faces strong pricing pressure from foreign customers.
- Geopolitical risks - supply chain disruptions and dependence on Asian markets (particularly in semiconductors, ferrous and non-ferrous metals, other raw materials, and consumer electronics).

EXECUTIVE SUMMARY: THE STATE OF THE ELECTRICAL ENGINEERING INDUSTRY IN THE CZECH REPUBLIC

6. Perspectives and recommendations

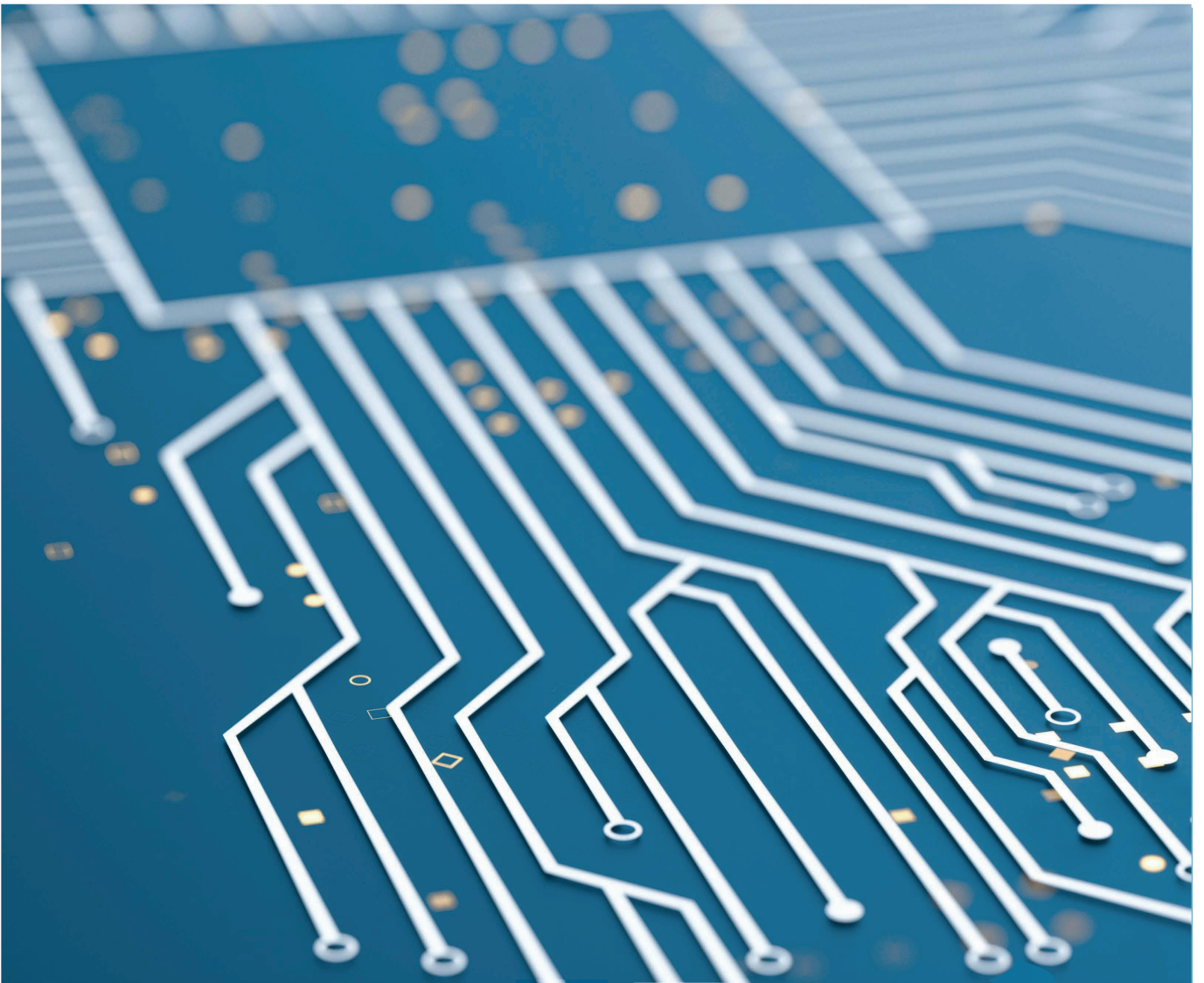
- Stable growth of the sector can be expected, albeit with higher volatility (investment cycles, geopolitical factors).
- Opportunities: e-mobility, battery production, smart grids, digitalized manufacturing, export diversification beyond the EU.
- Risks: unresolved labor shortages, dependence on the German industry, regulatory burdens, and legislative unpredictability.
- Recommendations for company management:
 - invest in research and development (particularly in high-tech, higher-value-added segments),
 - seek strategic partnerships (including international ones),
 - strengthen collaboration with technical schools and invest in employee upskilling,
 - build resilience and flexibility in internal processes and diversify markets and supply chains.

This study is also available in electronic form:



CONTENT

1	Methodology	page 8
	The chapter describes the data collection methodology, which includes a combination of statistical data, public databases (including CZ-NACE), and a survey conducted among company representatives. It also defines the electrical engineering industry according to the CZ-NACE classification (sections 26 and 27) and provides an overview of the abbreviations and indicators used.	
2	Macroeconomic perspective	page 12
	The chapter provides a comprehensive analysis of the economic environment in which the electrical engineering industry operated between 2020 and 2024, at global, European, and national levels. It tracks the development of GDP, inflation, foreign trade, foreign direct investment, and other structural factors affecting the sector.	
3	Electrical engineering sector in the Czech Republic	page 34
	This chapter focuses on the regional structure of companies within the sector and presents a ranking of the TOP 30 companies in terms of economic strength. Based on a survey of sector representatives, it also provides a short-term outlook, highlighting expected production trends, the markets companies plan to expand into, key challenges within supply chains, and the areas where they intend to invest.	
4	Trends and challenges	page 45
	This chapter addresses current technological, geopolitical, and legislative trends shaping the future of the electrical engineering industry. It covers topics such as digitalization, Industry 4.0, ESG, automation, dependence on global markets, and the role of the state in supporting innovation and research.	



1 Methodology

METHODOLOGY

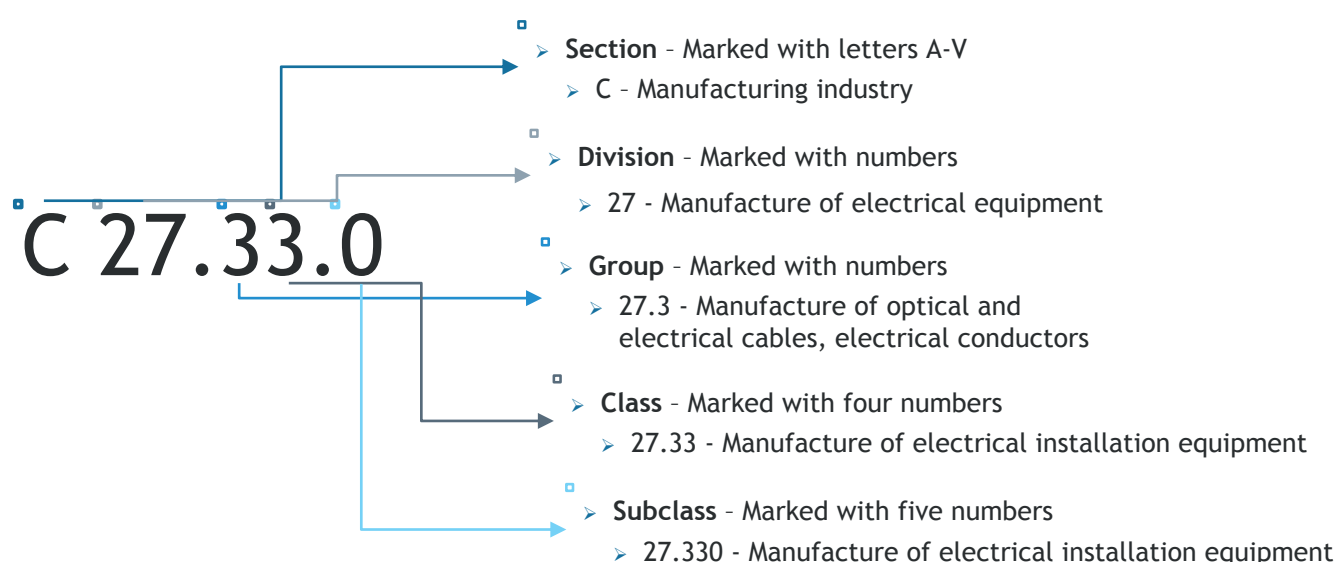
STRUCTURE OF THE CZ-NACE CODES

The CZ-NACE 2025 classification is based on the international NACE Rev. 2.1 standard. From the original four levels (section, division, group, class), a fifth (national) level has been added, with items identified by a five-digit numeric code (subclasses).

For the electrical engineering industry, the most relevant change is the merger of groups 26.7 (Manufacture of optical and photographic instruments and equipment) and 26.8 (Manufacture of magnetic and optical media) into group 26.7 (Manufacture of optical instruments, magnetic and optical media, and photographic equipment).

The data presented for the industry are based on Czech Statistical Office figures for the following sections:

- B (mining and quarrying),
- C (manufacturing industry),
- D (electricity, gas, steam, and air conditioning supply),
- E (water supply; sewerage, waste management, and remediation activities).



For the purposes of the sector analysis, a classification into Divisions and Groups was used.

OVERVIEW OF DIVISIONS AND GROUPS OF THE ELECTRICAL ENGINEERING INDUSTRY

26	Manufacture of computer and electronic and optical products
26.1	Manufacture of electronic components and boards
26.2	Manufacture of computers and peripheral equipment
26.3	Manufacture of communication equipment
26.4	Manufacture of consumer electronics
26.5	Manufacture of measuring testing instruments, clocks and watches
26.6	Manufacture of irradiation, electromedical and electrotherapeutic equipment
26.7	Manufacture of optical instruments, magnetic and optical media and photographic equipment
27	Manufacture of electrical equipment
27.1	Manufacture of electric motors, generators, transformers, and electricity distribution and control apparatus
27.2	Manufacture of batteries and accumulators
27.3	Manufacture of wiring and wiring devices
27.4	Manufacture of lighting equipment
27.5	Manufacture of domestic appliances
27.9	Manufacture of other electrical equipment

METHODOLOGY

SURVEY METHODOLOGY

The survey was conducted between **April and June 2025** and focused on mapping current trends, challenges, and strategies of companies operating in the Czech electrical engineering industry.

Companies were contacted through the Electrical and Electronic Association of the Czech Republic, CzechTrade, Veletrhy Brno, and through the BDO network.

The questionnaire was publicly accessible and completed by a total of **50 respondents**.

The respondents represent a cross-section of companies operating in the electrical engineering sector. They include businesses classified under NACE divisions 26 and 27, as well as other entities that, although falling under different NACE divisions, have activities closely related to the electrical engineering sector - such as component suppliers, technology developers, or firms providing specialized services in the field of electrical engineering.

RESPONDENT STRUCTURE:

Enterprise size	Number of respondents
Micro (up to 10 employees and an annual turnover or balance sheet total of up to 5 million CZK)	6
Small (up to 50 employees, annual turnover up to 200 million CZK, balance sheet total up to 100 million CZK)	20
Medium-sized (up to 250 employees, annual turnover up to 1 billion CZK, balance sheet total up to 500 million CZK)	14
Large (over 250 employees, annual turnover over 1 billion CZK, balance sheet total over 500 million CZK)	10

NACE	Main activity of the company	Number of respondents
NACE 26	Manufacture of electronic components and boards	4
	Manufacture of measuring testing instruments, clock and watches	5
NACE 27	Manufacture of electric motors, generators, transformers, and distribution and control apparatus	10
	Manufacture of batteries and accumulators	1
	Manufacture of wiring and wiring device	1
	Manufacture of other electrical equipment	5
Ostatní	Repair and maintenance of electronic and optical equipment	4
	Activities in the field of information technology	6
	Research and development in the field of technical sciences	5
	Wholesale activities	5
	Other	4

The questionnaire contained **23 questions**, developed by BDO in collaboration with the Electrical and Electronic Association of the Czech Republic.

For selected questions, respondents could select two options.

The data was processed by BDO using statistical tools.

The survey was conducted **anonymously**.

METHODOLOGY

LIST OF USED ABBREVIATIONS

Abbreviation	Meaning
CZ-NACE	Czech version of economic activities classification
CNB	Czech National Bank
CSO	Czech Statistical Office
ECB	European Central Bank
EPO	European Patent Office
ESG	Environmental, Social, Governance
EU	European Union
GDP	Gross Domestic Product
HICP	Harmonized Indices of Consumer Prices
IPI	Industrial Production Index
MF	Ministry of Finance of the Czech Republic
IMF	International Monetary Fund
OP TAK	Operational Program Technology and Applications for Competitiveness
pp.	Percentage Point
PPI	Industrial Producer Price Index
FDI	Foreign Direct Investment
HS	High Schools
R&D	Research and Development
Uni	Universities
LFSS	Labor Force Sample Survey

LIST OF COUNTRY ABBREVIATIONS USED

Abbreviation	Meaning
AT	Austria
CN	China
DE	Germany
DK	Denmark
ES	Spain
FR	France
GB	Great Britain
HU	Hungary
CH	Switzerland
IE	Ireland
IT	Italy
JP	Japan
KR	South Korea
MY	Malaysia
NL	Netherlands
PL	Poland
SK	Slovakia
TW	Taiwan
US	United States
VG	US Virgin Islands
VN	Vietnam

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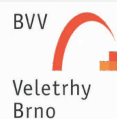
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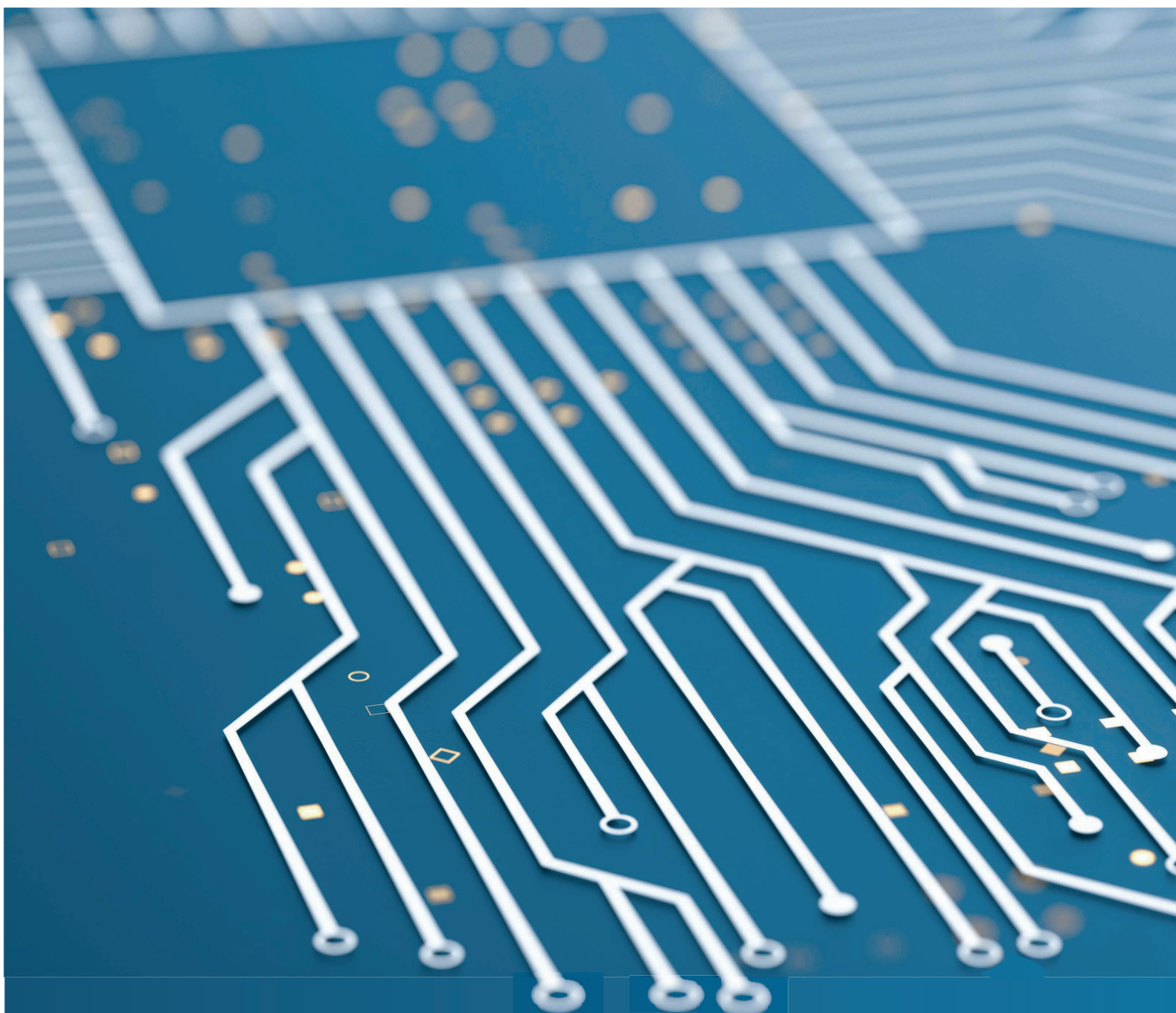
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MAIN SOURCE OF DATA

- Czech Statistical Office
- Ministry of Industry and Trade
- Czech National Bank
- Eurostat
- Company Annual Reports
- MERK Database



Macroeconomic perspective

The electrical engineering industry, which includes the manufacturing of electrical equipment (NACE 27) as well as electronics and optical instruments (NACE 26), is one of the key segments of the Czech economy. In 2024, it accounted for 14.4% of manufacturing sector revenues, with total revenues reaching 689 billion CZK.

In terms of trends, there is a positive development in education - the number of graduates in technical fields relevant to electrical engineering is increasing, which may help mitigate the shortage of qualified labor. Industrial production in both sectors has grown faster than the average for the manufacturing sector and the overall industry. From a foreign trade perspective, NACE 27 recorded a positive trade balance again in 2024 after five years.

GLOBAL ECONOMIC OUTLOOK



The global economy, after stabilizing following the COVID-19 pandemic, is entering a phase of structurally lower growth. The International Monetary Fund (IMF) projects that from 2025 to 2030 world GDP will increase by only about 3.2% annually, which is significantly below the historical average before 2020 (around 3.7%). Inflation on a global scale is indeed falling, but its return to target levels is slower than expected - for example, in 2025 it is still projected to be approximately 4.3%.

The main drag on global growth is stagnant trade. The volume of world trade is increasing more slowly than the global economy - in 2025 it is projected to grow by only 1.7%. This trend reflects rising protectionism, trade wars (especially between the U.S. and China), higher tariffs and the “reshuffling” of supply chains. What’s being called deglobalization raises costs, reduces efficiency and suppresses productivity growth.

Despite the slowdown, the global economy is not slipping into recession but is going through a “transition phase of weaker growth”. Regionally, growth remains uneven: advanced economies (the US, eurozone, Japan) face a combination of demographic decline, high debt and subdued investment activity. Emerging markets, especially in Asia, are still growing faster, but even there a slowdown is underway - for example China is dealing with a real-estate crisis and a loss of investment attractiveness.

Risks remain significant: geopolitical conflicts (Ukraine, the Middle East, Taiwan), energy-price volatility and changing trade rules. The IMF states that the world economy is undergoing a structural re-organization, where the old models are no longer valid and new ones are just emerging. In this environment, global growth remains uncertain, with potential deviations in both directions.

GLOBAL TRADE SLOWDOWN

- Trade growth is lagging behind GDP due to protectionism (USA, China) and supply chain disruptions.

ECONOMIC FRAGMENTATION

- The world is dividing into competing economic blocs, which reduces efficiency and productivity.

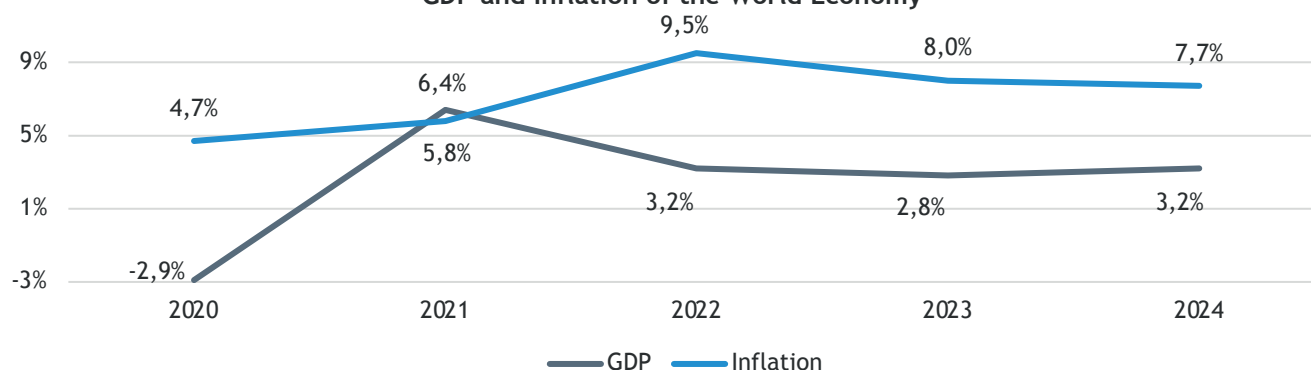
GEOPOLITICAL TENSIONS

- Conflicts in Ukraine, the Middle East, and tensions between the USA and China are increasing uncertainty.

REGIONAL DIFFERENCES

- Advanced economies (the U.S. and the EU) are growing slowly, while Asia maintains a faster pace of expansion.

GDP and Inflation of the World Economy



ECONOMIC OUTLOOK OF THE EUROPEAN UNION

The European Union is facing a combination of weak economic growth, declining industrial competitiveness, and strong transformational pressures in the energy and digitalization sectors.

In 2024, the EU began a mild recovery after a period of stagnation and high inflation, but growth remains subdued. In its spring 2025 forecast, the European Commission estimates real GDP growth of 1.1% for the EU and 0.9% for the eurozone (GDP grew by 0.7% in the first half of the year). In 2026, a slight acceleration to 1.5% for the EU and 1.4% for the eurozone is expected, assuming some risks subside and external demand recovers.

EU STATISTICS

- GDP growth- 0,2 % (for Q2 2025)
- Year-on-year inflation- 2,3 % (as of 06/2025)
- Unemployment - 5,9 % (as of 06/2025)

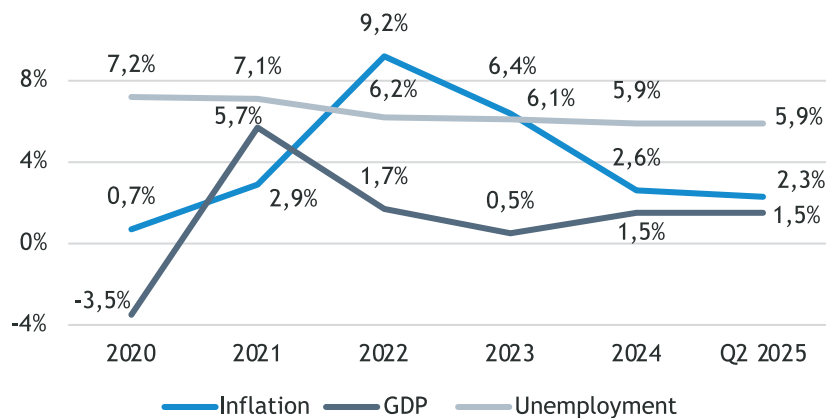
Inflation in Europe is simultaneously on a declining trend: the average HICP inflation in the eurozone is expected to fall from 5.6% in 2023 to 2.1% in 2025 and further to 1.7% in 2026, providing room for monetary easing by the ECB. The highest inflation as of June 2025 is observed in Romania (5.8%), Estonia (5.2%), and Slovakia and Hungary (4.6%).

A key issue remains Germany's weak performance, as the EU's largest economy significantly influences the entire bloc. Structural problems (high energy costs, insufficient investment, and demographic ageing) mean Germany shows one of the lowest growth rates in the EU, which also affects the Czech economy. The German government's economic growth forecast for 2025 was revised down to 0.3% (from the autumn estimate of 1.1%). Nevertheless, Germany managed to grow GDP by 0.3% in Q1 2025, following years of stagnation and decline, though this was followed by a contraction of -0.1% in Q2 2025.

Industrial production in the EU is stagnating, particularly in the automotive and engineering sectors. Uncertainty is heightened by new U.S. trade barriers and insufficient coordination of European industrial policies. The Czech Republic, as a highly export-oriented economy, is significantly affected by these factors.

On the other hand, the EU labor market remains very strong - unemployment is around 6%, employment is at historic highs, and real wages are rising again. This supports domestic consumption.

Inflation, GDP, and Unemployment in the EU



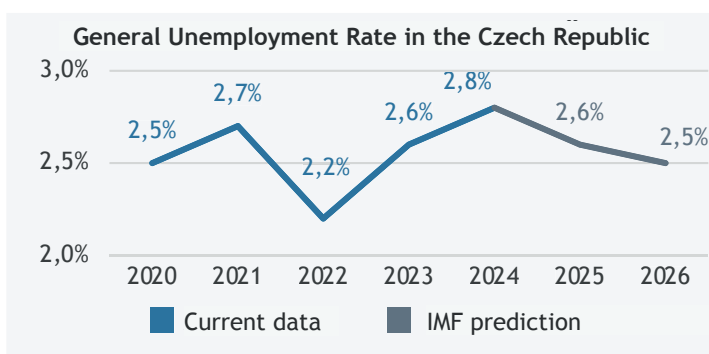
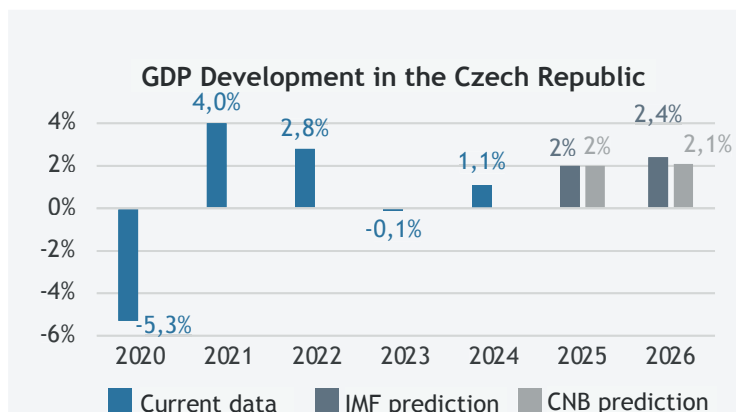
In 2024, the EU economy created 1.7 million new job positions, driven by continued increases in employment. As of mid-2025, the unemployment rate in the EU stands at 5.9%. The lowest unemployment is recorded in Malta (2.5%) and the Czech Republic (3%), while the highest is in Spain (10.4%), Finland (9.9%), and Sweden (8.3%).

EU exports remain subdued. The main causes include weaker foreign demand, persistent trade tensions (particularly between the U.S. and China), declining competitiveness in some industrial segments, and a slowdown in the traditional export engine - the German economy. To counter these challenges, the European Union is seeking to strengthen domestic investment through instruments such as the NextGenerationEU programme and other funding mechanisms aimed at enhancing strategic autonomy.

The outlook remains fragile. Positive signals come from investment activity and a recovery in real incomes. However, structural challenges (infrastructure, bureaucracy, energy) and external risks (geopolitical tensions, trade wars) continue to be significant sources of uncertainty.

MACROECONOMIC OUTLOOK OF THE CZECH REPUBLIC

The Czech economy began a gradual recovery in 2024 following a two-year slowdown. The Czech National Bank expects GDP growth of 2.0% for 2024, with a slight acceleration to 2.1% in 2026. However, the 2026 forecast was revised down by 0.3 percentage points due to the lingering effects of trade wars, which are dampening foreign demand. Inflation is expected to remain slightly above the target in 2025, averaging 2.5%, and to decline further to 2.2% in 2026. Despite the increased uncertainty associated with the impact of tariff measures, the Czech koruna in the first half of the year appreciated by 2% against the euro and 14% against the U.S. dollar, and analysts believe there is still room for further strengthening. A significant downward revision occurred in producer prices, where the CNB now expects a year-on-year decline of 0.1% in 2025 (compared to the previous forecast of +1.6%), mainly due to weaker energy commodity price developments. For 2026, the bank anticipates price stagnation.

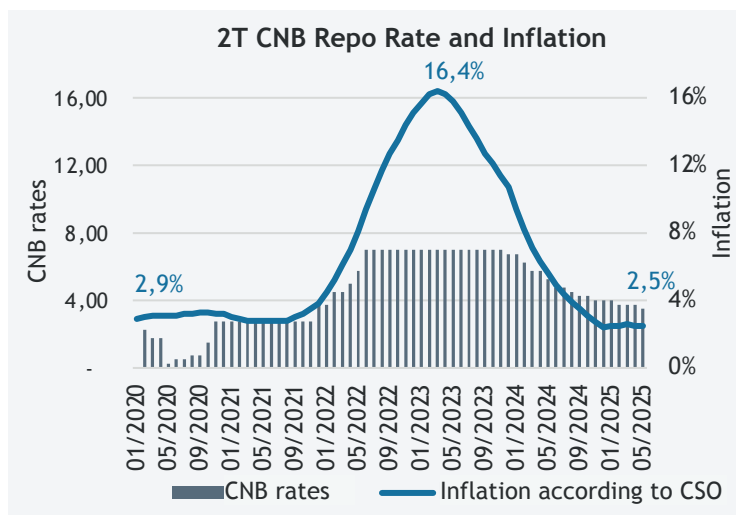


The Ministry of Finance expects a similar scenario for 2025 - real GDP growth of approximately 2.0%, representing a slight downward revision from the previously forecast 2.3%. Compared to growth of 1.1% in 2024, this acceleration is expected to be driven mainly by a recovery in real household incomes and the associated rebound in household consumption. For 2026, the Ministry anticipates further acceleration to around 2.4%, primarily due to strengthening investment activity and the expected acceleration of overall economic development in the countries of the

Czech Republic's main trading partners. Year-on-year inflation at the beginning of the year was slightly below 3%. Due to inflationary pressures from the CNB and a decline in some commodity prices (e.g., oil), the Ministry of Finance expects inflation to reach 2.4% in 2025 and then decrease slightly to 2.3% in 2026. Unemployment is expected to remain around 2.6%, with a slight decline to 2.5% due to the anticipated continuation of economic recovery.

Unemployment remains in the 2.6-2.8% range. Employers face difficulties in finding qualified workers, which puts upward pressure on wages while simultaneously limiting production growth. This structural problem is particularly pronounced in the industrial and technical sectors.

The Czech National Bank last reduced the two-week repo rate in May 2025 by 0.25 percentage points to 3.5%, marking the third cut since the beginning of the year. In the following months, however, the Bank Board decided to keep rates at this level, citing inflation that remained higher than expected. Rising service-sector prices - particularly in hospitality, accommodation, and culture - along with persistent uncertainties from global trade wars, are the main concerns. If these inflationary risks do not abate, interest rates could remain at the current level until the end of the year. Additionally, Governor Aleš Michl noted that a further rate increase cannot be ruled out if the inflation outlook deteriorates.



INDUSTRY AND TECHNOLOGY SECTOR DEVELOPMENT

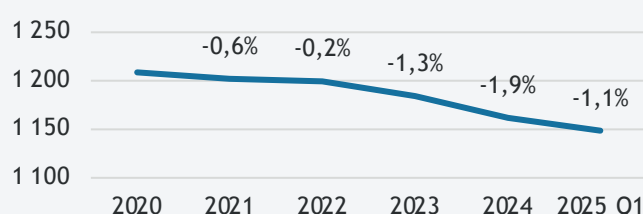
The Czech industrial sector experienced two consecutive years of decline in 2023-2024. In 2023, production fell by 0.8%, followed by a further decrease of 1.4% in 2024, according to data from the Czech Statistical Office. The largest drops were recorded in machinery manufacturing, the automotive industry, metallurgy, and metal production. In contrast, the food and paper industries showed slight growth. Nevertheless, new orders at the end of 2024 increased, indicating a potential recovery in 2025.

The value of new industrial orders rose by 2.8% year-on-year in 2024, with foreign orders by 2.6% and domestic orders by 3.2%. Thus, despite the decline in production, companies saw an increase in demand that could translate into higher output in 2025.

From 2020 to the first quarter of 2025, employment in the Czech industrial sector declined slightly each year. In 2024, the number of employees decreased by 2%, but this was not a widespread layoff; rather, it reflected targeted reductions in selected positions and natural turnover. This development was primarily related to automation, optimization of production processes, and a shift toward higher technological complexity. Over the entire period under review, industrial employment declined by approximately 5%, equivalent to roughly 60,000 workers.

Despite this decrease the Czech Republic continues to maintain the highest share of industrial employment within the European Union, reflecting the sector's importance to the domestic economy. At the same time, the average wage in the industry increased by 6.7% year-on-year in 2024, indicating rising labor productivity. In some sectors, this trend may also reflect the replacement of labor with technology and a shift toward more capital-intensive production.

Average number of employees in industry
(thousands of people, incl. year-on-year changes)



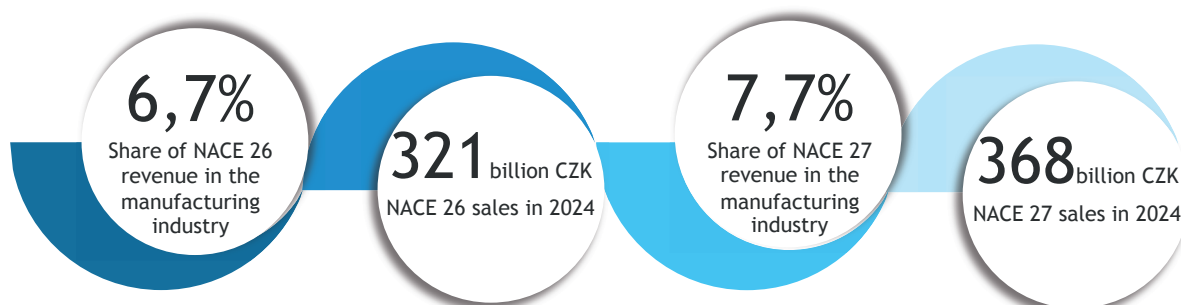
The automotive and electrotechnical industries, as backbone sectors of the Czech economy, are facing fundamental changes. The automotive industry struggled in 2021-2022 with shortages of semiconductors and other components, which constrained car production. While some of these issues were partially resolved in 2023 as supply chains recovered, demand in European markets remained weak. Declining car production (e.g., due to weak demand from Germany) has a direct impact on suppliers, including manufacturers of electrical equipment. These sectors must invest in modernization, the development of new products, and automation.

Digitalization and Industry 4.0 are becoming key strategies for maintaining competitiveness. Companies are implementing robotics, sensor technologies, and artificial intelligence in production. Nevertheless, small and medium-sized enterprises often lag behind due to limited capital and a shortage of skilled labor. Productivity growth and added value will depend on investment in research and development.

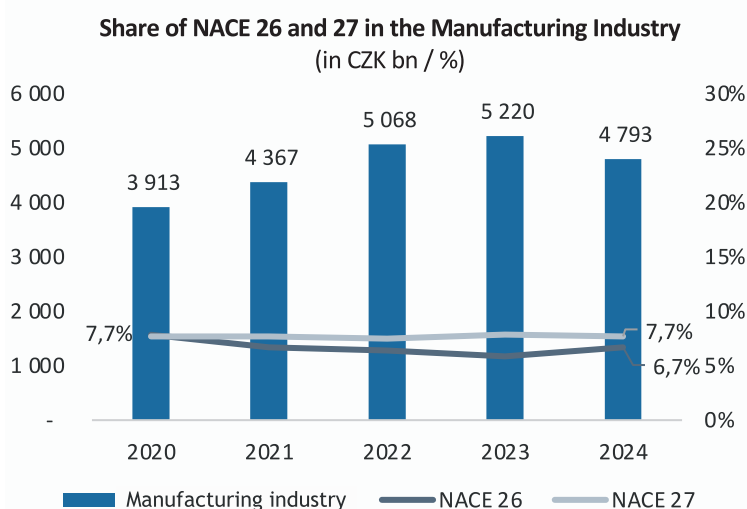
Green transformation and decarbonization represent another major trend. The EU is pushing industrial decarbonization through emission allowances, the CBAM and support for renewable energy sources. This increases demand for renewable energy (solar panels, wind turbines) and electromobility. At the same time, stricter standards are being introduced for energy efficiency, CO₂ emissions, and related metrics. Similarly, the energy sector as a whole is undergoing transformation - the shift to zero-emission sources requires modernization of the power grid, construction of charging and hydrogen infrastructure, etc., which again generates work for industry (electrical installations, electronics, engineering).

The future of the Czech industry will be determined by its ability to adapt to new technological and ecological requirements. Companies that transition early to low-emission production and high-tech products will secure their place in European value chains.

OVERVIEW OF THE ELECTROTECHNICAL INDUSTRY



In 2024, the electrotechnical industry accounted for **14.4%** of revenue from the sale of own products and services across the entire manufacturing sector (an increase of 0.7 percentage points compared to 2023). Between 2020 and 2024, the electrotechnical industry experienced fluctuating but overall growing revenue trends. Total sector revenue increased from 607 billion CZK in 2020 to 689 billion CZK in 2024, representing a cumulative growth of more than 13%.



NACE 26: MANUFACTURE OF COMPUTERS, ELECTRONIC AND OPTICAL DEVICES AND EQUIPMENT

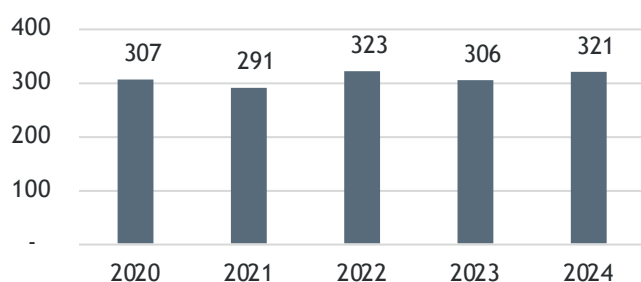
Division CZ-NACE 26 has historically been one of the key sectors of the Czech economy. The electronics and electrotechnical products manufactured are supplied to other industries, such as the automotive and engineering sectors. Its share of total manufacturing industry revenue steadily declined from 7.8% in 2020 to 5.9% in 2023. However, in 2024 there was a slight recovery, with the share rising to 6.7%. This development was driven by a combination of a decline in total manufacturing revenue and simultaneous growth in NACE 26 sector revenue, which reached 321 billion CZK in 2024.

NACE 27: MANUFACTURE OF ELECTRICAL EQUIPMENT

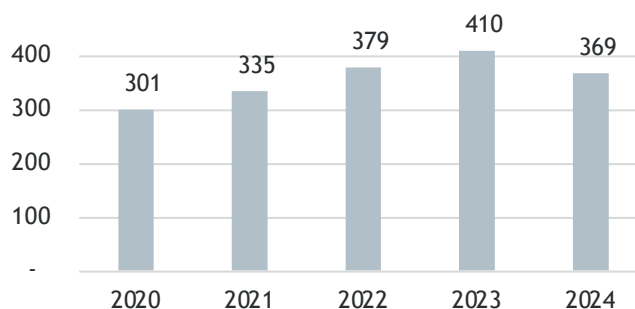
Division CZ-NACE 27 recorded annual growth from 2020 both in absolute revenue and in its share of the manufacturing industry. Revenue increased from 301 billion CZK in 2020 to 410 billion CZK in 2023, representing a 7.9% share. In 2024, revenue declined to 369 billion CZK; however, the sector's share of total manufacturing revenue remained stable between 7.7-7.9%, maintaining its significant position.

In terms of revenue volume, NACE 27 experienced stronger growth than NACE 26, rising by more than 36% between 2020 and 2023. In 2024, however, revenue decreased to 369 billion CZK (-10% year-on-year), likely due to reduced demand and delayed investment cycles in the energy and construction sectors.

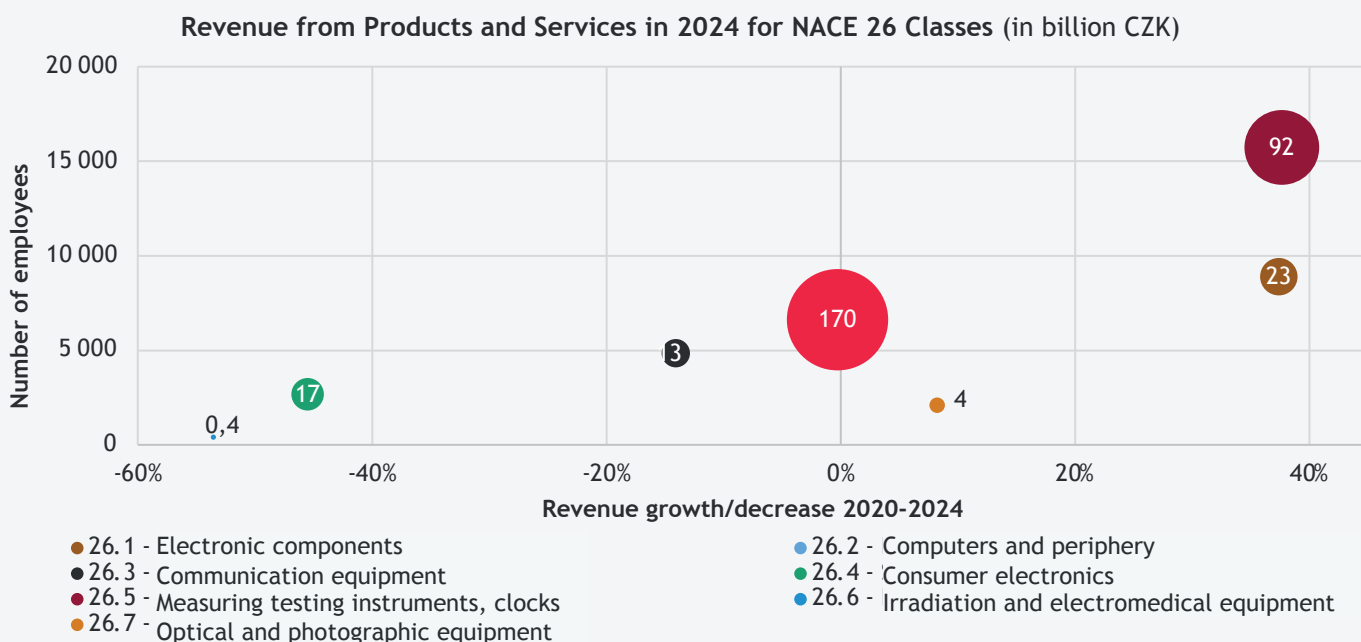
Revenues from Sales of Products and Services (billion CZK) NACE 26



Revenues from Sales of Products and Services (billion CZK) NACE 27



STRUCTURE AND DEVELOPMENT OF CLASSES IN NACE 26



NACE 26.1 - Manufacture of electronic components and boards

- The group is divided into class 26.11 - Manufacture of electronic components (including, for example, the production of chips, transformers, and coils) and class 26.12 - Manufacture of loaded electronic boards.
- It accounts for only 7% of NACE 26 revenue (23 billion CZK) but includes 52% of all companies within this section, making it a highly fragmented group with a significant presence of smaller manufacturers. Between 2020 and 2024, revenue grew by 37%, ranking this sector among the dynamically growing segments.

NACE 26.2 - Manufacture of computers and peripheral equipment

- This group includes the production of computers and related components - printers, servers, and storage devices - as well as almost the entire IT infrastructure. It is the largest group in terms of revenue: in 2024, it reached 170 billion CZK (53% of total NACE 26 revenue). However, the category showed no growth over the 2020-2024 period, with a 23% revenue decline in 2023 (i.e., 40 billion CZK).
- It employs 6,600 workers, with revenue per employee reaching 25.7 million CZK, the highest in the entire sector, reflecting a high degree of productivity and automation. The segment is influenced by globalization and the relocation of development capacities outside the Czech Republic.

NACE 26.3 - Manufacture of communication equipment

- The group includes the manufacture of mobile communication devices (e.g., mobile phones, tablets), transmitting and receiving antennas, modems, and similar equipment. In 2024, the group generated revenue of 13 billion CZK (4% of NACE 26) and employs nearly 5,000 people. Over the five-year period, revenue declined by 14%, which may be a result of pressure from Asian competition and the relocation of production outside the Czech Republic.

NACE 26.4 - Manufacture of consumer electronics

- This group includes products such as televisions, displays, players, audio equipment, and gaming devices. The segment is strongly influenced by digitalization and internet connectivity of products.
- In 2024, the group employs 2,600 people (3% of companies) with revenue per employee of 6.5 million CZK. Revenue totaled 17 billion CZK (5% of NACE 26), declining 46% over five years due to offshoring and strong competitive pressure.

STRUCTURE AND DEVELOPMENT OF CLASSES IN NACE 26

	Sales (in billion CZK)	Sales growth 2020-2024	Share of sales on NACE	Number of employees	Share of companies in Czechia in NACE 26	Performance per employee (in million CZK)
26.1 - Electronic components	23	37 %	7 %	8 893	52 %	2,6
26.2 - Computers and periphery	170	0 %	53 %	6 617	3 %	25,7
26.3 - Communication equipment	13	-14 %	4 %	4 846	7 %	2,7
26.4 - Consumer electronics	17	-46 %	5 %	2 675	3 %	6,5
26.5 - Measuring testing instruments, clocks and watches	92	38 %	29 %	15 729	19 %	5,9
26.6 - Electromedical and irradiation equipment	0,4	-54 %	0,1 %	406	1 %	1,1
26.7 - Optical and photographic equipment	4	8 %	1 %	2 096	2 %	1,9

NACE 26.5 - Manufacture of measuring testing instruments, clocks and watches

- One of the most significant and dynamic segments, divided into class 26.51 - Manufacture instruments and appliances for measuring, testing and navigation (e.g., instruments for the automotive, aviation, and meteorology sectors) and class 26.52 - Manufacture of watches and clocks, including clocks, watches, and their components.
- In 2024, the group generated 92 billion CZK in revenue. Growth over the 2020-2024 period reached 38%, the highest in the section, and together with a 29% market share, highlights the increasing importance of this sector. It employs 15,700 people, making it the largest class by workforce within the entire division.

NACE 26.6 - Manufacture of irradiation, electromedical and electrotherapeutic equipment

- Includes the production of diagnostic and therapeutic electronic devices and their components, such as ECG, CT, X-ray, and laser treatment equipment.
- It is a small and specialized group, generating only 0.4 billion CZK in revenue (0.1% of NACE 26) and employing 400 people. Revenue declined by 54%, the share of companies is 1%, and revenue per employee is the lowest in the section (1.1 million CZK). This trend reflects the relocation of some production outside the Czech Republic, a drop in orders, and higher entry barriers (certification, R&D).

NACE 26.7 - Manufacture of optical instruments, magnetic and optical media and photographic equipment

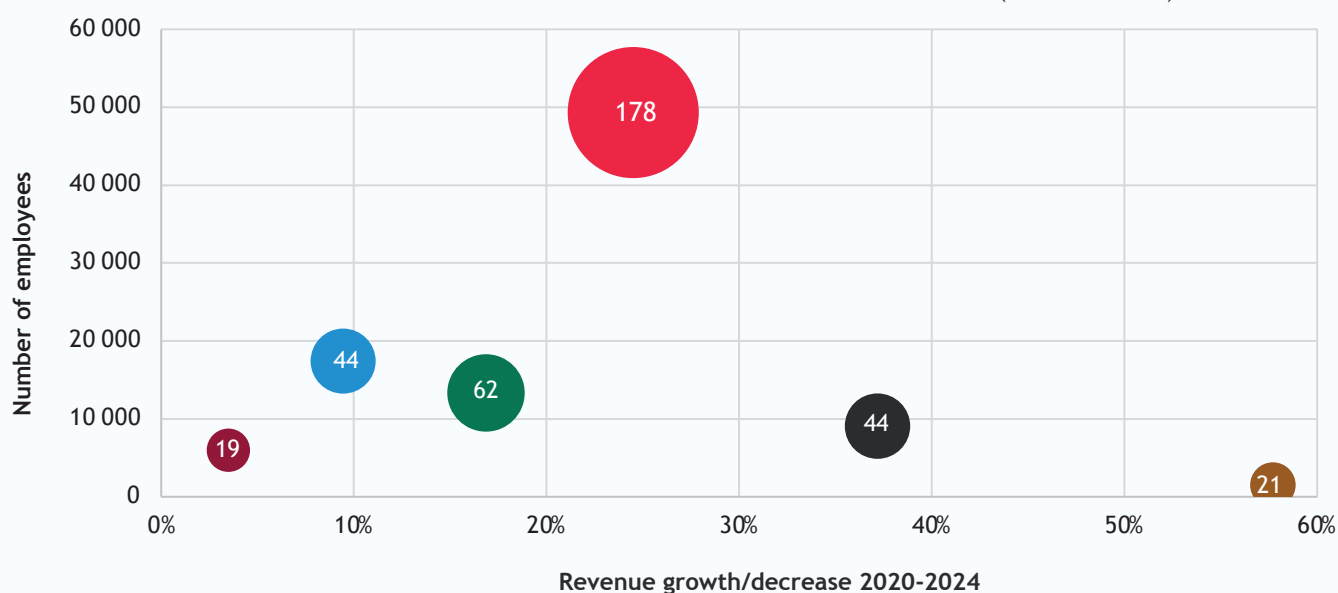
- This class includes the manufacture of photographic cameras, binoculars, microscopes, telescopes, and lenses. In 2024, it generated 4 billion CZK in revenue and employed 2,100 people. Over the observed period, the group recorded only modest revenue growth of 8%.

Revenue from Sales of Products and Services by NACE 26 Subcategories in 2024 (321 billion CZK)



STRUCTURE AND DEVELOPMENT OF CLASSES IN NACE 27

Revenue from Products and Services in 2024 for NACE 27 Classes (in billion CZK)



- 27.1 - Electric motors, generators and transformers
- 27.2 - Batteries and accumulators
- 27.3 - Wiring and wiring devices
- 27.4 - Lighting equipment
- 27.5 - Domestic appliances
- 27.9 - Other electrical equipment

NACE 27.1 - Manufacture of electric motors, generators, transformers and electricity distribution and control apparatus

- With revenue of 178 billion CZK in 2024, this is the largest class, accounting for 48% of total NACE 27 sales. It is also the largest employer, with 49,000 workers.
- This class covers the production of equipment essential for the conversion and distribution of electrical energy - from simple electric motors to high-power transformers for transmission networks. Supplies for railway and rail systems also play an important role. In recent years, demand has grown for motors and generators with higher energy efficiency, as well as components used in electromobility and renewable energy, reflected in a 25% increase in segment revenue over the past five years.

NACE 27.2 - Manufacture of batteries and accumulators

- The battery and accumulator segment has experienced dynamic growth in recent years, increasing by 58% over the past five years, driven primarily by rising demand for lithium-ion cells used in electric vehicles, consumer electronics, and backup power systems. Unlike its neighboring countries, the Czech Republic has so far been unable to attract an investor to build a battery gigafactory.
- With revenue now representing 6% of NACE 27, the segment has surpassed NACE 275 (household appliance production) in size, but it still has the lowest employment and the fewest companies with this as their primary activity within NACE 27.

NACE 27.3 - Manufacture of wiring and wiring devices

- This class covers the production of all types of cables - from high-voltage power cables for the energy sector to data and optical cables for telecommunications. Over the past five years, revenues have grown by 37%, driven mainly by increased demand for cable systems resistant to fire, electromagnetic interference, and with higher transmission capacity. The European market further supports the development of smart grids and infrastructure digitalization (e.g., optical networks for 5G).

STRUCTURE AND DEVELOPMENT OF CLASSES IN NACE 27

	Sales (in billion CZK)	Sales growth 2020-2024	Share of sales on NACE	Employees	Share of companies in Czechia in Nace 27	Performance per employee (in billion CZK)
27.1 - Electric motors, generators and transformers	178	25 %	48 %	49 313	24 %	3,6
27.2 - Batteries and accumulators	21	58 %	6 %	1 508	0 %	14,2
27.3 - Wiring and wiring devices	44	37 %	12 %	9 070	3 %	4,9
27.4 - Lighting equipment	62	17 %	17 %	13 331	2 %	4,7
27.5 - Appliances	19	3 %	5 %	5 978	10 %	3,2
27.9 - Other electrical equipment	44	9 %	12 %	17 416	54 %	2,5

NACE 27.4 - Manufacture of lighting equipment

- The lighting technology sector includes the production of indoor and outdoor lighting, specialized light sources, and LED components. Current trends link lighting with building digitalization (smart lighting) and energy efficiency.
- The sector generated revenues of 62 billion CZK and employed 13.3 thousand people, contributing 17% to the turnover of NACE 27. Growth of 17% between 2020 and 2024 indicates a stable and technologically driven development, reflecting the transition to LED technologies, intelligent lighting, and energy-efficient solutions, in line with European trends toward energy savings and green modernization.

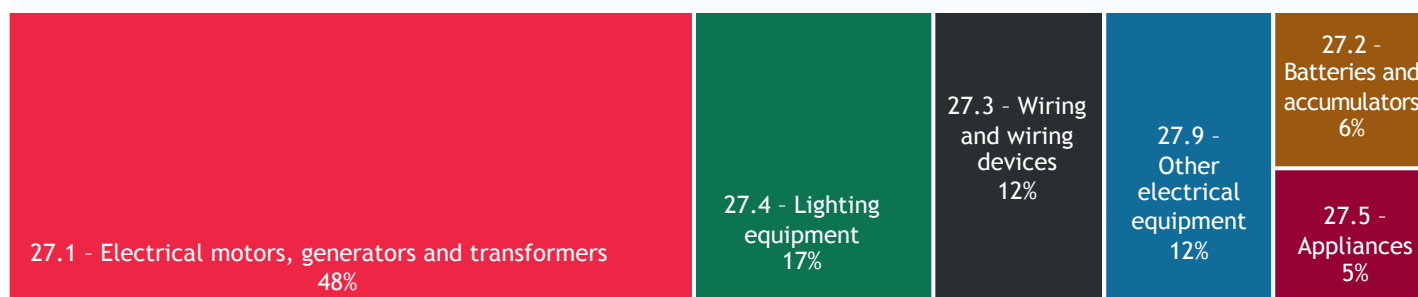
NACE 27.5 - Manufacture of domestic appliances

- This is the smallest class within NACE 27 in terms of revenue, generating 19 billion CZK and representing 5% of the sector's total turnover. However, in terms of the number of companies, it ranks third, with 266 legal entities in the Czech Republic registered primarily in the production of household appliances.
- Revenues grew only by 3% between 2020 and 2024, indicating low dynamism. The segment is strongly affected by price pressure on commodity products, globalization of production, and high competition from foreign brands.

NACE 27.9 - Manufacture of other electrical equipment

- This group includes equipment that cannot be classified under the previous categories. In the Czech Republic, over 1,300 companies operate in this class, making it the category with the highest number of firms, which reflects a highly fragmented market.
- In 2024, revenue from the sale of products and services reached 44 billion CZK, employing 17.4 thousand people and representing 12% of the sector. The 9% growth over the 2020-2024 period corresponds to a realistic performance level for medium-sized technology companies.

Revenue from Sales of Products and Services by NACE 27 Subcategories in 2024 (369 billion CZK)

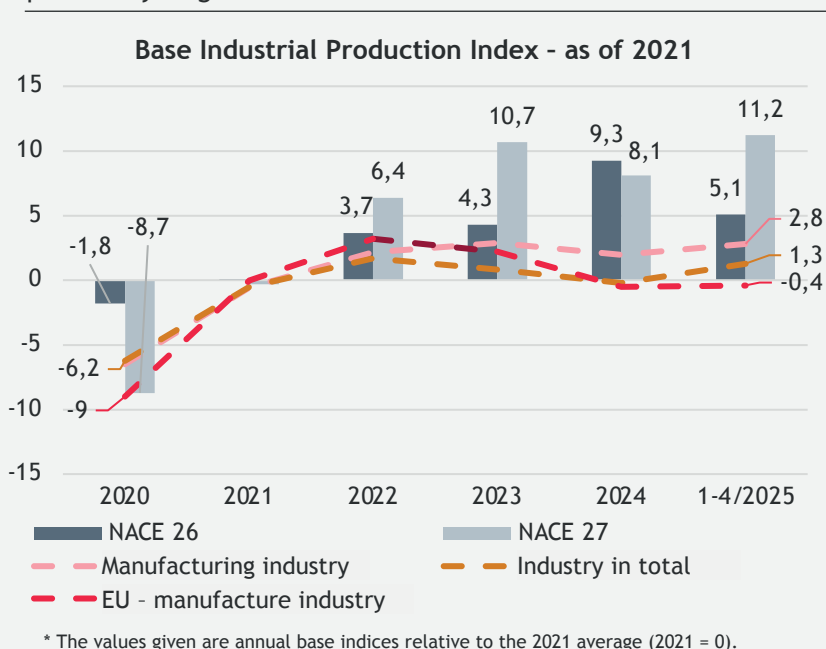


INDUSTRIAL PRODUCTION INDEX

The Industrial Production Index (IPI) is a key indicator of real industrial activity. It measures the volume of production in industrial sectors, adjusted for price and seasonal effects, in constant prices with 2021 as the base year (2021 = 100). The index is derived from revenues from own products and services, converted to constant prices, and covers CZ-NACE classifications B-D (excluding group 35.3) in accordance with Eurostat standards.

In 2021, production saw a year-on-year increase of 6.2%, which was related to the easing of pandemic restrictions and the subsequent one-off rebound in demand (following the decline in 2020). The years 2022 and 2023 brought a modest recovery - the industry reached values of 101.7 and 100.8, corresponding to only a very slight growth compared to the baseline. In 2024, however, the industrial index fell slightly again to 99.8, i.e., 0.2% below the 2021 level, indicating that the overall industry was unable to sustainably surpass the level from three years earlier. For the first four months of 2025, the situation has improved slightly - the index rose to 101.3, i.e., 1.3% above the 2021 level.

In the context of the five-year period, however, the growth of industrial production remains very weak, practically stagnant.



The manufacturing industry shows a development similar to that of the overall industry, but it is more growth-oriented, roughly 3 percentage points above the total industry. The manufacturing sector exhibits a mildly positive trend, driven mainly by modern technological segments, while some traditional sectors (e.g., automotive) are stagnating or fluctuating due to supply chain disruptions, volatile input prices, and structural changes in demand.

NACE 26 - This section experienced only modest growth in 2021 (1.8%). However, in 2024, the group saw an increase of 9.3% compared to 2021. In the first four months of 2025, there was a slight decline to 5.1% relative to the base year.

NACE 27 - This is one of the most dynamic segments. Production had already grown by nearly 9% in 2021, with growth accelerating to 10.7% in 2023. The first months of 2025 look positive, with an increase of 11% compared to 2021.

GROWTH OVER THE PERIOD 2020-2024

9 %

EU -
manufacturing
industry

6 %

Czechia -
Industry in total

9 %

Czechia -
manufacturing
industry

11 %

Czechia - NACE
26

18 %

Czechia - NACE
27

EUROPEAN CONTEXT

As a result of the Covid-19 crisis and restrictive measures, all EU countries experienced a decline in industrial production in 2020. However, these rates were quite diverse, ranging from approximately -11% in Italy, France, and Luxembourg to just -0.2% in Lithuania. The recovery in 2021 brought relatively high growth rates (9.1% in the EU, 8.8% in the euro area). Positive developments were particularly noted in Ireland, Belgium, and Lithuania.

In 2022, the rates of change remained positive in most countries but were much lower than in 2021. In 2023, the trend shifted again. Industrial production in the EU and euro area fell by roughly 2%, with the largest declines recorded in Estonia, Bulgaria, and Ireland.

INDUSTRIAL PRODUCTION INDEX - NACE 26

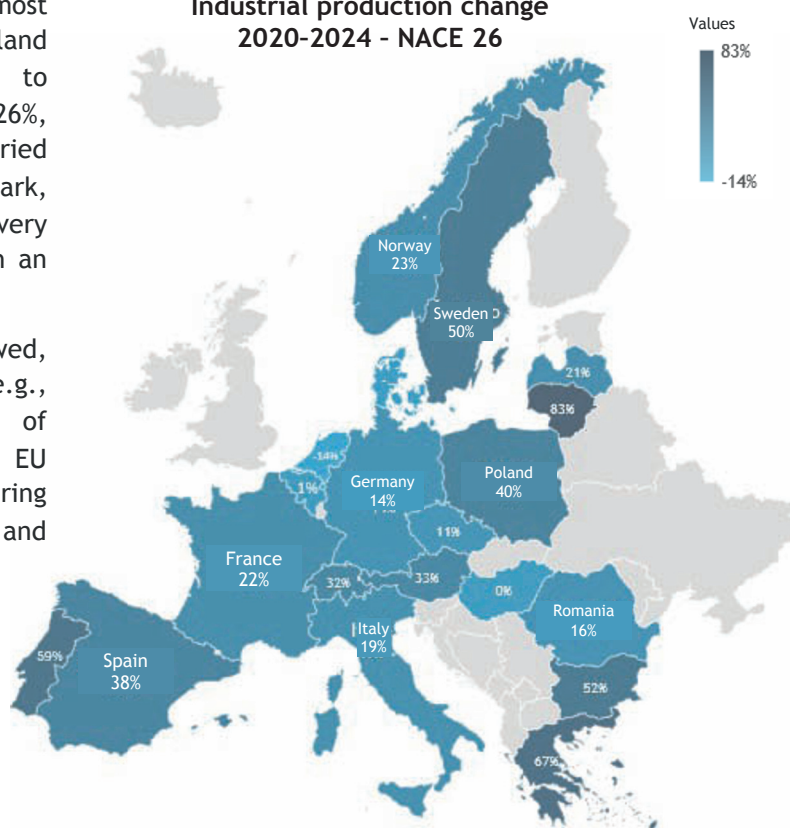
EUROPEAN CONTEXT

In 2020, due to the COVID-19 pandemic and related restrictive measures, production declined in most European countries. The only exceptions were Poland and Lithuania, which were the only countries to maintain year-on-year growth (8% and 26%, respectively). Production declines across Europe varied significantly, ranging from -13% in France, Denmark, and Switzerland to just -0.2% in Romania. The recovery in 2021 brought relatively high growth rates, with an average year-on-year increase of 26% in the EU27.

In 2022, the pace of production growth slowed, averaging 4% in the EU. Only a few countries (e.g., Denmark and Sweden) began showing signs of stagnation. In 2023 and 2024, trends across the EU turned downward. The most significant declines during the period were recorded in the Netherlands (-15%) and Bulgaria (-16%).

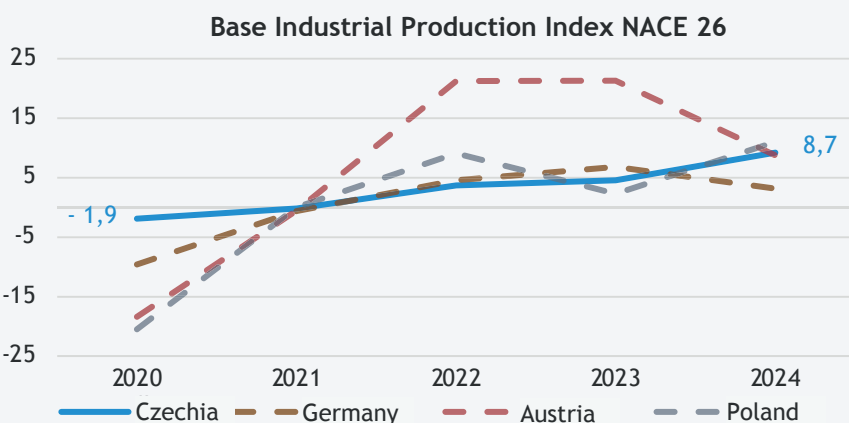
Across Europe, the monitored countries experienced an average growth of 15%. The highest increases occurred in Lithuania (83%), Greece (67%), and Portugal (58%). Negative values were recorded in the Netherlands (-14%) and Denmark (-3%). North Macedonia was excluded from the data, where production had declined by 50% since 2020.

Industrial production change
2020-2024 - NACE 26



NEIGHBORING COUNTRIES

Among the available data for neighboring countries, Poland recorded the highest production growth over the period 2020-2024, with the sector increasing cumulatively by approximately 39%. In Poland, the production of computers and electronic and optical equipment saw significant growth in 2020 (+20.5%) and further strong growth in 2024 (+11.0%), securing its leading position in the region.



The second-highest growth rate was observed in Austria, which experienced exceptional growth between 2020 and 2023, particularly in 2022 (over +21% compared to 2021). However, in 2024, growth slowed significantly, with a year-on-year decline of 13 percentage points, reducing Austria's overall growth rate over the five-year period to approximately 33%.

Germany experienced relatively steady growth between 2020 and 2023, but in 2024 production declined by 3.5 percentage points, indicating possible market saturation or a decrease in export demand. Its total five-year growth rate reached 14%.

The Czech Republic recorded the lowest overall growth among the monitored countries over 2020-2024, at approximately +11%. However, the development was stable - it was the only country in the region not to experience a production decline in any year. This trend confirms the sector's resilience to fluctuations but also suggests a potentially slower capacity to return to pre-crisis performance compared to competitors.

Note: The values shown are annual base indices relative to the 2021 average (2021 = 0).

INDUSTRIAL PRODUCTION INDEX - NACE 27

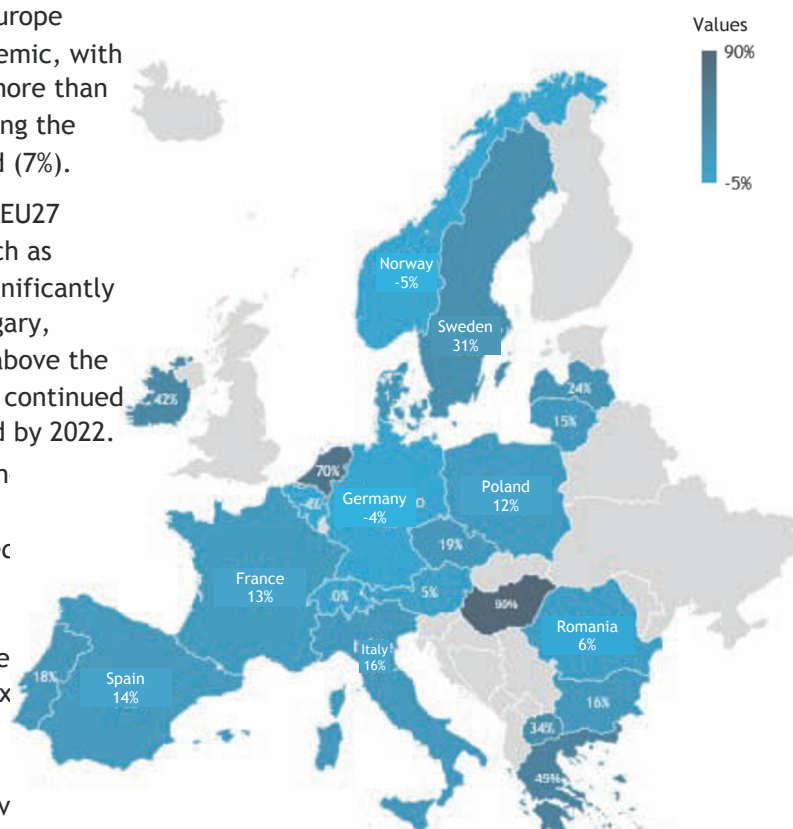
EUROPEAN CONTEXT

The electrical equipment manufacturing sector in Europe experienced a 6% decline during the COVID-19 pandemic, with Denmark, France, Italy, and Switzerland falling by more than 10%. However, some countries recorded growth during the crisis year—Hungary (13%), Poland (12%), and Ireland (7%).

The year 2021 brought the expected recovery, with EU27 production increasing by 13%. In some countries, such as Bulgaria, Hungary, and Turkey, this recovery was significantly faster than in Western European economies. In Hungary, production even grew by more than 40%, markedly above the European average. Hungary's above-average growth continued in 2022, whereas in Italy, growth had already stalled by 2022.

The year 2024 brought a slowdown and even a decline in production in several countries, led by Germany, Poland, and Lithuania, where the decrease compared to 2023 exceeded 15%. While parts of Europe experienced a contraction, some countries maintained a growth trend—particularly Sweden, the Netherlands, and Ireland, which recorded peak index values in 2024. The overall EU27 index fell by 9% in 2024, indication that the industry as a whole was unable to maintain the growth pace achieved in previous years.

In terms of overall five-year growth (2020-2024), the top performers appear to be Hungary (90%), Greece (49%), and Ireland (42%). During the same period, Belgium, Norway, and Germany each recorded a decline of 4%. The average growth in the EU27 was 9%.



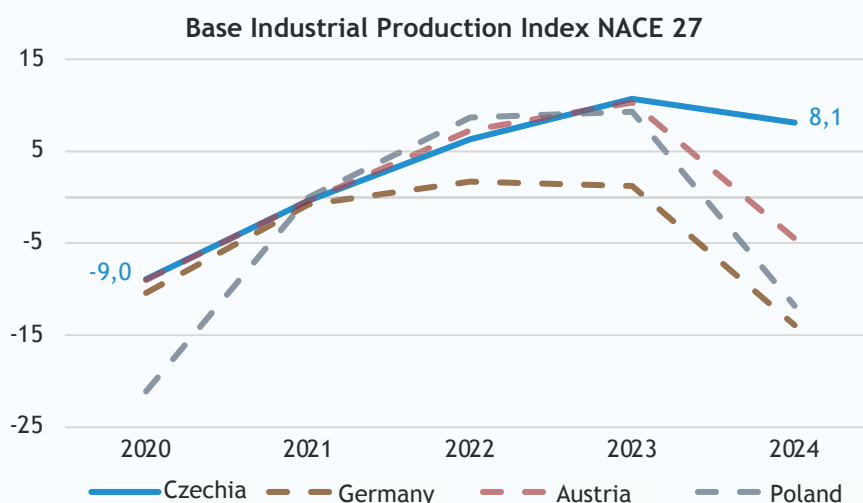
NEIGHBORING COUNTRIES

Compared to its neighboring countries, the Czech Republic achieved the highest five-year growth in the electrical equipment manufacturing sector (NACE 27). The total cumulative increase in industrial production amounted to approximately +18%. At the same time, the Czech Republic experienced the smallest decline (3%) in 2024, while other neighboring countries fell by more than 15 percentage points compared to 2023.

Poland ranked second, with total production growth of 12%. After a sharp decline in 2020 (-21%), dynamic growth followed in 2022 and 2023 (38%). However, growth slowed significantly in 2024, when production declined by 19%. Austria experienced growth very similar to the Czech Republic up to 2023, but in 2024 production fell by 14%. This resulted in a total five-year growth of only 5%, roughly one-third of the Czech pace.

Germany, as a key partner of the Czech industry, recorded the weakest performance (-4% over five years). After the 2020 decline (-10.4%), only very modest growth followed in 2022 and 2023 (+1.7% and +1.2%, respectively), which proved insufficient to restore sector performance. In 2024, production fell by 15%.

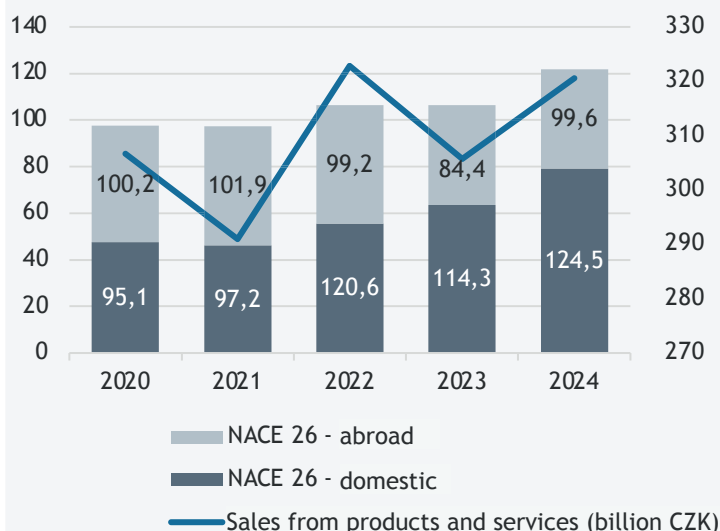
Note: The values shown are annual base indices relative to the 2021 average (2021 = 0).



NEW ORDERS IN THE INDUSTRY

New orders in the industry represent a key indicator of future production. Monitoring is based on year-on-year changes at current prices for enterprises and is distinguished between domestic and foreign orders. The new orders index reflects the change in the volume of orders received during a given period compared to the reference year.

Overview of year-on-year changes in the number of new industrial orders - NACE 26



The number of **FOREIGN ORDERS** in NACE 26 showed a declining trend over the observed period—between 2020 and 2024, it fell by 15%, with the largest drop occurring in 2023. Among the monitored groups, foreign orders in this sector were the only ones that, even two years after COVID, did not manage to return permanently to pre-crisis levels, signaling a loss of foreign demand or a shift of capacity away from this segment.

DOMESTIC ORDERS, by contrast, grew. After a slight slowdown in the early years, there was a steep double-digit increase, leading to a total cumulative growth of 59%. This indicates a gradual shift of the sector toward domestic customers.

Revenues returned to the 2022 level in 2024, demonstrating significant volatility in their development.

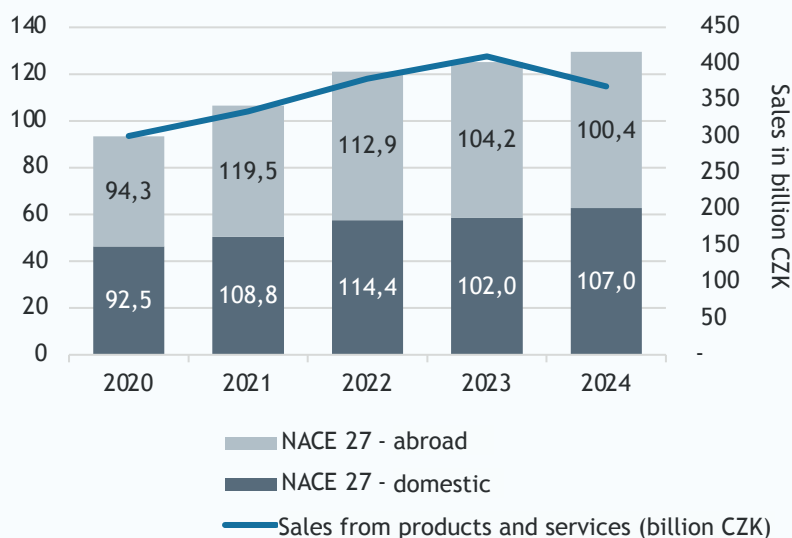
The inverse relationship between the dynamics of orders and revenues indicates variability in the size of individual orders and a possible concentration of orders among a smaller number of clients.

Orders in NACE 27 show an overall more stable development than in NACE 26. **DOMESTIC ORDERS** grew fairly steadily, with a short-term decline in 2023. Over the five-year period, they achieved cumulative growth of over 15%, with growth resuming in 2024.

FOREIGN ORDERS were more dynamic in the first half of the period - particularly in 2021 - but growth slowed from 2022, and by 2024 there was a slight decline. Total cumulative growth over the period amounted to approximately 33%, indicating a relatively strong demand from abroad.

Sector revenues grew strongly until 2023, reaching a peak of 410 billion CZK that year. Unlike NACE 26, the development of orders here aligns more closely with revenue trends, confirming the stability and predictability of business relationships in this segment.

Overview of year-on-year changes in the number of new industrial orders - NACE 27



INDUSTRIAL PRODUCER PRICES

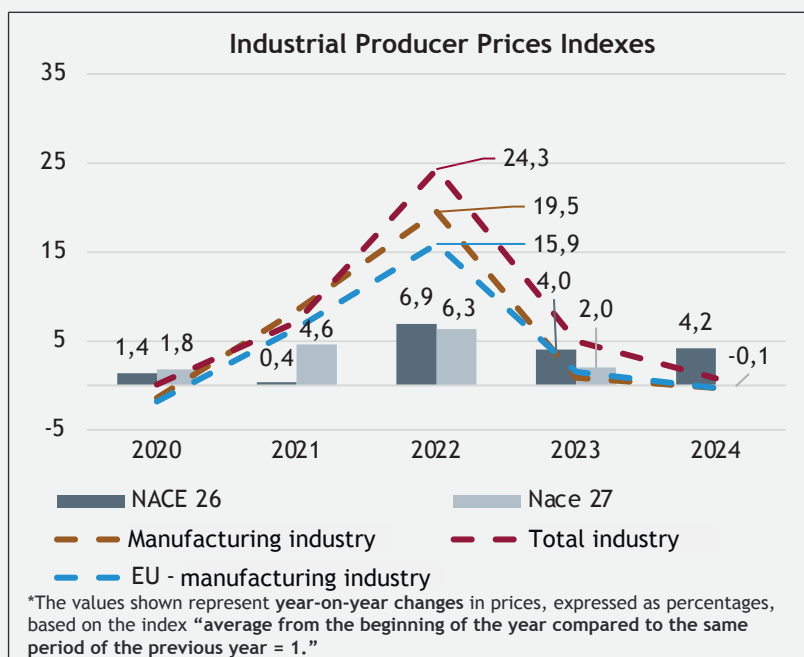
Industrial Producer Prices (PPI) in the Czech Republic recorded a significant increase between 2020 and 2022. In 2022, the year-on-year rise in industrial prices reached 24.3%, while in the manufacturing sector it was 19.5%. This development was the result of a pronounced inflationary shock, driven by rising energy prices, shortages of input materials, and strains on global supply chains.

Since 2023, a slowdown in price growth has become evident, with industrial prices increasing by 5.0% in 2023 and by 0.8% in 2024. In the manufacturing sector, the trend was even milder, with a 0.9% rise in 2023 followed by a 0.3% decline in 2024. This development indicates persistent price pressure and a limited ability to pass costs on to customers.

Unlike the manufacturing sector as a whole, the electrical engineering sector exhibits a milder but stable price dynamic:

- In the year of highest growth (2022), prices increased by **6.9%** in NACE 26 and by **6.3%** in NACE 27.
- In 2023, growth slowed to **4.0%** in NACE 26 and **2.0%** in NACE 27.
- In 2024, stable growth continued in NACE 26 (**+4.2%**), while NACE 27 recorded a slight decline in prices (**-0.1%**).

The differing dynamics between these subsectors are related to their cost structures and the level of competition. Products under NACE 27 - such as cables, switchgear, or motors - are exposed to high pressure from foreign customers, limiting the pricing flexibility of companies.

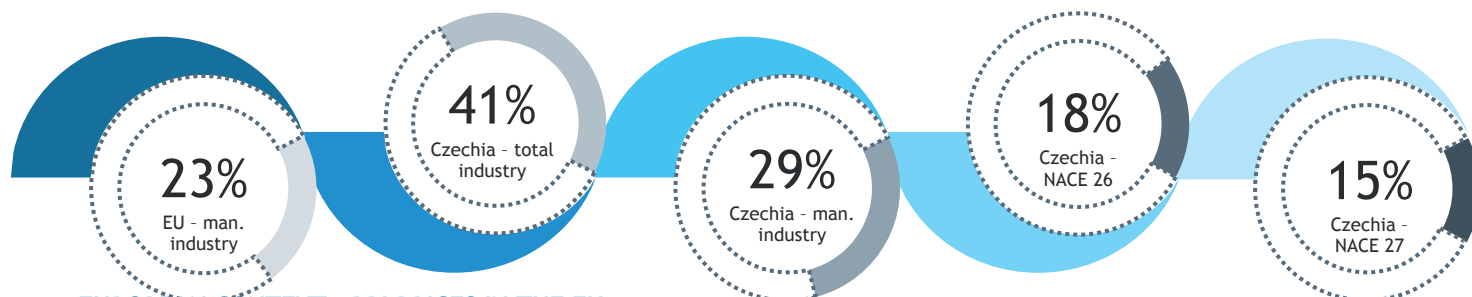


CURRENT SITUATION AND OUTLOOK FOR 2025

According to forecasts by the Ministry of Finance of the Czech Republic and the Czech National Bank, 2025 is expected to bring continued price stabilization in the industry. This trend is also confirmed by the latest data from the CSO:

- In April 2025, producer prices in the Czech Republic fell by 0.6% month-on-month and by 0.8% year-on-year.
- The largest declines were recorded in the prices of electricity, gas, steam, and air conditioning (-2.7%) and chemicals and chemical products (-1.3%).

CUMMULATIVE PRICE GROWTH INDEX FOR THE PERIOD 2020-2024



EUROPEAN CONTEXT - PPI PRICES IN THE EU

According to Eurostat data, producer prices in the EU fell by 2.1% month-on-month in April 2025 (March: -1.6%). The most pronounced declines were recorded in Bulgaria (-4.9%), France (-4.3%), and Ireland (-4.0%). The Czech Republic (-0.8%) belongs to the group of countries with a moderately significant decline (e.g., Germany -0.7%, Poland -0.6%). Slight price increases were recorded in Cyprus (+0.3%), Malta and Slovenia (+0.2%), and Latvia and Luxembourg (+0.1%).

FOREIGN DIRECT INVESTMENT

The Czech Republic is among the most open economies in Europe and has long been an attractive destination for foreign direct investment (FDI). These investments, defined as long-term equity stakes of at least 10% by foreign investors, represent a key source of capital, know-how, and technological development.

Components of FDI:

- **Equity capital**- Capital that an investor contributes to the share capital of a foreign company.
- **Reinvested earnings** - Profit that a foreign investor leaves in the company instead of distributing it as dividends.
- **Other capital**- Financial relations between the direct investor and its affiliated enterprises that do not take the form of ownership. This mainly includes loans and credits received or granted.

In 2023, the stock of FDI in the Czech Republic reached 4.9 trillion CZK, with the manufacturing sector - including the electrical engineering sector—accounting for the second-largest share (26%). Foreign investments in these sectors are driven by high export performance and integration into European and global supply chains.

From a geographic perspective, the largest contributors to capital invested in the Czech Republic are the Netherlands (16.2%), Luxembourg (15.2%), and Germany (13.8%). Investments in the Czech Republic are supported by the national agency CzechInvest, which provides investment incentives and advisory services to investors, particularly in the industrial and technology sectors.

FDI ANALYSIS IN NACE 26

Data from the Czech National Bank indicate that **foreign investment in the NACE 26 sector has long significantly exceeded the volume of domestic investments abroad**. In 2023, foreign direct investment (FDI) into the Czech Republic reached nearly **75 billion CZK**, while Czech investments abroad remained at **31 million CZK**.

A key trend is the significant role of reinvested earnings, which accounted for almost half of all FDI inflows into the Czech Republic in this sector in 2023. This development indicates stable confidence among foreign investors in the performance of domestic firms. Conversely, in 2021 and 2022, there was a short-term decline in foreign flows—primarily in the “other capital” category (loans and intercompany liabilities), which fell into negative values. This can be interpreted as a **restructuring of financing** and the repatriation of funds from the Czech Republic to foreign parent companies in response to the COVID-19 crisis and disrupted supply chains.

In 2023, the situation stabilized - other capital returned to positive values (+ 7.9 billion CZK), and the **total volume of investment inflows surpassed the pandemic level of 2020**. Outflows of FDI from the Czech Republic remained low. Domestic investors have long made only marginal investments, mostly in the form of equity capital. Notably, **all three years after 2021 show negative reinvested earnings**, reflecting either losses or a reluctance to reinvest in foreign subsidiaries.

Overall, the **positive FDI balance in NACE 26 is driven primarily by reinvested profits of foreign firms in the Czech Republic**, while Czech capital abroad continues to remain at a very low level. Developments in the “other capital” category indicate that the “2022 debt” was largely repaid in 2023, potentially opening space for new investment flows in the coming years.

OVERVIEW OF FOREIGN DIRECT INVESTMENT IN NACE 26 (IN MILLION CZK)

	Foreign Direct Investment into Czechia				Foreign Direct Investment from Czechia Abroad			
	Equity capital	Reinvest. earnings	Other capital	Sum	Equity capital	Reinvest. earnings	Other capital	Sum
2020	30 186	31 348	5 434	66 968	N/A	N/A	N/A	N/A
2021	26 275	19 632	-10 581	35 326	97	-67	0	31
2022	26 219	21 198	-3 621	43 796	95	-51	0	44
2023	36 165	30 646	7 865	74 676	99	-68	0	31

FOREIGN DIRECT INVESTMENT

OVERVIEW OF THE TOP 10 COUNTRIES BY FOREIGN DIRECT INVESTMENT IN NACE 26 (in million CZK)

Country	2020	2021	2022	2023
Netherlands	31 259	17 161	15 952	36 077
Switzerland	6 629	8 056	7 978	11 274
Hungary	6 769	2 766	2 929	7 976
Singapore	7 333	144	2 418	8 968
Germany	1 834	3 478	3 425	5 737
USA	4 547	4 272	4 672	-260
Taiwan	4 706	-5 123	1 710	2 184
Sweden	839	64	1 139	1 417
Luxembourg	0	0	2 246	366
Ireland	455	979	526	461

The structure of foreign direct investment in the NACE 26 sector confirms a high concentration of capital inflows into the Czech Republic from a small group of key investor countries. The most important role has long been played by the Netherlands, which increased its investment to 36 billion CZK in 2023, primarily due to retained earnings within companies (20 billion CZK). Consequently, the Netherlands accounts for 48% of all investment inflows into this sector, which may also reflect the fact that Dutch entities often serve as holding structures for broader European corporate groups.

A significant increase in investment was recorded from Singapore in 2023, reaching almost 9 billion CZK, entirely in the form of other capital, which reflects flexible intra-group financing by Asian investors. This type of investment may serve, for example, to support short-term cash flow needs or to finance expansion.

Germany, as a key economic partner of the Czech Republic, shows stable but relatively moderate investment volumes compared with other leading countries. In 2023, inflows amounted to 5.7 billion CZK, with reinvested earnings dominating. This year also brought a positive turnaround in other capital, which had been negative in 2020-2022 but returned to positive levels in 2023. In contrast, the United States recorded a net capital outflow in 2023 (-260 million CZK), driven mainly by a substantial negative balance in other capital (-2.2 billion CZK). This may indicate the withdrawal of credit lines or the repayment of loans by Czech subsidiaries.

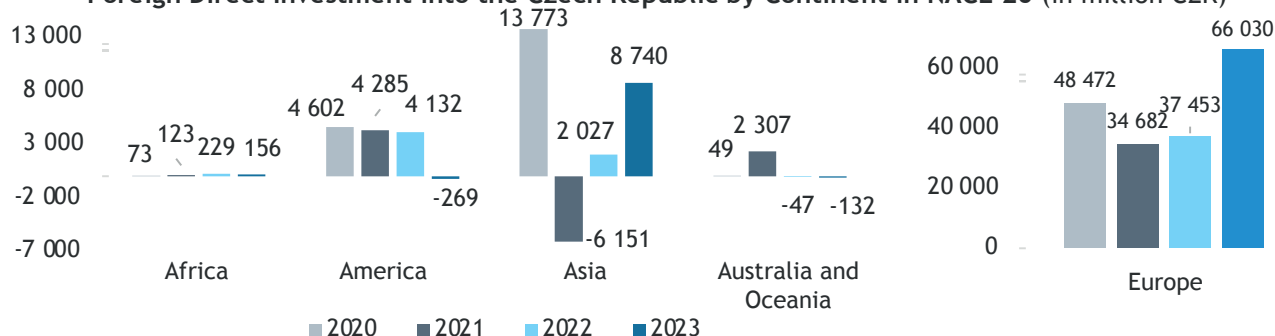
There is also a continuous capital outflow from the United Kingdom, China and Hong Kong, primarily due to a negative balance in the category of other capital. The negative trend is particularly pronounced in China, where the net outflow deepened to -1.9 billion CZK in 2023, possibly reflecting shifts in investment priorities or geopolitical uncertainty.

TERITORIAL STRUCTURE OF FDI BY CONTINENT

FDI in the Czech Republic is highly concentrated within Europe, which has long dominated in terms of both investment volume and stability of capital inflows. In 2023, investment inflows from Europe reached 66 billion CZK, representing approximately 88% of total inflows in that year. The main components were again reinvested earnings (29 billion CZK) and equity capital (32 billion CZK), while other capital returned to positive values (+4.8 billion CZK) after three consecutive years in negative territory.

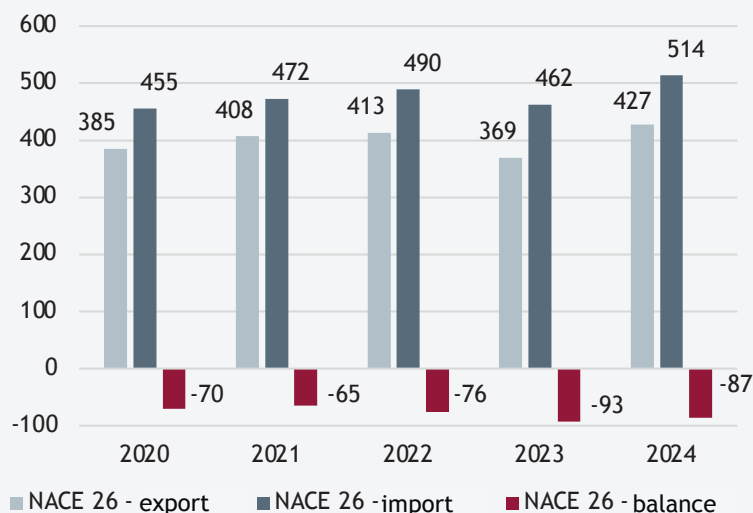
Asia is the second most significant region in terms of volume, mainly due to the strong increase in other capital recorded in 2020 and 2023 - especially from jurisdictions such as Singapore. In 2021, Asia experienced a substantial outflow (-6.2 billion CZK), driven primarily by a large negative balance in other capital.

Foreign Direct Investment into the Czech Republic by Continent in NACE 26 (in million CZK)



FOREIGN TRADE

Foreign Trade NACE 26 (in billion CZK)



The NACE 26 sector is strongly oriented toward export markets, as evidenced by the high and relatively stable share of exports in total revenues, which has ranged between 71% and 83% over the years.

In 2024, exports reached 427 billion CZK, representing an 11% increase compared to 2020. However, export development was uneven, with a decline of 11% (44 billion CZK) in 2023. The drop in 2023 was corrected in 2024, and exports reached a new peak. The largest export items are computers and computer equipment (26201) and mobile phones (26302).

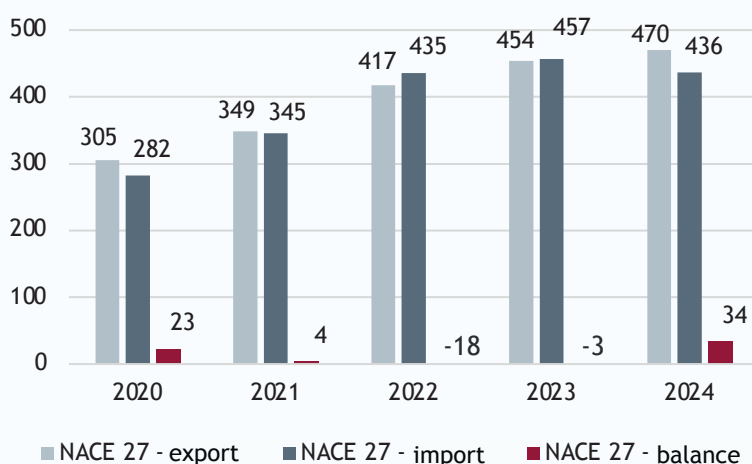
Imports into the Czech Republic grew even more dynamically, increasing by 13%, which put additional pressure on the trade balance, accounting for roughly 20% of export value. While the trade deficit in this sector amounted to 70 billion CZK in 2020, it deepened to 87 billion CZK in 2024. As with exports, there was a decline in 2023; however, it was only half as large (5%) as the drop in exports, which increased the trade deficit to 93 billion CZK (25% of export value). The largest import categories, as with exports, are mobile phones (26302) and electronic integrated circuits - chips (26113).

The NACE 27 sector has long been characterized by a strong export orientation. Between 2020 and 2022, the share of exports in total revenues exceeded 90%, and even in 2024, despite a slight decline to 78%, exports remain the dominant market for Czech electrical equipment production. Between 2020 and 2024, the value of exports increased by 54%, a very significant rise driven by strong global demand and the ability of Czech companies to respond to the post-pandemic recovery in industrial investment. The largest export items in 2024 were electrical accumulators (27202) and lighting equipment (27403).

Imports in this sector grew somewhat faster (+55%), leading to a fluctuating trade balance. While the balance was positive at 23 billion CZK in 2020, it turned negative in 2023 and 2024, primarily due to the rapid year-on-year import growth of 26% between 2022 and 2023. In 2024, the balance returned to a surplus (+ 34 billion CZK), driven by export growth and a slight decline in imports, reflecting the competitiveness of Czech exports and a potential easing of import pressures. The largest import categories were electrical accumulators (27202), as in exports, and switchgear (27123).

The average five-year ratio of the trade balance to exports reached a positive 2%, indicating a balanced position for the Czech Republic in this segment relative to foreign markets.

Foreign Trade NACE 27 (in billion CZK)



FOREIGN TRADE

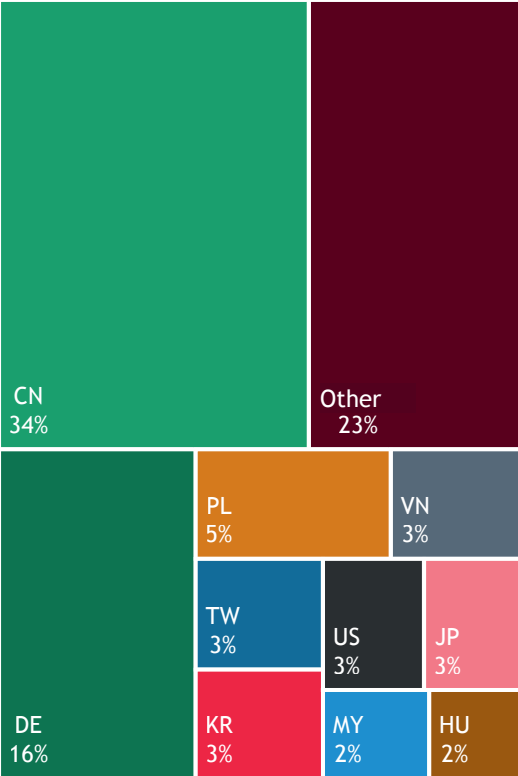
Exports of the Czech electrical engineering industry are clearly oriented toward **European Union** markets, with **Germany** remaining the key trading partner, accounting for **30% of total exports** (267 billion CZK). Germany is particularly dominant in electrical equipment (NACE 27), representing up to **48%** of all exports in this segment.

Slovakia ranks second with a 7% share, followed by the **Netherlands** (7%), which serves as a significant distribution hub within European trade. Slovakia holds a more prominent position in the export of electrical equipment, while the Netherlands is the second-largest destination for electronics and optical instruments (NACE 26), with an 11% share.

Other important partners include Poland, France, the United States, and the United Kingdom, each accounting for approximately 4-5% of total exports. The United States is also a leading destination for advanced electronic equipment (NACE 26), representing 6% of exports in this segment. In contrast, in NACE 27, the U.S. market accounts for only 3%, confirming that exports to the U.S. are more focused on sophisticated products.

Export concentration is particularly high in NACE 27, with 10 countries covering approximately 73% of total exports. By comparison, NACE 26 exports are more geographically diversified, with the “other countries” category representing up to 34%. Within the top 10 export destinations, NACE 26 delivers to Singapore and China, each with a 3% share.

Imports by Country NACE 26 and 27 (2024)



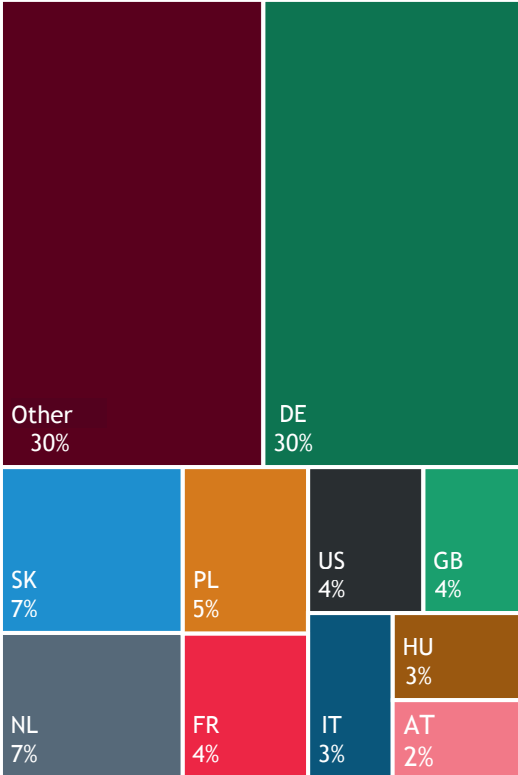
The import structure in the NACE 26 and 27 sectors exhibits a markedly different geographic profile compared to exports. While exports are primarily directed to European Union countries, **imports are heavily concentrated outside Europe**, particularly in East Asian markets. The largest supplier by far is **China**, accounting for 34% (327 billion CZK) of total imports in these two sectors. This inflow primarily consists of semiconductor components, electronic modules, consumer electronics, and input assemblies for manufacturing.

Germany is the second-largest supplier with 16%, representing a traditional and close partner within European manufacturing chains. Other notable suppliers include Poland, Vietnam, Taiwan, South Korea, the United States, and Japan, each contributing 2-5% of total imports. The top 10 supplier countries account for 77% of total import volume.

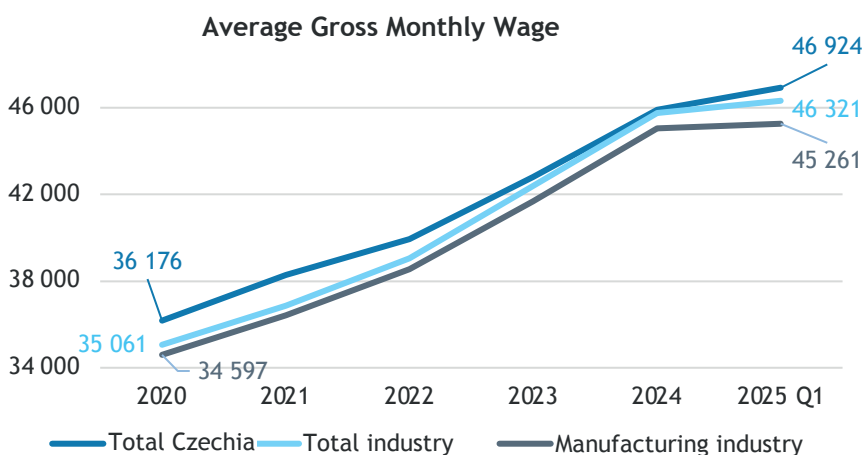
In the NACE 26 sector, dependence on Asian markets is particularly **significant**. **China alone accounts for 40% of total imports**, followed by Taiwan, Vietnam, South Korea, and Malaysia, which together supply 19% of imports. Imports from the EU are relatively modest compared to exports—for example, Germany accounts for only 11% of imports, with other European countries playing a minor role. The top 10 countries cover 82% of import volume in this sector, with the remainder coming from 187 countries worldwide.

In NACE 27, China remains the largest import partner (28%), but the structure is significantly more European. Germany contributes by 22%, followed by Poland (8%), Italy, Hungary, Slovakia, Austria, and Romania, together providing a strong presence in the European supply chain with a 43% share of imports.

Export by Country NACE 26 and 27 (2024)



EMPLOYMENT



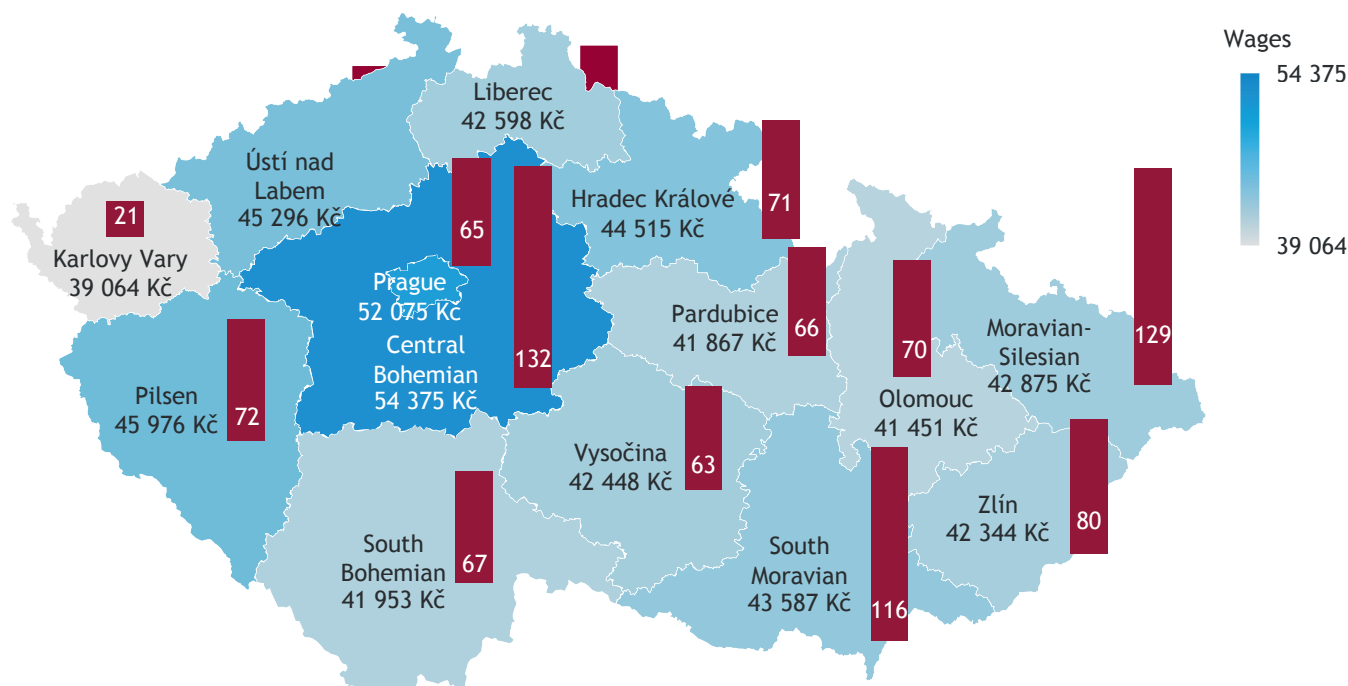
Average wages in the manufacturing industry increased by 31% over the observed period 2020 - Q1 2025, which represents a pace 1 percentage point faster than the national average, but 1 percentage point slower than the overall industrial sector.

The highest wage growth during this period was recorded in the real estate sector, followed by electricity, gas, steam and air-conditioning supply, which falls under the Czech industrial sector. Both industries recorded growth

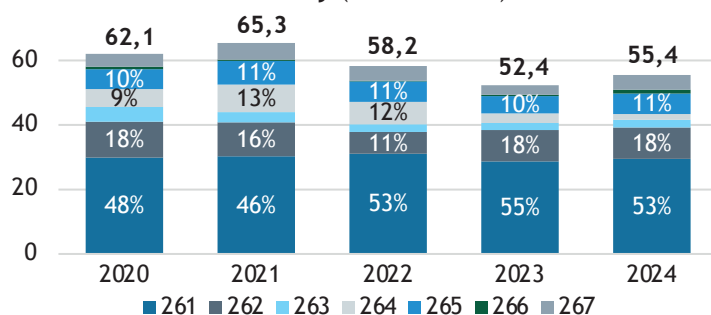
of 59%. The manufacturing industry employs approximately 1.04 million people, which corresponds to 26% of all employees in the Czech Republic, and accounts for 91% of total employment within the industrial sector.

Within manufacturing, NACE 26 and NACE 27 employ 3.8% and 9.0% of the workforce respectively - together representing 3.4% of all employees in the Czech Republic.

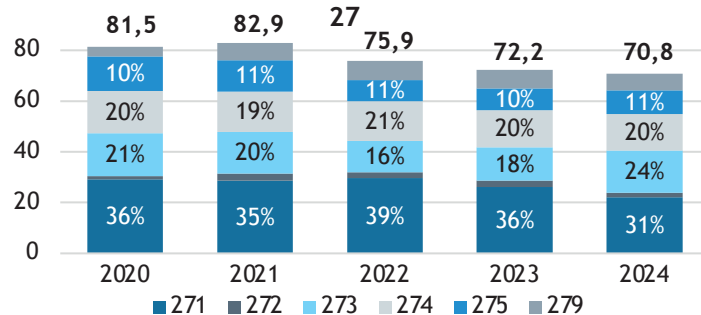
Average salaries in manufacturing industry and the number of employees (in thousands)



Number of Employees Based on the CSO Labor Force Survey (in thousands) - NACE 26

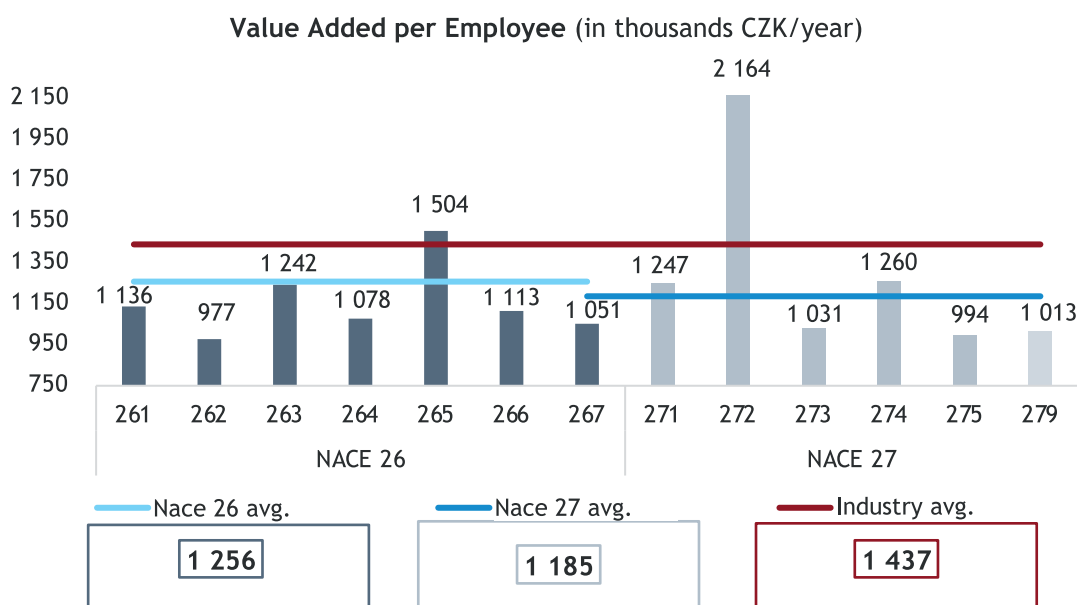


Number of Employees Based on the CSO Labor Force Survey (in thousands) - NACE 27



The Labor Force Sample Survey (LFSS) is conducted by CSO in all districts of the Czech Republic, based on interviews with selected households.

VALUE ADDED PER EMPLOYEE



Value added represents the difference between revenues and the costs of materials, energy, and services.

Value added per employee is calculated as the ratio of value added to the number of employees expressed in full-time equivalents.

The electrotechnical industry performs slightly below the productivity average of the manufacturing sector (1,206 thousand CZK vs. 1,237 thousand CZK per employee). At the same time, the entire manufacturing sector still lags behind the overall industry by roughly 200 thousand CZK per employee.

In NACE 26, value added per employee amounts to 1,256 thousand CZK, which is slightly above the manufacturing industry average but still below the overall industry level. Within NACE 26, performance is highly uneven. The most productive division is Group 265 - Manufacture of measuring testing instruments (1,504 thousand CZK), accounting for 46% of the total value added in NACE 26. Conversely, the lowest productivity is recorded in Division 262 - Manufacture of computers and peripheral equipment (977 thousand CZK), which may reflect a high share of manual assembly work with lower value added.

NACE 27 reaches an average of 1,185 thousand CZK, therefore below not only the overall industry but also NACE 26. As in NACE 26, productivity levels vary considerably across divisions. Group 272 - Manufacture of batteries and accumulators achieves the highest value added per employee (2.16 million CZK), reflecting a typically capital-intensive and export-oriented production. Manufacture of electric motors and generators (Group 271) also achieves above-average productivity and represents 54% of the total value added generated within NACE 27.

EUROPEAN CONTEXT

Data on value added per employee in European manufacturing show significant productivity differences. The EU27 average is 2,098 thousand CZK, while the Eurozone average is higher at 2,435 thousand CZK. The Czech Republic stands at 56% of the EU average, above Poland, Slovakia, Hungary, Portugal, and Lithuania, with Slovenia and Greece slightly higher. Western European countries, including Germany, France, Austria, and Belgium, exceed 2.4 million CZK, and Scandinavian countries surpass 3 million CZK per employee.

Value Added per Employee in the Manufacturing Industry in European Countries

Country	Difference compared to EU27= 100%	VA / employee (thousands CZK/year)
EU 27	100%	2 098
Eurozone	116%	2 435
Switzerland	268%	5 625
Denmark	235%	4 923
Netherlands	173%	3 632
Sweden	159%	3 336
Belgium	158%	3 316
Norway	144%	3 014
Iceland	143%	2 996
Finland	135%	2 841
Austria	129%	2 697
Germany	122%	2 557
France	118%	2 468
Luxembourg	115%	2 403
Italy	99%	2 076
Spain	91%	1 906
Slovenia	66%	1 390
Malta	62%	1 302
Greece	57%	1 205
Czechia	56%	1 176
Lithuania	55%	1 153
Portugal	51%	1 078
Slovakia	48%	1 014
Estonia	47%	986
Hungary	47%	982
Latvia	46%	972
Poland	46%	963
Cyprus	45%	947
Croatia	40%	833
Romania	33%	688
Bulgaria	26%	554

EDUCATION

HIGH SCHOOL EDUCATION

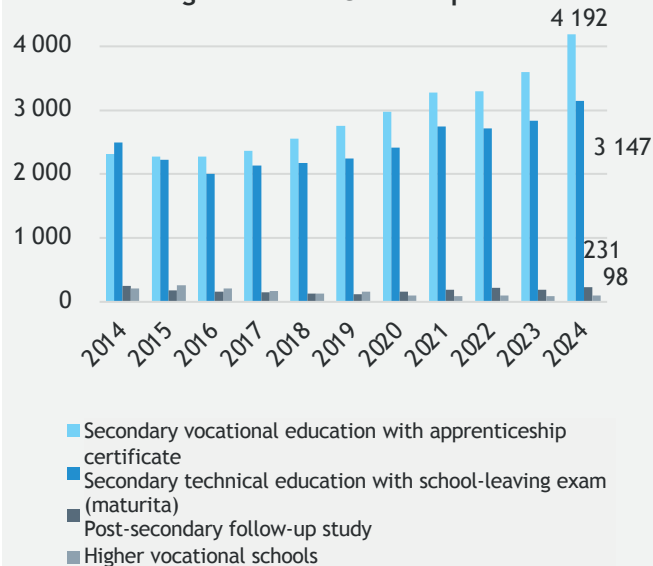
Secondary electrotechnical education in the Czech Republic covers programs under Field 26 - Electrotechnics, Communications, and Computer Technology. The number of graduates **rose by 46% between 2014 and 2024, reaching 7,700**. The largest and fastest-growing segment is vocational secondary education with an apprenticeship certificate, representing 55% of graduates and increasing by 82% over the decade. Vocational secondary education with a school-leaving certificate (maturita) accounts for 41% of graduates. By contrast, the number of graduates from follow-up studies fell by 6% to 231, and from higher vocational schools by 54% to 98.

Electrotechnical education encompasses **7 programs**. In 2024, the largest number of graduates came from Electrotechnics (42%) with nearly 3,000 graduates, followed by Electrician and Electrotechnical Work (38%). Other programs include Mechanic of Electrotechnical Equipment, Auto Electrician, Telecommunications, Computer Technology, and Mechanic of Telecommunication Networks. A potential obstacle to the continuing growth in graduates is the Czech demographic curve. While 2025 sees relatively strong cohorts entering secondary schools, in five years the number of applicants is expected to drop by roughly 9.5%, which will negatively affect the number of graduates.

UNIVERSITY EDUCATION

Higher education relevant to the electrotechnical industry includes Electrical Engineering and Power Engineering, as well as Electronics and Automation, both classified under the broader academic group Engineering and Mechanical Engineering. Between 2014 and 2019, the total number of graduates in electrotechnical fields declined each year (-30% overall). This was mainly due to a downturn in the larger program group Electronics and Automation,

Graduates of Secondary Electrotechnical Programs in the Czech Republic



which accounts for **72% of graduates**. Since 2020, however, the trend has gradually reversed. In 2024, 1,269 students completed the Electronics and Automation program, representing a 27% increase compared to 2019.

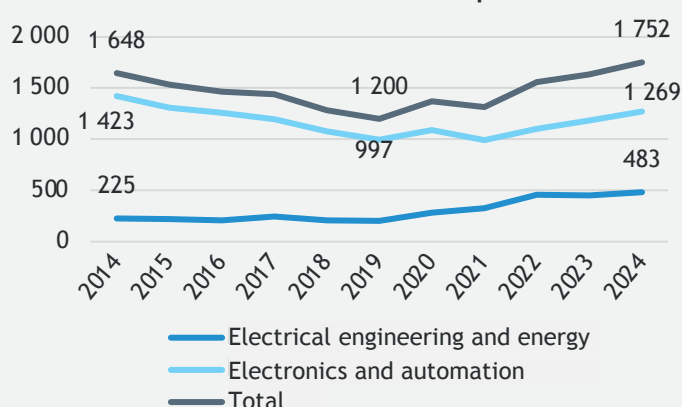
The smaller but rapidly developing program Electrical Engineering and Power Engineering has been growing even more significantly. The number of graduates increased from 225 in 2014 to 483 in 2024 (+115%), and this field now accounts for approximately one-third of all graduates. Its growth introduces new types of specializations, including intelligent grid technologies, power electronics, and energy system management.

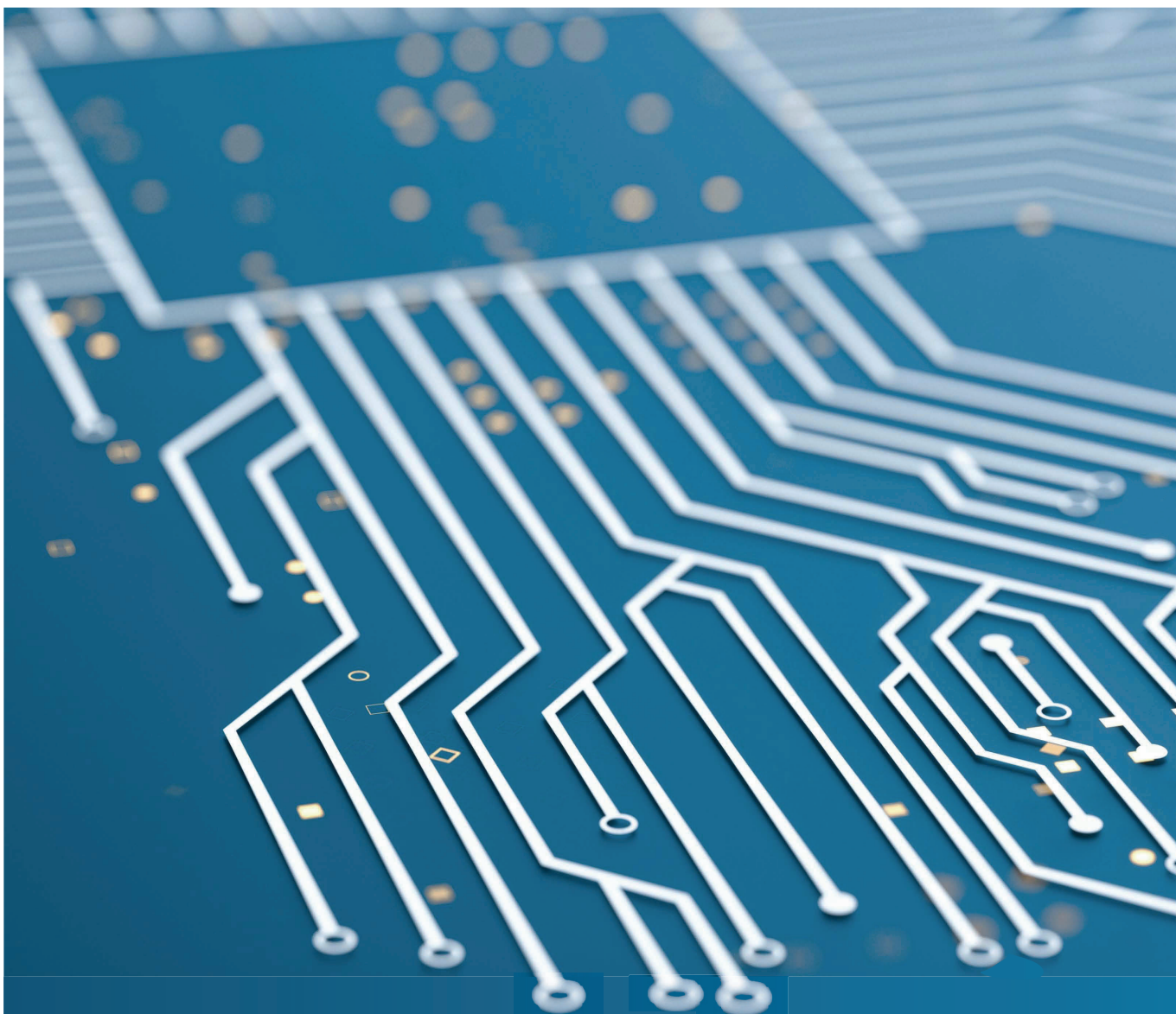
In total, **1,752 students** graduated from both programs in 2024, nearing the record level from 2011 (1,819 graduates). This development may help ease the difficulties in securing qualified labor in the coming years, especially in the context of demographic change and increasing demand for technical professions.

EMERGING OPPORTUNITIES

The significant increase in the number of graduates from technical fields in recent years represents a positive trend that may help reduce labor market pressures in the electrotechnical industry. However, in the context of an aging workforce and expected sector growth, it is essential to ensure that the supply of qualified workers continues to meet rising demand. Otherwise, this positive development may prove only temporary.

Graduates of University Electrotechnical Education in the Czech Republic





Electrical Engineering Sector in the Czech Republic

The Czech electrotechnical industry is highly decentralized and predominantly composed of small enterprises. The key players with the largest revenue shares are owned by foreign entities. These foreign owners often choose other European countries - such as Hungary, the Netherlands, or Switzerland - as locations for their European headquarters rather than the Czech Republic.

Companies report that their most significant challenges include a shortage of qualified workers, rising costs, regulatory changes, and geopolitical risks.

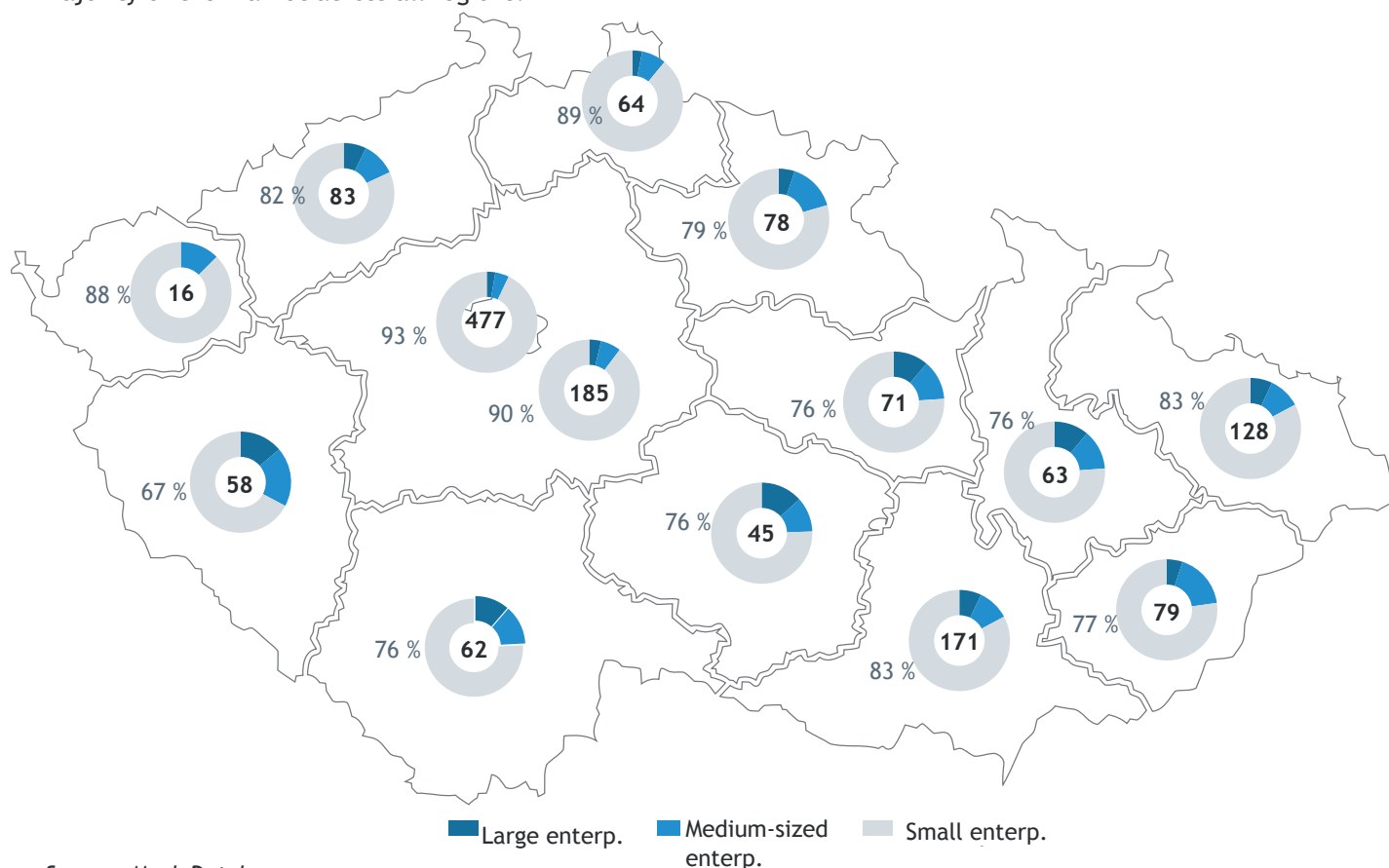
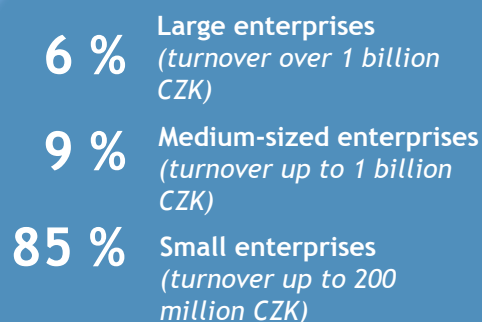
Investment priorities are focused on new technologies, automation, and research & development. Most companies expect revenue growth and plan to expand into new markets.

REGIONAL DISTRIBUTION OF COMPANIES IN THE SECTOR

The Merk database records nearly 4,900 companies whose main business activity falls under NACE 26 and 27, of which almost 1,600 companies report a turnover exceeding 500,000 CZK.

The size structure of these companies shows that the Czech electrotechnical industry is highly decentralized and consists predominantly of small enterprises, which often operate as suppliers or specialized manufacturers within broader value chains.

The highest concentration of companies is located in Prague and the Central Bohemian Region, reflecting the clustering of industry and supporting services in these areas. Small companies represent the vast majority of the market across all regions.



Source: Merk Database

Note: Only companies with a minimum annual turnover of 500,000 CZK are included.

In the Czech Republic, compared to the number of small and medium-sized enterprises, there are relatively few large companies (approximately 90) with an annual turnover exceeding 1 billion CZK. Nevertheless, these enterprises represent the key market players in terms of both revenue and employee numbers.

NACE - main activity	Number of companies	Share on NACE	NACE - main activity	Number of companies	Share on NACE
26	241	10 %	27	141	6 %
26.1	1 215	52 %	27.1	601	24 %
26.2	82	3 %	27.2	11	0 %
26.3	163	7 %	27.3	75	3 %
26.4	72	3 %	27.4	63	2 %
26.5	437	19 %	27.5	263	10 %
26.6	28	1 %	27.9	1 381	54 %
26.7	115	5 %			

POSITION OF KEY MARKET PLAYERS

The TOP 30 companies by revenue, with core activities in NACE 26 and 27, generate **over 464 billion CZK** in turnover.

All companies in this ranking are owned by foreign entities, predominantly from non-European countries such as Taiwan, the USA, South Korea, and Japan. These firms often choose other European countries for their regional headquarters - e.g., Hungary, the Netherlands, or Germany - rather than the Czech Republic. This has implications for the Czech economy, including potential profit outflows and lower reinvestment of earnings back into the domestic market. Strategic decisions regarding investments, development, or plant closures are frequently made abroad, reducing local control over key industry segments. Additionally, there may be less incentive to localize research and development if innovation management is not anchored in the Czech Republic.

TOP 30 companies by turnover	NACE	Country of company headquarters	Country of majority owner	Turnover 2023 (million CZK)	Share on industry (26/27)
FOXCONN CZ s.r.o.	26.2	TW	HU	77 208	23,6 %
Continental Automotive Czech Republic s.r.o.	26.5	DE	NL	46 800	14,3 %
Foxconn European Manufacturing Services s.r.o.	26.2	TW	NL	39 183	12,0 %
Thermo Fisher Scientific Brno s.r.o.	26.7	US	NL	25 044	7,7 %
Panasonic Automotive Systems Czech, s.r.o.	26.1	DE	DE	14 755	4,5 %
Foxconn Technology CZ s.r.o.	26.1	TW	HU	11 083	3,4 %
ON SEMICONDUCTOR CZECH REPUBLIC, s.r.o.	26.1	US	CH	7 094	2,2 %
Vitesco Technologies Czech Republic s.r.o.	27.5	DE	NL	39 455	8,8 %
HELLA AUTOTECHNIK NOVA, s.r.o.	27.4	DE	DE	17 522	3,9 %
ABB s.r.o.	27.1	CH	CH	17 386	3,9 %
Siemens, s.r.o.	27.1	DE	AT	14 906	3,3 %
PO LIGHTING CZECH s.r.o.	27.4	FR	FR	14 533	3,2 %
Clarios Česká Lípa spol. s r.o.	27.2	US	ES	14 058	3,1 %
Marelli Automotive Lighting Jihlava s.r.o.	27.4	JP	DE	12 515	2,8 %
NKT s.r.o.	27.3	DK	DK	12 099	2,7 %
OEZ s.r.o.	27.1	DE	NL	11 381	2,5 %
Miele technika s.r.o.	27.5	DE	CH	9 607	2,1 %
Mobis Automotive System Czech s.r.o.	27.4	KR	KR	8 446	1,9 %
ZF Electronics Klášterec s.r.o.	27.3	DE	DE	8 139	1,8 %
PLAKOR CZECH s.r.o.	27.1	KR	KR	7 597	1,7 %
Eaton Elektrotechnika s.r.o.	27.1	IE	NL	7 407	1,6 %
A123 Systems s.r.o.	27.2	CN	VG	6 615	1,5 %
Prysmian Kabely, s.r.o.	27.3	IT	NL	6 333	1,4 %
MD ELEKTRONIK spol. s r.o.	27.3	DE	DE	5 974	1,3 %
KOITO CZECH s.r.o.	27.4	JP	JP	5 269	1,2 %
PRAKAB Pražská Kabelovna s.r.o.	27.3	AT	AT	5 133	1,1 %
JULI Motorenwerk, s.r.o.	27.1	DE	DE	5 039	1,1 %
TRCZ s.r.o.	27.5	JP	JP	4 534	1,0 %
Hitachi Energy Czech Republic s.r.o.	27.1	CH	CH	4 487	1,0 %
Gebauer a Griller Kabeltechnik, spol. s r.o.	27.3	AT	AT	4 389	1,0 %

Note: Revenue is calculated as the sum of sales from products and services and sales of goods.

Source: Annual reports of selected companies

Division NACE 26 within the TOP 30 companies includes only 7 firms, yet they account for 48 % of the total revenue of these largest companies. The segment is dominated by group 26.2 - Manufacture of computers and peripheral equipment, primarily driven by Foxconn group companies with revenue exceeding 127 billion CZK, representing 39 % of NACE 26.

In contrast, **NACE 27** is more fragmented, with no single company holding a dominant market position. Individual company shares range in the single digits, reflecting a more diversified market. The most significant subgroups are 27.1 - Manufacture of electric motors, generators, transformers, and electrical distribution and control equipment, represented by 7 companies accounting for 15.1 % of the sector, and 27.4 - Manufacture of lighting equipment, with the largest player being HELLA AUTOTECHNIK NOVA (3.9 % share).

CURRENT COMPANY TOPICS



- Launch of a private 5G network (June 2023) at the Continental Automotive plant in Brandýs nad Labem, serving as a model facility for digitalization and automation.
- The network was implemented in collaboration with T-Mobile and aims to accelerate communication between robots, support the operation of autonomous vehicles, and overall enhance production efficiency.

Panasonic

- Became the first supplier in Germany to obtain ISO/SAE 21434 certification for automotive cybersecurity - a certification that also applies to its Czech branch. This addresses the growing connectivity of vehicles with the cloud, OTA updates, and cyberattack threats. The implemented Cybersecurity Management System (CSMS) enhances the brand's credibility as a Tier 1 supplier in the EU.

SIEMENS

- In 2024, the R&D department in Trutnov focused on smart motor management and the development of a new generation of electronic circuit breaker trip units.
- The Global Business Services shared service centers also engaged in development activities, with teams focusing on advanced automation and the robotic optimization of corporate processes.



- In 2024, the company opened a new automated production and logistics center in Ostrava-Hrušov, investing over 4.6 billion CZK. By 2027, it plans to invest an additional 14 billion CZK to develop advanced technologies for sustainable mobility within the Czech automotive industry.

HITACHI

- All three production plants in the Czech Republic are certified according to ISO14001. The company actively participates in the ecological transformation of the energy sector - it is involved in smart grid projects and low-carbon technologies.



- The globally recognized manufacturer of electron microscopes is investing billions of CZK to expand its facilities in Brno. The new research and production hall will double production capacity and strengthen the development of highly digitized technologies.

ENGEL

- The company focuses on process optimization and cost reduction, resulting in an operating profit margin of 4.4 % of total revenue.
- The most significant investment in the past fiscal year 2025 was in digitalization and Big Data analytics, totaling 15.6 million CZK.
- The company continues to invest in new machine technologies, logistics, and process digitalization.



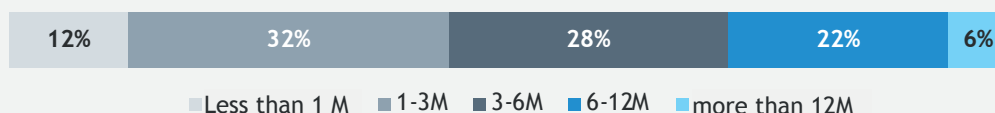
- Between 2022 and 2026, the company plans to invest approximately CZK 5 billion in expanding the production of advanced AGM car batteries in Europe, aiming to increase capacity by 50%. The expansion includes its Czech facility, where the focus is on automation and more efficient utilization of production capacity for local markets.



- A flexible manufacturing system that, through automation and smart technologies, can quickly switch between different orders. The machines can operate unattended, for example overnight, and the entire operation can easily adapt to changes in production.

OUTLOOK FOR THE FUTURE

HOW FAR IN ADVANCE DID YOU HAVE ORDERS/CONTRACTS BOOKED OR PRDUCTION CAPACITY FILLED AS OF JANUARY 2025?

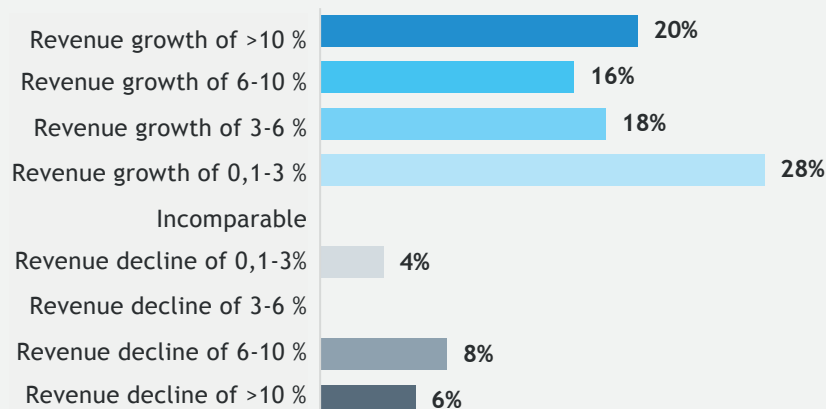


In January 2025, the NACE 26 segment was perceived as more predictable, with **56%** of respondents having orders secured for the next 3-6 months. In contrast, in the NACE 27 segment, **47%** of respondents had orders guaranteed only 1-3 months in advance.



In January 2025, **67%** of respondents operating in the IT sector and **60%** of those engaged in the manufacture of electric motors, generators, and similar equipment had orders secured for only 1-3 months ahead.

WHAT DEVELOPMENT IN REVENUES AND SERVICES DO YOU EXPECT IN THE UPCOMING YEAR 2026?



82% of respondents expect revenue growth.

Respondents from both NACE 26 and 27 agree that an increase of up to 3% is the most likely scenario.

50% of micro-enterprises and **30%** of large companies anticipate revenue growth of more than 10% in 2026.

40% of respondents in the production of electric motors, generators, etc., expect revenue growth of up to 3%.

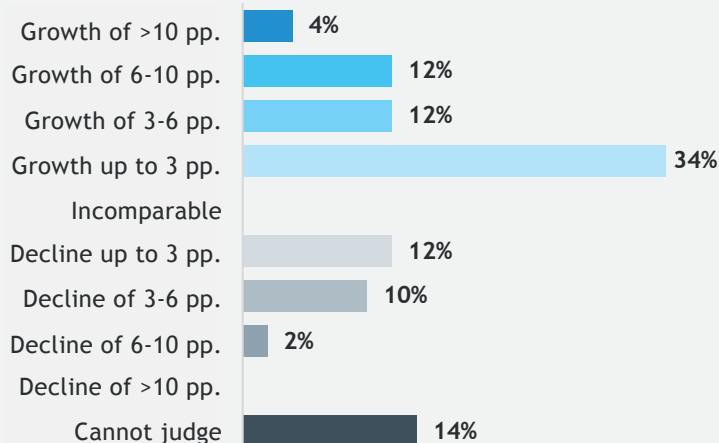
WHAT CHANGE DO YOU EXPECT IN THE AVERAGE MARGIN OF YOUR PRODUCTS IN 2025 COMPARED TO 2024?

14% of respondents were unable to assess the expected development of average margins due to rapidly changing market conditions.

Expectations in NACE 26 are mixed, but **55%** of respondents anticipate an increase in average margins, with **22%** expecting growth of 6-10 pp.

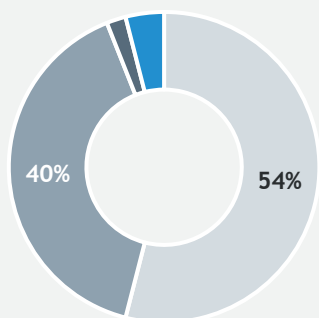
In NACE 27, **53%** of respondents expect a margin increase of up to 3 percentage points, while only **12%** foresee growth of 6-10 percentage points.

Among NACE 27 respondents who had contracted orders for 6-12 months as of January 2025, **50%** see higher potential for margin growth (6-10 percentage points).



OUTLOOK FOR THE FUTURE

ARE YOU PLANNING TO EXPAND INTO NEW MARKETS IN 2026?



- we plan to expand
- we do not plan to enter new markets
- we plan to withdraw from some markets
- we plan to expand while simultaneously withdrawing from some markets

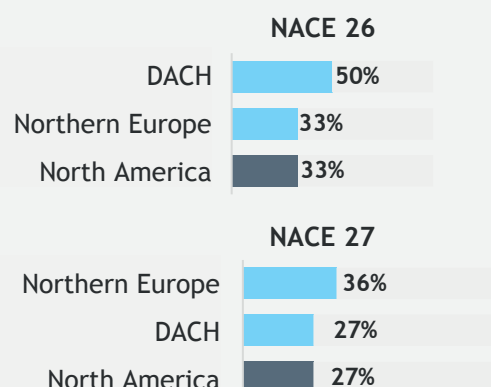
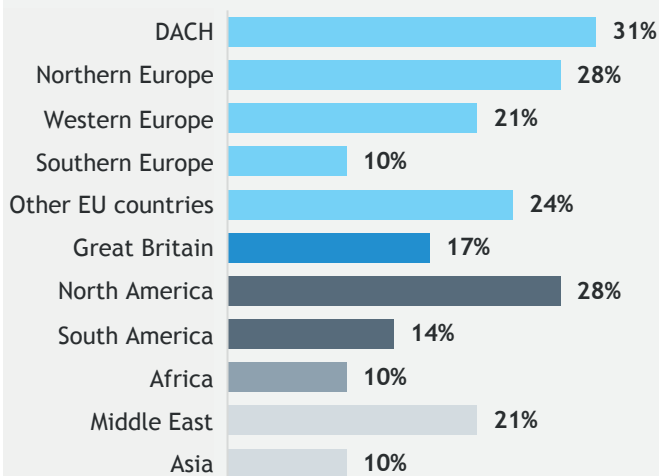
NACE 26	67%	33%
NACE 27	65%	35%

■ we plan to expand
 ■ we do not plan to enter new markets

100% of respondents engaged in the production of electronic components and boards, and 90% of respondents in the manufacturing of electric motors, generators, etc., plan to expand into new markets.

None of the respondents involved in the production of other electrical equipment intend to enter new markets in 2026.

WHAT MARKETS ARE YOU PLANNING TO ENTER?



Outside of the mentioned areas, respondents plan to expand:

- Philippines
- Japan
- South Korea

Respondents also plan to withdraw from some markets, namely Germany and Africa.

Preferred countries for expansion by company size:

MICRO	➤ Other EU countries ➤ North America ➤ Middle East	SMALL	➤ DACH ➤ GB ➤ Asia	MEDIUM	➤ North Europe ➤ DACH ➤ Other EU countries	LARGE	➤ Africa ➤ Asia ➤ South America
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PRODUCTION

WHAT WAS THE COMPANY'S AVERAGE CAPACITY UTILIZATION RATE LAST YEAR (2024)?

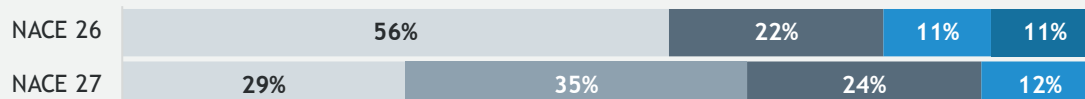


more than 90 % 80-90% 70-80% 60-70% 50-60% less than 50 %

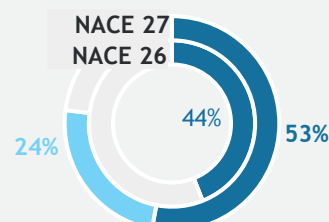
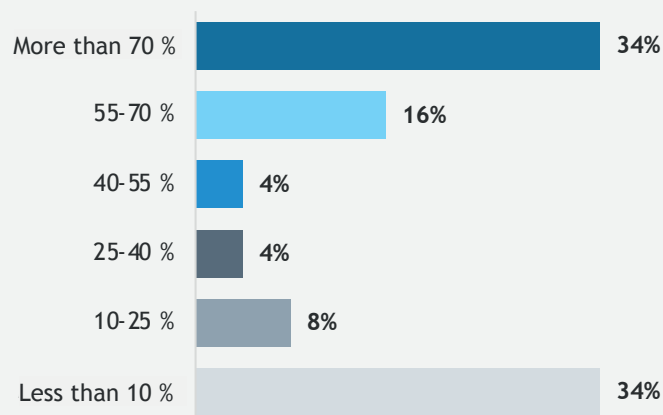
74% of respondents utilized more than 80% of their production capacity. Companies in NACE 27 exhibit a more balanced capacity utilization - in most firms (64%) it ranges between 80-100%, and none operate below 60%.

In 2024, 60% of respondents in the manufacture of measuring, testing, and navigation instruments and devices reported capacity utilization above 90%.

Uneven capacity usage was observed in the production of electronic components and boards, where 50% of respondents operated at over 90% capacity, while 25% used less than half of their available capacity.



WHAT PERCENTAGE OF YOUR PRODUCTION'S SALES WILL BE DIRECTED TO EXPORTS IN 2025?



The NACE 27 sector is significantly more export-oriented, with 77% of respondents exporting over 55% of their production.

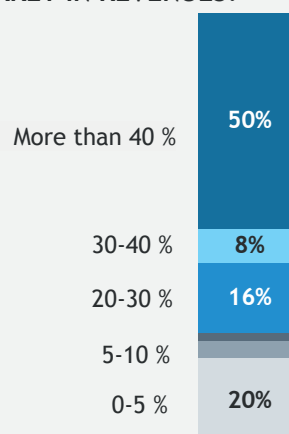
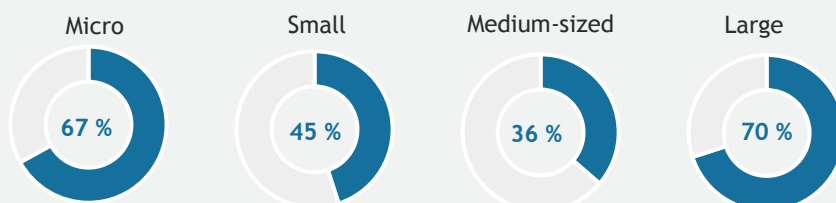
In contrast, 33% of NACE 26 respondents export less than 10% of their output.

80% of respondents from the field of Production of electric motors, generators, transformers, etc. export more than 70%.

WHAT IS THE SHARE OF YOUR MAIN ACTIVITY IN THE CZECH MARKET IN REVENUES?

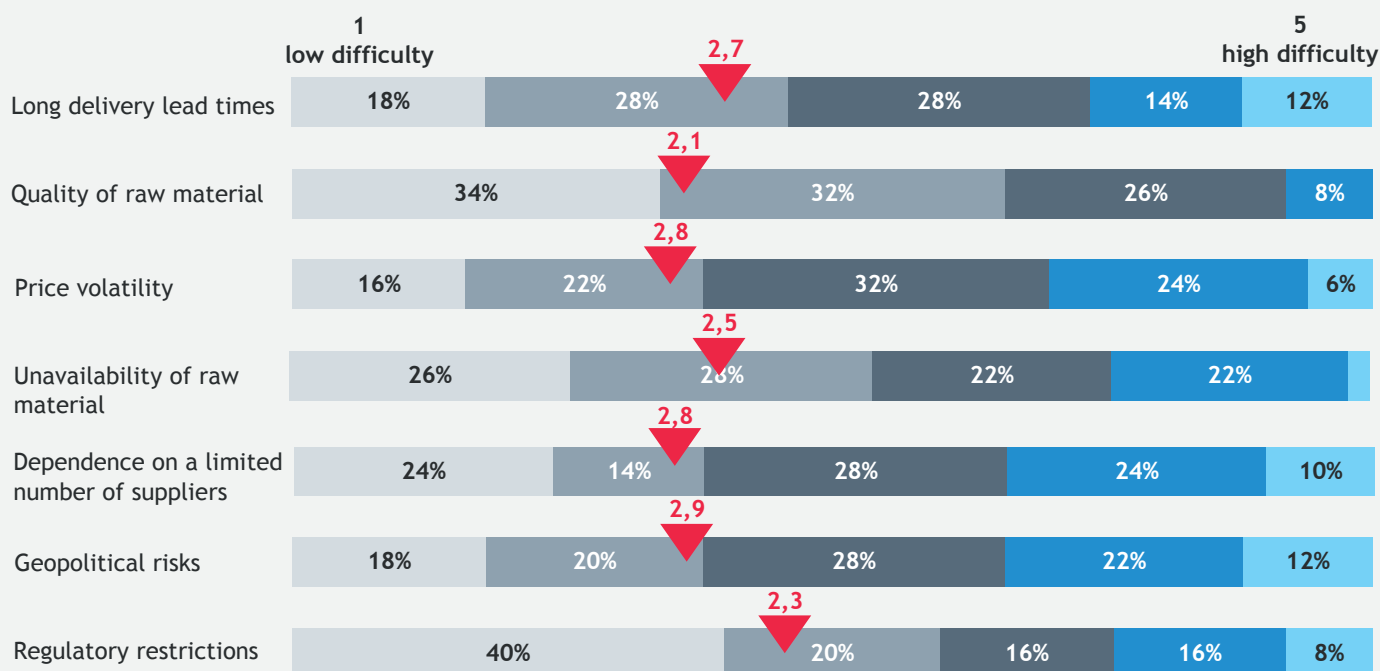
More than 40% market share in the Czech Republic is reported by:

- 56% of respondents from NACE division 26
- 29% of respondents from NACE division 27
- 83% of respondents from the field of information technology



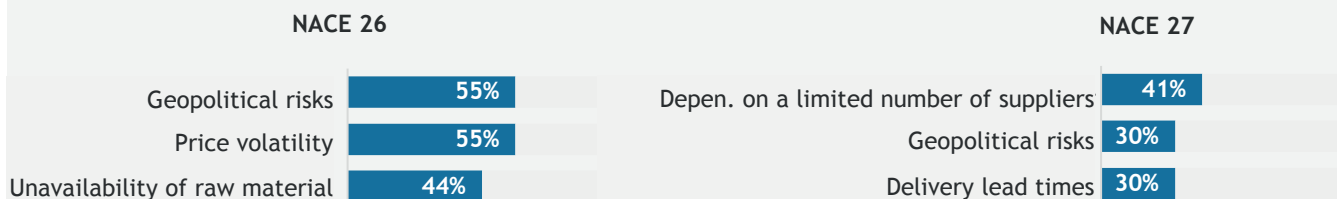
SUPPLY CHAINS

WHAT ARE THE BIGGEST CHALLENGES IN SECURING KEY RAW MATERIALS AND COMPONENTS FOR YOUR PRODUCTION?



▼ Weighted average

MAIN BARRIERS FOR COMPANIES IN NACE 26 AND 27



Note: For the purposes of these two graphs, responses rated 4 and 5 were combined.

The most significant barrier for companies in the field of battery and accumulator manufacturing is the limited number of suppliers and long delivery times.

80% of firms in the Manufacture of instruments and appliances for measuring, testing and navigation perceive price fluctuations as their biggest challenge.

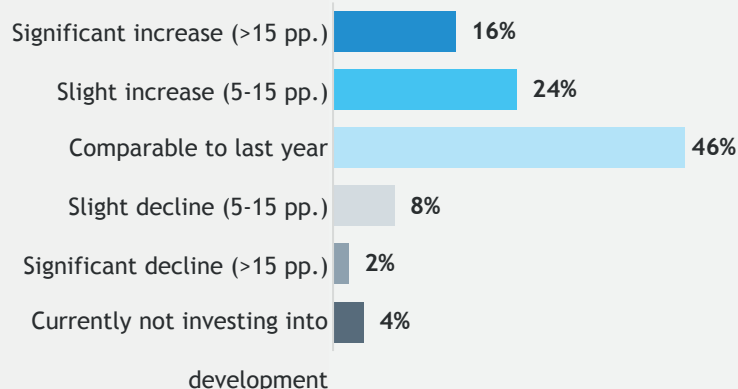
Regulation is the least problematic for companies engaged in the manufacture of other electrical equipment, (80%).

Main challenges/ size of enterprise	MICRO	SMALL	MEDIUM-SIZED	LARGE
Geopolitical risks	50 %	25 %	35 %	40 %
Dependence on a limited number of suppliers	34 %	35 %	28 %	40 %
Price volatility	17 %	30 %	36 %	30 %
Long delivery lead times	0 %	40 %	28 %	10 %

Note: For the purposes of these two graphs, responses rated 4 and 5 were combined.

INNOVATION AND INVESTMENT

ARE YOU PLANNING A CHANGE IN THE AMOUNT OF INVESTMENT IN THE DEVELOPMENT OF YOUR COMPANY IN 2026 COMPARED TO 2025?

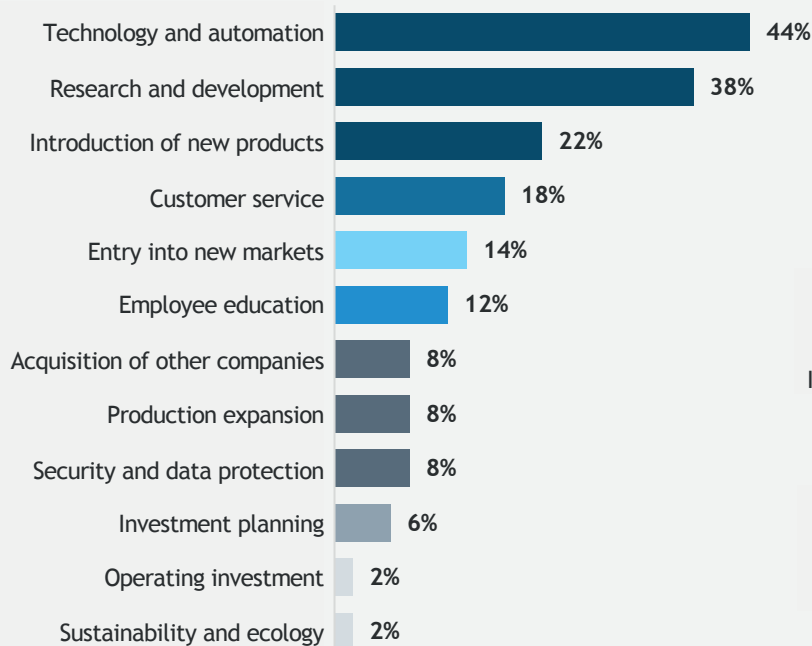


40% of respondents plan to increase investments in company development in the following year by at least 5 percentage points.

56% of respondents from section NACE 26 and 35% of respondents from section NACE 27 plan to allocate a comparable amount of funds for investments as in 2025.

40% of large companies plan to invest a comparable volume of funds as last year.

IN WHICH AREA DO YOU PRIMARILY PLAN TO INVEST IN THE NEXT 1-2 YEARS?



TOP 3 INVESTMENT AREAS

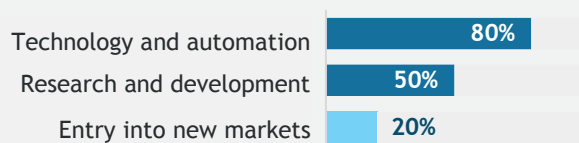
NACE 26



NACE 27



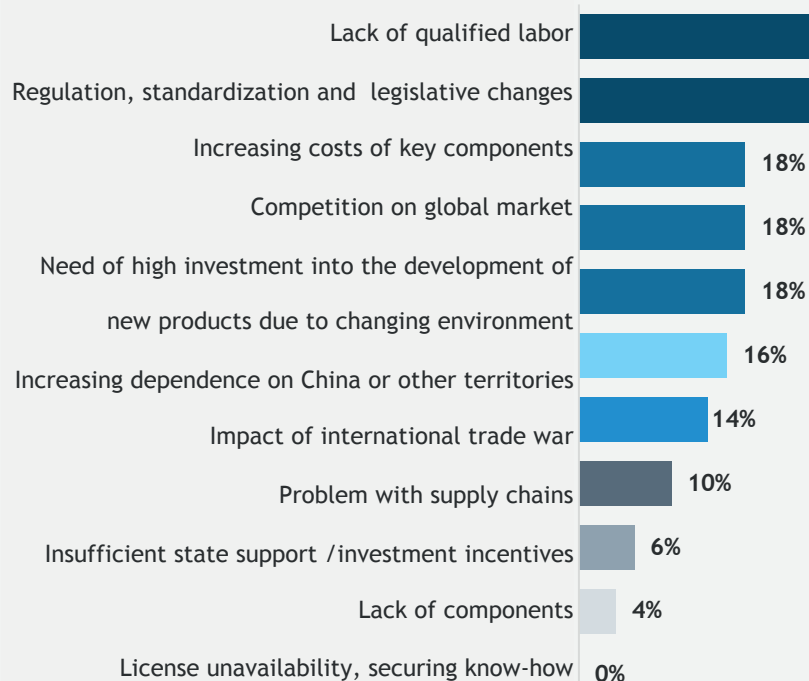
Manufacture of electric motors, generators, etc.



80% of respondents in the Manufacture of electric motors, generators, etc. plan to invest primarily in technology and automation, with 40% allocating a comparable amount of funds as in 2025, and 30% considering a slight increase in their investment volume.

CURRENT CHALLENGES

What are the biggest challenges/barriers you foresee in the short term (1-3 years)?



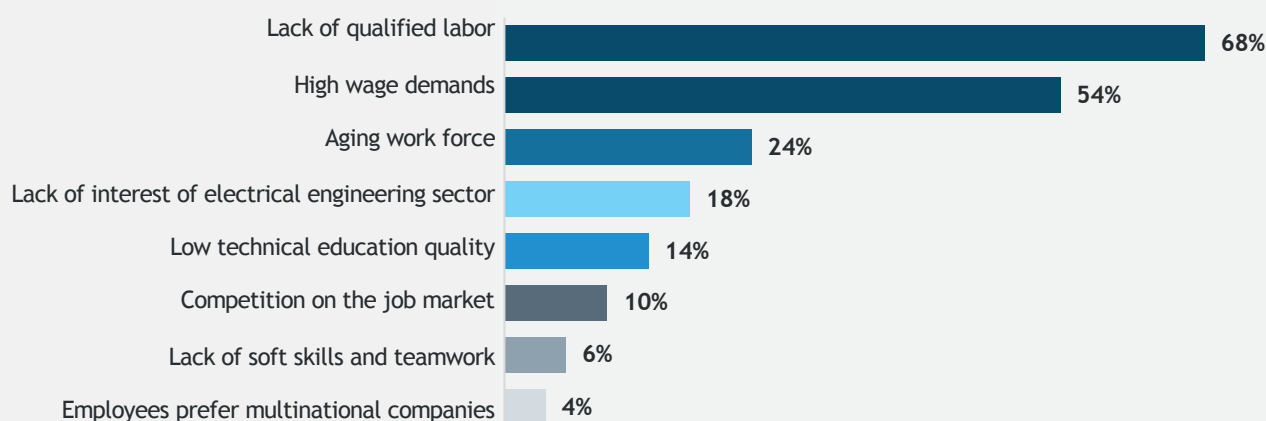
Respondents, regardless of company size, agreed that the biggest challenge in the coming years will be the shortage of qualified workers.

This issue affects companies in NACE 27 more significantly (65%) than in NACE 26 (44%).

60% of respondents in the manufacture of instruments and appliances for measuring, testing and navigation see the need for substantial investments in new product development as a major concern.

Regulation, standardization, and legislative changes are perceived as the most burdensome by companies in IT (50%), maintenance and repair of electronic and optical equipment (50%), wholesale (60%), and the manufacture of electronic components and boards (50%).

WHAT ARE THE BIGGEST CHALLENGES IN RECRUITING NEW EMPLOYEES?



80% of respondents in the production of electric motors, generators, etc., identified a shortage of qualified workers as the main obstacle in recruiting new employees.

83% of respondents in the information technology sector reported difficulties due to high wage expectations.

75 % of respondents in the production of electronic components and boards cited low quality of technical education as the biggest challenge, a concern echoed by 30% of large companies across all sectors.

CURRENT CHALLENGES

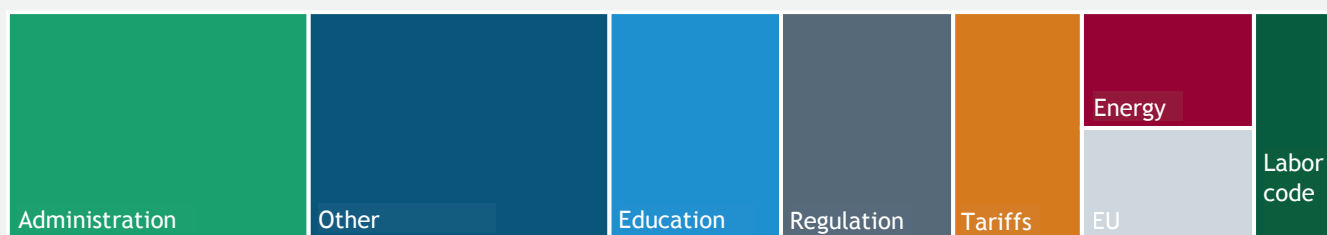
The questionnaire included the following two open-ended questions:

WHAT MEASURES OR LEGISLATIVE CHANGES COULD SUPPORT THE GROWTH OF YOUR INDUSTRY?

Surveyed companies most frequently highlight excessive administrative and regulatory burdens, which have long constrained their development. Key priorities include simpler, more stable, and predictable legislative changes to reduce the time and costs associated with bureaucracy.

Another critical area is education, particularly addressing the shortage of qualified workers. Employers emphasize the need for better preparation of students in technical fields, including practical skills and language proficiency.

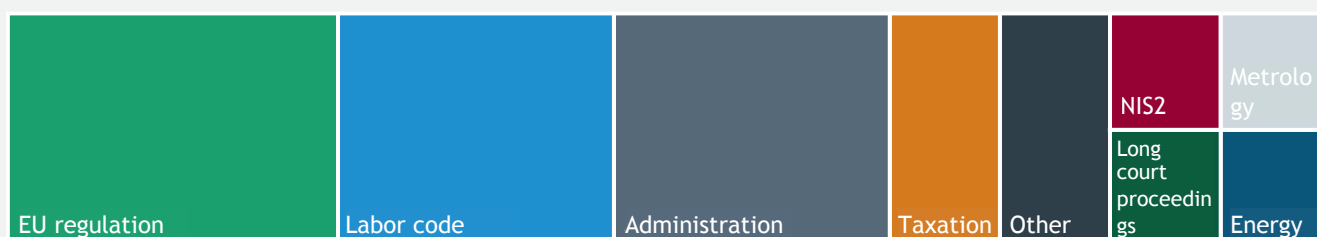
Other important topics include establishing fair conditions in foreign trade - especially regarding non-European e-commerce - ensuring access to energy at competitive prices and improving the clarity of European legislation. Less frequently mentioned suggestions include adjustments to subsidy policies, support for technology startups, tax reductions, and strengthening cybersecurity.

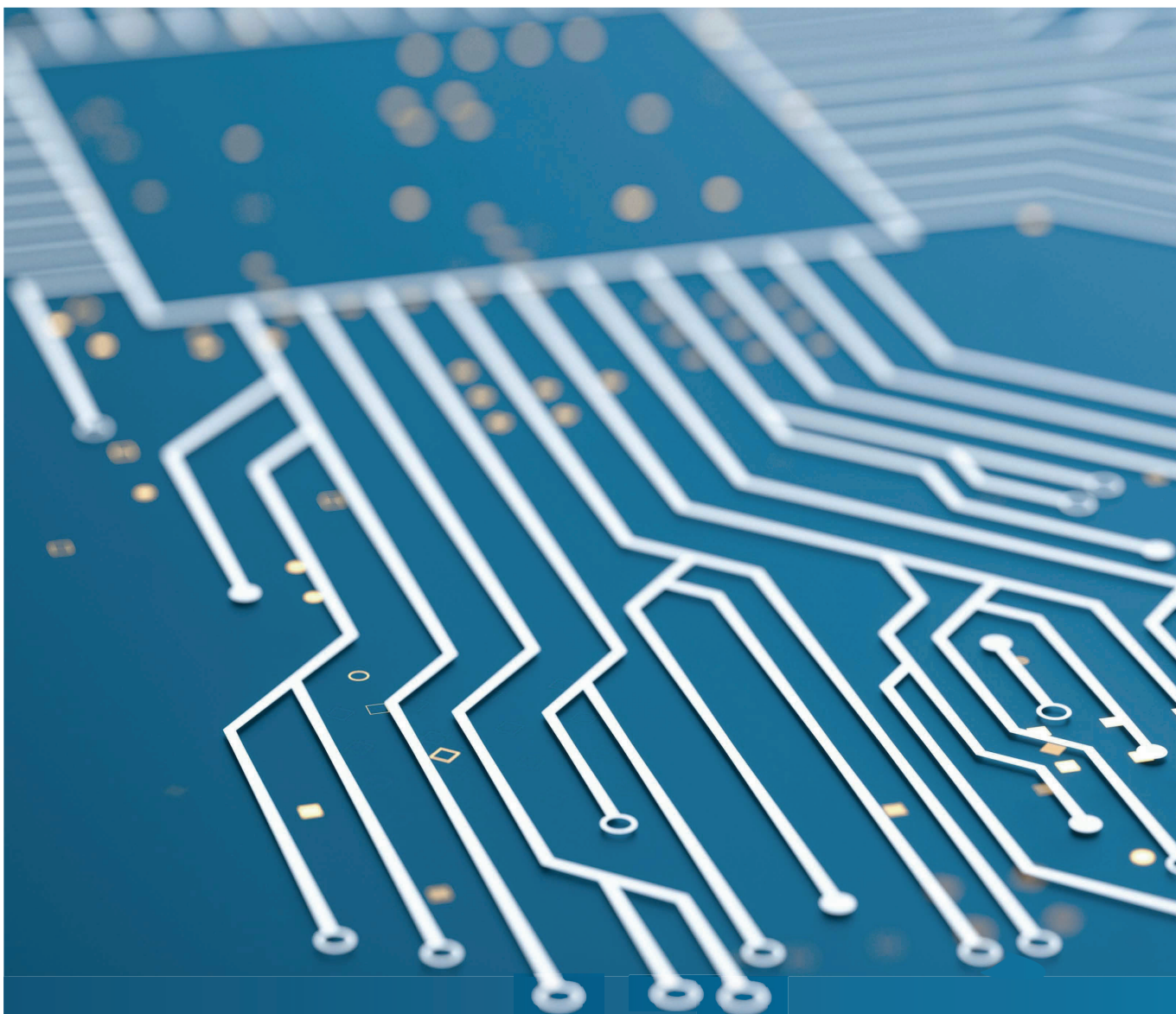


WHICH LEGISLATIVE MEASURES ARE THE MOST CONSTRAINING FOR YOUR COMPANY?

Respondents most frequently identify the complexity and ambiguity of European legislation (e.g., ESG, GDPR, or the Green Deal) as the main barriers to development, coupled with insufficient information on its impact on companies. Companies also commonly cite increasing administrative burdens, bureaucracy, and frequent reporting requirements as significant challenges.

Additional difficulties include the inflexibility of labor and tax legislation, complexity in navigating technical standards, uncertainty in the energy sector, and insufficiently incentivizing conditions for implementing employee programs or innovations.





Trends and challenges

In recent years, the electrotechnical industry has faced significant changes driven by technological advances in digitalization and automation, pressures for corporate sustainability, geopolitical tensions, and regulatory demands. These factors are shaping both corporate strategies and public policies in the fields of industry, research, and investment.

Implementing Industry 4.0 principles - including the use of artificial intelligence, sensor technologies, predictive maintenance, and digital twins - has become essential to maintaining competitiveness in European and global markets. At the same time, companies must adapt to increasingly stringent ESG requirements, ranging from carbon footprint measurement to sustainable supply chains and transparent corporate governance.

AUTOMATION / DIGITALIZATION / INDUSTRY 4.0

With the advent of digital transformation - not only through advanced automation and robotics, but also via the use of generative and non-generative artificial intelligence models, as well as new digital technology-based business models - the electrotechnical and electronics industry is rightfully regarded as a key driver of technological progress and industrial innovation. This sector holds significant potential, particularly due to its long-standing tradition and high level of technical education. Maintaining competitiveness, however, requires continuously increasing investments in research, development, and innovation, aimed at producing both components and finished products with higher added value.

In terms of industrial robot installations, the electrotechnical industry surpassed the traditional global leader in robotics—the automotive sector - in 2023, capturing a 28% share of the total 541,000 installations, compared to automotive's 22%. The Industry 4.0 concept, which aims to implement the Industrial Internet of Things (IIoT) across all processes - not only in industrial production but also in product development, logistics, operation by end-users, and end-of-life product management - positively impacts the efficiency of the value chain and enhances the competitiveness of the overall economy. Digital transformation primarily focuses on the efficient utilization of all resources entering industrial processes, including material (raw), energy, human, and financial resources.

Addressing the shortage of qualified labor is therefore just one of many benefits brought by the implementation of the Industry 4.0 concept. In the Czech industrial environment, demand is growing for robotic workstations that not only enable production but also allow continuous quality monitoring of small series of highly customized products, whose configurations may change several times within a single shift. Another emerging trend is the development of shared workstations or shared spaces where robots and human operators collaborate. Czech electrotechnical companies achieve a high level of professionalism in the systemic integration of these workspaces, leveraging advanced digital technologies such as virtual or augmented reality and simulations using digital twins.

TOP 5 countries
Installation of industrial robots 2023

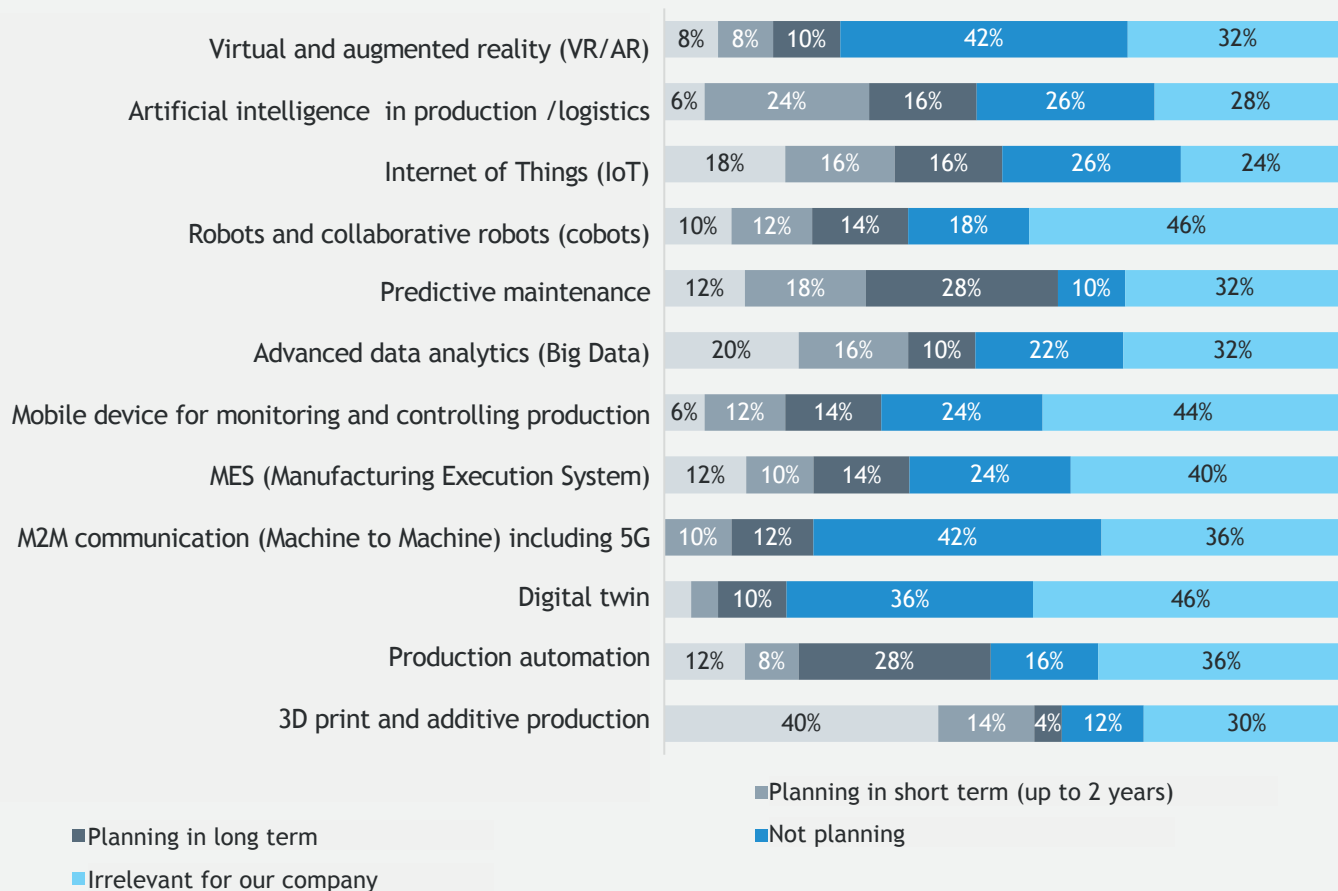
China	276 thousand	79 %
Japan	46 thousand	
USA	37 thousand	
Korea	31 thousand	
Germany	28 thousand	
TOTAL	541 thousand	

Czech companies can leverage grants and preferential loans to advance their automation and digitalization efforts, for example through calls under the OP TAK program or the TAČR Trend and Twist programs. Currently, the SIGMA DC5 call is open, which supports the implementation of long-term projects that establish and develop systemic solutions addressing current and future R&D&I challenges across various fields. This call is particularly suitable for projects in electrotechnics, electronics, or ICT.

One of the major challenges facing Czech electrotechnical companies is their role in gradually ensuring sufficient resilience against external shocks caused by both global and local crises. There is a significant potential in leveraging advanced digital technologies, whether for accurate forecasting of electricity production from renewable or alternative sources, predicting energy consumption in response to dynamically changing industrial or transport demands, or ensuring transparency and reliability of all digital operations through distributed technologies such as Blockchain. Successful addressing of these challenges depends on closer collaboration between industry, technical universities, and other research institutions.

AUTOMATION / DIGITALIZATION / INDUSTRY 4.0

WHAT TECHNOLOGIES ARE YOU PLANNING TO IMPLEMENT?



- **68% of surveyed companies plan to implement new technologies or innovations within the next two years.**
- **Another 18% of companies are considering implementing innovations over a period longer than two years.**
- **The remaining 14% of firms currently do not plan any technological changes.**

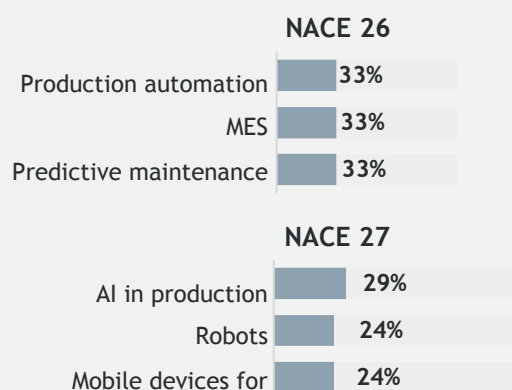
The degree of digitalization varies significantly depending on company size. Large enterprises show a much higher level of advanced technology implementation and exhibit different technological preferences, which can be attributed to their greater financial and human resources, as well as higher levels of standardization and operational complexity.

The most commonly already implemented technologies are:

- 3D printing and additive manufacturing
- Advanced data analytics (Big Data)
- Sensors and the Internet of Things (IoT)

The most frequent focus in both the short- and long-term horizon is the introduction of predictive maintenance (71% of medium-sized companies; 45% of small companies) and the implementation of artificial intelligence in production and logistics.

WE PLAN IN THE SHORT-TERM HORIZON (WITHIN 2 YEARS)



The most widely implemented technology in both sectors is 3D printing and additive manufacturing, adopted by 78% of respondents in NACE 26 and 29% in NACE 27.

ENVIRONMENTAL POLICY/ ESG

The industrial sector accounts for nearly 30% of global greenhouse gas emissions. EU environmental regulations, such as the Green Deal, CSRD directive, Fit for 55, and new requirements for the circular economy and energy efficiency, are having an increasingly significant impact on European industry and strongly shaping its development. Energy intensity and carbon footprint represent key vulnerabilities, which under the pressure of new legislation are the main areas requiring transformation - particularly in decarbonization and responsible resource management.

Legislative changes require companies to invest in more environmentally friendly production processes, reduce environmental impacts, and increase energy efficiency, which in turn drives up operating costs. Studies and expert estimates indicate that the transition to a zero-emission economy will be costly, with investments totaling around 3 trillion CZK by 2050 (including 1.2 trillion CZK by 2030).

The production of electronic equipment is both energy- and material-intensive, consuming scarce metals and generating substantial amounts of waste, often containing hazardous substances. According to a 2023 survey, 59% of Czech companies are investing in energy savings. The state supports these efforts through programs such as OP TAK, including its second Energy Savings call and the Circular Economy initiative.

The Czech industry actively participates in the production of components for renewable energy, e-mobility, and battery storage, yet significant potential remains untapped. E-mobility is currently a key segment of the electrotechnical industry. Large companies (e.g., Škoda Auto, ČEZ) already require ESG data and proof of “greenness” from their suppliers - pressuring Czech firms to implement systems for measuring and reporting emissions. This requirement also affects smaller companies in NACE 26 and 27.

KYOCERA AVX COMPONENTS

In 2024, the company spent over CZK 21 million on environmental protection measures, including:

- Maintaining and developing the ISO 14001 system (continuously since 2004)
- Modernizing technologies to reduce environmental impacts
- Employee training and raising ecological awareness

In 2024, Foxconn obtained 27 UL 2799 “Zero Waste to Landfill” certifications

- This internationally recognized standard evaluates how efficiently an organization manages waste and minimizes landfill disposal.
- The certification confirms the diversion of at least 90% of waste from landfills through recycling, composting, energy-recovery incineration, or reuse.
- There are 3 certification levels:
 - **Platinum:** 100% landfill diversion
 - **Gold:** 95-99 %
 - **Silver:** 90-94 %
- Out of the 27 certifications received, the Foxconn group achieved **Platinum in 24 cases**, across locations in Asia, Europe, and the Americas.
- The company has also begun installing rooftop solar panels in several countries, including Vietnam, where it reached a capacity of 19 MWp in 2024.

FOXCONN®

Czech banks, when assessing creditworthiness and investment risk, are increasingly considering not only financial indicators but also ESG principles in their evaluation of corporate clients. ESG scores are becoming part of internal rating models and can influence access to capital and interest rates. This encourages companies to adopt greater transparency and transition to more sustainable business models. At the same time, legislation creates significant opportunities through grants and incentives aimed at supporting green technologies and energy efficiency.

ENGEL s r.o.

The company received a grant commitment for the construction of a 1.6 MWp photovoltaic power plant. The project is co-financed by the Modernization Fund based on a decision by the Ministry of the Environment, with an expected contribution of 7 million CZK. The total investment amounted to 43 million CZK. With the completed PV plant, the company is able to cover its entire energy demand for production processes under fully sunny conditions.

DEPENDENCE ON USA / CHINA AND OTHER TERRITORIES

Global supply chains have undergone significant changes in recent years due to geopolitical tensions between the U.S. and China, as well as other major events such as the pandemic and ongoing conflicts. The EU has identified 137 products for which it is highly dependent on imports - including raw materials, chemicals, pharmaceuticals, and solar panels. Of these products, 52% of critical imports originate from China. For example, the EU relies on China for 98% of certain rare earth elements (REE), which are essential for electronics manufacturing, the energy sector, healthcare, and the defense industry. In response, the EU adopted the Critical Raw Materials Act in 2023 and is actively working to diversify supply sources. These developments have a direct impact on the Czech electrotechnical industry, which remains heavily dependent on imported strategic technologies, semiconductor chips, and other electronic components – particularly from China, Taiwan, and the United States. This creates both challenges and opportunities for Czech companies: the need to strategically diversify their supply base, while also seizing chances to integrate into newly emerging value chains.

High dependency significantly increases companies' vulnerability to geopolitical crises, trade conflicts, and disruptions in supply chains - as demonstrated by the pandemic and ongoing tensions in the Taiwan Strait.

The EU is responding with initiatives such as the **European Chips Act**, which aims to:

- Double the EU's share of global semiconductor production to 20% by 2030 (up from the current ~10%)
- Strengthen resilience against supply chain disruptions
- Support research, development, and manufacturing of next-generation semiconductors in Europe

The Act is expected to mobilize more than €43 billion by 2030. The European Commission has already approved the co-financing of seven "first-of-a-kind" projects with total investment costs exceeding €31.5 billion. Several additional projects are still under development or preparation (e.g., ONSEMI - expansion of semiconductor production).

With regard to dependence on battery imports from Asia, the Czech government is currently in negotiations with investors – reportedly five entities from different continents - that could potentially build a battery cell factory ("gigafactory") in the Czech Republic.

Foxconn CZ s.r.o.

It relies on global supply chains while simultaneously benefiting from the relocation of production from China to the Czech Republic to reduce dependence on Asian manufacturing networks.

- Server manufacturing - Kutná Hora
- Server and network equipment (switch) manufacturing - Pardubice
- Computer, monitor, and accessories manufacturing - Pardubice

In June 2024, the company announced an investment of **more than CZK 44 billion to expand semiconductor production in Rožnov pod Radhoštěm.**

The goal is to build a fully vertically integrated production of SiC chips that are critical for:

- Electromobility (higher efficiency and extended EV range)
- Renewable energy systems
- Artificial-intelligence data centers

onsemi

This investment is presented as one of the largest foreign investments in the history of the Czech Republic and a key step toward establishing a Central European semiconductor supply chain. At the same time, it supports Europe's effort to achieve greater chip self-sufficiency. The investment is expected to create up to 1,000 new jobs. Onsemi is negotiating an incentive package with the Czech government (20% of capital expenditure). Direct EU funding under the European Chips Act has not yet been officially confirmed.

PRICING POLICY

Global dependence on key components and products imported from Asia and the United States exposes the Czech industry to significant price volatility. This situation is further complicated by rising energy and raw material prices, higher transportation costs, as well as trade tariffs and duties resulting from tensions between major global economies – particularly the United States, China, and the EU. Companies are therefore forced to reassess their pricing strategies and look for ways to stabilize costs. One potential solution is stronger participation in European initiatives promoting local production of semiconductors and electronic components, which could reduce future price dependence on non-European markets.

STATE SUPPORT

To maintain competitiveness and to handle the green and digital transformation, the sector expects stronger support from the state. The key priority is especially financial support for investments into decarbonization, energy efficiency, renewable energy sources, digitalization and automation. An important role is also played by programs supporting research, development and innovation, particularly in the area of semiconductors and strategic technologies. Special attention should be given to small and medium-sized enterprises, which have limited capacity to implement these changes. At the same time, it is necessary to intensively support cooperation between universities and industrial companies, which will accelerate the application of research results in practice and increase the innovation capacity of the entire sector.

The state supports research and development, but investments remain below the EU average (see the following chapter). Greater support of technical education and reskilling is needed to address the shortage of qualified workers. A national center for semiconductors and chips is being established, which may be a strategic step towards strengthening self-sufficiency.

Support from the state and the EU (e.g., subsidy programs) plays a key role in encouraging Czech companies to engage more in patent activity. In December 2024, the Ministry of Industry and Trade approved a program to support strategic investments, which is expected to bring at least 100 billion CZK into innovation and production in the fields of batteries, solar panels, wind turbines, heat pumps and electrolyzers in the years 2025-2033. Approximately 24 billion CZK of this amount will come from public funds, the rest from private investors. Investments into semiconductors, electromobility and renewable energy sources are essential for increasing competitiveness and reducing dependence on imports. The program was subsequently approved by the European Commission in March 2025.

In 2024, the Ministry of Industry and Trade prepared a new program to support research, development and innovation - **TWIST: Program for Transfer, Research, Development and Innovation for Strategic Technologies**. It explicitly aims to support the development of strategic technologies, especially artificial intelligence, quantum technologies, semiconductors, microelectronics, and to strengthen the transfer of research and development results into practice. The program will be implemented in the period 2025-2031 and foresees a total support of 5 billion CZK.

Operational Program Technology and Applications for Competitiveness (OP TAK)

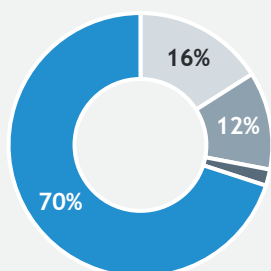
It is a key instrument of state support for increasing the competitiveness of Czech enterprises, particularly small and medium-sized companies, although some calls are also suitable for large companies.

In the 2021-2027 programming period, a total of 3.2 billion EUR (approx. CZK 81.5 billion) is allocated.

The program has the following priorities:

- Strengthening the performance of enterprises in the areas of research, development, innovation, and their digital transformation
- Development of competitiveness and entrepreneurship of small and medium-sized enterprises
- Development of digital infrastructure
- Transition to a low-carbon economy
- More efficient resource management

WHAT TYPES OF FINANCING DO YOU MAINLY USE FOR INNOVATION / RESEARCH AND DEVELOPMENT PROJECTS?



Public
Financial institutions
Investors
Own resources

Public funds (subsidies, incentives, grants) are used most frequently by micro-enterprises (33%), while large companies use them minimally (10%).

The majority of respondents (50%) who rely primarily on public funding report that obtaining state support is somewhat difficult.

13% 50% 38%

No issues Slight issues Significant issues

67% of micro-enterprises perceive the process as somewhat difficult, while 33% consider it significantly difficult.

RESEARCH AND DEVELOPMENT

Research and development (R&D) is a systematic creative activity aimed at expanding existing knowledge - including knowledge of humans, society, and culture - and at acquiring new knowledge or applying it in practice.

R&D activities must meet the following criteria:

- Include an element of novelty
- Be creative and inventive
- Contain an element of uncertainty
- Be systematic
- Be transferable and/or reproducible

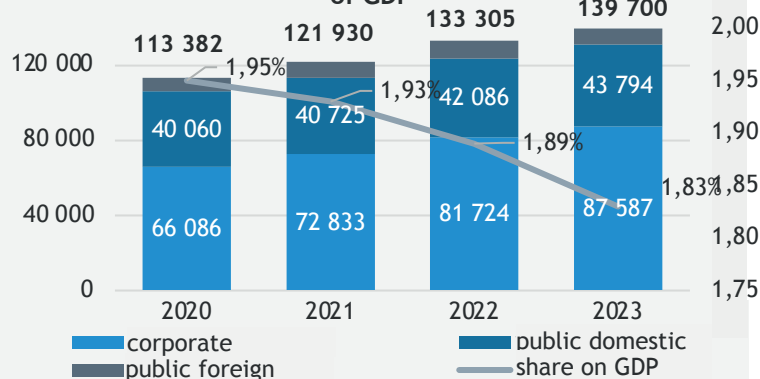
R&D encompasses the following categories of activities:

- **Basic research** - experimental or theoretical work aimed at gaining new knowledge about the principles of phenomena or facts.
- **Applied research** - primarily focused on acquiring specific new knowledge.
- **Experimental development** - systematic work drawing on existing knowledge and practical experience with the goal of creating new or improved products or processes.

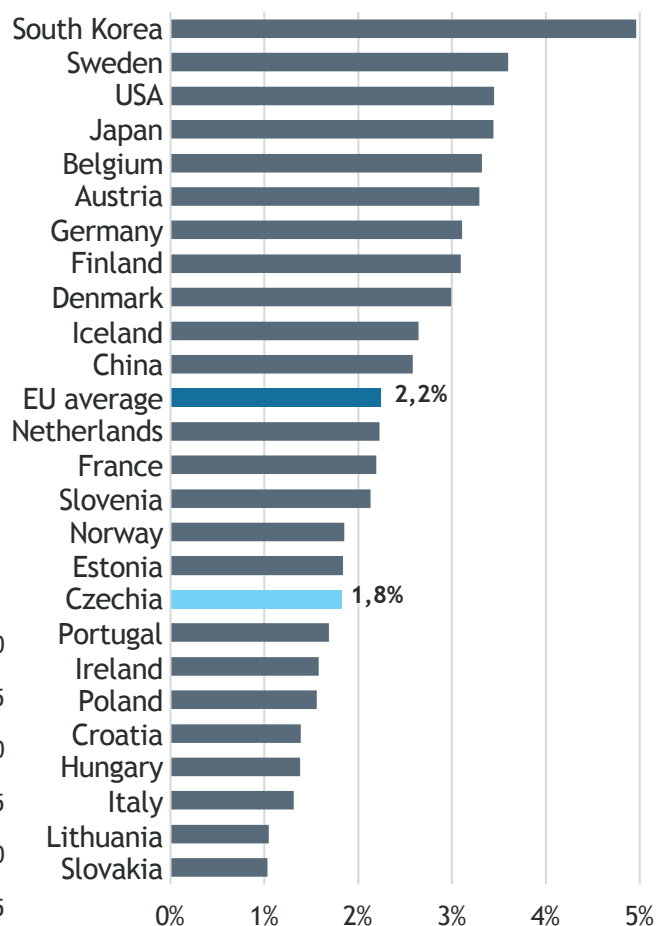
The Czech electrotechnical industry is strong and export-oriented, but it lags behind Western Europe in patent activity and investments in research and development. Consequently, the government is launching new programs to support strategic investments, particularly in technologies for decarbonization, electromobility, and semiconductor production. For example, the Potenciál call under OP TAK supported the establishment of corporate development centers, with 2 billion CZK released in the second call. For further development of the sector, it is crucial to increase investments in innovation and education so that the Czech Republic can fully leverage its potential and strengthen its position in both the European and global markets.

The Czech Republic has long supported research and development (R&D), yet its level of investment lags behind the European Union average. In 2023, R&D expenditures accounted for 1.8% of GDP - 140 billion CZK (a year-on-year increase of 5%), with this figure historically never exceeding 2%. In contrast, the EU average is around 2.2% of GDP. However, R&D spending in the Czech Republic is increasing in absolute terms each year. Domestic public funds accounted for approximately 43.8 billion CZK in 2023 (about 30% of total R&D expenditure). Another 8.3 billion CZK (6%) came from foreign public sources, mainly from the European Union. The remaining 66% (88 billion CZK) of funding comes from the business sector. State budget subsidies are gradually increasing - between 2022 and 2023, they rose by 3.5%, corresponding to an increase of 1 billion CZK. The number of entities conducting R&D in the Czech Republic is slowly growing, reaching 3,302 entities in 2023.

Sources of R&D funding (in million CZK) and share of GDP



Share of R&D Expenditure in GDP



RESEARCH AND DEVELOPMENT

TAX INCENTIVES FOR RESEARCH AND DEVELOPMENT

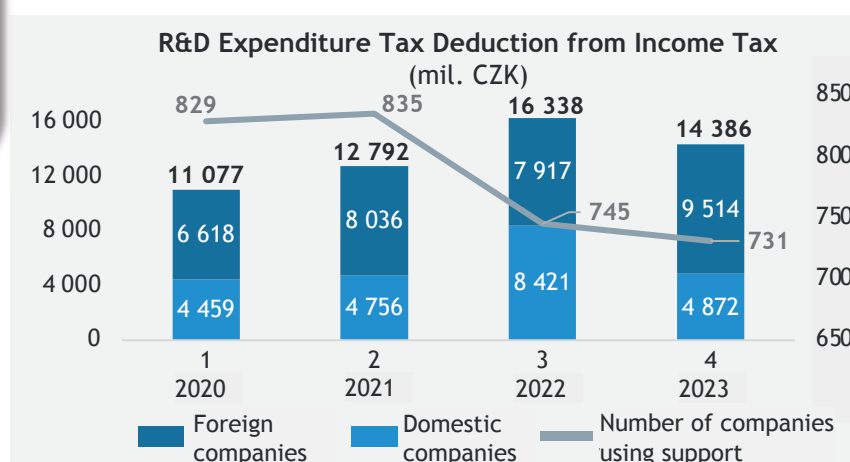
Tax incentives for R&D in the Czech Republic allow companies to deduct certain R&D expenses from their corporate income tax base - known as a tax deduction. The deduction is applied based on a **documented R&D project**, which must define **objectives, methods, and expected benefits**. Expenses incurred for research and development can be deducted from the tax base starting from the date the intention to carry out the project is officially notified.

Deductible expenses include:

- Experimental or theoretical research
- Design and engineering work
- Calculations
- Technology proposals
- Production of a functional sample or prototype of a product, or its component, related to the implementation of the R&D project

Domestic companies accounted for 72% of the firms that utilized the R&D tax incentive in 2023. However, in terms of the amount claimed, the situation is reversed: of the 14.4 billion CZK total, **66% (9.5 billion CZK)** went to companies under foreign control. The average deduction per company was 19.7 million CZK.

In 2023, a total of **731 private companies** in the Czech Republic applied the R&D tax deduction, representing a year-on-year decrease of 14 companies. The R&D tax deduction amounted to **14.4 billion CZK** in 2023 (a 12% decrease compared to 2022), with the decline mainly attributable to domestic companies. At a corporate tax rate of 19%, firms saved **2.7 billion CZK**.

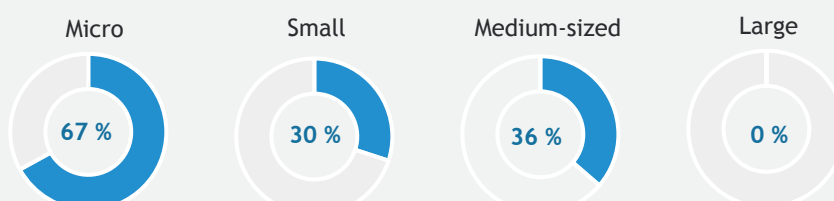
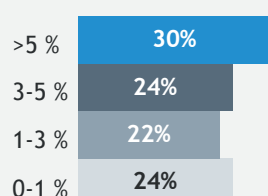


VOLUME OF INVESTED FUNDS BY SECTOR

Expenditures on research and development in the business sector, broken down by main economic activity and type of expenditure in manufacturing (TOP 15 divisions) in 2023, are shown in the following overview. The highest investments are directed to the automotive industry, with the electrical engineering industry ranking second and the electronics industry fourth. In R&D expenditures in NACE sectors 26 and 27, companies with foreign ownership dominate, accounting for approximately **76% of total expenditures**—specifically 70% in NACE 26 and **80% in NACE 27**. This share is higher than the manufacturing industry average (71%). Large companies make up 82% of total R&D expenditures in the electrical sector.

Manufacturing Industry - Top 8 Sectors	Total million CZK	Breakdown by Type of Expenditure (mil. CZK)		
		wages	other current expenses	investment expenses
Automotive Industry	13 189	7 111	4 820	1 258
Electrical Engineering Industry	7 189	4 159	2 708	322
Mechanical Engineering Industry	5 351	2 668	2 141	543
Electronics Industry	4 784	2 713	1 531	539
Manufacture of Other Transport Equipment and Devices	2 721	1 026	1 447	248
Repair and Installation of Machinery and Equipment	2 332	1 329	898	105
Pharmaceutical Industry	1 828	745	777	306
Metalworking Industry	1 700	948	564	188

HOW MUCH OF YOUR REVENUE DO YOU INVEST ON AVG. IN R&D?



Structure of respondents by enterprise size who invest more than 5% of their revenue in R&D

PATENTS

International Patent Classification (IPC)

The International Patent Classification (IPC) is a system administered by the World Intellectual Property Organization (WIPO) that provides a standardized method for classifying patent documents worldwide.

Between 2020 and 2024, a total of 27,000 patents were granted in the Czech Republic, of which 93% went to foreign applicants, while the remaining 7% (1,780 patents over five years, including 377 in 2024) **were granted to Czech entities**. Overall, the success rate for granted applications in 2024 **reached 82%**. However, there has been a long-term decline in the number of patent applications filed by domestic entities - in 2013, 983 applications were submitted, compared to only 461 in 2024. The most significant drop occurred among universities, where applications fell from 279 in 2013 to just 60 in 2024. In 2024, companies in the Czech Republic paid a total of 3.5 billion CZK in licensing fees.

The fields of the electrical engineering industry are consistently represented among the most significant technological areas, with Czech entities actively participating in their development, although their share is not dominant. Overall, electrical engineering disciplines account for 8.9% of all patents granted in the Czech Republic. For Czech applicants, however, the share of granted patents decreases to 5%, mainly due to low activity in the field of Class 31 - Electrical Circuits and Transmission Technology, which represents only 0.6%.

**Patents Granted to Foreign and Czech Entities
(Period 2020-2024, TOP 10 IPC Fields)**

IPC field	Foreign entities		Czech entities	
	Number	Share	Number	Share
10 - Transport, Storage	2 276	9%	236	13%
13 - Organic Chemistry	2 323	9%	100	6%
05 - Medical, Dental, and Hygiene Preparations	2 224	9%	49	3%
20 - Construction	1 450	6%	120	7%
04 - Health and Entertainment	1 356	5%	128	7%
30 - Electrical Engineering	1 233	5%	81	5%
08 - Material Processing	1 155	5%	71	4%
26 - Measurement, Optics, Photography	1 024	4%	164	9%
31 - Electrical Circuits, Transmission Technology	1 063	4%	10	1%
06 - Separation and Mixing	925	4%	70	4%

PATENTS GRANTED OR VALIDATED FOR CZECH ENTITIES BY NACE (PERIOD 2020-2024)

Despite the high technological intensity of the electrical equipment manufacturing sector, its share of total patents in the manufacturing industry remains low (3.0 % and 1.9 %). Typical patents in the field of electrical engineering include innovations such as new semiconductor components, chip production technologies, and devices for energy, automation, or electromobility. The NACE 27 sector can benefit from the development of smart grids, electromobility, and automation. NACE 26 has growth potential driven by digitalization, optical technologies, and the development of electronic components. Both sectors could significantly profit from greater support for research and development, closer collaboration with academia, and the effective use of European funding instruments.

NACE - Manufacturing industry	Total	Share of the total #
10-12 Food, beverage and tobacco industry	165	26,5%
13-15 Textile, wearing apparel, leather and shoe industry	89	14,2%
16-18 Wood and paper industry	76	12,2%
19-20 Petrochemical and chemical industry	56	8,9%
21 Pharmaceutical industry	53	8,4%
22 Rubber and plastic industry	43	6,9%
23 Industry of glass, ceramics and porcelain	36	5,8%
24 Manufacture of basic metals	21	3,4%
25 Manufacture of fabricated metal products	21	3,3%
26 Manufacture of computer, electronic and optical products	19	3,0%
27 Manufacture of electrical equipment	12	1,9%
28 Manufacture of machinery and equipment n.e.c.	11	1,8%
29 Manufacture of motor vehicles	11	1,7%
30 Manufacture of other transport equipment	7	1,1%
31-32 Manufacture of furniture and other manufacturing	4	0,6%
33 Repair, maintenance and installation of machinery and equipment	2	0,2%

PATENTS

PATENT APPLICATIONS FILED WITH THE EUROPEAN PATENT OFFICE BY COUNTRY OF RESIDENCE OF THE APPLICANT/INVENTOR

Applicant's country	Number of applications per million inhabitants, 2024	Number of applications for 2024
Liechtenstein	9 022	361
Switzerland	1 112	9 966
Sweden	468	4 936
Luxembourg	457	307
Finland	428	2 400
Denmark	426	2 539
Netherlands	393	7 054
Germany	300	25 033
Austria	234	2 146
Belgium	221	2 615
Ireland	209	1 118
Iceland	162	62
France	160	10 980
EU 27	152	68 392
Norway	147	817
Malta	110	62
Italy	82	4 853
Slovenia	73	156
Cyprus	64	62
Estonia	54	74
Spain	45	2 192
Portugal	33	347
Lithuania	25	73
Czech Republic	23	252
Latvia	19	36
Poland	19	692
Hungary	15	139
Slovakia	11	62
Croatia	11	41
Greece	10	107
Monte Negro	10	6
Bulgaria	8	53
Turkey	6	542
Romania	3	63
Serbia	3	20

Patent activity across European countries shows significant disparities, not only in absolute numbers but especially when adjusted per capita. Among the most active countries in terms of patent applications per million inhabitants are Liechtenstein (9,022), Switzerland (1,112), Sweden (468), and Luxembourg (457). Among the larger economies, Germany stands out with 25,033 applications, followed by France with almost 11,000.

The **EU-27 average is 152 applications per million inhabitants**, while the Czech Republic reached only **23 applications per million**, corresponding to a **total of 252 applications**. This places the Czech Republic well below the European average - roughly on par with Lithuania (25) and significantly behind comparable countries such as Slovenia (73) and Estonia (54). The lowest levels of patent activity are recorded in Romania, Serbia, and Turkey (3-6 applications per million inhabitants).

These figures highlight the **weak international innovation performance** of the Czech Republic, particularly regarding patents with European protection. They also suggest that most Czech research and development results are not systematically protected through the EPO, which weakens the international commercial potential of domestic innovations.

LICENCES

Licenses represent one of the key instruments for effectively capitalizing on the results of research and development and commercially utilizing industrial property rights. Based on a license agreement,

the licensor grants the licensee is the right to use a specific invention, design, or know-how within the agreed scope, territory, and time period, usually in exchange for payment or other financial consideration.

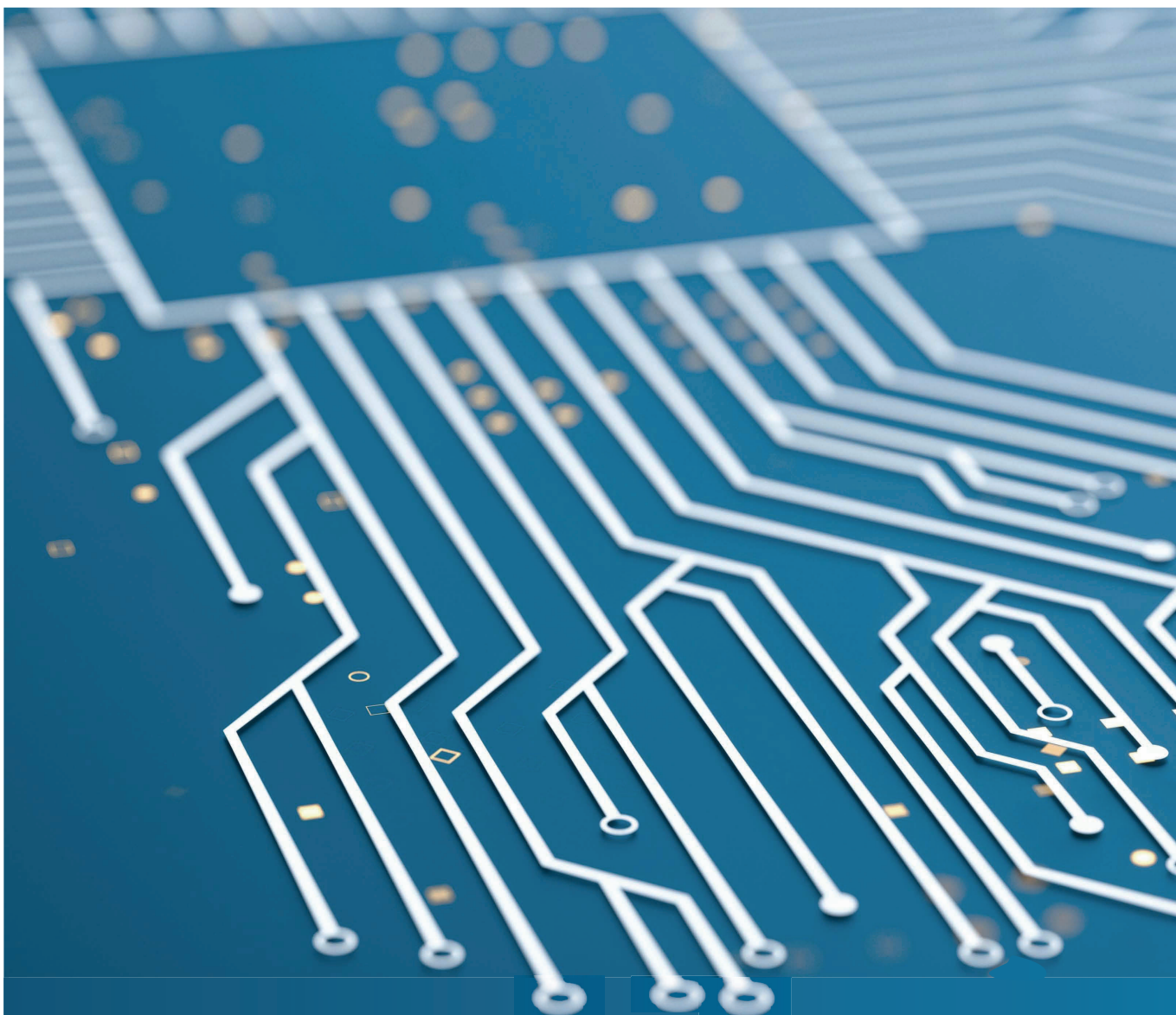
According to the subject, several types of licenses are distinguished:

- **Patent licenses** - the right to use a valid patent in a specific country or countries, e.g., for manufacturing or export.
- **Design licenses** - grant permission to use an industrial or utility design, for example, the design of a component or device.
- **Know-how licenses** - include the transfer of **unprotected technical knowledge, experience, and manufacturing methods**, which are often crucial for implementing innovations in practice.

In 2023, there were a total of 169 entities in the Czech Republic providing 889 licenses for some form of industrial property protection. Providers earned over 3.7 billion CZK from these licenses in 2023, of which 3.5 billion CZK came from patent licenses.

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