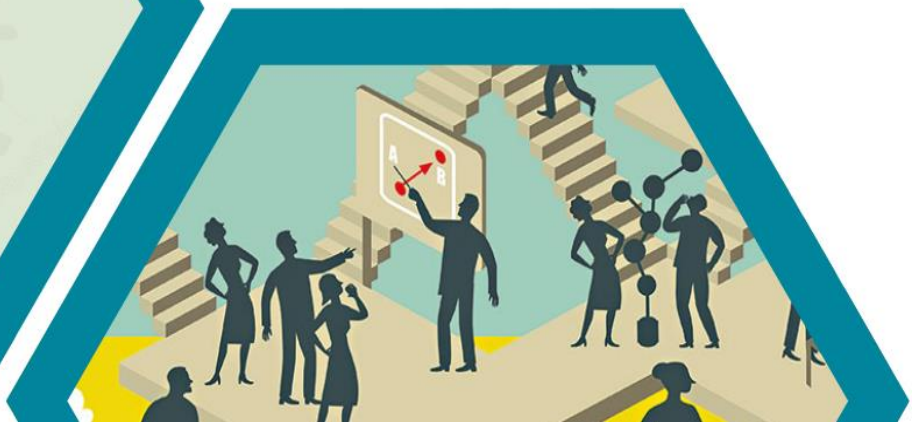
INFORMATIVE REPORT

MEDIUM AND LONG-TERM LABOUR MARKET FORECASTS



2024

INFORMATIVE REPORT

ON MEDIUM AND LONG-TERM LABOUR MARKET FORECASTS UP TO 2040

2024

INTRODUCTION

In order to implement Paragraph 24 of the Protocol Decision No. 48 of 14 July 2009 and Paragraph 11 of the Protocol Decision No. 60 of 8 November 2016 of the Cabinet of Ministers, the Ministry of Economics has prepared the Informative *report on medium and long-term labour market forecasts* (hereinafter – the "Report").

The Report outlines the current situation in the labour market and includes the Ministry of Economics updated labour market forecasts for medium-term period up to 2030 and long-term period up to 2040. The labour market forecasts are based on the economic development and demographic scenarios developed by the Ministry of Economics.

Labour market forecasts drafted by the Ministry of Economics are one of the tools that allow an early anticipation of labour market mismatches in the future. They show possible trends in the labour market development and possible risks if the current education system and education supply structure are retained.

Forecasts are one of the stages in the labour supply adjustment process. They are the quantitative basis for further discussions among employment, education and structural policy makers, social partners, scientists and other stakeholders, in order to prepare and adapt the expected structural changes in the national economy in a timely manner.

The information is outlined in 5 chapters and in the Annex. The Report consists of a characterisation of the economic and labour market trends, description of economic and demographic development scenarios, medium-term and long-term labour market forecasts, an overview of implemented and planned education and employment measures, and also a summary of recommendations on labour demand and supply improvement directions, and an Annex.

All the statistical information, except for the specifically mentioned cases, has been taken from the database of the Central Statistical Bureau. The data provided by the Statistical Office of the European Communities (Eurostat), Ministry of Education and Science, State Employment Agency, and the European Centre for the Development of Vocational Training (Cedefop) have also been used in this Report.

Detailed MoE labour market forecasts, economic growth scenarios and demographic forecasts can be viewed on the website: https://prognozes.em.gov.lv.

ABBREVIATIONS

ALMP	active labour market policy
RRF	Recovery and Resilience Facility
CEDEFOP	European Centre for the Development of Vocational Training
COVID-19	infectious disease caused by SARS-CoV-2 coronavirus
CSB	Central Statistical Bureau
DOM	dynamic optimisation model
LFS	Labour Force Survey
WB	work-based
EC	European Commission
MoE	Ministry of Economics
ERDF	European Regional Development Fund
EU	European Union
ESF/ESF+	European Social Fund (ESF+ in 2021-2027)
GDP	gross domestic product
ICT	information and communication technologies
ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations
IT	information technologies
MoES	Ministry of Education and Science
MoW	Ministry of Welfare
AI	artificial Intelligence
CM	Cabinet of Ministers
SME	small and medium-sized enterprises
SEC	Sectoral expert council
SEA	State Employment Agency
OECD	The Organisation for Economic Co-operation and Development
R&D	research and development
PIAAC	OECD Programme for the International Assessment of Adult Competencies
PPS	Purchasing power standard
REACT-EU	Recovery Assistance for Cohesion and the Territories of Europe
STEM	Science, technology, engineering and mathematics
ILO	International Labour Organisation
ULC	unit labour costs of products

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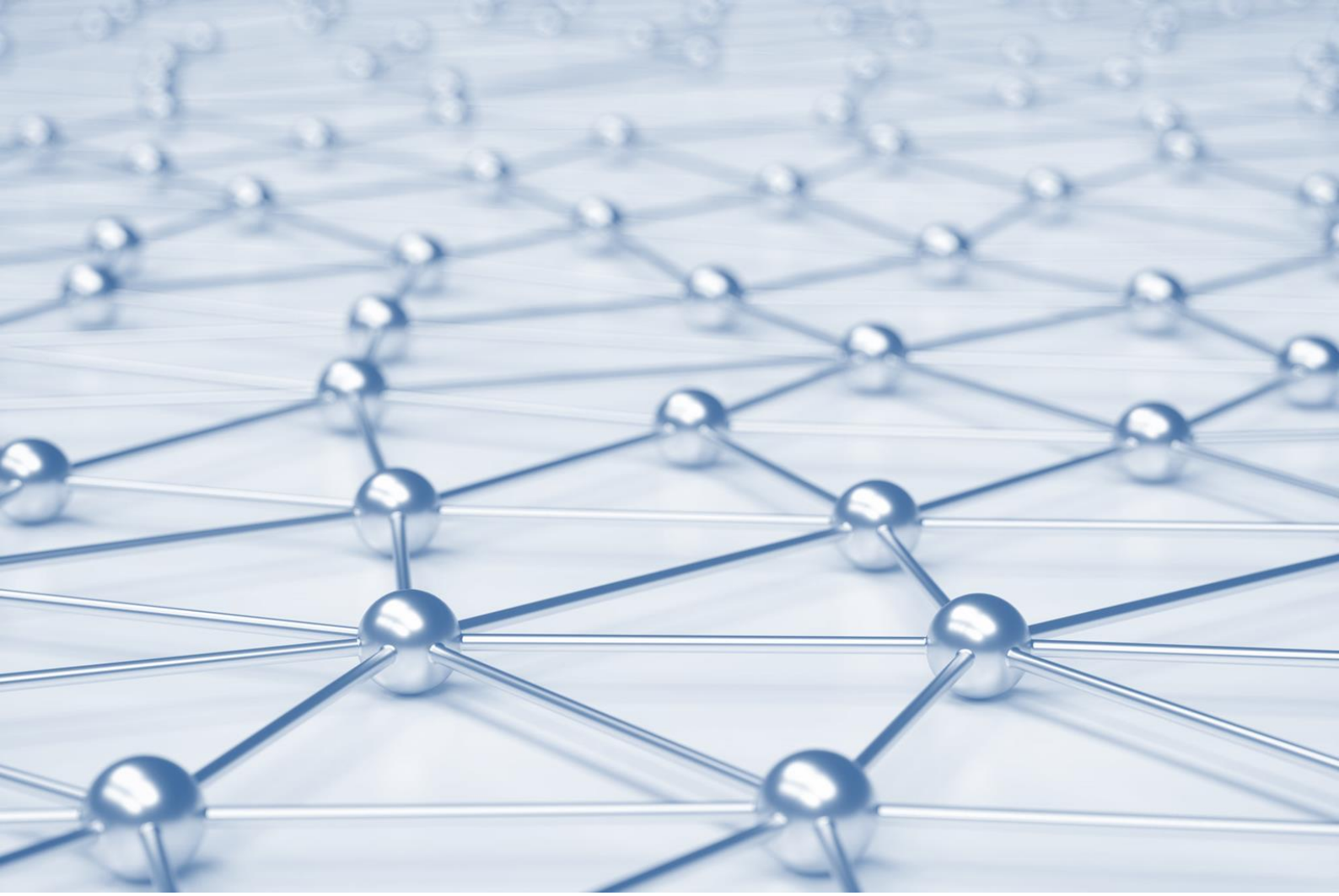


1. ECONOMY AND LABOUR MARKET DEVELOPMENT

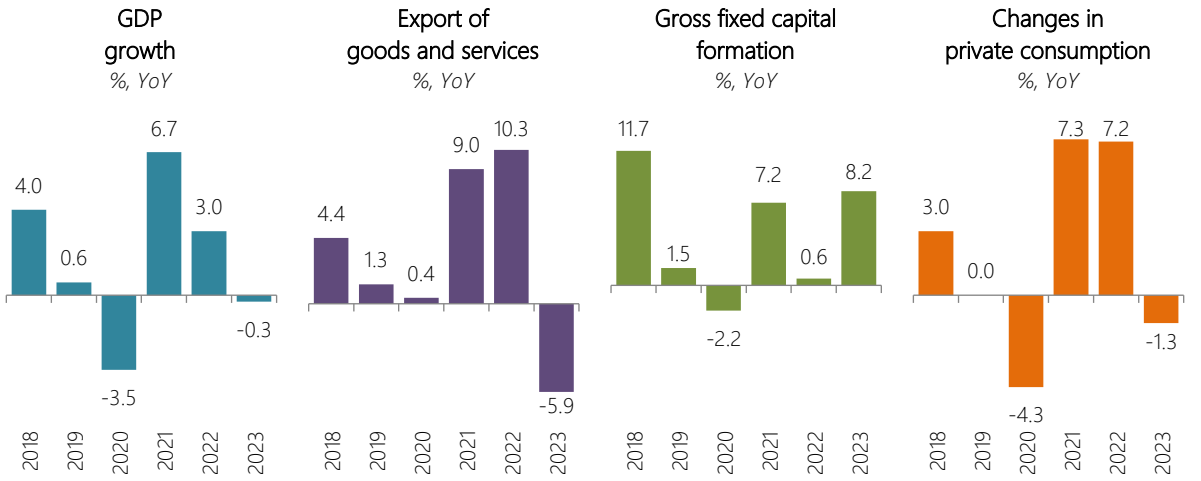
1.1. MACROECONOMIC SITUATION AND DEVELOPMENT OF INDUSTRIES

Stable economic growth in Latvia with rates exceeding the EU average continued until the Covid-19 pandemic. From 2013 to 2019, GDP grew by 2.9% per year on average. The COVID-19 pandemic has had a significant impact on economic development on a global scale and also in Latvia. GDP shrank by 3.5% in Latvia in 2020. The extensive government and EU funds support measures, as well as the improvement of the epidemiological situation in 2021, contributed to the recovery of Latvia's economy, and GDP grew by 6.7%.

After the rapid recovery of the economy from the crisis of the COVID-19 pandemic in 2021, growth in Latvia slowed to 3% in 2022. The economic development in 2022 was significantly influenced by the disruptions in supply chains caused by Russia's invasion of Ukraine, the rise in inflation caused by the cost of energy and food, as well as the decline in global demand. In the first half of 2022, the consequences of the war were not yet felt in full in Latvia. The economy grew 5.4% compared to the first half of 2021. The rise was affected by the low base in early 2021 and the gradual lifting of COVID-19 restrictions. However, in the second half of the year, growth decreased to 0.8%, as the export-import balance deteriorated and the growth rates of private consumption and investments decreased.

In 2023, economic development continued to be affected by the geopolitical situation and uncertainty, high prices and growing interbank loan interest rates. The unfavourable situation in the external environment and weak demand in the main target markets affected Latvia's export performance. High inflation had a negative impact on household consumption and the real income of the population. The geopolitical situation in the region and weak lending hampered a faster increase in investment. In total, GDP shrank by 0.3% in 2023.

Figure 1.1



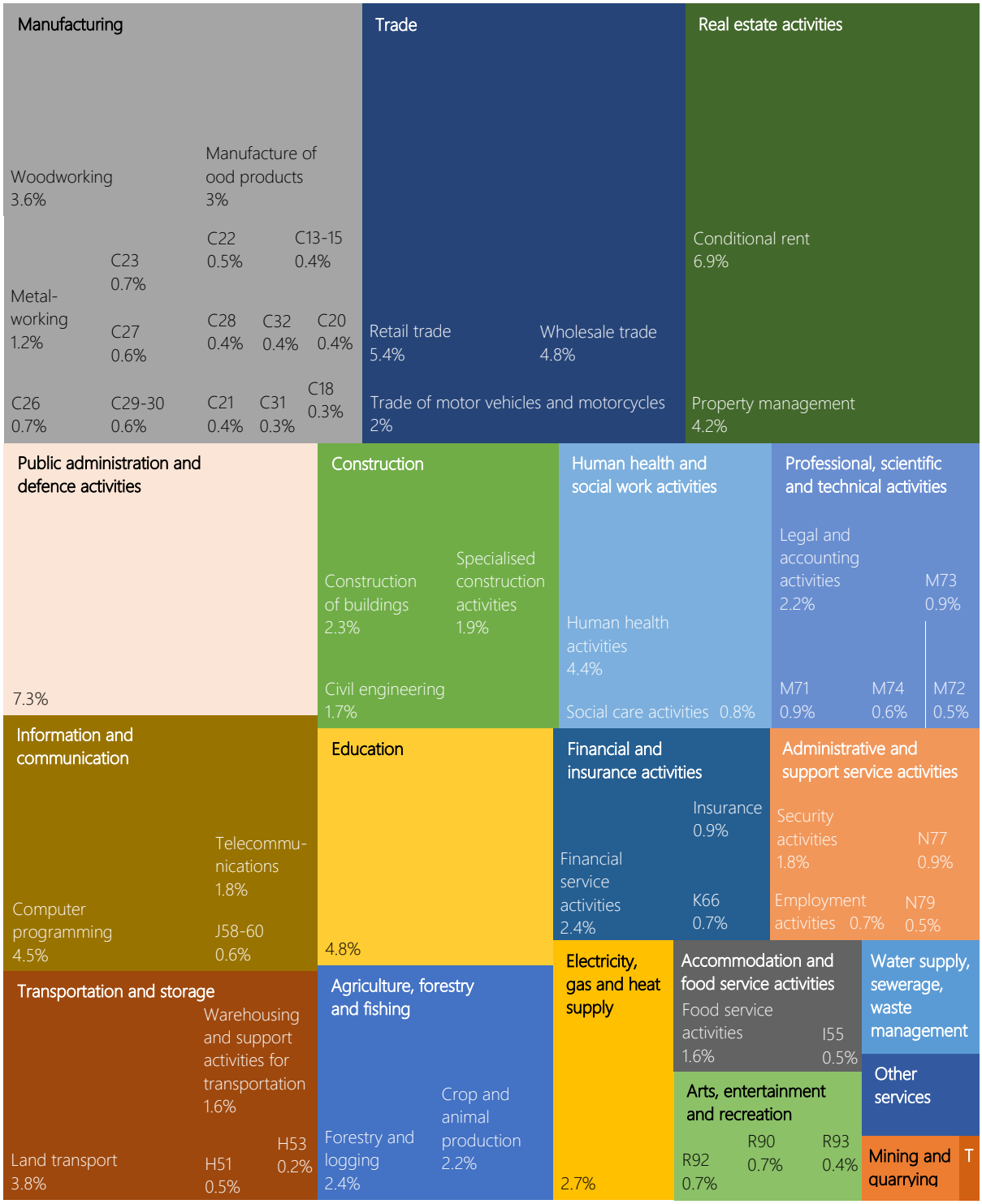
Source: CSB

In 2010, producing sectors (i.e., agriculture, forestry and fishery, industry, and construction sectors) accounted for 27.6%; however, in 2023 – for 28.4% of total value added. In 2023, compared to 2010, the share has increased in construction, business services, and public services. Nevertheless, it has declined in other industry, transportation, trade and accommodation. Meanwhile, it remained practically unchanged in agriculture, forestry and fishery, and manufacturing.

Figure 1.2

Structure of national economy

2023, %*



C13-15 – Light manufacturing; C18 – Printing and reproduction of recorded media; C20 – Manufacture of chemicals and chemical products; C21 – Manufacture of pharmaceutical products; C22 – Manufacture of rubber and plastic products; C23 – Manufacture of other non-metallic mineral products; C26 – Manufacture of computer, electronic and optical products; C27 – Manufacture of electrical equipment; C28 – Manufacture of machinery and equipment; C29-30 – Manufacture of motor vehicles; C31 – Manufacture of furniture; H51 – Air transport; H53 – Postal and courier activities; I55 – Accommodation; J58-60 Publishing activities, Motion picture, video and television programme production; K66 – Activities auxiliary to financial services; M71 – Architectural and engineering activities; M72 – Scientific research and development; M73 – Advertising and market research; M74 – Other professional, scientific and technical activities; N77 – Rental and leasing activities; N79 – Travel agency activities; R90 – Creative, arts and entertainment activities; R92 – Gambling and betting activities; R93 – Sports activities, amusement and recreation activities; T – Activities of households as employers of domestic personnel.

* – calculations by the Ministry of Economics

In 2015-2019, growth was observed in all sectors, with the exception of electricity, gas, steam and air conditioning supply, financial activities and real estate activities. The increase in trade and manufacturing volumes had the largest effect on growth. In 2020, virtually all sectors were negatively affected by the Covid-19 crisis and the biggest impact came from the drop in volumes in most service sectors and construction. As the economy recovered, in 2021-2022, growth was seen in all sectors except construction and other industry. The biggest impact was the increase in volumes in trade and manufacturing. In 2023, as the economy slowed, volumes fell in all manufacturing sectors except construction, but grew in all service sectors except trade, transportation and healthcare. The biggest impact was the increase in volumes in construction and public administration and defence activities and the drop in trade, manufacturing and transportation.

Overall, uneven growth is observed in **agriculture, forestry and fishing**, because the industry is closely linked to weather. In 2022, volumes of the sector increased significantly, underpinned by a rapid increase in volumes in forestry and logging and growing demand for lumber resources. In 2023, the volumes of the industries generally reduced due to unfavourable weather. Production volumes decreased in crop and animal production, forestry and logging, but increased in fishing.

The development of **manufacturing** is fostered by improved competitiveness of Latvian manufacturers, as well as demand dynamics in the largest export markets. Industry growth rates were still comparatively rapid at the beginning of 2022. This was fostered by an increase in manufacturing volumes of metalworking and chemical industry. Shrinking manufacturing volumes could be seen in the industry in the second half of the year when viewed by months. Overall, the growth of manufacturing by 2.7% in 2022 was fostered by an increase in production volumes of metalworking, chemical industry, manufacture of vehicles and other non-metallic mineral products. A picture similar to that seen in the second half of 2022 was observed also in 2023, and production volumes in manufacturing generally decreased by 5.2% during the year. The decline in output of sub-sectors was significantly influenced by a decline in wood processing volumes and more moderately – by drops in output volumes in manufacture of finished metal products, other non-metallic mineral products, manufacture of furniture and manufacture of basic pharmaceutical products and preparations. Positive trends during this period were observed in sub-sectors of the food industry, manufacture of electrical and computer, electronic and optical products. In 2023, manufacturing turnover at current prices decreased by 2.6%. Volumes of products sold in the domestic market grew slightly, while volumes of exported products reduced.

Other industries (mining, electricity and gas supply) reduced rapidly in 2022-2023, underpinned by the drop in electricity and gas supply sectors as natural gas supplies from Russia stopped, production of electricity and the amount of heat produced in combined heat and power plants reduced considerably because of higher average air temperature during the heating period, as well as austerity measures due to high energy prices. A rapid decline was also observed in mining and quarrying caused by the reduction of volumes in quarrying of gravel and sand, and extraction and processing of peat.

The development of the **construction sector** is very cyclic and is mainly related to public orders and projects of the EU funds. A decline of 11.3% was observed in the construction sector in 2022 as investments in construction reduced and construction costs increased. Rising prices hindered both existing construction projects and the commencement of new ones. In 2022, pressure on construction costs was stepped up by Russia's invasion of Ukraine, which considerably reduced the availability of individual construction materials, as well as considerably increased the costs of energy sources. In 2023, however, the construction sector saw a rapid recovery after several years of decline and was the main positive factor in GDP development. Construction of buildings and specialised construction activities were the main development drivers of the sector.

Trade was positively influenced by an increase in private consumption, considering the gradual increase in population income. In 2022, trade was negatively affected by the decrease in turnover of goods with Russian and Belarusian markets due to sanctions imposed in the EU, which resulted in a sharp decrease in wholesale trade volumes (at constant prices). Overall, trade volumes decreased by 6.1%. In 2023, trade continued to be negatively affected by the unfavourable situation in the external environment and trade volumes reduced by 5,1%. The increase in consumer prices exceeded the increase in income, real income of the population shrank and negatively affected household consumption. Retail trade turnover shrank by 1.9% in 2023. The retail turnover of food products reduced at the fastest, the turnover of non-food products – more moderately, but the turnover of fuel increased.

Transportation and storage is closely linked to international transport. After growth in 2021-2022, volumes of the transportation industry have shrunk in 2023 due to a drop in all transportation sub-sectors, except air transport. Volumes of services declined at the fastest pace in land transport, transport via pipeline, and warehousing and support activities for transportation. Volumes of freight carried reduced in all modes of transport, underpinned by

the drop in the volume of freight carried in international transportation. In 2023, passenger transport has grown most rapidly in air transport – by 23.2%, it increased by 15.4% in land transport and by 2.5% in ports.

In 2021-2022, volumes of business services rose in the **sectors of business services** as they recovered from the COVID-19 crisis. Volumes of services increased in all sectors, except in 2022 a decline was observed in financial and insurance activities after a sharp rise in 2021, when revenues from commission fees, financial instrument transactions and insurance activities increased. The increase in information and communication services had the biggest impact. In 2022, rapid increase rates were also observed in arts, entertainment and recreation, one of the sectors hit the hardest by the COVID-19 restrictions. In 2023, a moderate increase was observed in business services. Volumes increased in all business services sectors. The biggest impact was the increase in real estate activities, arts, entertainment and recreation and information and communication.

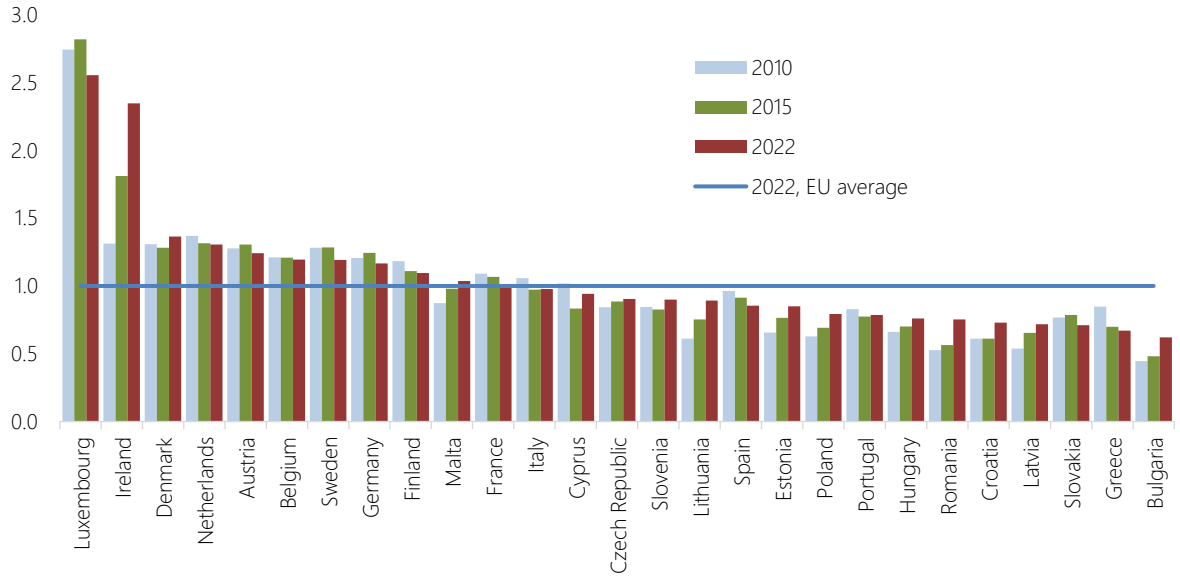
In **sectors of public services** volumes of services provided increase according to the increase in total general public budget expenditure. In 2020-2021, total volumes of services showed a moderate increase, while in 2022 total volumes of services increased rapidly. This process was the most rapid in education services and public administration and defence activities, while they increased moderately in human health and social work activities. Public consumption to increase the defence capabilities of the state, health and education has been growing in recent years. Also in 2023, total volumes of services continued to increase rapidly. Volumes continued to increase rapidly in education, public administration and defence activities, but volumes of human health and social work activities shrank.

Latvia compared to the EU

Figure 1.3

GDP per capita according to PPS in European Union Member States

2022, % of the EU average



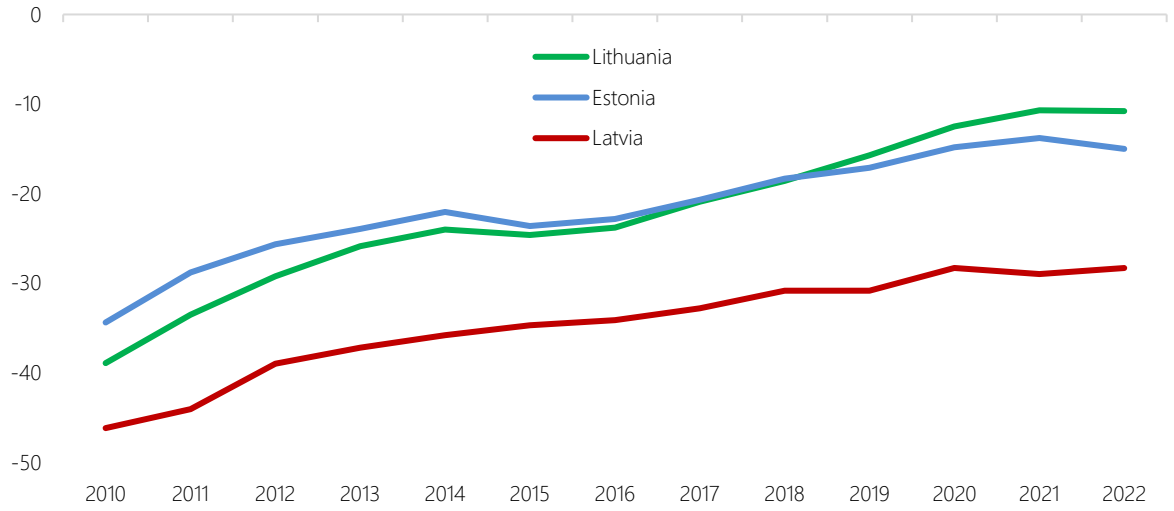
Source: *Eurostat*

In 2022, Latvia's GDP per capita (calculated at current prices according to PPS) stood at 72% of the EU average. Latvia was 24th according to this indicator among EU countries lagging behind Estonia (18th) and Lithuania (16th). Latvia's lagging behind the EU average GDP per capita decreased by almost 18 percentage points from 2010 to 2022. Convergence was mainly driven by a faster GDP growth rate than the EU average.

Figure 1.4

GDP per capita of Baltic States

at current prices according to PPS, % of the EU average



Source: *Eurostat*

During the COVID-19 pandemic, the convergence rates of Latvia and Estonia slowed and remained almost unchanged until the end of 2022, while Lithuania's convergence rates have remained unchanged since 2016 (around 2% per year). It should be noted that Lithuania's and Estonia's overall lagging behind the EU average is much lower than Latvia's (-10% and -15% respectively, while Latvia lags behind by 28%). Lithuania and Estonia have had the fastest growth rates among the Baltic States since 2010 (2% per year on average, while Latvia's growth rate is 1% per year on average).

1.2. EMPLOYMENT AND UNEMPLOYMENT OF THE POPULATION

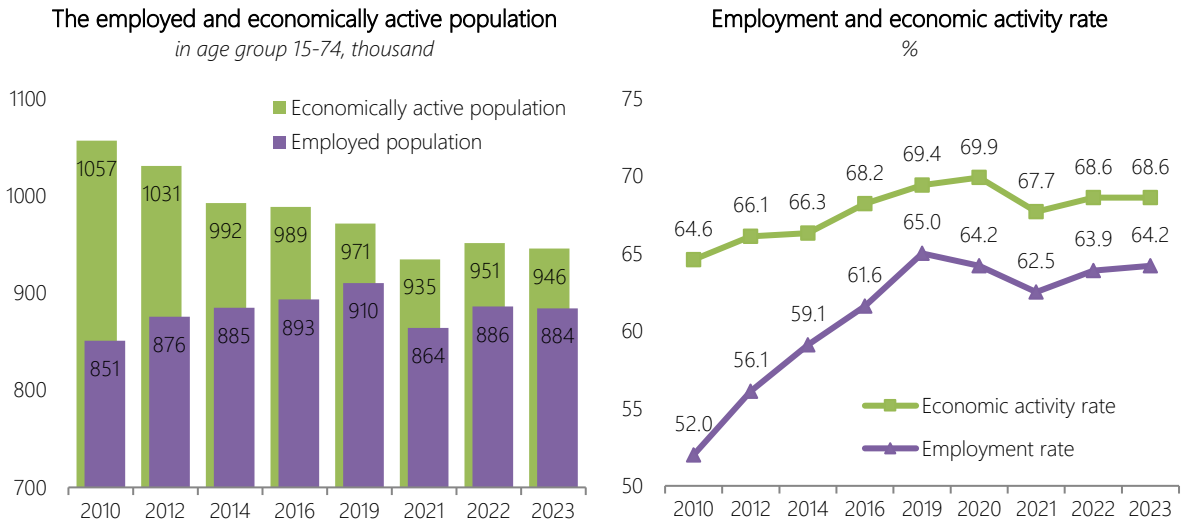
With the recovery from the COVID-19 pandemic, employment growth has resumed, as well as unemployment continued to fall in 2022. As labour demand grows, the shortage of workers is becoming more sensitive. This is evidenced both by the return of unemployment indicators to pre-crisis (2019) levels and by the increase in vacancies and workplace load. The COVID-19 pandemic as a whole has had a negative impact on the economic activity of the population, which, along with demographic processes, narrows the labour market supply and increases the risks of labour shortages.

However, while the employment rate is growing, overall demand for the labour force remains limited and there is still a slight decrease in the number of occupied jobs. As pressure from the labour supply side increases, both in terms of access to human resources and in terms of remuneration, it is increasingly difficult for employers to create new jobs and attract employees.

In 2023, the total number of people employed was 2 thousand or 0.2% lower than in 2022. The decrease in employment was largely influenced both by the slowdown of the economic growth rate and by the factors of the labour market supply side – the decrease of the working-age population, as well as the decrease of the total labour supply. Also, the need for labour force is replaced by the increase in productivity even more, and thus the number of employees required for performing a specific job reduces. In total, 884.2 thousand people aged 15 to 74 years were employed in 2023. However, the number of occupied jobs decreased only by 0.1%.

The share of the employed in the total population in 2023 was 64.2%, 0.3 percentage points higher than in 2022, and it is 0.8 percentage points below the pre-crisis level (2019). After a sharp decline in the economic activity of the population in 2021, participation of the population in the labour market increased in 2022, while it remained unchanged in 2023. In 2023, the economic activity rate of the population aged 15-74 was the same as in 2022 and 0.9 percentage points higher than in 2021.

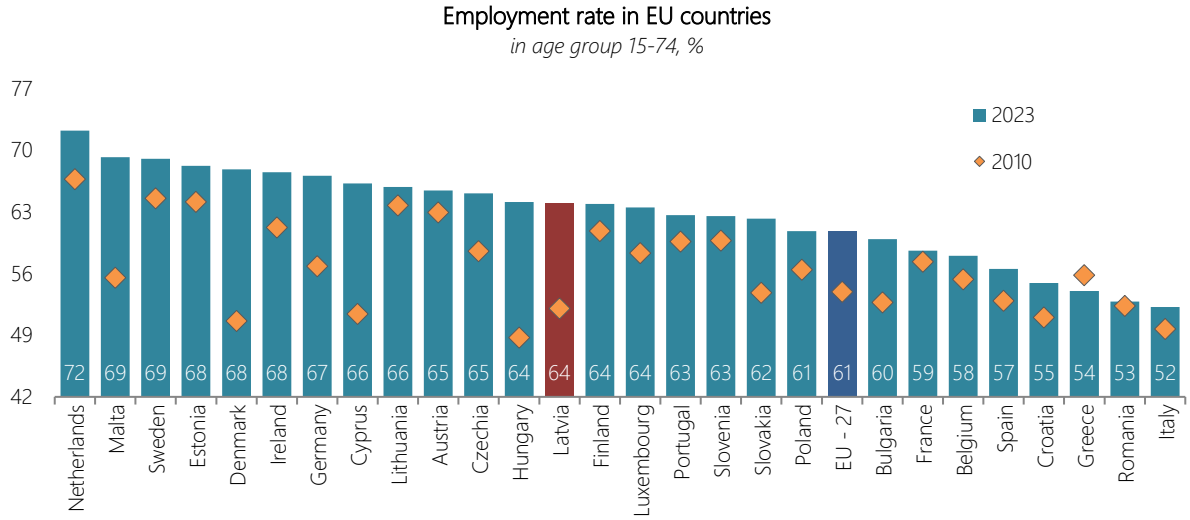
Figure 1.5



Source: CSB

Overall, the employment rate among the population aged 15 to 74 in Latvia in 2023 was 3.1 percentage points higher than the EU average. Since 2010, the increase in the employment rate in Latvia has been one of the most rapid in the EU. However, it should be taken into account that the employment rate in 2010 in Latvia, like in other countries, reached its lowest point after the financial crisis of 2008, therefore the changes in the indicator are partially related to the low base effect of the employment rate in 2010.

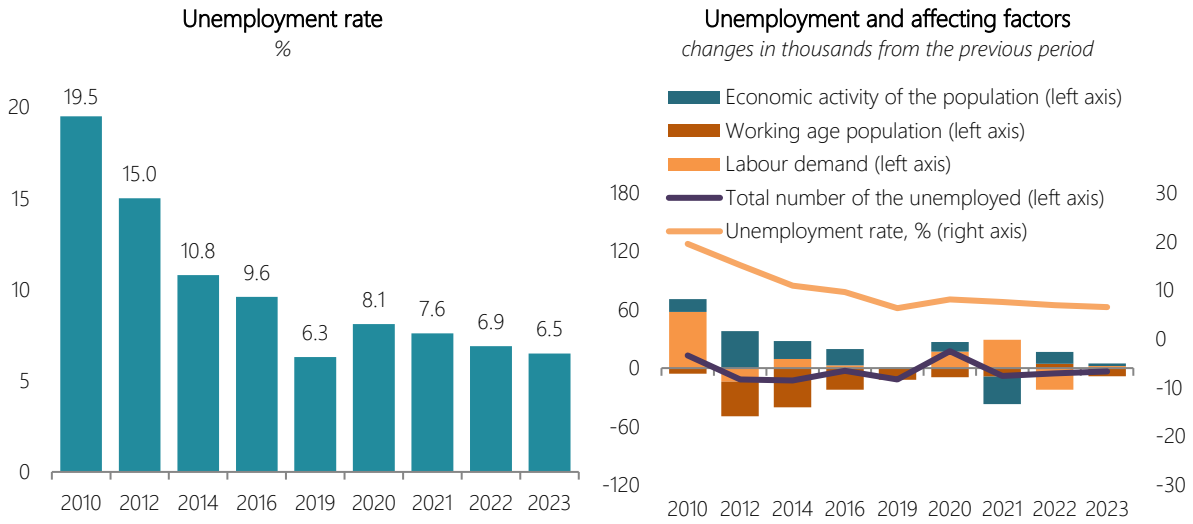
Figure 1.6



Source: *Eurostat*

Considering the slowdown in labour supply, the decline in unemployment is also generally slowing down. Yet, despite all that, unemployment rates remain low and close to pre-pandemic (2019) rates. The unemployment rate fell to an average of 6.5% in 2023, which was 0.4 percentage points less than in 2022 and 13 percentage points less than in 2010. Overall, the number of unemployed declined to 61.5 thousand in 2023 – 3.7 thousand less than in the previous year. The decline in unemployment was mainly affected by the reduction in economic activity of the population, as well as demographic processes – the decline in the working age population and changes in the age structure of the population – continues to have a significant effect.

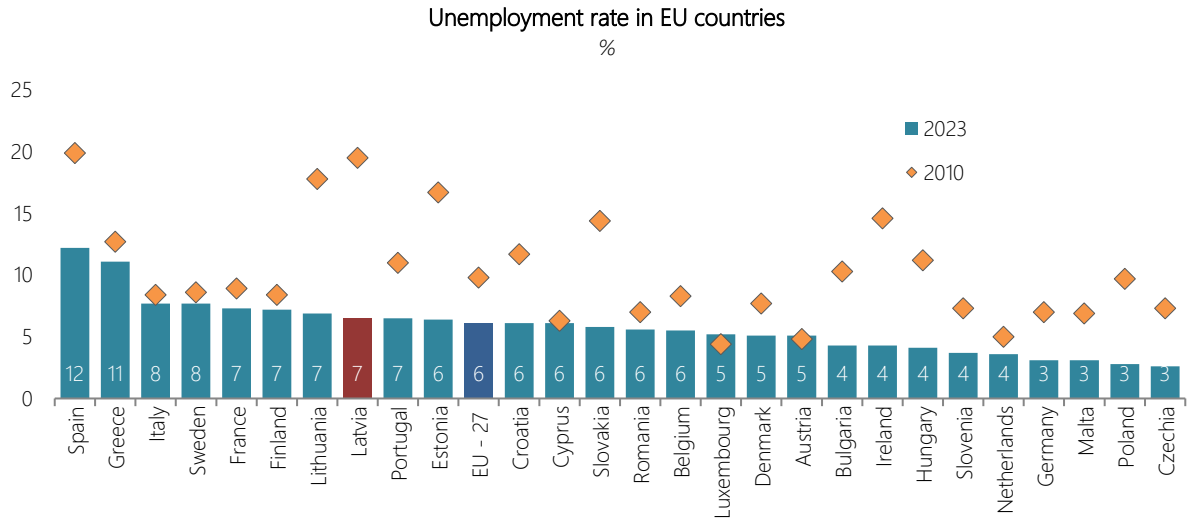
Figure 1.7



Source: CSB

In 2023, the average unemployment rate in the EU Member States was 6.1%. In comparison with 2010, the unemployment rate decreased rapidly in all three Baltic countries and, in 2023, it was below the EU average, however, it was higher than the EU average in all Baltic countries.

Figure 1.8



Source: *Eurostat*

Despite the decline in unemployment, there is still a risk that some of the unemployed may have problems finding jobs that match their skills since the complete recovery in the sectors that had most jobs in the previous years might be long, but in sectors where job opportunities are created, skills previously acquired will not necessarily be required. It should also be considered that long-term unemployment can cause structural unemployment risks, namely, the longer this person is unemployed, the greater the risk of losing job skills and abilities, and the more difficult it is to adapt to new labour market requirements. Similarly, structural problems are exacerbated by regional differences in the labour market, which together hinder the recovery of the labour market. Although regional disproportions are gradually converging, the process is still slow. Distinct problems have long been observed in the Latgale region, where the unemployment rate is almost twice as high as the average rate in the country, which, amid the low geographic mobility of the labour force, increases the risks of structural unemployment.

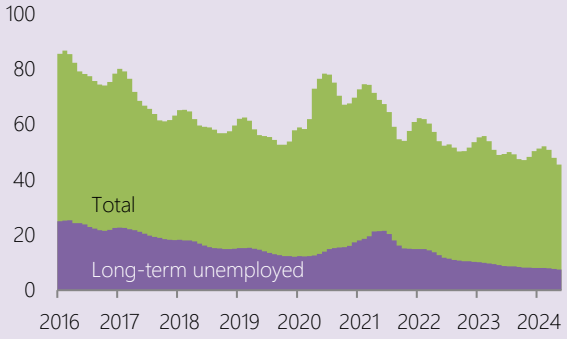
Job seekers and vacancies registered with the SEA

The number of job seekers registered with the SEA continues to decline, as does total unemployment. The registered unemployment rate fell to 5.1% in mid-June 2024, while the total number of registered unemployed fell to 44.8 thousand in that period.

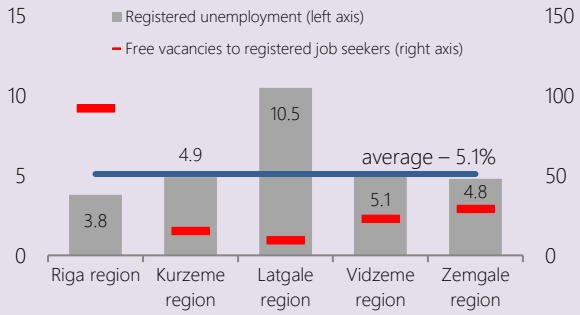
Positive trends are also observed in the dynamics of the long-term unemployed. Both the number of long-term unemployed and their share in the total number of job seekers is gradually decreasing. The number of long-term unemployed registered during the year has decreased by more than 18% or approximately 1.7 thousand, it reduced by 65% or approximately 14 thousand compared to the highest number of long-term unemployed in recent years in June 2021, which is a general indication of a more pronounced decrease of labour stock. In May 2024, 7.5 thousand registered job seekers or about 16.4% of all registered unemployed were unemployed for more than one year.

The number of vacancies registered at SEA also remained at a relatively high level. While the number of vacancies has been on a declining trend in recent years and the number of vacancies has fallen by more than 1/3 since mid-2022, it should be noted that the number of job seekers has also fallen significantly and many of the vacancies have been filled. The most significant number of vacancies in June 2024 was in construction, industry and transportation. However, the largest number of vacancies was registered in assistants, construction workers, as well as truck occupations.

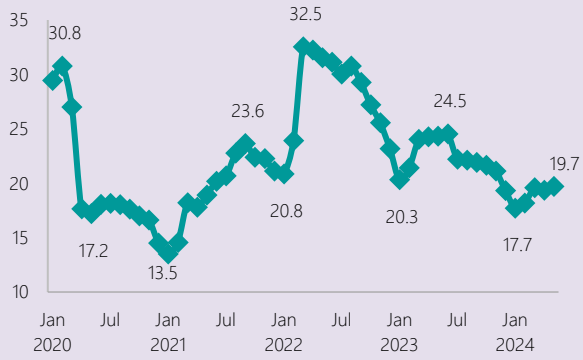
Number of registered job seekers
thousands



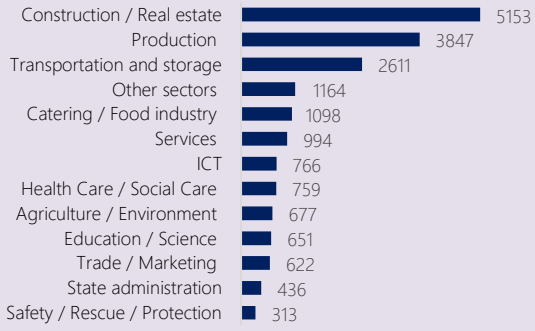
Registered unemployment rate and vacancy/job seeker ratio by region on 17 June 2024, %



Number of current vacancies at the end of the month
thousands



Number of vacancies by sector on 17 June 2024



TOP 30 occupations most in demand from 1 January to 17 June 2024 **

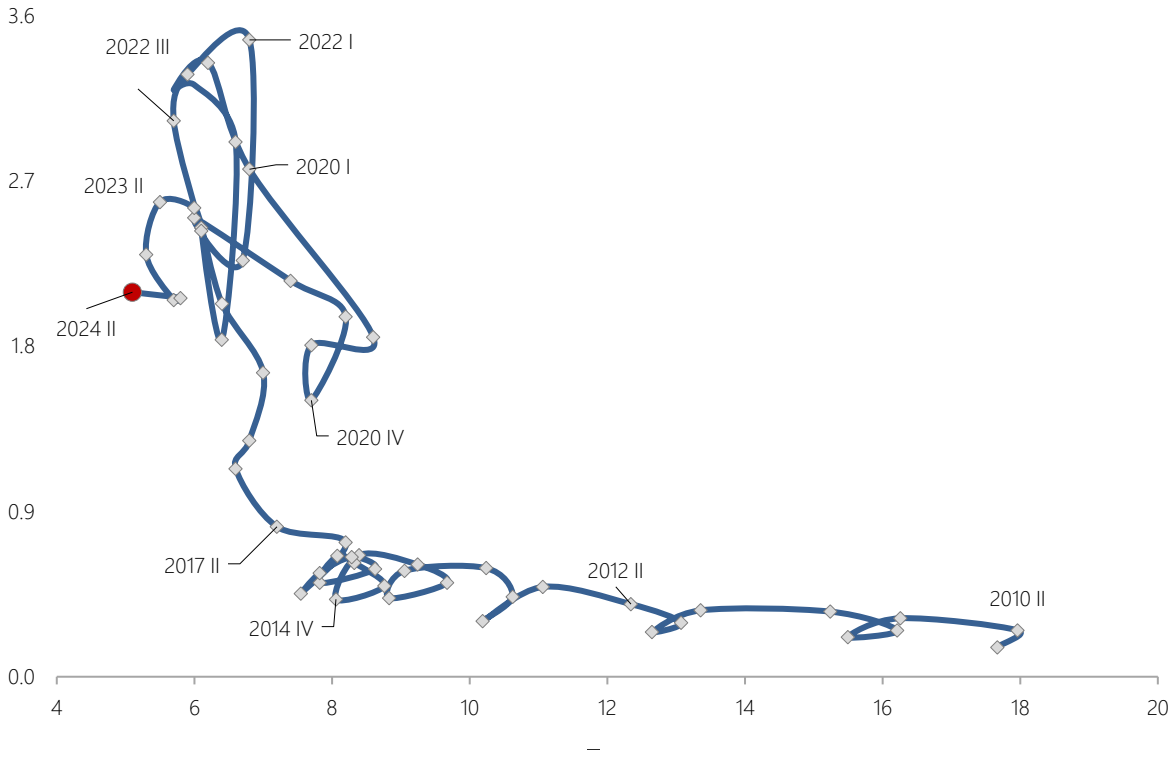
** Occupations with most vacancies registered in SEA in the period from 1 January – 17 June 2024
Source: SEA, MoE calculations

Some proof of the formation of structural unemployment can be obtained using the Beveridge curve, which represents the interrelated dynamics of unemployment and free workplaces. During the financial crisis – in 2009 and at the beginning of 2010, unemployment grew, but the number of vacancies remained practically unchanged. Unemployment reached its peak in Q2 2010. An upward change in the direction of the Beveridge curve can be observed from Q3 2010 to the end of 2016, which shows a change in the economic phase cycle and the improvement of the situation in the labour market. Employment was increasing gradually, and the number of job seekers and inactive persons had declined. The shift on the curve is the same as the drop in the number of jobs during the crisis, which demonstrates a cyclic decline in the unemployment. The decline in the unemployment rate was related to an increase of economic activity.

Figure 1.9

Beveridge curve in Latvia

2010-2023, vertical axis – number of vacancies to economically active population; horizontal axis – unemployment rate



Source: CSB, SEA

From 2017 to 2022, the number of vacancies was growing faster than the unemployment rate reduced and this generally marked an increase in structural problems in the labour market – the number of unfilled vacancies in the labour market increased despite unemployment. It should be noted that the COVID-19 crisis has generally accelerated structural changes in labour demand accelerating automation of workplaces in labour-intensive industries – mainly reducing the demand for low- and medium-qualification workforce without professional skills and increasing the share of jobs requiring higher qualification, in particular in information and communication services.

Since 2022, the number of vacancies in the labour market has decreased and unemployment continues to decrease as well, thus the overall situation in the labour market in Latvia has become more balanced – employers are using opportunities to attract employees increasingly more even if their qualifications do not fully conform to the specifics of the work or if the employee's residence is in a different region than the workplace.

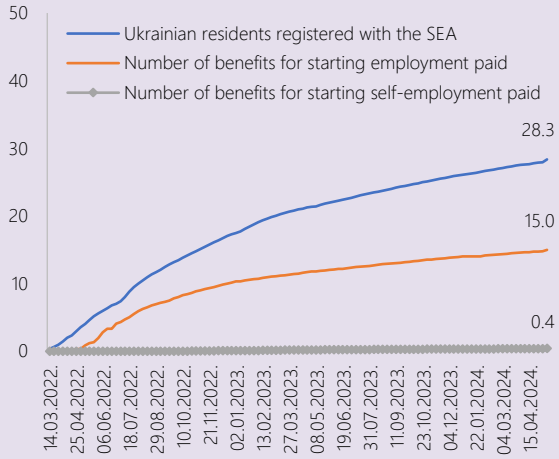
Labour shortages have also been reduced by the involvement of Ukrainian people in the labour market. However, it should be noted that along with the decrease in the inflow of Ukrainian war refugees, this positive effect of the flow on the dynamics of labour supply is gradually waning. Some of the war refugees are returning home, so the negative impact of demographic factors on the dynamics of labour supply could become more pronounced again in the coming years.

Ukrainian residents registered with SEA

On 24 February 2022, Russian aggression against Ukraine began, forcing 4.2 million Ukrainian civilians to flee. In order to provide immediate and collective protection, the EU activated the Temporary Protection Directive in March 2022. Rights under the temporary protection mechanism include residence permits, access to the labour market and housing, medical assistance and access to education for children. According to *Eurostat* data, 44,960 Ukrainian civilians were admitted to Latvia as persons subject to temporary protection by the end of April 2024.

In order to facilitate the integration of Ukrainian civilians into the labour market of Latvia, starting from 7 March 2022, a benefit for starting employment of EUR 500, but starting from 3 October 2022 was provided, a benefit for starting self-employment in such amount was also provided. The amount of both benefits was increased to EUR 620 in 2023 and to EUR 700 in 2024. Between 7 March 2022 and 3 June 2024, 28,347 Ukrainian civilians registered with the SEA, of whom 14,965 persons received the benefit for starting employment and 391 persons received the benefit for starting self-employment. As the flow of refugees from Ukraine is relatively stable, an average of 1,600-1,800 Ukrainian civilians are registered with the SEA at the same time, about 70 per cent of whom are women and 30 per cent are male. About ¼ of these people are over 50. By 3 June 2024, 3,667 people were involved in active employment measures offered by the SEA, including 697 people – in learning the official language. As of 3 June 2024, 1531 Ukrainian residents were registered with the SEA, of whom 1409 persons were in search of jobs. At the same time, the number of vacancies offered by employers to Ukrainian residents on 3 June 2024 was 965.

Ukrainian residents registered with the SEA and number of benefits for starting employment paid to them
thousands



Ukrainian residents registered with the SEA – job seekers and offered vacancies
as of 03.06.2024

By analysing the information of the SEA and the State Revenue Service regarding the employment of Ukrainian civilians, it can be concluded that, by the end of December 2023, 53% of the recipients of employment benefits continued working for the same or another employer in Latvia, while 35% worked for the same employer. Promoting the employment of Ukrainian civilians in high-qualification occupations is a topical matter, as many unemployed people have higher education. Data from the State Revenue Service show that ongoing legal employment relationship with 8,721 Ukrainian civilians in 9,185 jobs was declared by 3,073 employers as of 31 December 2023. At the end of 2023, the employment rate of Ukrainian civilians (the share of employed persons at working age (18-65 years)) amounted to 43%. At the end of 2023, 630 Ukrainian civilians, performers of economic activity, stayed in Latvia.

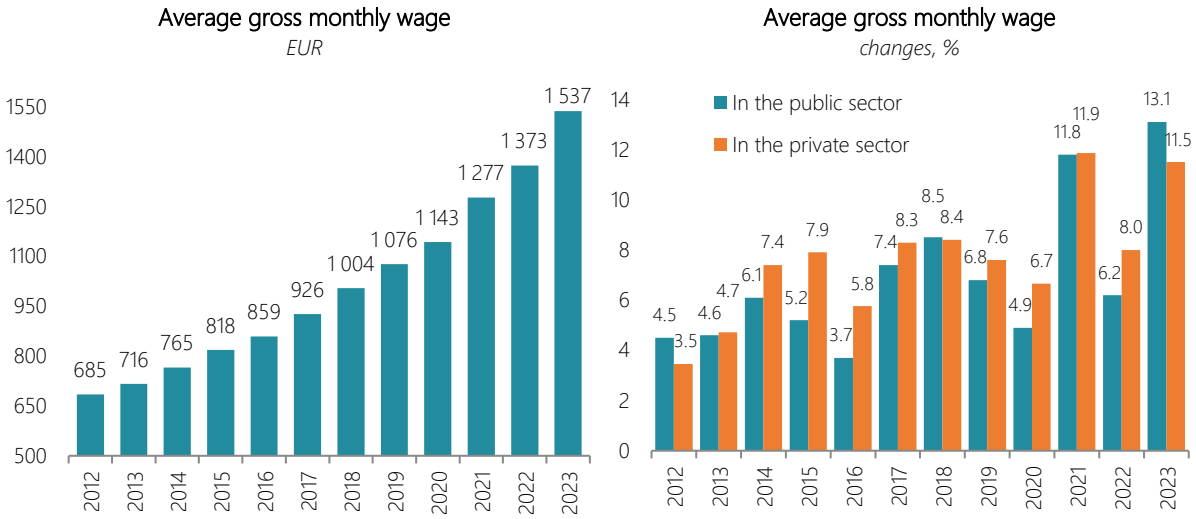
Source: SEA

1.3. WAGES AND PRODUCTIVITY

In light of improvements in the labour market and increasing labour shortages, since 2013 gross wage growth has remained stably above 4.5% per year and reached the fastest growth in recent years in 2023, with gross wages increasing by 11.9%. In 2023, the average gross wage reached EUR 1,537. Its increase was largely affected by the increase in labour demand, the decline in the working age population, as well as the reduction in the purchasing power of the population, which put pressure on wages. The gross wage has risen by 18.7 per cent compared to the pre-pandemic level of 2019.

In recent years, the difference in wages in the private and public sector has reduced rapidly. If the average gross wage in the private sector (EUR 623) was EUR 183 lower than in the public sector (EUR 806) in 2008, then, in 2023, the average gross wage was EUR 1,553 in the public sector and EUR 1,533 in the private sector.

Figure 1.10



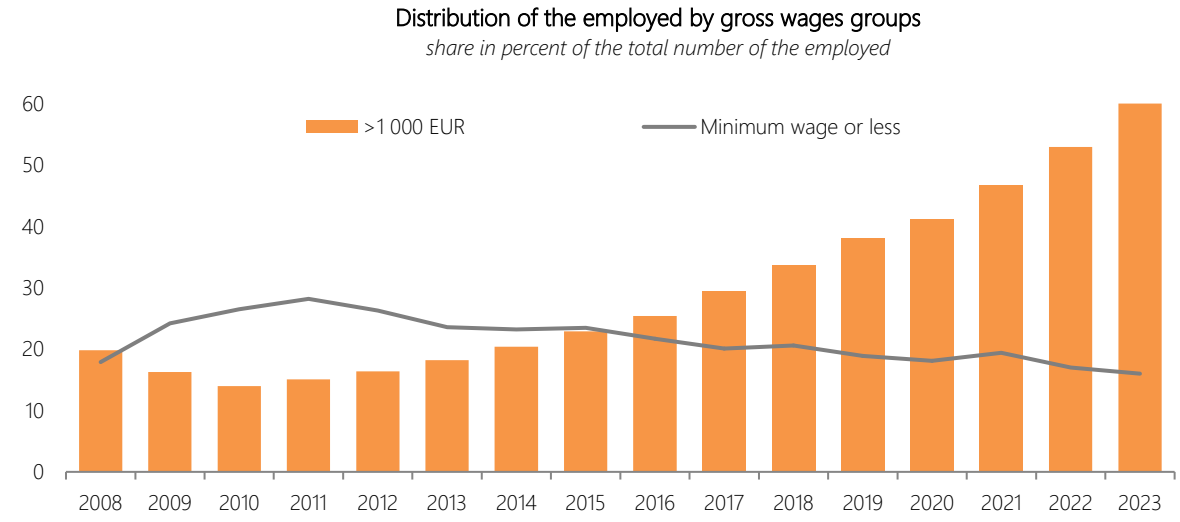
Source: CSB

Along with an increase in the nominal wage, real wages are also increasing gradually. In 2013-2016, the increase in real wages became more rapid. This has been primarily driven by the rapid rise in nominal wages, as well as the moderate increase in consumer prices. As inflation was growing rapidly, the real wage increased by 8.7% in 2022, while a small increase in real wage (by 2.2 per cent) was observed as inflation stabilised in 2023.

In recent years, the share of people receiving the minimum wage has been reducing and the number of employed receiving a wage over EUR 1,000 per month has been growing. The share of the group of people who receive EUR 1,000 or more reached already 60% of the total number of employed in 2023.

Wages have in fact been growing in all sectors of the economy since 2013, however, their dynamics varied. In 2023, the fastest growth of wages was observed in agriculture, forestry and fishing – 18.2%. Similarly, in 2023, a comparatively rapid increase in gross wages was observed in electricity, gas and steam supply (17.5%), transportation and storage (15.6%), and public administration and defence activities (15%).

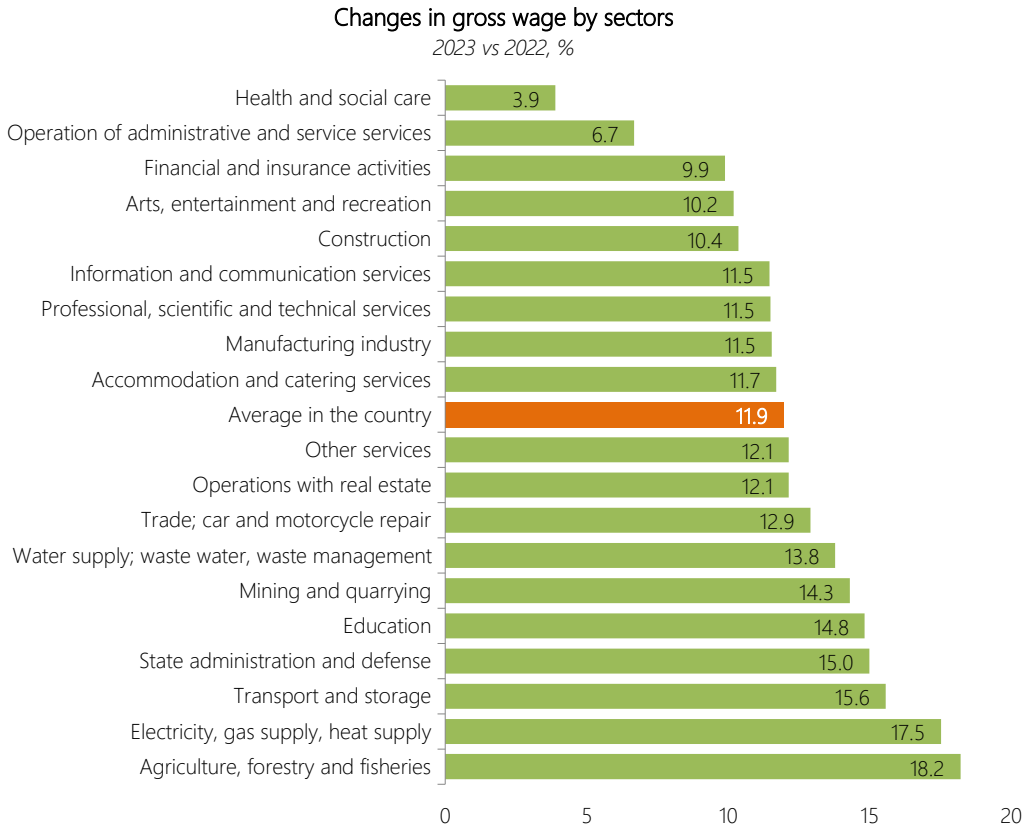
Figure 1.11



Source: CSB

The highest gross wage was still in financial and insurance activities – EUR 2678, which is almost twice higher than the average wage in the national economy. At the same time, the smallest wage in 2023 was in accommodation and food service activities – EUR 993.

Figure 1.12



Source: CSB

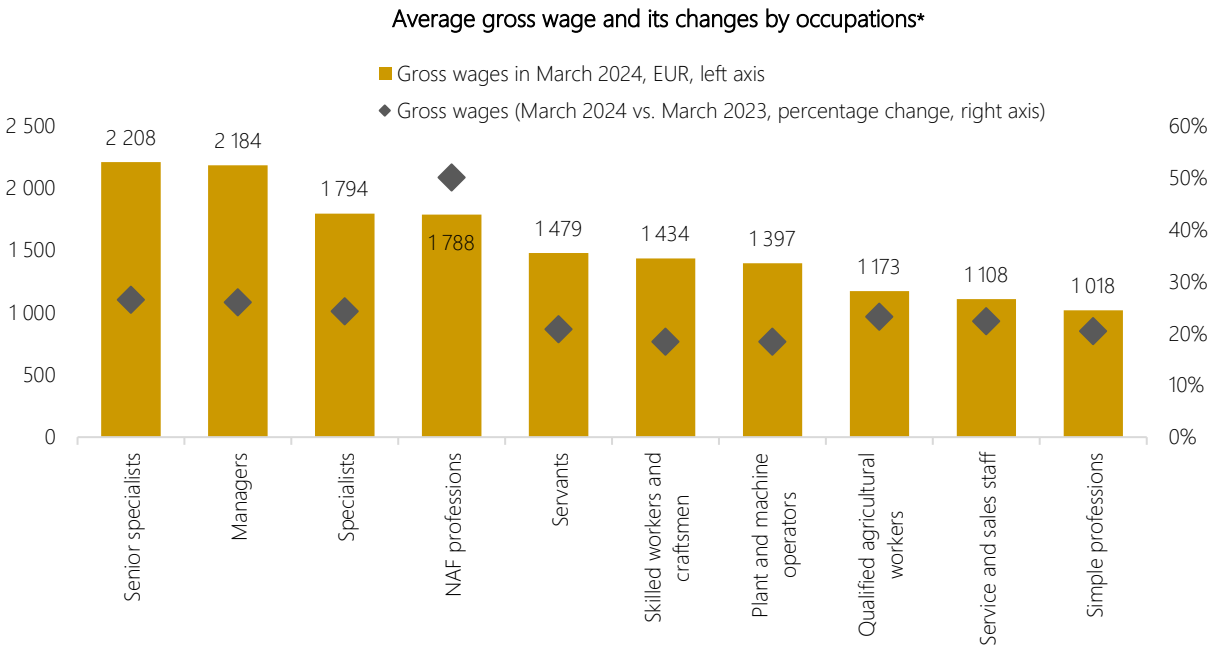
The average gross wage in human health and social work activities and administrative and support service activities increased by 3.9% and 6.7%, respectively, in 2023, compared to 2022, which, taking into account the rapid increase in wages, is considerably below the average increase in wages in the country. The most rapid increase in wages was observed in agriculture, forestry and fishing, and electricity, gas and steam supply.

At the beginning of 2024, compared to the respective period of the previous year, wages grew rapidly also by occupations. Wages were growing in all major groups of occupations. The fastest growth of wages was observed in NAF occupations (50.1%). Wages in major groups of professionals (26.5%), managers (26%) and technicians and associate professionals (24.3%) increased as well. The highest increase in wages was observed also in other major groups of occupations (an increase of about 20%).

Labour costs are a significant factor of competitiveness; therefore wage growth must be balanced with the increase in productivity. Latvia is in one of the leading positions by productivity growth rates among the EU Member States, yet wages have been growing faster than productivity, thus weakening the competitiveness of Latvian entrepreneurs in the field of costs. The increase in nominal unit labour costs (ULC) also evidences of the growing risks of losses in cost competitiveness.

Productivity rates tend to decrease in the long term, while the increase in labour costs remains persistently high. The most rapid increase in productivity was observed before 2008, after Latvia acceded to the EU, which became a significant incentive for the inflow of foreign investments. From 1996 to 2007, the convergence process accelerated – the productivity gap among the EU-15 countries fell by almost 26 percentage points.

Figure 1.13



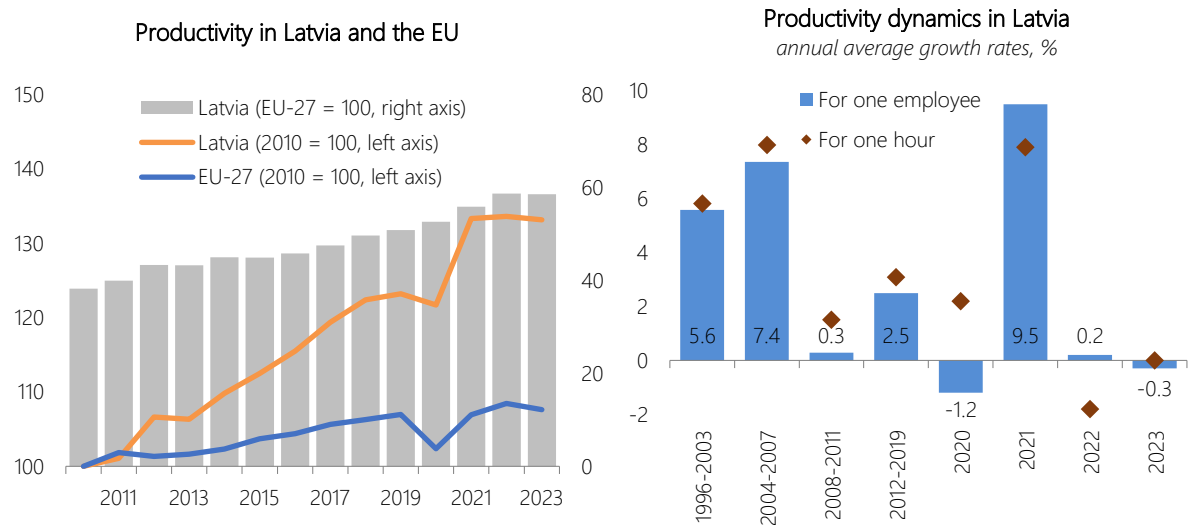
Source: State Revenue Service
* The average gross salary is calculated based on the full-time equivalent (160 hours of work per month)

The global financial crisis influenced not only the decline in economic activities, but also productivity dynamics. In the years of economic recession (2008-2010), it reduced by almost 3%, which was rather moderate compared to the drop in GDP (by 17.4%). This was mainly due to the rapid adjustment of the labour market to the drop in economic activities. As employers optimised the attraction of resources, entrepreneurs reduced labour demand, and the number of employees shrank by nearly 15 per cent, which partially offset the drop in productivity.

The global financial crisis has weakened Latvia's production capacity, which is reflected in the moderate productivity dynamics. Productivity was growing 2.5% per year on average from 2012 to 2019, which is almost twice slower than before the crisis. The financial crisis has worsened access to credit, hampering the transformation of labour and capital into science-intensive activities.

Productivity dynamics have been volatile in recent years. They are determined by adjustments in product and labour markets in response to external shocks.

Figure 1.14



Source: *Eurostat*

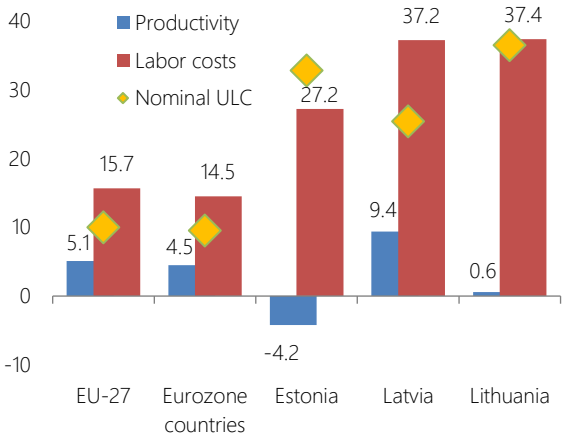
In 2020, the COVID-19 pandemic brought a strong and lasting global impact on the economic situation. Like in nearly all countries around the world, in 2020, due to the COVID-19 pandemic, the economy of Latvia was in recession. However, its impact on productivity is uncertain. It decreased in terms of the number of employees by 1.2%. In terms of the number of hours worked, productivity has increased by 2.2%, which is slightly below the trend of the last decade. Markedly different fluctuations in productivity rates in the first year of the COVID-19 pandemic were largely affected by state support for the preservation of jobs, mainly in the form of subsidised wage schemes, which contributed to the preservation of jobs, while the number of hours worked reduced. In 2021, as the restrictions reduced and economic activity resumed, productivity increased by 9.5%, which is partially explained by the low base effect. In 2022, productivity exceeded the level of the previous year only by 0.2% due to the deterioration of the geopolitical situation. In 2023, economic growth was also weak and productivity reduced by 0.3% compared to the previous year. Overall, in 2023, GDP per employee in the Latvian national economy reached 58.6% (72.8% according to PPS) of the EU average. Since 2019, the productivity gap with the EU average (according to PPS) narrowed by almost 4 percentage points.

Latvia has long been showing that, in years of high economic growth, the gap between productivity and labour costs was widening, while in recession it was getting smaller. However, labour costs have continued to rise rapidly since 2021, despite declining economic activity and slow productivity growth. This is a sign of the growing mismatch between labour demand and supply.

Figure 1.15

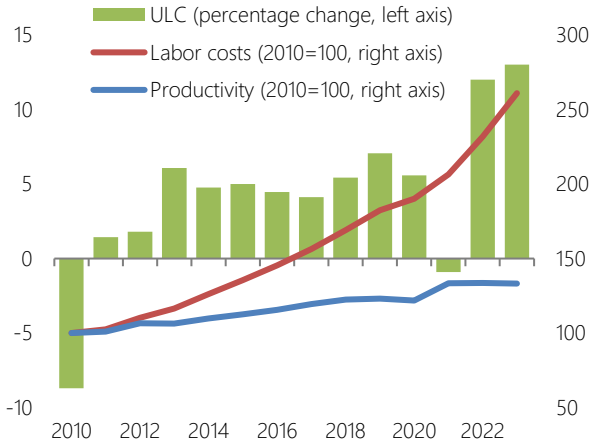
Changes in productivity, labour costs and ULC in the Baltic countries and in the EU

2021 vs. 2018, %



Dynamics of labour costs and productivity

%



Source: *Eurostat*

Particularly strong dynamics of nominal ULC were observed in the last years before the COVID-19 pandemic. In 2019, compared to 2015, ULC rose 4.3%, driven by a nearly fourfold faster increase in labour costs (in nominal terms) compared to productivity growth. Before 2019 the increase in labour costs was affected both by wage convergence processes in the EU labour market and the tenser situation in the Latvian labour market due to the increase in labour shortage.

ULC continued to grow also in the years of the COVID-19 pandemic. Due to the decline in economic activity, labour costs increased more slowly in 2020 than a year ago – by 4.3% (by 7.8% in 2019). Despite a more moderate increase in labour costs, ULC still increased by 5.6% due to the drop in productivity (by 1.2%). In 2021, labour costs kept growing rapidly and exceeded the level of the previous year by 8.5%. This did not put pressure on labour unit labour costs, because productivity increased more rapidly, and ULC decreased by almost 1%.

In 2022, labour costs growth rate accelerated even more. The remuneration of employees increased by 12.2% and, as productivity remained at the level of the previous year, this significantly worsened the cost competitiveness indicator. The nominal ULC increased by 12%. Labour costs were growing rapidly also in 2023, increasing productivity dynamics significantly. Labour costs grew by 13% compared to the previous year showing the steepest rise in the past decade.

Cost competitiveness reduction risks are observed in both manufacturing and market services sectors. The dynamics of labour costs in the last five years (2015-2019) before the COVID-19 pandemic in both mentioned groups of sectors were very similar – they increased by almost 7.2% and 7.9% on average every year, respectively.

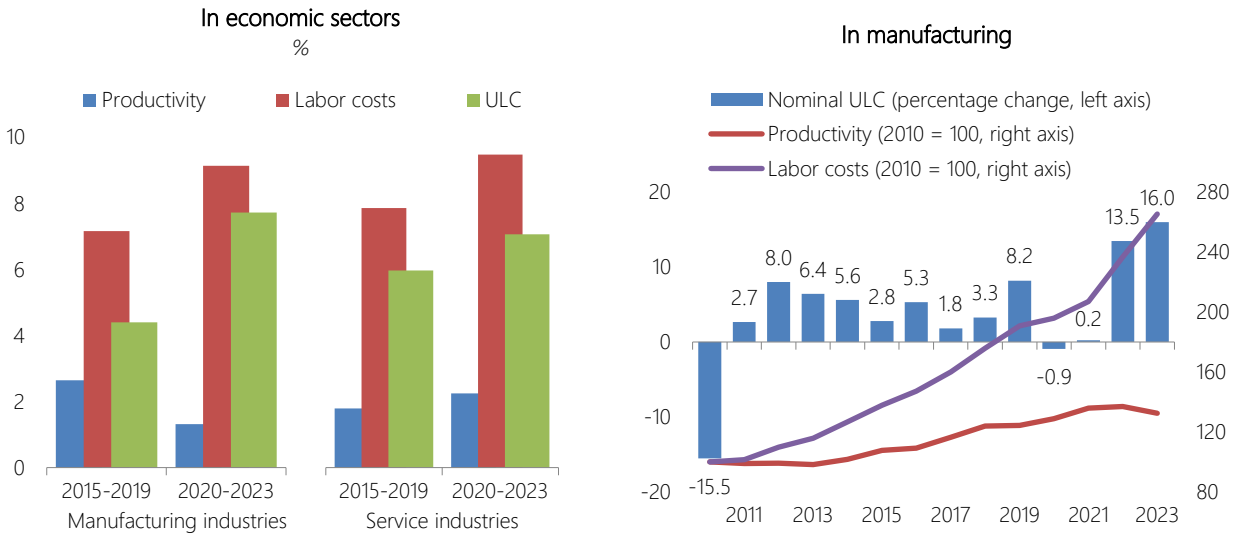
However, productivity in producing sectors increased slightly more rapidly than in the services sectors – by 2.6% and 1.8%, respectively. Therefore, also the nominal ULC increase in producing sectors was more moderate.

The shock related to the COVID-19 pandemic has a stronger impact on adjustments in the products market than in the labour market. In the last four years (2020-2023), labour costs in manufacturing and services sectors were growing by 41.9% and 43.6%, respectively. Productivity growth in the commodity producing sectors and services sectors increased much more moderately and was unable to cover the increase in labour costs. From 2020 to 2023, ULC increased by 34.6% in the producing sectors and by 31.4% in the services sectors. The largest increase in nominal ULC in the last four years was observed in agriculture and construction. Unit labour costs of products of financial services were only 5.7% higher than in 2019, which was the lowest ILC increase.

In manufacturing the gap between the rise in productivity and labour costs is slightly more moderate than in the economy overall. However, annual changes in nominal ULC are rather volatile being to a large extent affected by factors on the goods market, while labour costs show stable upward dynamics. Labour costs in manufacturing were growing almost three times faster than productivity in the last five years before the COVID-19 pandemic (2015-2019).

Figure 1.16

ULC, labour costs and productivity



Source: *Eurostat*

In 2020, productivity grew at a faster pace than labour costs – by 3.6% and 2.6%, respectively, thus decreasing nominal unit labour costs of products by almost 1%. It means that under the influence of the measures to restrict the COVID-19 pandemic the changes in the number of employees were stronger than the decline in manufacturing volumes. Nevertheless, labour costs in companies in manufacturing sectors continue to increase.

In 2021, productivity dynamics in manufacturing were slightly more moderate than labour cost dynamics. Compared to the previous year, productivity in the sector increased by 5.4%, but labour costs – by 5.7%. A relatively steady increase in productivity and labour costs kept the industry's costs competitive at the level of the previous year – nominal ULC increased by only 0.2%. In 2021 and 2022, trends have changed dramatically – nominal ULC in manufacturing grew by 13.5% and 16%, respectively, mainly due to the rapid increase in labour costs.

The labour costs dynamics in Latvian manufacturing significantly exceed EU average labour costs and nominal ULC growth rates. Considering that the EU countries are our main trade partners, such trends reduce the competitiveness of Latvian producers in the field of costs.

In the long term, the increase in labour costs, which is not compensated by a corresponding rise in productivity, may have a negative impact on competitiveness and reduce the share of company profits, which entrepreneurs will be forced to adjust to keep price competitiveness in external markets.

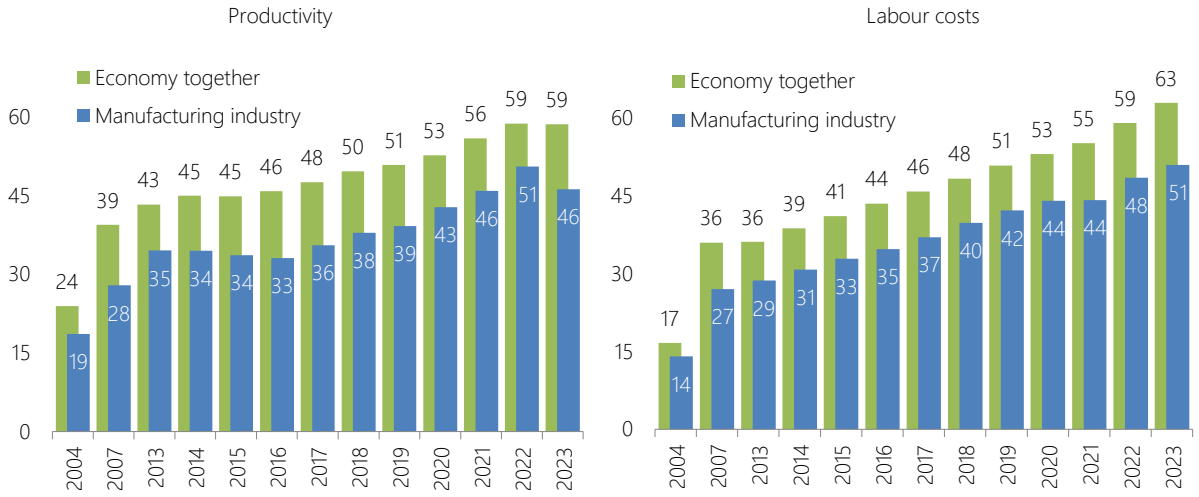
Labour costs in Latvia are among the lowest in the EU Member States. In 2023, labour costs per employee in the Latvian economy were almost 59% of the EU average, whereas in the manufacturing industry – 46.2%. Compared to 2019, in 2023, the labour cost gap decreased by 12.1 percentage points (in manufacturing – by 8.7 percentage

points), while in terms of productivity in the economy it fell by a total of 7.7 percentage points (by 7.1 percentage points in manufacturing). It implies that the wage convergence process has been faster than productivity convergence in the past years.

Figure 1.17

Convergence of productivity and labour costs with the EU average level

% of the EU-27 average



Source: *Eurostat*

In the context of slow productivity dynamics, the increase in labour costs puts significant pressure on the cost competitiveness of Latvian entrepreneurs. The weakening of economic activity has had little impact on the labour market situation. This shows that the problem of labour shortages is acute for entrepreneurs and, despite the slowdown in economic activity, jobs are preserved. Wages, on the other hand, continue to rise as a result of high inflation pressures. These trends keep widening the gap between productivity and labour costs. The increase in productivity is the main factor determining competitiveness, and structural changes in the Latvian economy towards higher value-added activities and knowledge-intensive industries will also greatly determine the positive dynamics of productivity.

2. LABOUR DEMAND AND SUPPLY

2.1. CHANGES IN AND STRUCTURE OF THE LABOUR DEMAND

During the period from 2011 to 2019 (after the financial crisis of 2008), when growth returned to Latvia, the number of employees increased in all major sectors of the economy. However, 2020 brought new challenges to Latvia, as well as to most countries of the world, caused by the global COVID-19 pandemic. Overall, Latvia's economy and labour market were not strongly dependent on the sectors primarily affected by the COVID-19 crisis (accommodation and food service activities, international passenger transport). However, it should be noted that the restrictions introduced to stop the pandemic and the global drop in demand in 2020-2021 directly or indirectly affected most sectors of the economy in Latvia, particularly labour-intensive sectors. In 2022, despite the economic turmoil, the labour market remained stable. The number of employees in Latvia increased by 2.6% in 2022. This was the fastest increase in the number of employees since 2007, partly due to both the recovery of the labour market from the COVID-19 pandemic and the employment of Ukrainian civilians in Latvia. Also in 2023, despite the tense geopolitical situation and the slow-down in economic growth rates, the situation in the labour market did not significantly deteriorate as the demand for the labour force was high.

Table 2.1

Number of the employed in economic sectors

thousands

	2010	2012	2014	2016	2019	2020	2021	2022	2023
Total	**850.7**	**875.6**	**884.6**	**893.3**	**910.0**	**893.0**	**864.0**	**886.2**	**884.2**
Agriculture, forestry, fishing	73.3	73.3	66.4	68.7	66.3	64.3	58.5	59.9	59.3
Manufacturing	112.2	122.5	118.8	123.5	115.1	114.5	109.2	114.4	111.7
Other industry	26.5	20.6	18.9	25.7	19.3	19.6	22.1	23.4	20.8
Construction	57.6	62.3	73.2	66.1	81.1	76.5	72.3	72.1	70.3
Trade, accommodation	162	155.6	161.6	154.7	169.6	160.2	157.9	166.2	156.6
Transportation and storage	71.4	75.1	84.8	83.3	74.3	69.3	66.7	65.9	73.2
Other business services	154	163.9	165.2	173.8	179.7	187.2	174	179.5	188.1
Public services	193.7	202.3	195.7	197.5	204.6	201.4	203.3	204.8	204.2

Source: CSB

Note: Starting from 2014, labour force survey (LFS) methodology has been changed – quarterly average population residing in households (previously population at the beginning of the year) was used for generalisation of the quarterly data

In 2023, according to the LFS data, the number of employed was 884 thousand, which was 2.2% or 20 thousand less than in 2021, and this was close to the employment rate in 2019 (before the COVID-19 pandemic). The number of the employed in relation to 2021 fell the fastest in other industry, construction and trade and accommodation, while increased in transportation and storage, other business services and manufacturing.

Figure 2.1

Structure of the employed in economic sectors

%

Source: CSB

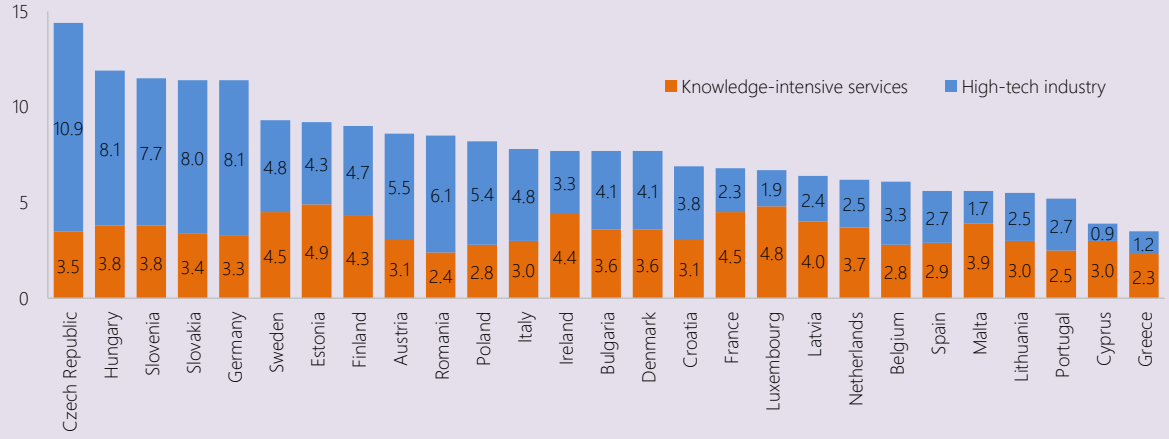
The largest percentage of the employed in 2023 was in public services sectors (23%), commercial services (21%), trade and accommodation (18%), as well as manufacturing (13%). The structure has not significantly changed compared to 2021, the number of the employed slightly shrank in other industry. The share of the employed in transportation, manufacturing and construction, trade and accommodation, manufacturing and agriculture remained unchanged.

Labour demand in high-tech and knowledge-intensive services sectors in EU countries

The EC has named the specialisation in high technology and knowledge-intensive sectors as one of the key advantages of the EU's competitiveness in the global markets. Among EU countries, the largest share of employed in the high-tech economy was in Czechia in 2022 (14.4% of the total number of employed), Hungary (11.9%), Slovenia (11.5%), Slovakia (11.5%) and Germany (11.4%), while the lowest – in Greece (3.5%), Cyprus (3.9%) and Portugal (5.2%). Latvia's share of high-tech industries in general is 6.4%, thus ranking it only the 19th among the 27 European countries by the share of employees in high-tech industries.

Employment in high-tech economy in EU-27 countries

2022, % of total employment



Source: Cedefop, Skills Panorama, https://skillspanorama.cedefop.europa.eu/en/skills-themes/future-jobs#

Demand for occupations

Table 2.2

Numbers of the employed in economic sectors by occupational groups

2023, thousands

	Agriculture	Manufacturing	Other industry	Construction	Trade, accommodation	Transportation and storage	Other business services	Public services	Total
High qualification occupations, including:	**10.0**	**32.0**	**9.0**	**19.1**	**44.4**	**21.5**	**116.3**	**139.9**	**392.1**
Managers	4.0	10.2	2.1	9.7	19.1	7.5	23.7	16.7	93.0
Professionals	2.6	9.0	3.6	4.9	8.8	3.6	57.2	95.6	185.3
Technicians and Associate Professionals	3.4	12.7	3.3	4.5	16.4	10.5	35.3	27.6	113.8
Medium qualification occupations, including:	**38.4**	**61.1**	**9.4**	**37.8**	**93.9**	**45.8**	**47.1**	**46.5**	**380.0**
General Office Clerks	0.9	5.9	1.5	1.1	10.4	7.9	14.9	5.7	48.2
Services and Sales Workers	1.1	1.1	0.2	0.2	63.9	2.8	21.9	37.8	129.1
Skilled Agricultural Workers	26.4	0.7	0.0	0.0	0.1	0.0	0.8	0.0	28.1
Craft Workers	0.9	34.7	3.6	31.7	15.4	4.3	6.2	0.8	97.7
Plant and Machine Operators	9.1	18.8	4.0	4.8	4.0	30.9	3.4	2.3	77.0
Low qualification occupations	**10.9**	**18.7**	**2.4**	**13.4**	**18.3**	**5.9**	**24.7**	**17.8**	**112.1**
Total	**59.3**	**111.7**	**20.8**	**70.3**	**156.6**	**73.2**	**188.1**	**204.2**	**884.2**

Source: CSB

In 2023, the highest number of employees was in public services (204.2 thousand), business services (188.1 thousand), trade and accommodation (156.6 thousand) and manufacturing (111.7 thousand), accounting for 63% of all employees. When broken down by occupation qualification, the number of employees of high qualification occupations is 392 thousand (44% of the total number of employed), employees of medium qualification occupations – 380 thousand (42% of total) and employees of low qualification occupations – 112.1 thousand employees (14% of total).

The largest number of employees of high qualification occupations are professionals in the services sector (95.6 thousand or almost 11% of all employees). The largest number of employees in medium qualification occupations are services and sales workers in the trade sector (63.9 thousand or 7.2% of the total number of employees).

In comparison to 2021, in 2023 high qualification occupations had 3.7 thousand more employed (increase by 1.4%). An increase is observed in employed persons in the occupation of professionals (by 14.6 thousand), while there is almost the same decrease in the occupation of technicians and associate professionals (-11.5 thousand). The largest increase in the number of employed persons is observed in medium qualification occupations (+13.3 thousand), of which the number of sales workers increased by 11.9 thousand, general office clerks by 4.2 thousand, but there is a decrease in the number of craft workers (-2.8 thousand and plant and machine operators (-0.7 thousand). The largest increase in the number of employed persons is in manufacturing (2.5 thousand), construction (1.3 thousand), business services and public services (2.1 thousand in total), while a decrease in other industry (-1.3 thousand) and trade and accommodation (-0.6 thousand). Overall, the number of employed has increased by 20.2 thousand, or 2.3%, compared to 2021.

Table 2.3

Changes in the employed in economic sectors by occupational groups

2023 vs. 2021, thousands

	Agriculture	Manufacturing	Other industry	Construction	Trade, accommodation	Transportation and storage	Other business services	Public services	Total
High qualification occupations, including:	**0.9**	**1.0**	**0.5**	**0.0**	**-4.2**	**1.3**	**7.6**	**-3.4**	**3.7**
Managers	0.0	0.8	0.1	0.1	0.2	0.9	-0.1	-1.5	0.6
Professionals	1.0	-0.8	0.3	1.2	1.0	0.0	8.5	3.4	14.6
Technicians and Associate Professionals	-0.1	1.1	0.1	-1.3	-5.5	0.4	-0.8	-5.3	-11.5
Medium qualification occupations, including:	**-0.6**	**1.2**	**-0.5**	**-3.3**	**3.6**	**4.7**	**5.3**	**3.3**	**13.3**
General Office Clerks	0.6	1.4	0.1	-0.8	0.0	0.4	2.8	-0.3	4.2
Services and Sales Workers	0.5	-0.1	0.0	-0.2	2.6	0.6	1.9	6.6	11.9
Skilled Agricultural Workers	0.4	0.5	0.0	0.0	0.0	0.0	0.2	0.0	1.1
Craft Workers	-0.9	-1.2	-0.2	-1.2	0.4	0.4	1.0	-1.1	-2.8
Plant and Machine Operators	-1.2	0.6	-0.4	-1.2	0.6	3.4	-0.7	-1.9	-0.7
Low qualification occupations	**0.5**	**0.3**	**-1.3**	**1.3**	**-0.6**	**0.5**	**1.1**	**1.0**	**2.8**
Total	**0.8**	**2.5**	**-1.3**	**1.3**	**-0.6**	**0.5**	**1.1**	**1.0**	**20.2**

Source: CSB

Comparison of labour demand in 2023 with labour demand in 2021 in Latvia

The largest decline in labour demand in 2023 was observed in manufacturing, accommodation and food service activities, retail trade, except for motor vehicles and motorcycles, construction and wholesale trade. The highest labour demand is observed in human health and social work activities, social work activities without accommodation, accommodation and food service activities. Labour demand is also observed in computer programming, IT services and air transport. The COVID-19 pandemic impacted accommodation and food service activities, as well as air transport and recreation, and there was a recovery in these sectors at the end of 2023.

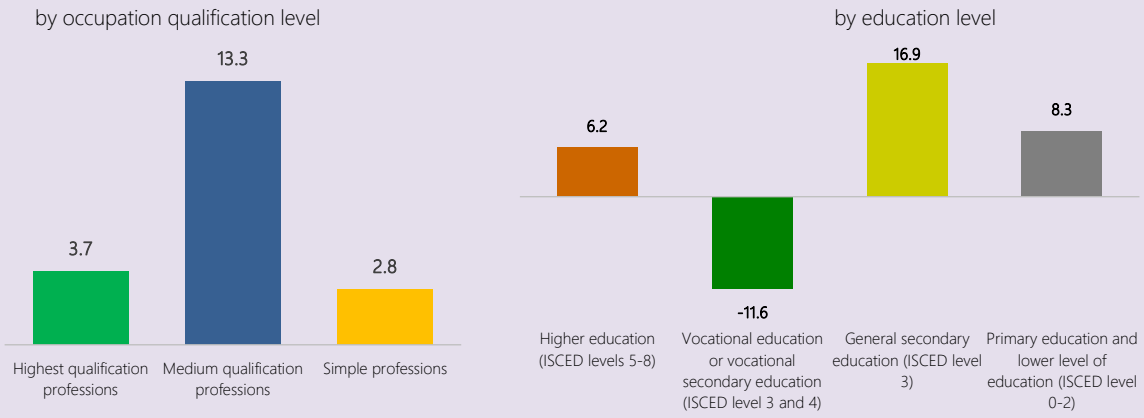
Changes in occupied jobs by sectors

Q4 2023 vs Q4 2021, thousand

Source CSB

In 2023, compared to 2021, the number of employees of medium qualification occupations significantly increased (by 13.3 thousand), as well as the number of employees has increased both in high qualification occupations (by 3.7 thousand,) and in elementary occupations (by 2.8 thousand).

Changes in the number of employees
2023 vs. 2021, thousand

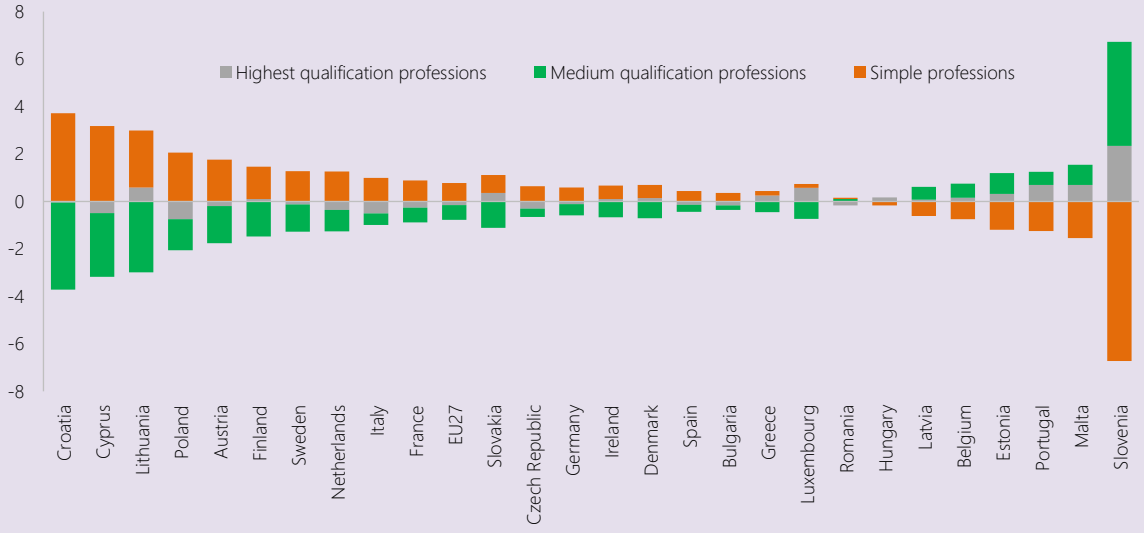


Source: *Eurostat*

In 2023, compared to 2021, the number of employees increased among persons with tertiary education, and also general secondary education, basic education and lower education. At the same time, the number of employed decreased among people with vocational education, which is mainly affected by the decrease in the total labour supply with vocational education. The most significant increase in the number of employed was observed among people with general secondary education and basic education, which has been largely affected by the low-base effect after the COVID-19 pandemic. It should be noted that during the COVID-19 pandemic (2020-2021) the largest drop in labour demand was observed among people with general secondary education and basic education, while the number of employed with higher and vocational education increased.

It should be noted that in most European countries the tendency for labour demand to restructure in favour of higher qualification occupations has continued in the post-pandemic period. In 2023, compared to 2021, the share of employees in higher qualification occupations increased by approximately 0.8 percentage points in EU-27. At the same time, the share of employed in medium qualification occupations reduced by 0.6 percentage points. In EU-27, the sharpest increase in the share of high qualification occupations is observed in Croatia (+3.7 pp), Cyprus (+3.2 pp), Lithuania (+2.4 pp) and Poland (+2.1 pp). At the same time, Slovenia (-6.7 pp), Malta (-1.5 pp) and Portugal (-1.2 pp) saw the most rapid decrease in the share of high qualification jobs. The share of employees in low and middle qualification occupations also increased in several countries. The fastest increase in low and medium qualification occupations is observed in Slovenia (+4.4 medium and 2.3 low). The number of employees in high qualification occupations in Latvia has decreased by 0.8 percentage points, while the share of employees in middle and low qualification occupations has increased by 0.7 and 0.1 percentage points, respectively.

Changes in the share of employees in high, medium and qualification occupations in EU-27 countries
2023, compared to 2021, percentage points

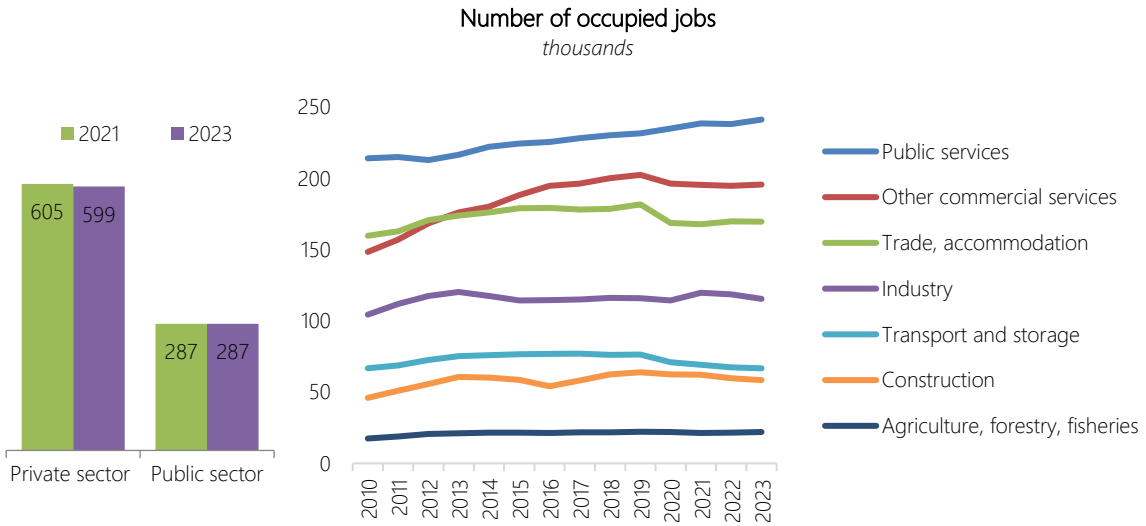


Source: *Eurostat*

Changes in the number of occupied jobs

In 2010-2023, the number of **occupied jobs** increased in all main sectors of the national economy (except transportation and storage, where the number of occupied jobs remained unchanged). The number of occupied jobs reduced by 6.2 thousand compared to 2021 (the reduction was in the private sector). The most rapid increase was in agriculture (by 3.2%), while the most rapid decline – in construction (-6.12%), industry (-3.45%) and transportation and storage (-3.4%).

Figure 2.2



Source: CSB

Concepts of the employment and occupied jobs

Employed population

According to the definitions created by the International Labour Organization (ILO), employed population are all those persons, who carried out any work for money or for remuneration in the form of goods or services during the reference week.

Employed population also includes self-employed persons in business, in rural agriculture or professional practice. The persons who are temporarily absent from work during a prenatal and childbearing leave, as well as during a parental leave, shall be considered to be employed, if after the end of the leave the person is guaranteed to return to the previous workplace. The employed also include those persons who work in their rural farmsteads (farms or backyard) to produce products for own consumption or sale.

Information on economic activity of the Latvian population (employment and unemployment) was obtained from the continuous Latvian LFS.

In LFS, information about economic activity (including employment) according to the methodology is collected from persons aged 15 to 74. For the international comparability of data part of employment indicators were calculated also for the age group 15-64. Internationally, the age group 15-64 is accepted as working age used for publishing of data by *Eurostat* and ILO, therefore Latvia also published main indicators characterising economic activity for two age groups: 15-64 year-olds and 15-74 years-olds

Occupied jobs

Paid job, where an employee is employed. The number of occupied jobs includes full-time and part-time workers, whose working hours should be registered in accordance with the Labour Law and those whose working hours are not registered.[1] One person may be employed in several jobs.

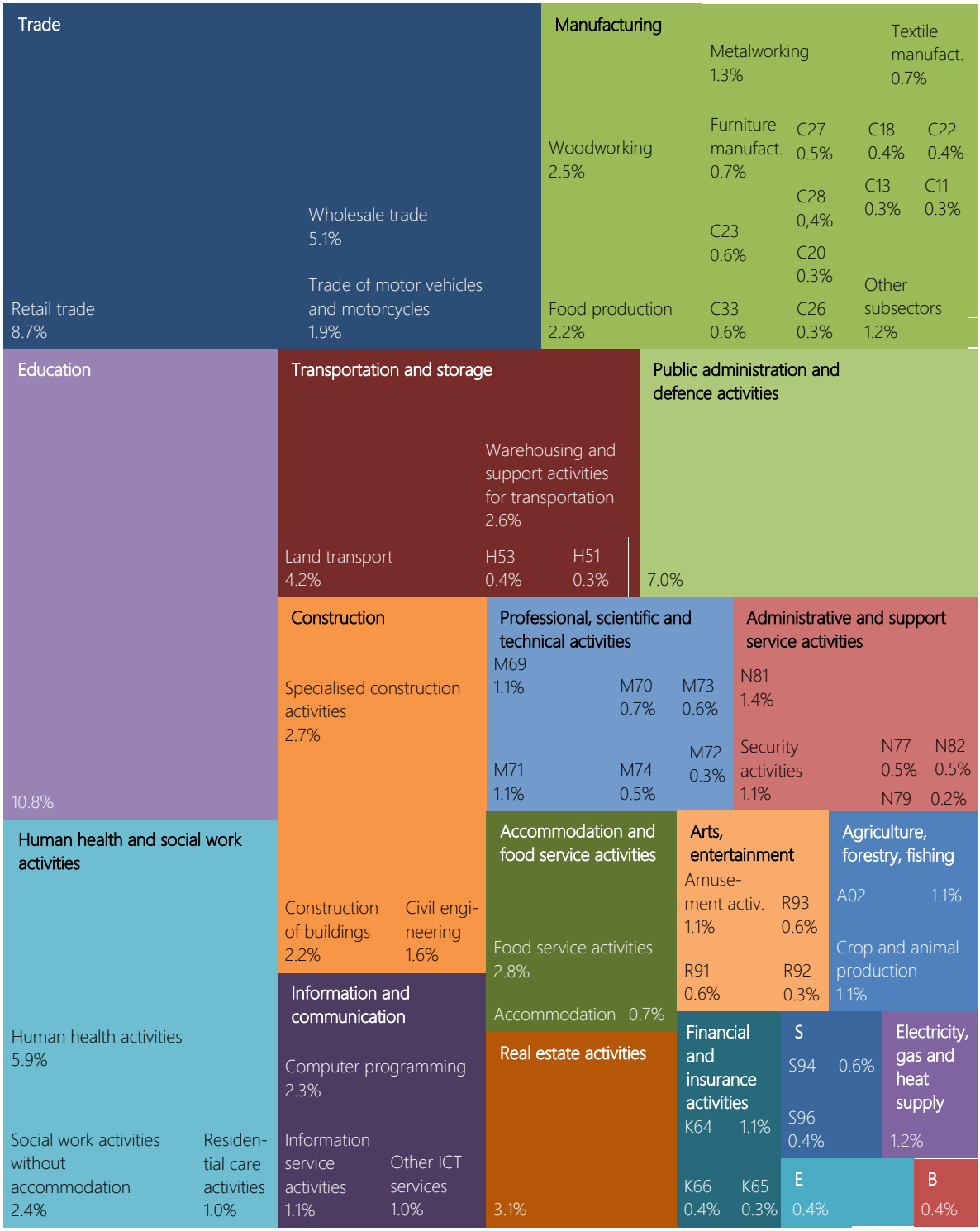
Data on occupied jobs are obtained from the survey of companies, central government institutions, local governments and their institutions and institutional units. The information is obtained by summarising data of the quarterly statistical review forms prepared by CSB on economic operators, institutions, foundations, associations and funds and administrative data. Administrative data are obtained as a results of CSB's calculations made from the data of the State Revenue Service.

[1] CSB definition: https://stat.gov.lv/lv/metadati/2878-aiznemtas-un-brivas-darbvietas

Figure 2.3

Occupied jobs by sectors

structure in 2023, %



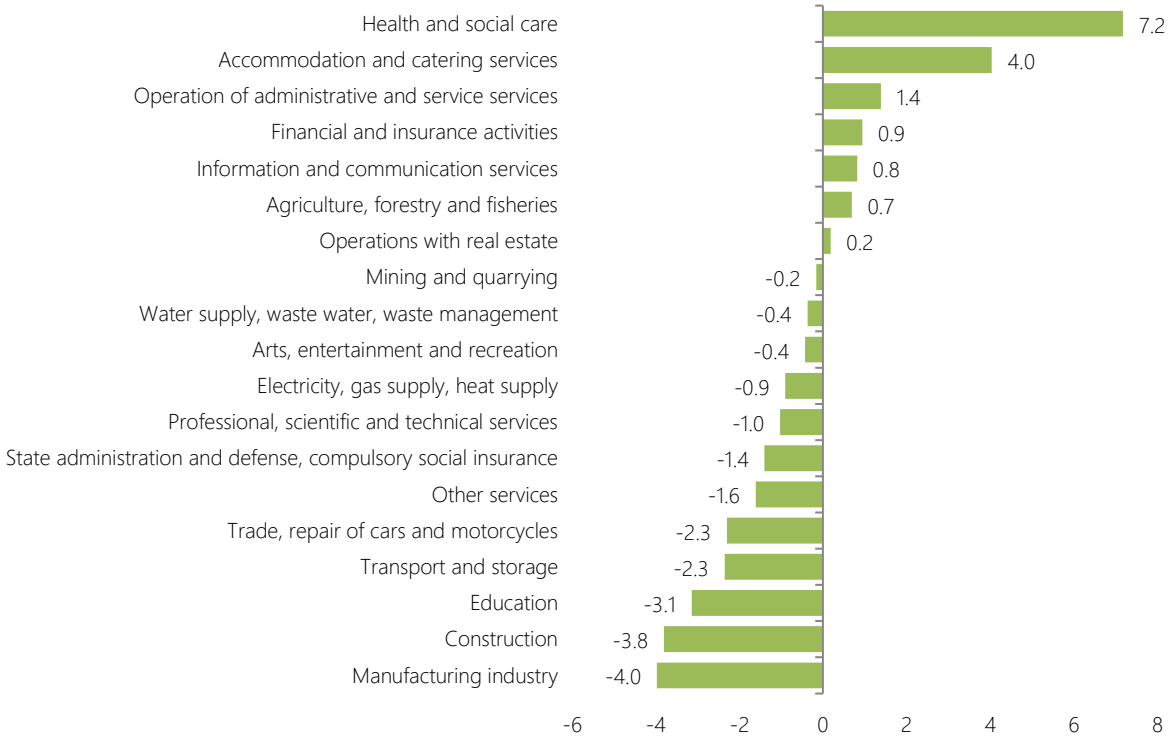
A02 – Forestry; A03 – Fisheries; B – Mining industry, quarrying; C11 – Production of beverages; C13 – Manufacture of textiles; C18 – Printing; C20 – Chemical industry; C22 – Manufacture of rubber and plastic products; C23 – Manufacture of non-metallic mineral products; C26 – Production of computers, electronic equipment; C27 – Manufacture of electrical equipment; C28 – Manufacture of equipment, mechanisms and machines; C33 – Equipment repair; E – Water supply, waste water, waste management; H51 – Air transport; H53 – Post and courier activities; K64 – Financial services; K65 – Insurance; K66 – Financial auxiliary activities; M69 – Legal, accounting services; M70 – Operation of central offices, consulting; M71 – Architectural, engineering services; M72 – Scientific research work; M73 – Advertising, market research; M74 – Other professional, scientific and technical services; N77 – Renting and leasing; N79 – Operation of travel agencies; N81 – Maintenance of buildings; N82 – Office activities; R91 – Activity of cultural institutions; R92 – Gambling and betting; R93 – Sports, recreational activities; S – Other service activities; S94 – Activities of public, political organizations; S96 – Individual services

Source: CSB

Figure 2.4

Changes in the number of occupied jobs

2023 vs. 2021, thousands



Source: CSB

The number of occupied jobs has decreased by 6.2 thousand in 2023 compared to 2021. The highest increase in the number of jobs was in manufacturing, construction, education, while the highest increase – in human health and social work activities, accommodation and food service activities, administrative and support service activities.

2.2. DEMOGRAPHIC SITUATION AND LABOUR SUPPLY

2.2.1. DEMOGRAPHIC TRENDS

Long-term trends show that the Latvian population continues to reduce. The total reduction in population in Latvia since 2000 exceeds 500 thousand, which is about 1/5 of the population in the early 2000s. The most important factors affecting demographic trends are population ageing, low birth rates and population emigration.

At the beginning of 2024, 1,872 thousand inhabitants lived in Latvia, their count decreased by 11.1 thousand compared to the beginning of 2023.

The birth rate in Latvia has been low for a long time, and it does not suffice for the reproduction of the existing population. After the rapid decline in the birth rate in the 1990s, starting from 1999, as the socioeconomic situation in the country improved and those who were born in the 1980s reached the reproductive age (there was a period of high birth rate in Latvia in 1980-1990), the birth rate in Latvia showed growing trends (the number of newborns, as well as the birth rate increased), which was retained up until 2008. Due to the economic crisis, the number of newborns reduced in 2009 and the birth rate resumed growth only in 2012 reaching the highest number of newborns in the last decade in 2015 and 2016. A reduction in the birth rate has been observed since 2017 and the and the trend continued in 2023 – as the birth rate approached its lowest level since independence. The negative birth dynamics of recent years highlights the need for the activation of targeted birth rate stimulation measures.

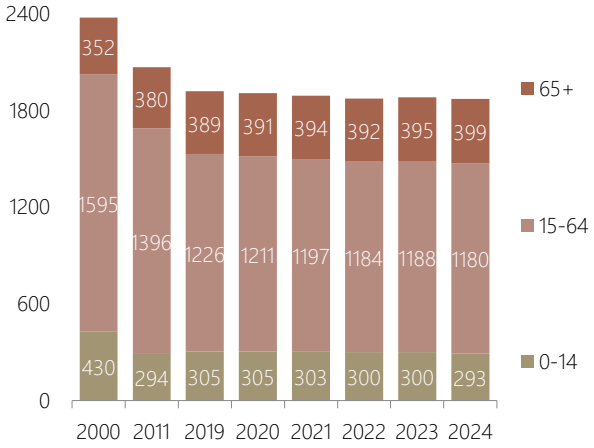
The death toll has been gradually dropping since 2007. This indicator has stabilised since 2012. The mortality rate has drastically aggravated in 2020-2022 under the influence of the Covid-19 pandemic. In 2023, the death toll was by 2.7 thousand lower than in the previous year, while the figure returned to the pre-pandemic level.

The natural population number change is characterised by the natural population growth coefficient, which has been improving since 2011. It has markedly worsened since 2017 as a result of negative birth rate developments in recent years. Combined with the morality rate in recent years, in 2021 the coefficient has fallen to its historically lowest negative level – -9.1 per 1000 inhabitants. The indicator has been gradually improving since 2022, but has not yet recovered to 2019 levels.

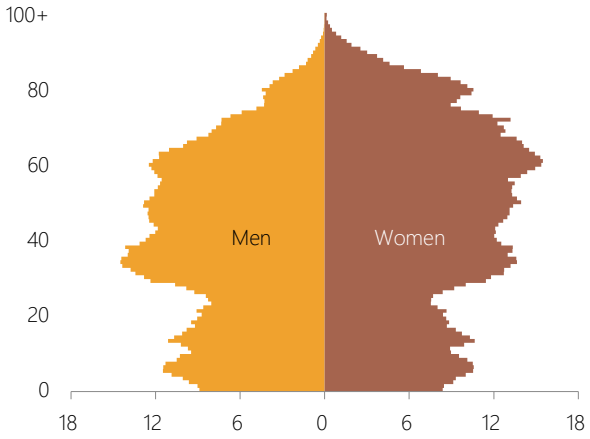
Figure 2.5

Age structure of the population

thousands, at the beginning of the year



thousands, at the beginning of 2024



Source: CSB

The ageing process of the population continues – the average age of the Latvian population is increasing. It has increased by 4.6 years in the period from 2000 to 2023 and reached 43.1 years at the beginning of 2024. Ageing affects the labour market increasing the population above working age. As the number of working age people reduces, the proportion of population beyond working age to working age population becomes higher. As a result of a slight increase in birth rates, the decrease in the number of people before working age has stopped since 2012. Unfortunately, the Covid-19 pandemic has interrupted this positive trend, and since 2021 the reduction in the number of people before working age has resumed.

In 2023, number of working age population continued to drop. At the beginning of 2024, the population in the age group of 15-74 was 1395 thousands, having reduced by 5.4 thousand compared to the beginning of 2023. The most considerable decline in the population was observed in the following population groups of working age: 25-29 years (by 5.3 thousand or 5.9%), 30-34 years (by 5.3 thousand or 5.9%) and 55-59 years (by 1.9 thousand or 1.5%).

When viewing the period since 2000, it was generally the negative international migration that has had the most significant impact on population dynamics. As welfare of the population increases, the intensity of migration flows has decreased only in recent years. The population has decreased by a total of 510 thousand in the period from 2000 to the beginning of 2024, of which 265 thousand applies to migration.

In Latvia, migration flows to foreign countries grew rapidly due to the global financial crisis, as the economic situation was worsening. Negative net migration reached its peak in 2009 and 2010. The main reason for leaving during this period was searching for job opportunities abroad – the majority of emigrants were people of working age, and people from younger age groups were especially mobile.

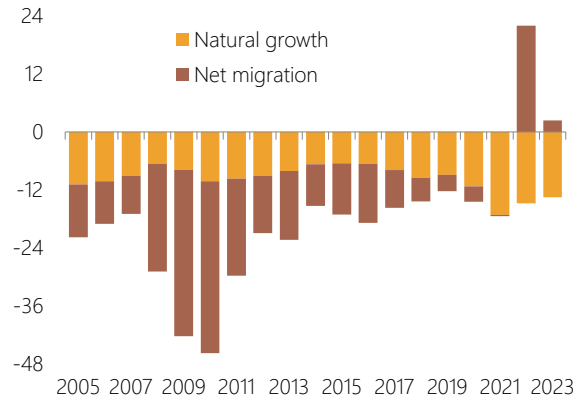
Migration indicators have been gradually improving since 2011. Negative net migration was improved not only by the reduction in the number of emigrants, but also by the increase in the number of immigrants. However, since 2014 a small drop has been observed in the number of immigrants and the number of emigrants tended to increase. The situation improved in 2017, as the immigrating population increased, and the emigrating population decreased. Along with economic growth, extension of job opportunities and increase in wages, the incentives for economic migration of the population reduce and the negative net migration in recent years has significantly

reduced. Since 2022, the population increases due to migration, as refugees of the Ukrainian war enter the country.

Figure 2.6

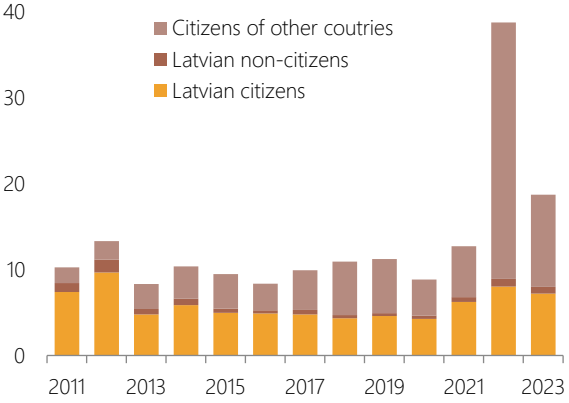
Factors affecting the changes in the number of the population

thousands



Long-term immigrants by citizenship

thousands



Source: CSB

The increase in labour shortage, as well as more open migration policy have generally changed the national composition of migrants. By 2017, Latvian citizens and non-citizens dominated the overall flow of the immigrant population. In 2018-2019, their number was less than half, but since 2020 the share of Latvian citizens and non-citizens in the total number of long-term immigrants exceeded half again. Although the number of re-emigrants in 2022-2023 increased, but refugees of the Ukrainian war reduced their share.

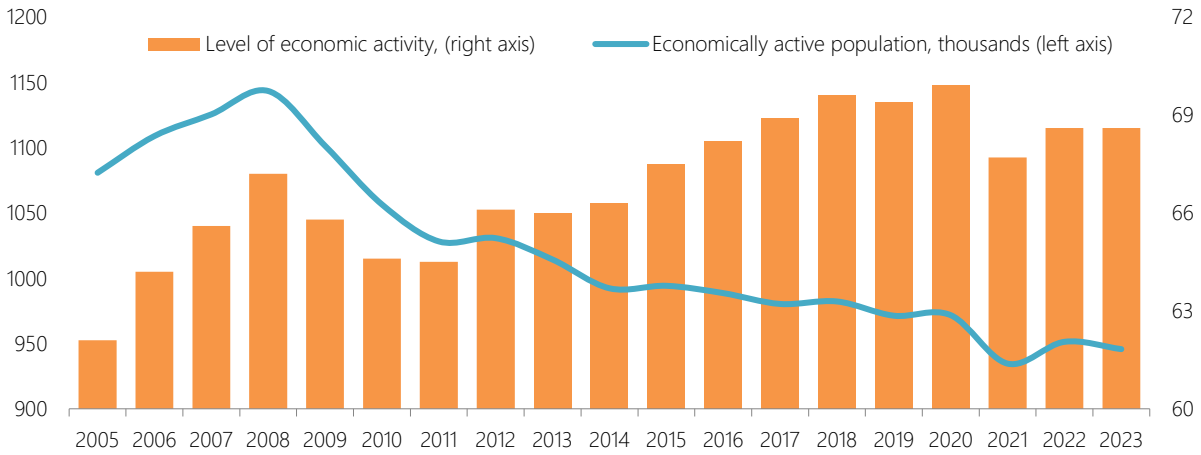
It should be noted that taking into account the free movement of the labour force in the EU, it is not possible to perceive emigration flows completely precisely. Not only Latvia, but also other EU member states have to deal with the problem of how to provide accurate description of the structure of those people leaving the country to search for job.

2.2.2. PARTICIPATION OF THE POPULATION IN THE LABOUR MARKET AND THE LABOUR SUPPLY

Labour supply is represented by economically active population consisting of employed population and job seekers.

Figure 2.7

Economic activity indicators



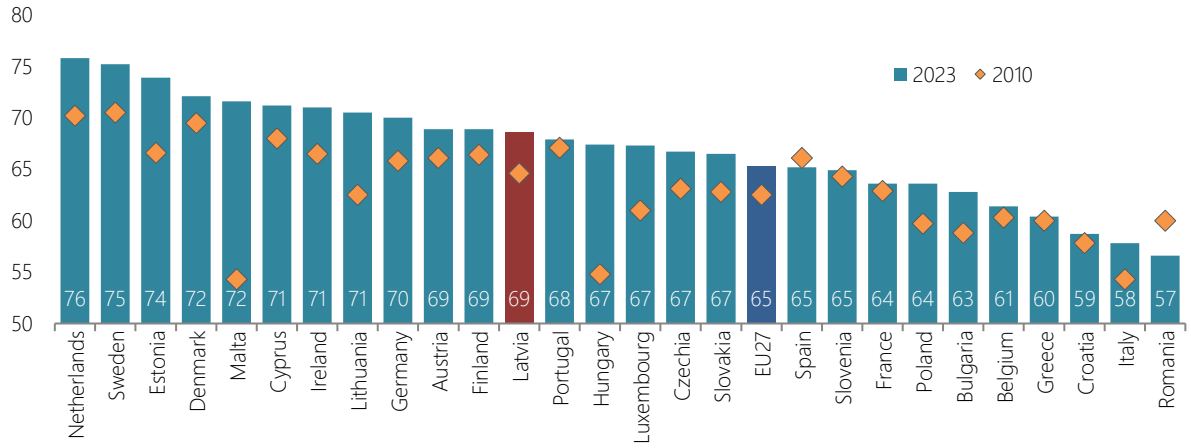
Source: CSB

The demographic processes in the country have a direct reflection in labour supply trends. The working age population is shrinking as a result of ageing and emigration, which has adverse effect also on economically active population. From 2008 to 2021, economically active population reduced by approximately 209 thousand. The economically active population has been decreasing since the global financial crisis of 2008. From 2015 to 2020, the negative trend generally decreased, taking into account the increase in economic activity of the population, however, when the COVID-19 pandemic arrived, the rate of decrease in economically active population increased. In 2021, the economically active population decreased by 37.1 thousand, mainly due to the reduction in economic activity during the Covid-19 pandemic. In 2023, the number of economically active population declined by 36.5 thousand in comparison with the pre-pandemic level of 2019. The activity rate of the population in the labour market in 2023, compared to 2022, has not changed in the age group from 15 to 74 reaching 68.6%.

Figure 2.8

Activity rate in EU countries

in age group 15-74, %



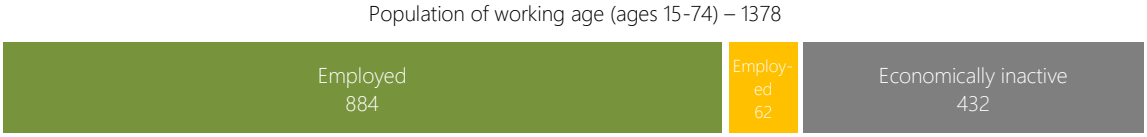
Source: *Eurostat*

Overall, the participation of the population in the labour market in Latvia is at a higher level than the EU average. In 2023, the economic activity of the population was 3.3 percentage points higher than the EU-27 average (65.3%).

Figure 2.9

Situation in the labour market in 2023

in thousands



pupils, students	115
pensioners receiving only retirement pension	174
housekeepers	59
disabled, persons incapable of work for a long period of time	54
persons on parental leave	4
other	26

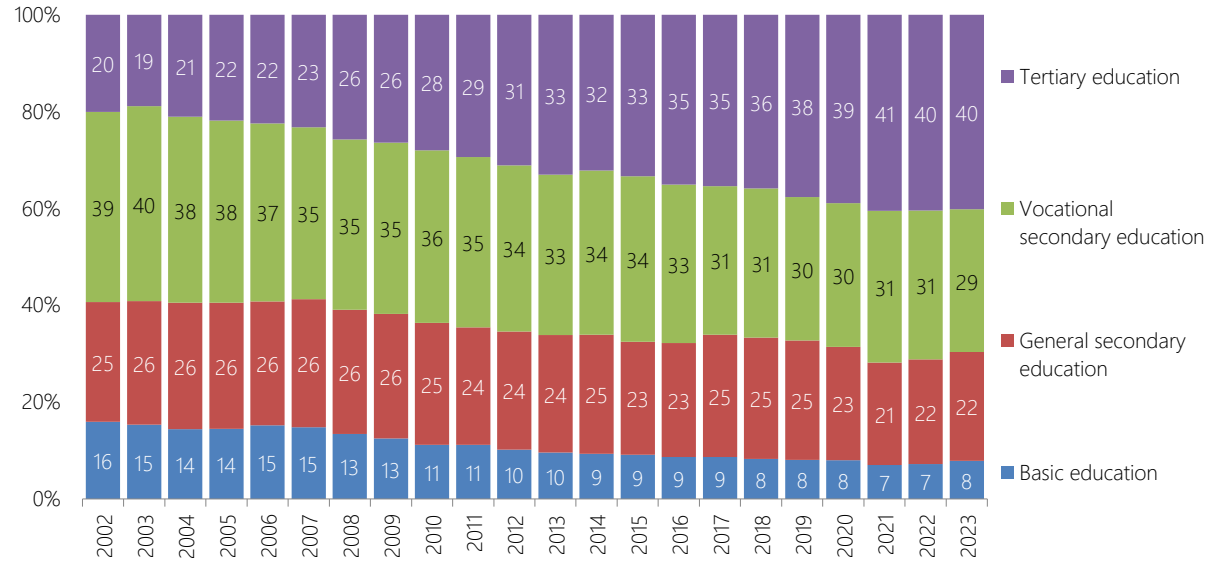
Source: CSB

The level of economic activity is relatively stable in almost all age groups. The biggest changes affected the involvement of elderly people in the labour market. The improvement of the economic situation and the increase in the retirement age cause a faster increase in the level of economic activity of the population aged above 60. A small increase in the economically active population can be observed in 2023 in basic and general secondary education groups.

Figure 2.10

Breakdown of the economically active population by education level

aged 15-74, %



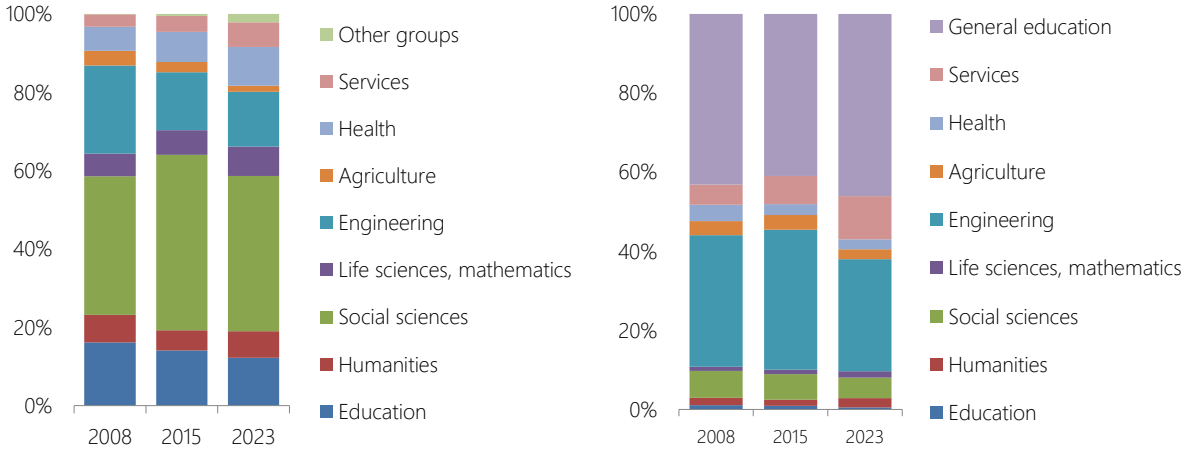
Source: CSB

The population is becoming increasingly aware of the importance of the education level in the labour market. The percentage of the economically active population with higher education continues to gradually increase – 2/5 of all the economically active population has higher education in 2023. It should be noted that the share of the economically active population with secondary vocational education increased after the COVID-19 pandemic, however, it has fallen to pre-pandemic levels in 2022 and 2023.

Figure 2.11

Breakdown of the economically active population by thematic groups of education

with higher education, % *with general secondary and vocational education, %*



Source: CSB

The largest labour supply was still with higher education in the field of social sciences, business and law. Since 2008, the most significant increase in the number of the economically active population has been observed in this group. It was largely caused by the choice of the students of the previous years to obtain higher education in this thematic group. At the same time, most students in the field of social sciences, business and law study for personal funds.

The next largest thematic groups of education of the economically active population are engineering, manufacturing and construction, as well as education.

Figure 2.12

Percentage of employed population above 50 years in high qualification sub-major groups of occupations

2023, % of the number of the employed in the respective sub-major group

Source: CSB, MoE calculations

Since 2008, the structure of the economically active population at the secondary education level by thematic groups of education has been relatively stable with some exceptions. A considerable part (more than 2/5) of the economically active population has general secondary education. These persons have no professional qualification in the labour market. The biggest labour supply for vocational secondary education is in engineering, manufacturing and construction. However, taking into account labour ageing trends, a decrease in the share of the thematic group has been observed in recent years. The most rapid increase is observed in the thematic group of education – the share of the economically active population with relevant education has more than doubled since 2008.

The labour force in Latvia is increasingly ageing in individual sectors and occupational groups, which can cause a drop in the supply in the future. These trends are becoming stronger over the years.

Across sectors, the largest share of the employed above 50 has been in other industries for a longer period of time (especially in the water supply, sewerage, waste management and remediation activities sector) and in public services (especially in the education sector and human health and social work activities sector), as well as in agriculture.

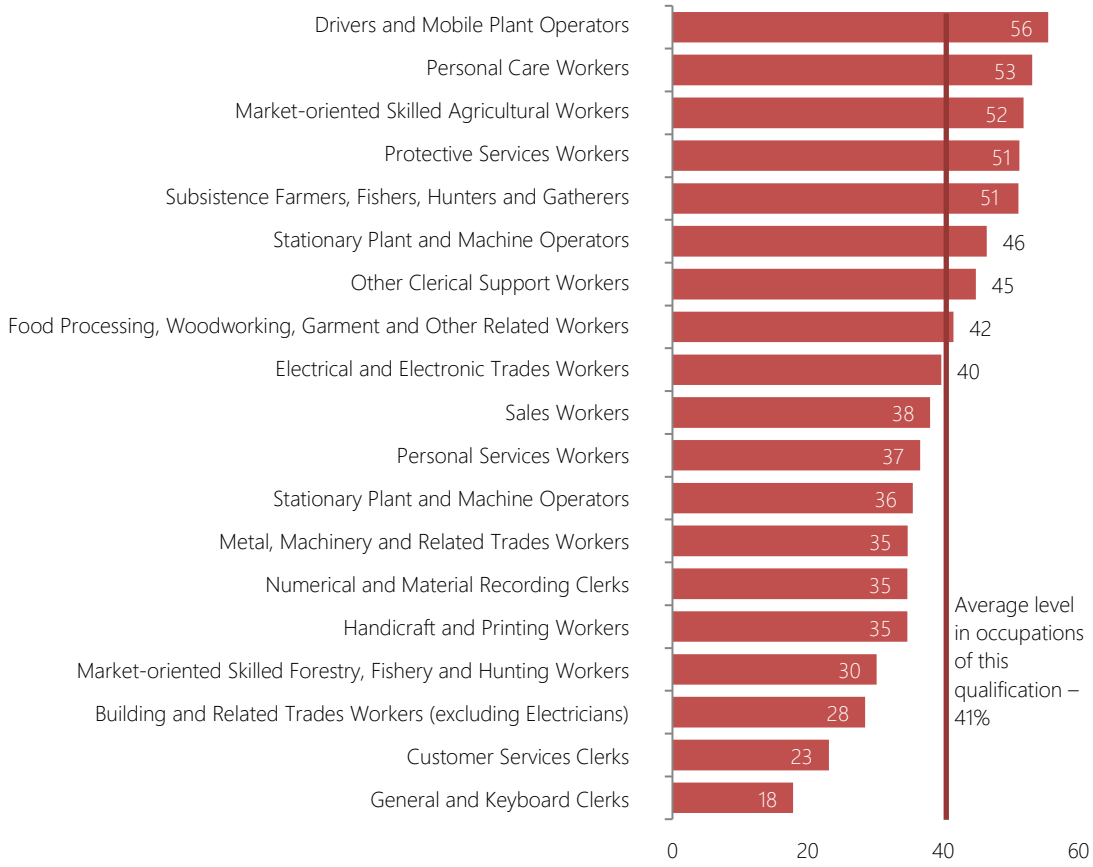
The percentage of the employed above 50 years of age in high qualification occupations is 33%. The analysis of the structure of the employed by occupational groups evidences that the ageing of the labour force does not affect high qualification occupations in the same way. For a longer period of time, the ageing problems have been specifically affecting health associate professionals and professionals, as well as teaching professionals.

The percentage of the employed above 50 years of age in medium qualification occupations is 41%. Negative development trends of the labour age structure also affect a range of medium qualification occupation groups. This trend mostly affects personal care workers, market-oriented skilled agricultural workers, protective services workers, as well as drivers and mobile plant operators.

Figure 2.13

Percentage of employed population above 50 years in medium qualification sub-major groups of occupations

2023, % of the number of the employed in the respective sub-major group



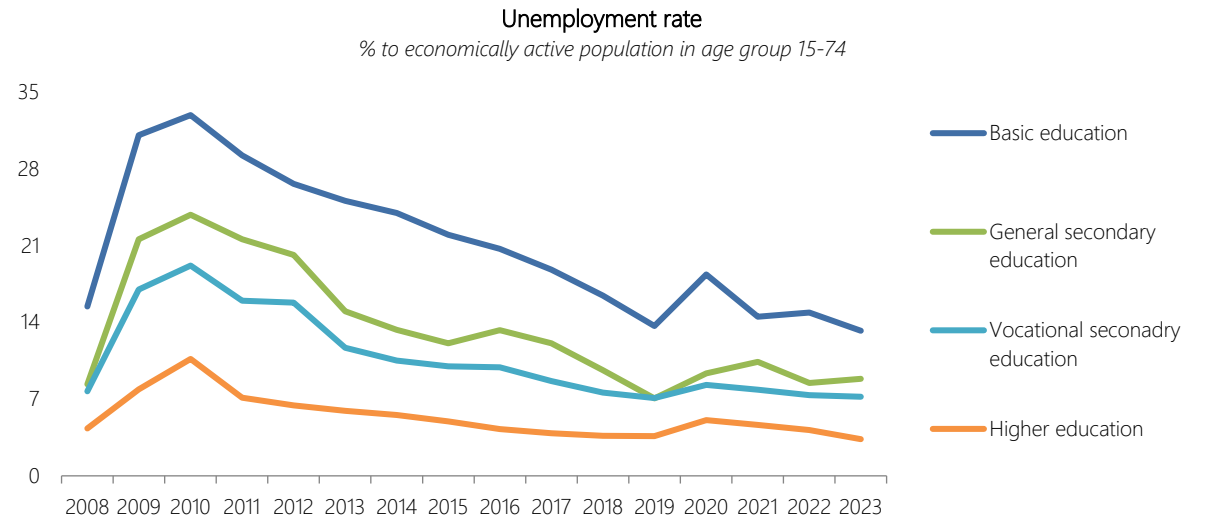
Source: CSB, MoE calculations

The labour age structure in various occupations is affected by several causes. Young people do not prefer certain orientations of studies/training or choose to work in a different occupation after studies due to different reasons. Low wages is one of the reasons in individual occupations.

2.3. MATCHING OF LABOUR MARKET DEMAND AND SUPPLY

The Covid-19 pandemic crisis has generally reduced labour demand in the economy and also contributed to the total unemployment/labour surplus increase during the crisis. The largest increase in job seekers was observed in 2020, as labour demand reduced rapidly. In 2023, labour demand generally continued to drop, however, taking into account the reduction in economic activity/participation rate of the population in the market, as well as the reduction in working age population, labour supply in the labour market reduced as well, thus generally narrowing free labour resources/job seekers in the labour market. In total, 61.5 thousand persons were job seekers in 2023, which was by 3.7 thousand less than in 2022. In 2023, the unemployment rate reduced to an average of 6.5% of the economically active population exceeding the pre-crisis (2019) level by 0.2 percentage points.

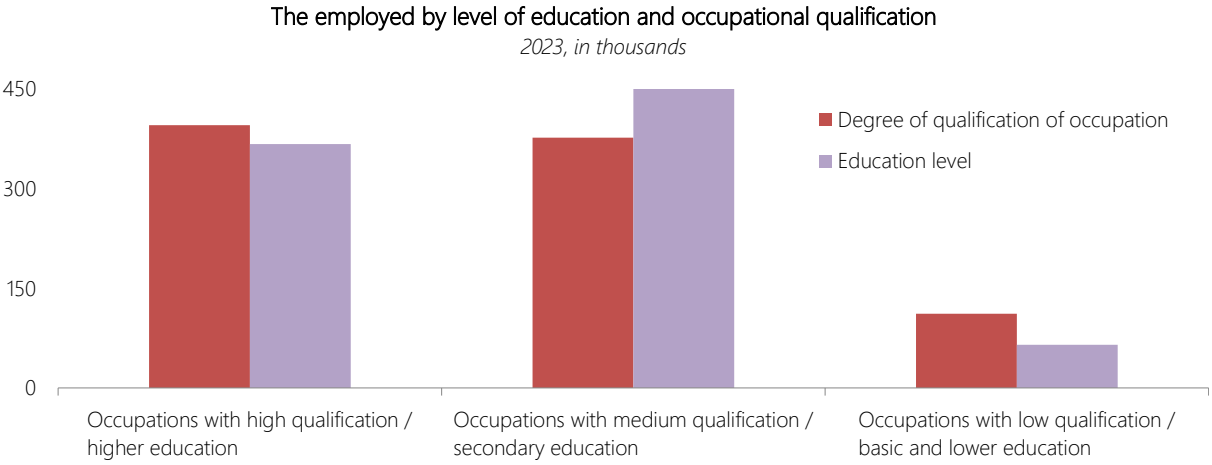
Figure 2.14



Source: CSB

Overall, people with higher education level are less subjected to the risk of unemployment. In 2023, the unemployment rate of people with higher education was 3.3%, while the unemployment rate of people with secondary education was almost three times higher (8.8%), but with basic and lower education – 4 times higher (13.2%). It should also be noted that unemployment risks are generally reduced by mastering a profession – in 2023, the unemployment rate among the population with secondary vocational education was 1.6 percentage points lower than among people with general secondary education. This trend has intensified during the crisis – employers, who considered personnel reduction options, chose to keep employees with professional skills as a priority.

Figure 2.15



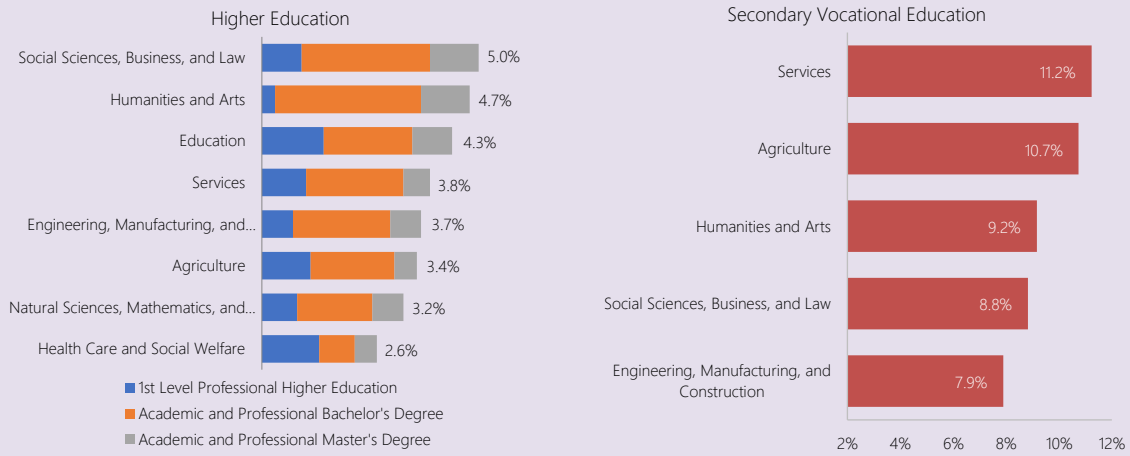
Source: CSB, MoE calculations

If we look at the **matching of education of the employed to their level of qualification** (for aggregation of occupations see Table 6 in the Annex to the report) several significant structural disproportions can be observed. Compared to the breakdown of the employed population by education levels and occupational qualification groups, it is visible that the number of the employed with higher education is smaller than the number of the employed in occupations with high qualification, which people with higher education should actually have. Meanwhile, at the level of medium qualification in 2023 we can see that the number of the employed with secondary education exceeds the number of the employees in medium qualification occupations. This leads to the conclusion that part of high qualification occupations are occupied by employees with secondary education, and this has impact on the potential development of productivity increase in the long-term.

The *register of students and graduates* collects data on students in higher education study programmes. Unpersonified data on employment and remuneration of graduates are collected and published. The monitoring of graduates of higher education institutions in Latvia started in 2017, and data are currently available on the jobs of graduates of 2017, 2018 and 2019 one year after the end of their studies. Each year's group of graduates is expected to be monitored over a 10-year period. Monitoring of graduates of vocational education institutions started in 2020 and the first data have been prepared. The monitoring of graduates of vocational education institutions is created based on the monitoring of graduates of higher education institutions, and naturally supplements the monitoring of graduates of higher education institutions, thus providing more comprehensive information on the results of the education system taking into account further life of graduates after they obtain education of the respective degree. Monitoring of graduates is an integral part of the education quality monitoring system, which provides information based on the data accumulated over many years for the adoption of sustainable decisions relating to the formation of education policy and its compliance with the needs of the economy.

According to the results of the monitoring of graduates, around 82% of all graduates of higher education institutions of 2019, on whom information is available, were employed in 2020, but the average unemployment rate among the economically active graduates was 4.8%, which is generally lower than the economy average among the population with higher education. Around 78% of all employed graduates were employed in high qualification occupations (major groups of occupations 1-3).

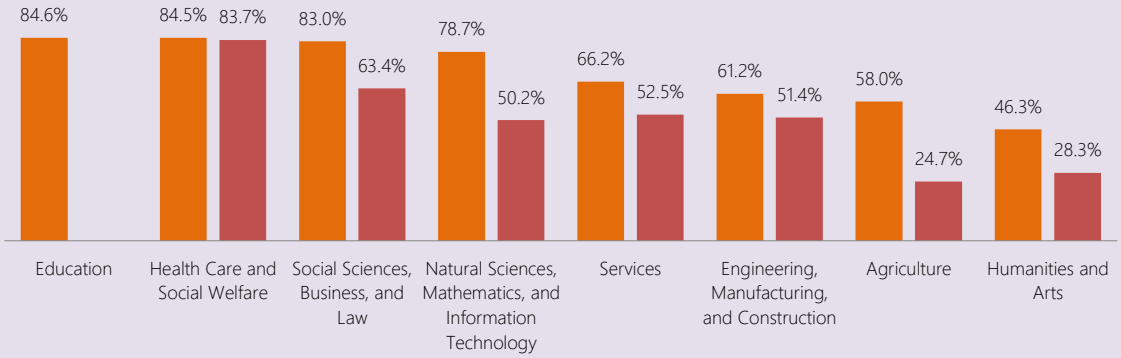
Unemployment rate among graduates of education institutions of 2017-2021 by level of education and thematic group of education
data of 2022, %



Source: Graduate monitoring data; Ministry of Economics calculations

The highest unemployment rate is observed among graduates of social sciences, business and law, as well as humanities and arts, and agriculture programmes. At the same time, the lowest unemployment among graduates is observed among graduates in the fields of health and welfare.

Matching of occupations of graduates of higher education institutions to the thematic group of education in 2022
graduates of 2017-2021, share as a percentage



Source: *Graduate monitoring data, MoE calculations based on the occupation-education matching matrix (see Sub-chapter 3.1 of the informative report) by sub-major groups of occupations of the classification of occupations.*

The highest occupation matching level in higher education, taking into account the thematic area of education of graduates, is observed in health and welfare (83%) and education (80%). The lowest occupation matching is observed in agriculture, humanities and arts, mainly due to the fact that graduates of this thematic area of education work in many other occupations, which are not evaluated as matching in accordance with the classification of occupations by main tasks and main requirements of the qualification.

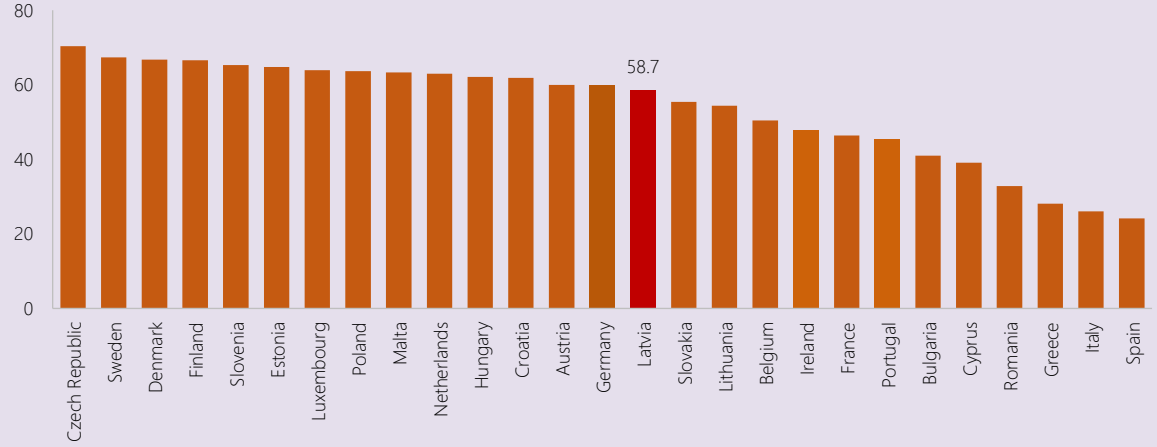
At the same time, it should be noted that significant structural inconsistencies are observed also within groups of occupations. The most pronounced insufficiency of skills is observed in high qualification occupations, where only almost 3/4 of employees had higher education in 2023. It is partially explained by the fact that the high qualification occupational group includes managers of all types of institutions and their business units, as well as positions in other types of companies and organisations, where employment is often not directly linked to the education/qualifications obtained, but rather to participation/ownership in the company or organisation.

European Skills Index 2024 – skills matching

According to the skills matching pillar of the European Skills Index, there are still large gaps between EU countries in terms of skills mismatches. According to the index, the smallest mismatches are observed in countries such as Czechia, Sweden and Denmark, which are closest to the perfect performance, while the most pronounced mismatches are in Spain, Italy and Greece. Latvia as a whole is slightly below the average in terms of skills matching (59%, 17th place among the EU27 countries), immediately below Germany (60%), and significantly lagging behind Estonia (65%). However, it should be noted that Latvia is also ahead of highly developed countries such as Belgium, France and Ireland, which are a step ahead of Latvia in terms of skills development and activation.

European Skills Index 2024 – skills matching*

2024, ideal indicator score – 100, higher assessment is an indication of better performance



Source: Cedefop

** The European Skills Index measures the performance of the EU's skills system – the distance to perfect performance (100 points), the highest achievement over the last 7 years. The skills matching pillar consists of 3 indicators to measure different aspects of use of skills in the labour market (labour supply with higher or lower skills level than required in the labour market): higher education mismatch (those with higher education that have a job that does not require it); low wage earners (tertiary graduates that are low wage earners); and qualification mismatch (the extent to which each employee's education attainment level matches each occupation in each industry)*

For individuals, a skills mismatch has a negative impact on satisfaction with job and wages, for example, a high qualification professional working in lower-level jobs will receive remuneration that does not match his or her skills, while the employees underskilled for their profession may have problems in carrying out their direct job duties. This reduces productivity of companies while shortage of skills increases recruitment costs and impedes the assimilation of new technologies. At macroeconomic level, mismatches increase unemployment and reduce GDP growth through inappropriate human capital allocation and/or a decline in productivity, which it causes while skills shortages have a negative impact on labour productivity.

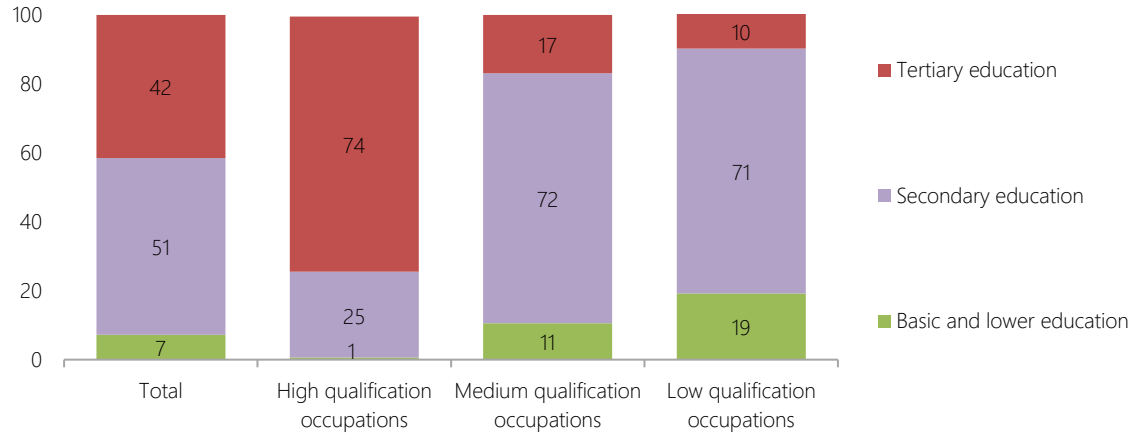
In order to reduce mismatches in skills supply and demand, it is important to provide high-quality education and training programmes, which ensure upskilling and reskilling. The importance of work based (WB) learning is also emphasised. Effective implementation of immigration policy can also help to reduce skills shortages. On the other hand, insufficient qualifications can be reduced by reducing the proportion of low qualification workers, preventing early school leaving and providing opportunities for upskilling. Along with technological progress, the creation of new jobs and cooperation between employers and the education system are also important to ensure adequate skills. Developing a modern lifelong learning system will be essential to help workers adapt and update their skills during their careers. High-quality skills assessment and the development of a system of anticipating changes in the labour market will also be important.

At the same time, the most pronounced surplus of skills is in the lower qualification/elementary occupations, where almost 3/4 of all employees have higher levels of education than would be required to carry out their job duties.

Figure 2.16

Structure of the employed by levels of education and by occupational qualification

2023, %



Source: CSB, MoE calculations

2.4. CHANGES IN EDUCATION SUPPLY

Impact of demographic trends on the number of students

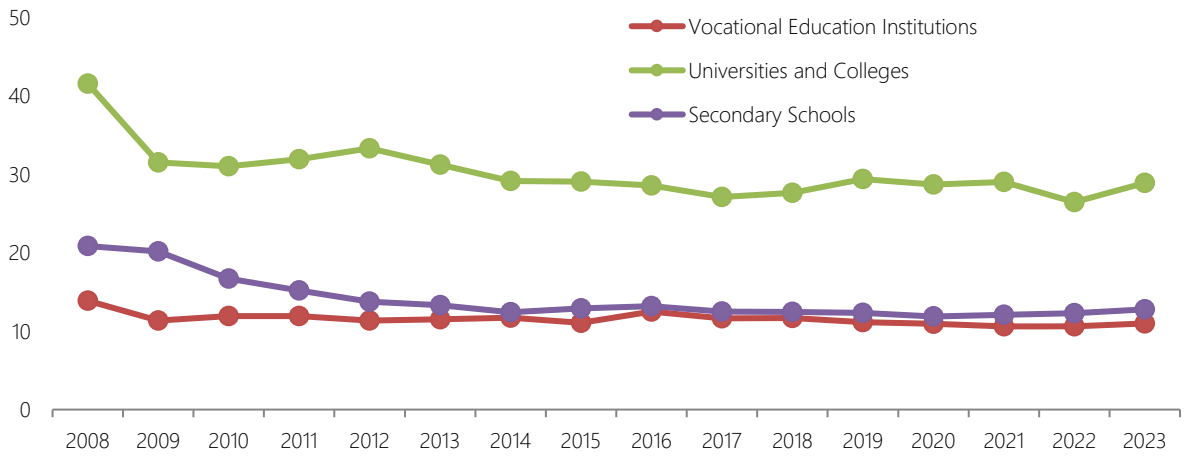
The number of students in general secondary education has been dropping in the last 10 years both at the level of basic school and secondary school. The declining trend is also observed in the number of students in vocational secondary education. The main reasons for the reduction in the number of students are persistently low birth rate and emigration of the population. Thanks to the improvement in birth rates in the period from 2004 to 2008, the drop in the number of students in general and vocational secondary education has slowed down, but the student count trend is still negative.

The structure of secondary education depends on the choice of basic school graduates to continue their education. It should be noted that the most significant problem in vocational education is still its low attractiveness level, which is largely related to prejudices and outdated stereotypes in society – more than half (57%) of young people after completing basic education still prefer to continue general secondary education. Although basic school graduates have been more focused on vocational education over the last few years, it is still not sufficient to ensure replacement of medium qualification specialists in the labour market due to ageing of the population.

Figure 2.17

Students enrolled into education institutions

thousands



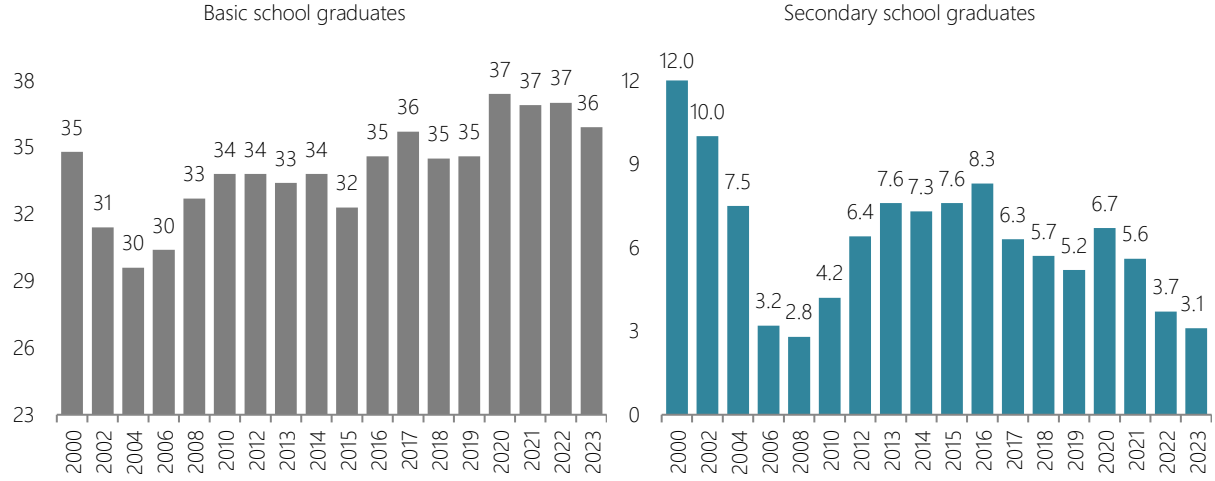
Source: CSB, Ministry of Education and Science

In recent years, the number of students enrolled in vocational education institutions remains at about the same level. In 2022, the number of those youths has decreased by 1.9 percentage points, who continue studies in vocational education after they obtain general secondary education.

Figure 2.18

Students continuing their studies in vocational education institutions

% of total graduates



Source: CSP

Latvia has set a target for 2024 to ensure that at least 39% (45% in 2027) of the total number of students acquiring secondary education study vocational secondary education programmes. The share of vocation education students has slightly grown in recent years, the student count ratio in vocational secondary education reached 37.0% in academic year 2021/2022. It is necessary to continue measures to promote the attractiveness of vocational education, including public awareness campaigns to dispel myths and change attitudes towards vocational education and popularise quality work and growth opportunities among graduates with respective vocational secondary education, thereby increasing the interest of young people in acquiring a professional qualification in vocational secondary education institutions. It is also necessary to promote more active communication between sectors and employers on employment opportunities in the relevant qualifications.

Structural changes in the education supply

Regarding the proportion of students in life sciences and engineering (life sciences, mathematics, and computing group and engineering, manufacturing and construction group), the target for 2020 was to reach 27% of the total number of graduates. However, in 2020, graduates of the target group constituted only 18.7% of all graduates. This indicator has not significantly changed in recent years reaching 19.6% in 2023. In order to achieve this goal it is necessary to implement targeted measures for the involvement of secondary education students into these study directions more actively. It should also be noted that high drop-outs during studies affect the share of graduates in exact study directions.

The number of matriculated students has been reducing in recent years, which is explained by demographic and economic reasons. The inflow of foreign students also does not compensate for this decline. Until 2019, the number of foreign students, who wanted to study in Latvia, has been growing comparatively rapidly. In the last three years the number of foreign students in Latvia has not significantly changed and in 2023 foreign students accounted for almost 14% of enrolled students.

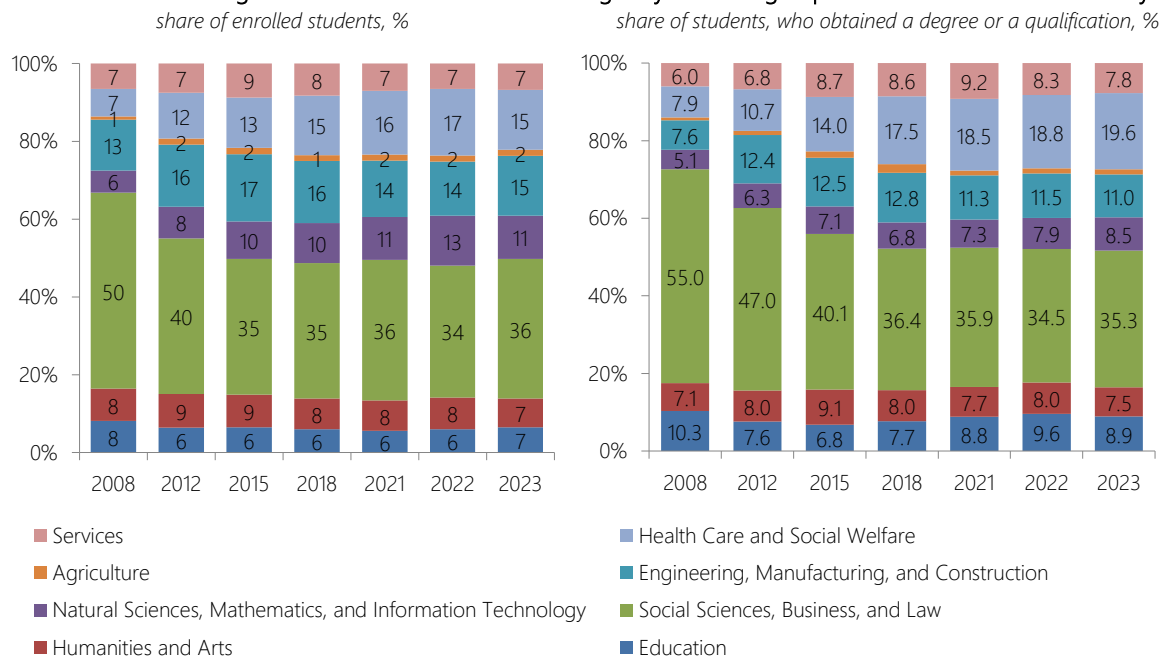
As the economic situation deteriorated in 2009, the possibility of studying for state budget funds became more important, leading to a sharp drop in the share of students in the thematic area of social sciences, where the majority are paid study places. In 2023, the number of students enrolled to the thematic area of social sciences amounted to 36.1% of the total student count.

At the same time, since 2008, the share of students enrolled in the “Education” thematic group has decreased significantly, and it has not significantly changed in recent years. Since 2015, the number of students enrolled to life sciences, mathematics, IT, as well as engineering, manufacturing and construction thematic areas of education

has been generally declining. It should be noted that the number of students enrolled in exact sciences has increased slightly in the last two years, in 2023 lagging only 2.1% behind the highest level of 2015. Meanwhile, in 2023, the share of students enrolled to the health and welfare thematic group has reached 15% (12.9% in 2015).

Figure 2.19

Number of students in higher education institutions and colleges by thematic groups of education in the academic year



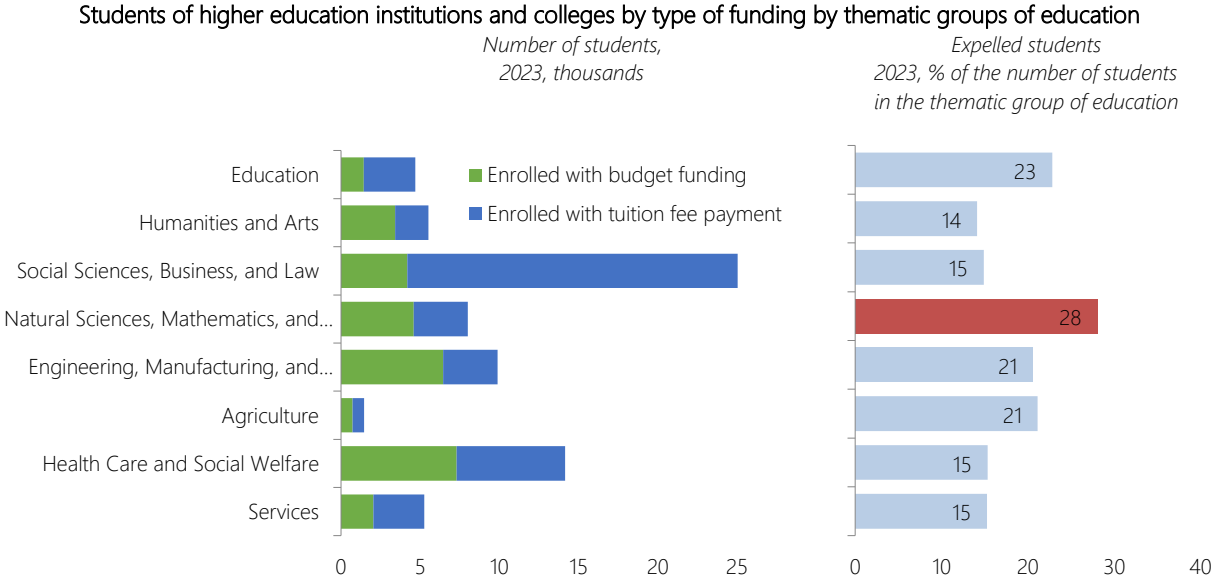
Source: CSB

The fact that the number of students enrolled in the thematic group of life sciences, mathematics and computing, and health and welfare gradually increases should be evaluated positively. Meanwhile, a decline has been observed in the thematic area of engineering, manufacturing, and construction in recent years.

The changes that took place in the education policy in the previous years are reflected with a time lag. The rapid changes in the structure of enrolled students in 2009 reflected in the structure of higher education graduates only several years later. Over these years, there has been a significant decline in the share of social sciences graduates, which is a reaction to the changes in the structure of the enrolled students.

Figure 2.20

Students of higher education institutions and colleges by type of funding by thematic groups of education



Source: CSB

The comparatively small increase in the share of graduates in the thematic group of life sciences, mathematics and computing, and the drop in the thematic group of engineering, manufacturing and construction can be explained by the relatively high level of drop-outs during the studies.

One of medium-term objectives of the education policy is to restructure state aid for higher education studies according to the-term labour market forecasts. In 2022, the number of students enrolled for budget funds in STEM (life sciences, mathematics and information technologies, as well as engineering, manufacturing and construction thematic areas of education) programmes amounted to 65% of the total number of students enrolled to budget-funded study places (target for 2020 – 55%[1]). Measures for attracting high school graduates to study fields of national importance should be continued. At the same time, it is important to reduce student drop-outs in STEM directions, which is still considerably higher than in other directions.

It should be noted that state support and accessibility of budget places still play an important role in the choice of young people in favour of studies in STEM areas. The share of students enrolled for budget funds in engineering, manufacturing and construction thematic area of education accounted for about 65% of all students enrolled in the respective programmes in 2023. Similarly, the high share of students enrolled in state-funded study places is observed in life sciences, mathematics and information technologies thematic areas – 57% of all students were enrolled in studies for state budget funds.

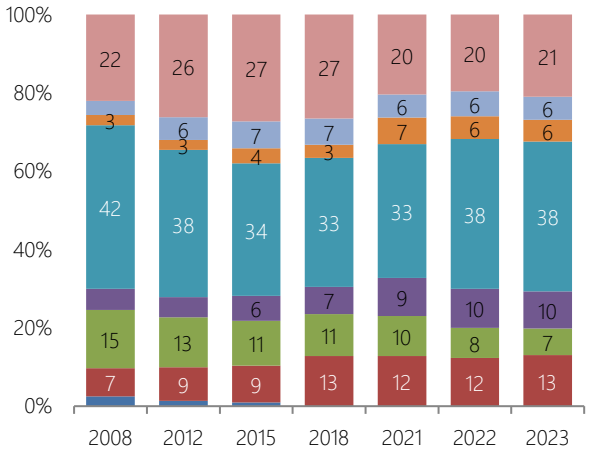
Although the proportion of young people studying for budget funds has increased proportionally in recent years, most of them still start studies at their own expense. In 2023, about 41% of the total number of students started their studies for state budget funds.

In vocational secondary education institutions, young people most often choose the thematic group of engineering, manufacturing and construction (38% of the total number of students in 2023). This group is the largest in number. Since 2008, its share has reduced, but in 2023 returned to the level of 2012. Since 2018, the share of students enrolled to the "services" thematic group of education has reduced significantly (27% of enrolled students in 2018; 21% in 2023). At the same time, the share of students in the agriculture thematic group of education has increased during the period (by 3 percentage points in 2023, compared to 2018).

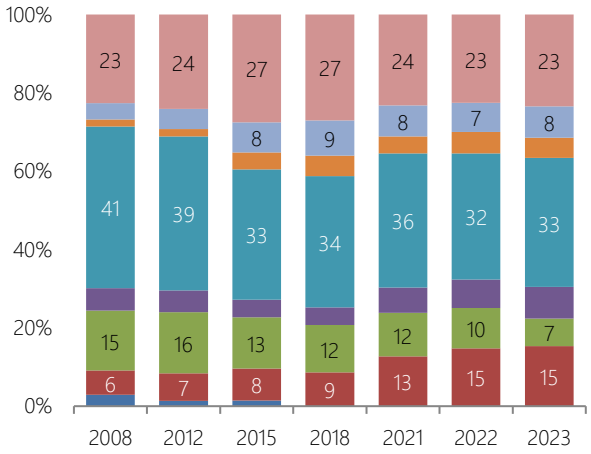
Figure 2.21

Number of students in vocational education institutions by thematic groups of education

number of enrolled students, %



*number of those, who obtained a **professional** qualification, %*



Services
Health Care and Social Welfare
Agriculture
Engineering, Manufacturing, and Construction
Natural Sciences, Mathematics, and Information Technology
Social Sciences, Business, and Law
Humanities and Arts
Education

Source: CSB

[1] The Guidelines on Development of Education for 2014–2020 are available here: https://likumi.lv/ta/id/266406-par-izglitibas-attistibas-pamatnostadnu-20142020gadam-apstiprinasanu

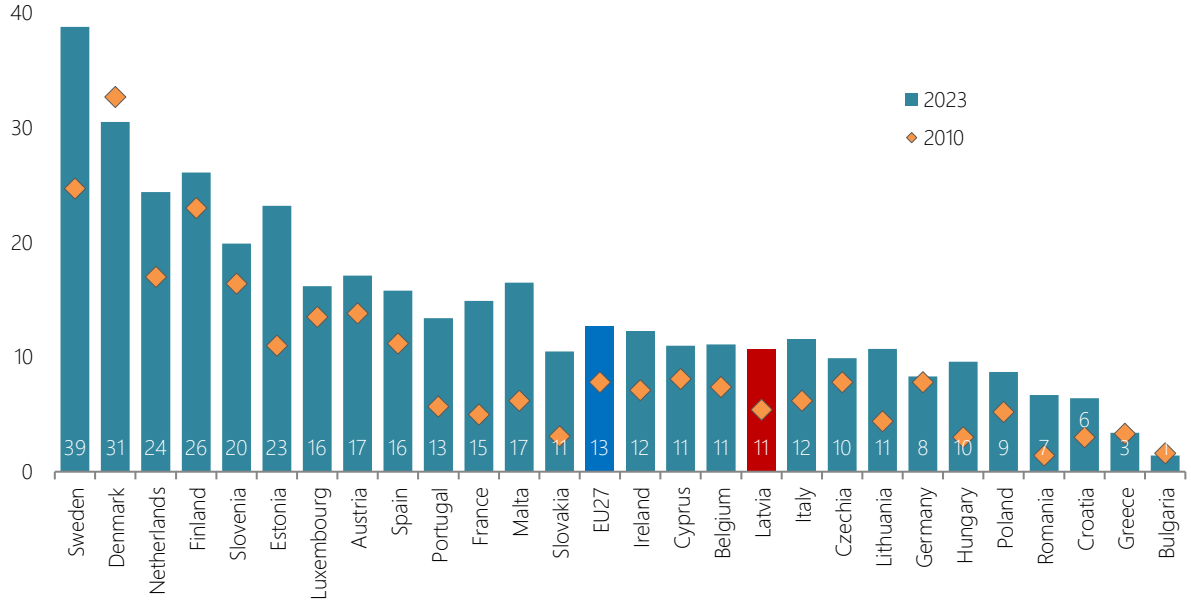
Adult education

In 2023, 10.7% of 25-64 year-olds were involved in adult education activities, while in the Nordic countries this rate was three and even four times higher. Although participation of adults in the education process has increased since 2020 (by 4.1 percentage points in 2023, compared to 2020), it is still below the EU average. The purpose of the policy is to reach the involvement of at least 10% of adults in adult education by 2024.

Figure 2.22

Population involvement in adult education*

in the age group 25–64, %



Source: *Eurostat (EU Labour force survey)*
* During the four weeks before the survey

Insufficient involvement has a number of reasons and fundamental problems faced by all the three parties involved in the adult education process – employers, employees and providers of education services. Society as a whole still has low interest in adult education. Low wages in a number of occupations and sectors are also one of the most significant obstacles to the involvement of persons in longer training courses. The population mainly expects the training offer to increase individual competences and adult education is not considered as a career growth opportunity. Weak regional mobility and the possibility of combining learning with work is also a disincentive. According to the CSB data, in 2020, 30.7% of employees participated in training organised by employers in Latvia, while the EU average was 42.4%. The costs of one participant's training in Latvia in 2020 amounted to an average of 297 euros and were the lowest among the Baltic States. Employers in Latvia support the training of their employees relatively less than in other EU countries. In 2023, the participation of employed adults in training organised during paid working hours decreased by 1.1 percentage points, from 47.9% (2022) to 46.8% (2023), lagging behind the planned target of 55% (2027). Employers' expenses on educating their employees of total labour costs is among the lowest in EU[i]. In Lithuania these costs were 432 euros, in Estonia – 892 euros, EU average – 1441 euros[1]. There are a number of other reasons on the side of enterprises why the existing system is not working properly. On the side of educational institutions, however, there is no clear, precise demand of businesses and industries. Cheap, low-quality offers compete on the market, but existing administration and financing mechanisms are not supportive and motivating.

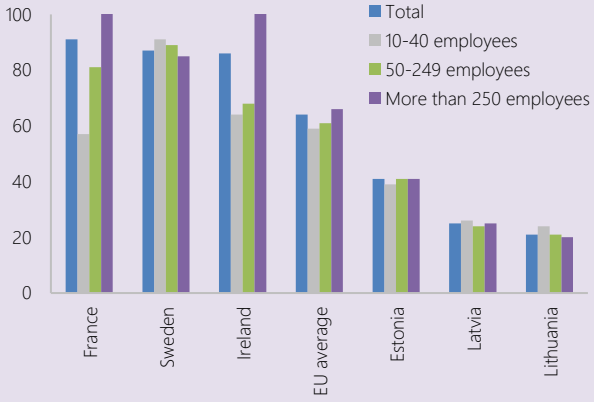
[1] CSB survey "Vocational training in companies" – survey data of 2020

Development of lifelong learning culture in Latvian businesses

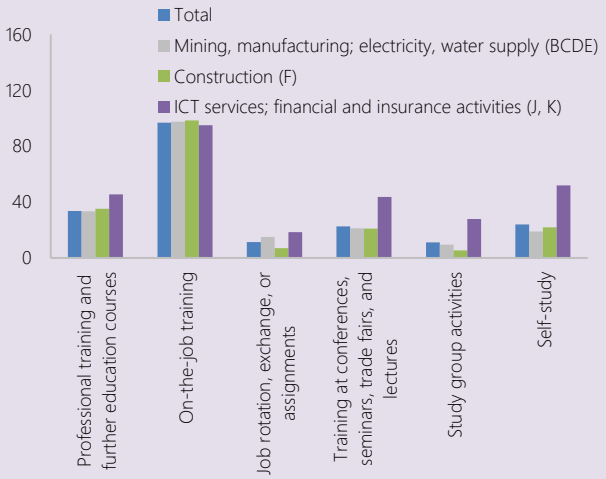
A lot of knowledge, skills and abilities needed to sectors or businesses are specific, they cannot be learned only through formal education at school (and this is not the task of formal education). Moreover, acquired skills are becoming outdated increasingly faster. It is becoming more and more difficult and costly to find an employee with adequate knowledge and skills to boost business growth and bring innovation in conditions of a limited workforce in the labour market. The solution is to invest in the training and development of their own employees. The education system will never be able to provide specific skills and abilities at company level. The role of the education system is to provide a broad knowledge base. The task of the sectors is to give signals to formal education and to invest in the improvement of knowledge, skills and abilities of employees.

The data used in this box comes from the Five-Year Continuous Vocational Training Survey (CVT), which collects information about companies' investments in training their employees. The latest available data is for 2020, covering companies with 10 or more employees in the NACE 2 B-N, R and S sectors (except agriculture, forestry and fishing, public administration and defence activities, compulsory social security activities, education, health and social work activities). CVT includes planned training funded by the company that takes place on-site, online or in a hybrid format, not including initial vocational training (IVT). CVT courses are organised and conducted at specific training sites, while other types of CVTs may be linked to active work, including conferences, job rotations and self-learning. CVT also collects information on initial vocational training in companies covering ISCED levels 2-5 with a duration of training between six months and six years.

Costs of continuous vocational education by company size
2020, costs per training hour, EUR



Lifelong learning culture in companies
2020, %



Source: *EUROSTAT*; CSB

Like in other EU countries, large enterprises in Latvia spend a higher share of their total labour costs on training than SMEs. As the level of participation of SME employees in adult education activities is generally lower and the majority of employees in Latvia work in small and medium-sized enterprises, the state policy plays an important role in supporting the financial capacity of SMEs to provide adult education. In general, the level of expenses for training in Latvian companies, regardless of their size, is significantly lower than in companies of similar size in the EU. There are also differences between sectors. In Latvia, ICT, financial and insurance companies spend most of their labour costs on training (an average of EUR 35 per training hour). It is followed by companies in manufacturing, science and services; construction; trade, transportation and storage, accommodation and food service activities. However, regardless of the sector in which Latvian companies operate, they all spend less than companies in the EU. In addition, Latvian companies tend to choose short, non-formal education programmes that are cheaper, but they usually can only provide an unofficial attendance certificate, which means that the skills acquired by employees are not always recognised in the labour market, weakening their ability to take full advantage of the benefits of their participation in training and reducing their motivation to use learning opportunities.[1]

Entrepreneurs may be motivated to invest in the development of employees' knowledge, skills and competences to ensure productivity of the company, but it will also reduce costs of recruiting new staff, foster motivation of employees and positive attitudes towards employers, loyalty, improve the reputation of the company, help to retain employees, and it may be easier for the company to attract good employees and talents in the future. By acquiring new knowledge and skills, employees become more versatile, able to perform different duties, tasks. When entrepreneurs provide and/or invest in training, to make it effective they are forced to think about future trends and plan the development of the company, and to follow up on the quality of training.

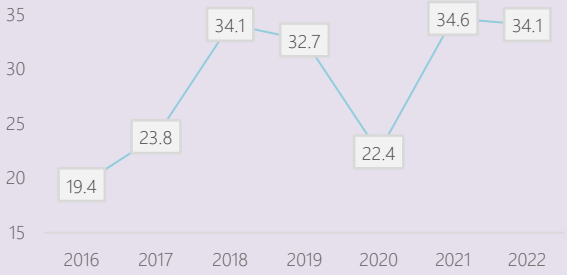
Given that the labour market is increasingly changing, it is necessary to move towards the creation of a functional adult education system to continuously develop skills, abilities and competencies to provide the labour market with the necessary human resources.

[1] Supporting employers in promoting skills development in Latvia, OECD, 2022: https://www.oecd.org/content/dam/oecd/en/about/programmes/dg-reform/latvia/latvia-employers-report-2022.pdf

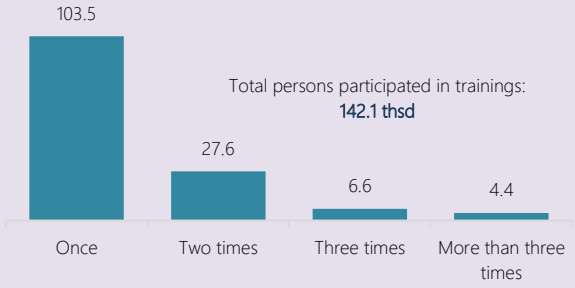
Monitoring of results of state co-financed adult education support projects*

In order to ensure the compliance of lifelong learning policy with future labour market requirements, the MoE and CSB, in cooperation with the Ministry of Education and Science, the State Education Development Agency, the MoW, the SEA and the LIAA have started work on the establishment of a graduate monitoring system in relation to state-funded continuing education and upskilling programmes. The existing monitoring data collection includes data from the SEA, the State Development Education Agency (SEDA) and the Central Finance and Contracting Agency (CFCA) on the educational institution that implemented the education programme, the training sector, the type of education programme, as well as socio-demographic and economic indicators about graduates such as age, gender, education and employment. From 2016 to 2022, 142.1 thousand persons participated in the training. 28.1 thousand graduates (approximately 1/5 of the total number of graduates) have completed educational programmes in the manufacture of electronic and optical equipment; information and communication. Also 12.1 thousand graduates (or 8.5% of total graduates) have completed courses in business, finance, accounting (trade, commerce). Approximately 70% of education programmes consist of non-formal education programmes graduated by 98.9 thousand persons.

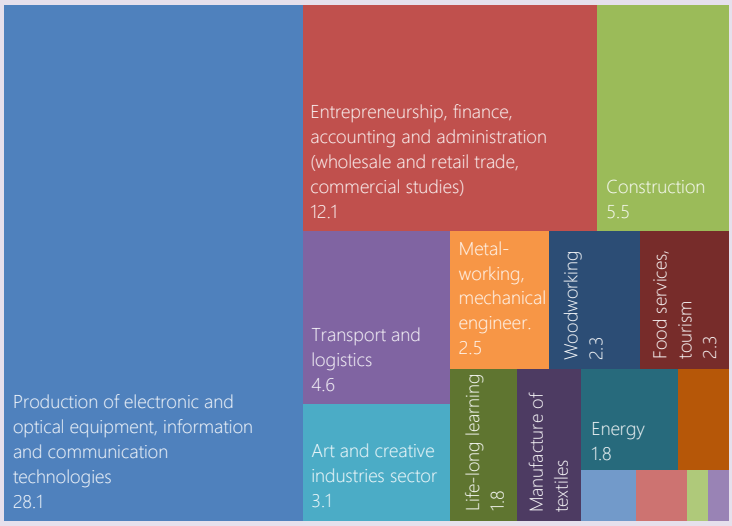
Number of graduates by years
thousand



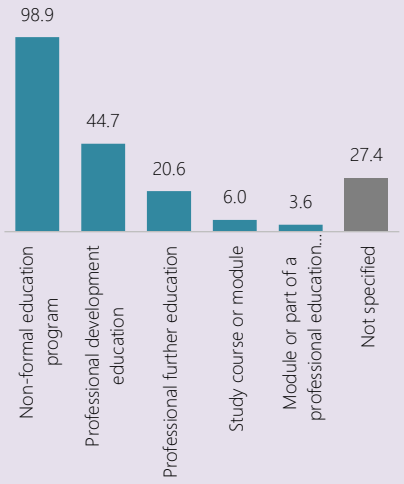
Number of graduates by times of participation in training
thousand, total for 2016 to 2022



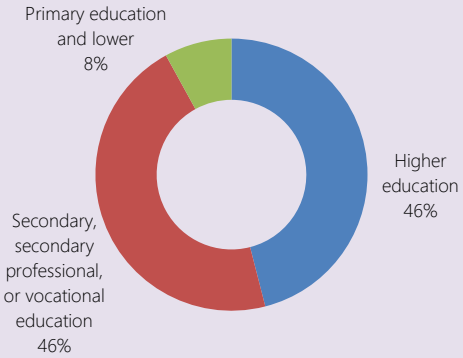
Graduates by field of training
thousand, total for 2016 to 2022



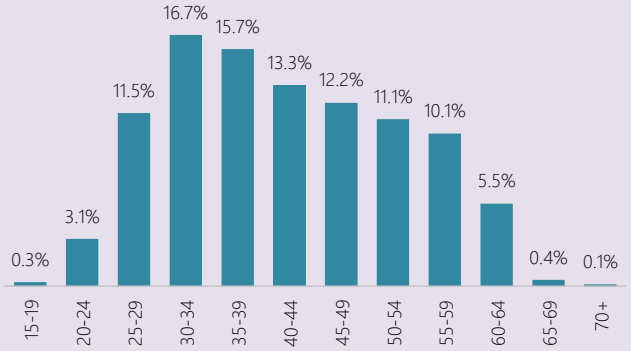
Number of graduates by type of education programme
thousand, total for 2016 to 2022



Level of education of graduates
%



Graduates by age
% of total graduates

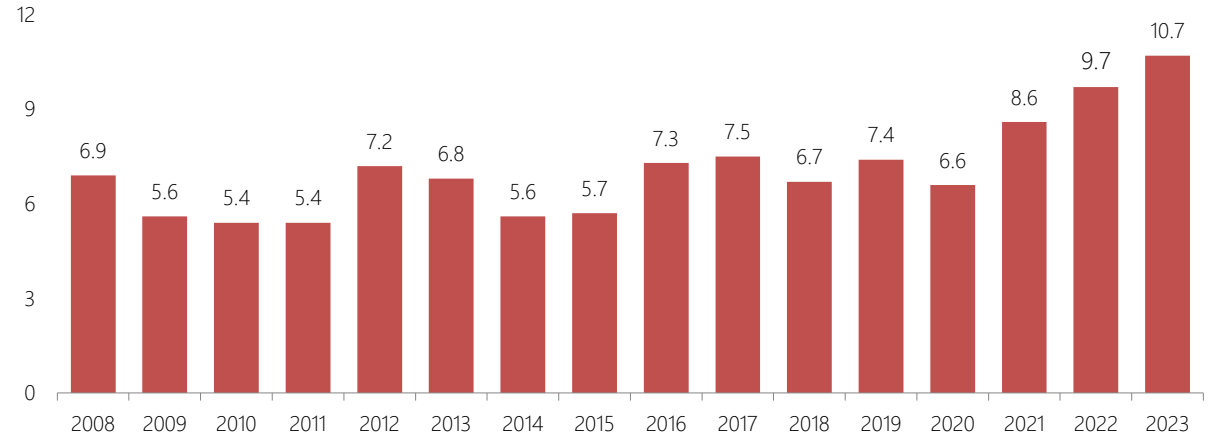


* MoE: Operational programme "Growth and Employment", specific objective 1.2.2 "Promote introduction of innovations in merchants", measure 1.2.2.1 "Support for the training of employees", measure 1.2.2.2 "Innovation motivation programme", measure 1.2.2.3 ""Support for ICT and non-technology learning, as well as learning aimed at attracting investors"; MoES/SEDA" ESF project "Improvement of professional competence of employed persons"; MoW/SEA: data on graduates of continuing vocational training or improvement training.

Figure 2.23

Population involvement level into lifelong learning

% of the population in the age group 25–64



Source: CSB, *Eurostat*

People with higher education are more actively choosing to participate in adult education activities, which is justified, inter alia, by the requirements of a high qualification or regulated occupation to regularly improve knowledge and skills. 18.4% of people with higher education were involved in adult education activities in 2023, i.e. by 7.2 percentage points more than in 2020 (11.2%). The population with general secondary education (8.1% in 2023) and vocational education or vocational secondary education (5.0% in 2023) is considerably lower. The involvement indicators among women are considerably higher than among men. The share of involvement of women was 13.5%, which exceeded the share of involvement of men by 5.7 percentage points (7.8%).

3. MEDIUM AND LONG-TERM LABOUR MARKET FORECASTS

3.1. METHODOLOGY OF DEVELOPMENT OF LABOUR MARKET FORECASTS BY THE MINISTRY OF ECONOMICS

MoE labour market forecasts

The MoE has been preparing and updating medium-term labour market forecasts since 2008. Starting from 2011 long-term forecasts are prepared. The labour market forecasts are based on the scenarios of economic development and demography developed by the MoE; these scenarios are based on the medium and long-term development goals of Latvia, as set in the strategic planning documents: Sustainable Development Strategy of Latvia until 2030 and National Development Plan 2021-2027.

The preconditions for these forecasts are closely related to the ability of Latvia to implement the set goals and to introduce the required structural reforms, which are aimed at strengthening the growth potential. Therefore, the forecasts should be considered in context with the progress of these reforms and the possible changes in the policy emphasis should be taken into account.

Labour market forecasts are one of the tools that allow for an early anticipation of formation of labour market mismatches in the future and a more efficient distribution of labour resources in the economy. They show possible trends in the labour market development and the possible risks, taking into account the anticipated changes in the education supply structure.

The medium-term and long-term labour market forecasts developed by the MoE are one of the stages in the labour supply adjustment process. They are the quantitative basis for further discussions among employment, education and structural policy makers, social partners, scientists and other stakeholders, in order to prepare and adapt the expected structural changes in the national economy in a timely manner.

Labour market forecasting model

The MoE methodology for labour market forecasting arises from the dynamic optimisation model (DOM)[1] that was developed within the ESF project *"Research of long-term forecasting system of the labour market demand and analysis of improvement options"* in 2007. The labour market forecasting technology and the DOM model have been significantly improved over time. Having implemented the ESF project activity "*The improvement of the medium and long-term labour market forecasting instruments*" from 2011 until 2013, the MoE, in cooperation with Riga Technical University, has improved the initial labour market forecasting methodology and model.[2] Furthermore, from 2017-2019 in cooperation with SIA "AC Konsultācijas" labour market forecasting model assumptions on education corresponding to occupation standards (occupation-education matching assumptions) have been updated in the research *"Possibilities of establishment of the system of anticipating changes in the labour market and linking of medium and long-term market forecasts with the action policy"*[3]. New occupation-education matching assumptions have been integrated into the model and labour market forecasts starting from 2020. MoE revises occupation-education matching assumptions on a regular basis, taking into account changes in occupation standards and education content, as well as consulting with sectoral experts.

For the modelling of labour market, the system dynamic approach is employed. The forecasting methodology is based on partial balance principles, where labour market demand stimuli are determined and arise from the set economic growth targets, but labour supply in the long term adapts to labour market demand and relative wage changes.

The labour market forecasting model consists of three basic blocks: demand block, supply block, and the labour market block. All of the blocks are interrelated and mutually complementary (see Figure 3.1). The basic principles and inner logic of the model are based on the concept of the labour market general equilibrium, i.e. the labour force demand and supply balances in various labour market segments over a longer period of time.

Demand for labour depends on the macroeconomic development scenarios – growth of economic sectors and expected changes in productivity. Demand for occupations arises from the demand of labour in the specific sector

[1] Examination of the system for long-term forecasts of labour market demand and analysis of its improvement possibilities. MoW of LR: Riga, 2007, http://www.lm.gov.lv/upload/darba_tirgus/darba_tirgus/petijumi/ilgtermina_prognozesana.pdf

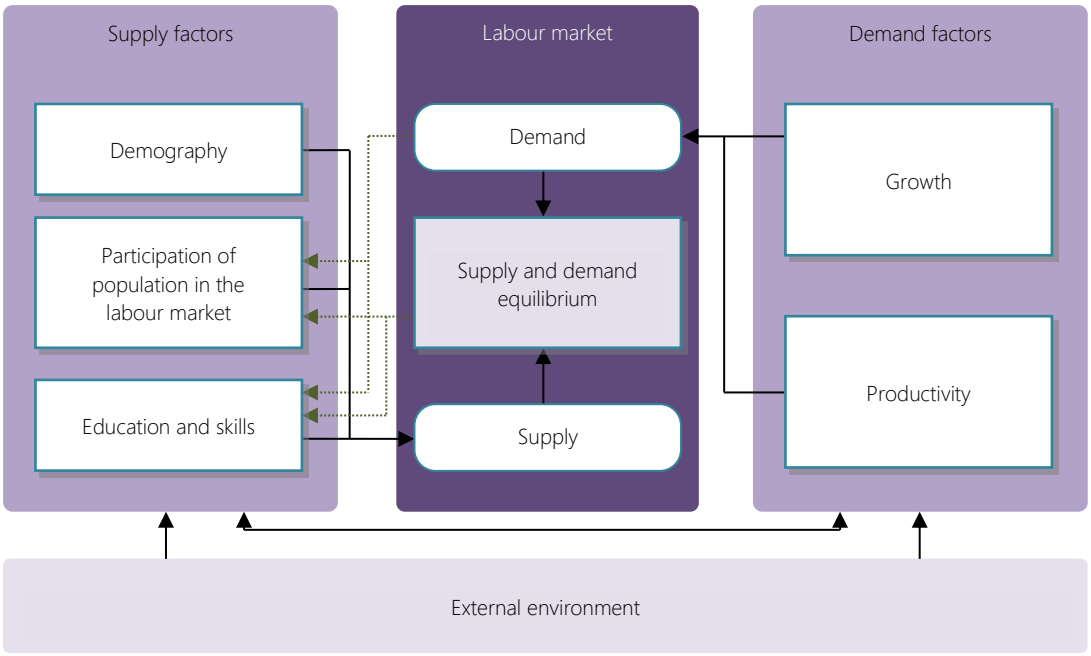
[2] For further information on the labour market forecasting model see the Technical Documentation of the Model for Medium- and Long-Term Forecasts and Policy Analysis in the Latvian Labour Market. https://www.em.gov.lv/files/tautsaimniecibas_attistiba/Dokumentacija_Lat.pdf

[3] Research "Possibilities of establishment of the system of anticipating changes in the labour market and linking of medium and long-term market forecasts with the action policy": https://em.gov.lv/files/attachments/DarbaTirgus_Gala%20zinojums.pdf

and expected changes in the structure of occupations within the sector. But the demand for education depends on the skills/education necessary for the performance of duties of the required occupations.

Figure 3.1

Logical structure of labour market forecasting model



Labour market supply forecasts arise from:

- detailed demographic forecasts;
- participation level forecasts in different age groups of the population;
- breakdown of the current labour force by age, professional experience (current or previous occupation) and acquired education;
- current education system and education supply (number of students, breakdown of total and state-funded study places by education levels and fields).

At the same time, labour force supply forecasts depend on the general tendency of the labour market towards balance and on the gradual adaptation of supply to demand. Education preferences mainly stem from the ratio of labour market demand to supply, i.e. future students will choose those fields, where the most promising (relatively higher) work opportunities and the highest possible return from individual investments in education are expected at the moment of the decision. The baseline scenario also assumes that the education system and education supply (the distribution of state budget funded study places) do not change significantly during the forecast period. It means that labour force supply forecasts reflect an education-policy-change neutral situation in the labour market.

It should be noted that these forecasts are based on the example of an ideal labour market, i.e. demand for certain levels and fields of occupations in the labour market, determine the demand for the respective level and field of education. It means that in the future the expansion and replacement labour demand in certain occupations can only be satisfied with a supply of labour force with the qualification (education) necessary for the relevant occupation.

Labour supply forecasts take into account ageing trends of labour force, as well as occupational mobility of labour force, which are determined by the similarity of skills and competences across occupations.

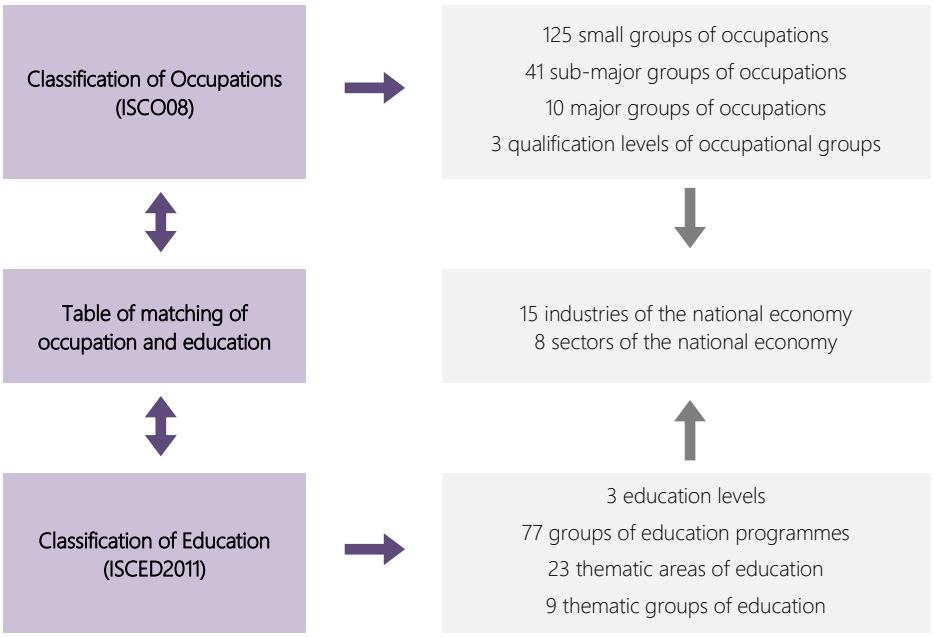
Classifications and aggregation of the forecasts

The MoE labour market forecasts are prepared in relation to sectors, groups of occupations, and education. The forecasts are based on the international classification systems adapted to Latvia and are internationally comparable. The forecasts for the sectors are based on the Statistical classification of economic activities in the European Community NACE rev. 2. National economy sectors are aggregated in 8 sectors of national economy.

The aggregation of occupational forecasts is based on the Latvian Classification of Occupations, which, in turn, is based on the International Standard Classification of Occupations (ISCO-08). Labour demand and supply forecasts are prepared for 125 small groups of the classification of occupations, which are summarised in 41 sub-major groups of occupations, 10 major groups of occupations, and at three occupation qualification levels.

Figure 3.2

Labour market forecasts classification and aggregation system



Occupation forecasts are closely related to the forecasts of labour demand and supply, by the acquired education. The aggregation of education forecasts are based on the Latvian Classification of Education, which is based on the International Standard Classification of Education (ISCED2011). The forecasts for education demand and supply are provided for three education levels (basic, secondary, and tertiary), by 23 thematic areas of education at each education level.

The labour market forecasts by occupations and education are synchronised by using the occupation-education compliance matrix, developed by the MoE in cooperation with the MoES and the MoW in 2011, for the needs of medium and long-term labour market forecasts. The matrix is based on the Latvian Classification of Occupations and on the framework of the International Standard Classification of Occupations (ISCO08), as well as on the assumptions on the occupation skill levels and corresponding education levels. Furthermore, from 2017-2019, the occupation-education matching matrix was updated within the research "Possibilities of establishment of the system of anticipating changes in the labour market and linking of medium and long-term market forecasts with the action policy" in cooperation with SIA "AC Konsultācijas" within ESF project No. 7.1.2.2./16/I/001. MoE revises occupation-education matching assumptions on a regular basis, taking into account changes in occupation standards and education content, as well as consulting with sectoral experts.

Information and data sources used in forecasting

In the development of labour market forecasts, mainly the data, included in the national statistics programme and regularly summarised by the CSB, have been used. The Labour Force Survey (LFS) is the most important source of information. The main forecast assumptions about the structure of demand and supply of labour force are based on the LFS. The MoE medium-term and long-term labour market forecasts of 2024 used anonymised LFS microdata of 2023.

The MoE's demographic forecasts are based on the information provided by the CSB, in regard to the number and structure of the population in 2023 and at the beginning of 2024, as well as the demographic trends of the previous years. The long-term assumptions about the fertility and mortality rates arise from the base scenario of the demographic forecast EUROPOP2023, developed by the Statistical Office of the European Communities (Eurostat). The scenarios of international migration are closely related to the Latvian growth targets and the further development of the situation in the labour market.

Education statistical data is used for the modelling of the education system structure and the entering of labour force in the labour market. The main sources for education statistics are CSB's Report on vocational education institutions (prof-1) and Report on higher education institutions, colleges (1-higher education institution, college), as well as general education statistics.

3.2. ECONOMIC GROWTH ASSUMPTIONS AND DEMOGRAPHIC PROJECTIONS

3.2.1. TARGET SCENARIO OF ECONOMIC GROWTH

The MoE has prepared a Target scenario of economic growth and a macroeconomic forecast that matches it. Although the geopolitical situation in the region has a negative impact on the economy, the long-term goals of economic development, which have already been identified in policy planning documents and are related to the need to increase exports and productivity of Latvian goods and services, remain unchanged. The initiatives launched earlier by the EU, such as the Green Deal and digitisation, also remain topical.

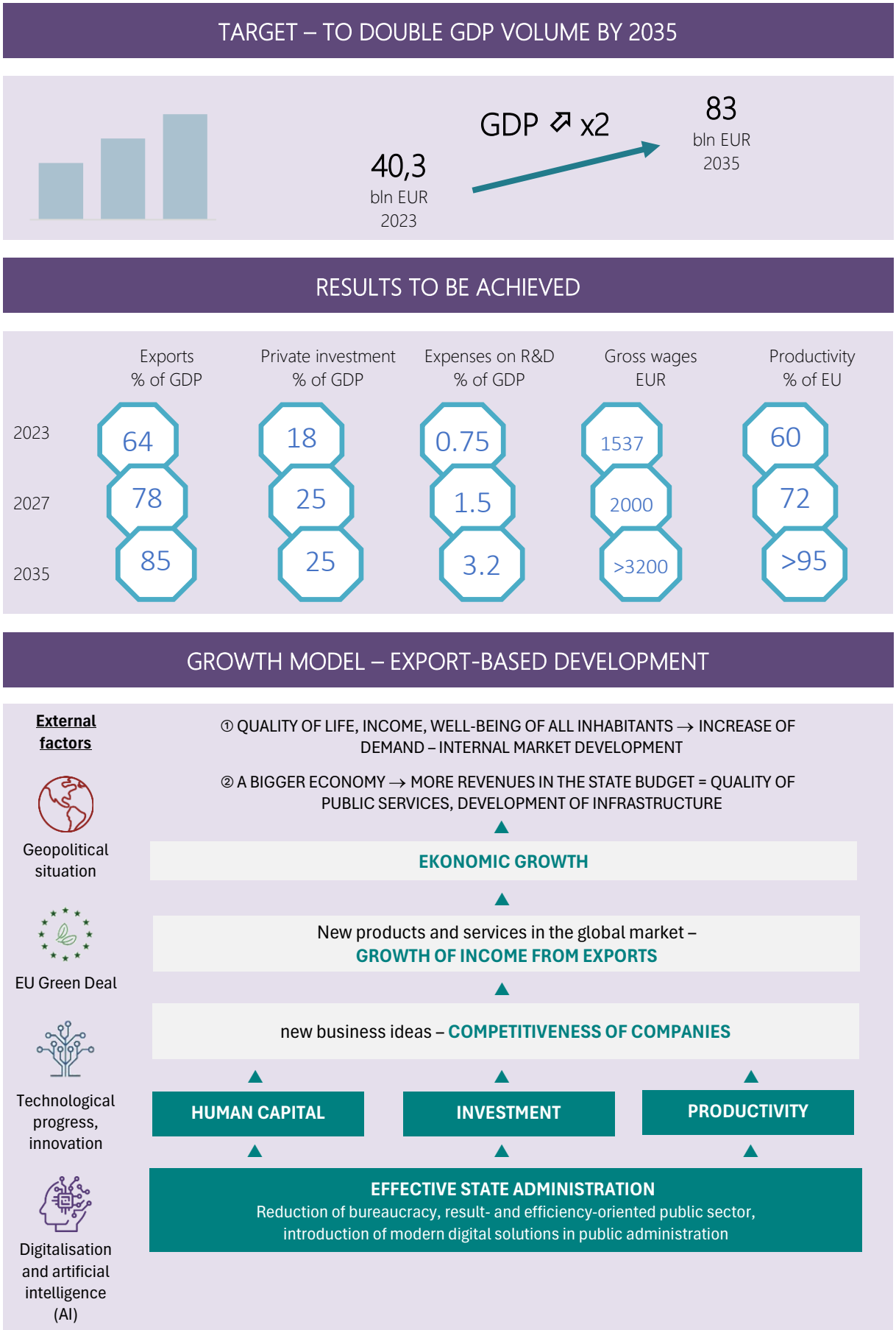
The target scenario has been drafted in accordance with the objective set out in the informative report on the economic development of Latvia[1] – to make Latvia's GDP volumes double by 2035 (reaching EUR 83 billion at current prices), compared to today's situation. The target scenario has taken into account the existing settings of the structural policy defined in policy documents – Sustainable Development Strategy of Latvia until 2030[2], National Development Plan of Latvia for 2021-2027[3], National Industrial Policy Guidelines for 2021-2027[4].

To achieve this, the average annual economic growth rates of 4-5% need to be achieved over the next few years, provided inflation remains stable at 2%. In order to achieve the objectives set, it is necessary to ensure labour resources – at least 900 thousand employees per year, increase in export share to at least 80% of GDP, and annual private investment of at least 25% of GDP should be ensured. Productivity-based growth over the next 10 years can lead to an increase in average gross monthly wage to at least EUR 3,200.

[1] https://tapportals.mk.gov.lv/legal_acts/3ee763e4-6022-41f5-a3d9-3055fdf261cb
[2] https://pkc.gov.lv/lv/valsts-attistibas-planosana/latvijas-ilgtspejigas-attistibas-strategija
[3] https://pkc.gov.lv/lv/nap2027
[4] https://www.em.gov.lv/lv/industriala-politika

Figure 3.3

Economic growth target



Medium- and long-term macroeconomic framework

Due to the expected demographic trends, the decisive precondition for faster economic growth is to increase the productivity level. One of the main challenges is to create new competitive advantages, which is related investments in human capital, technologies, innovation and research, digitisation. The creation of new competitive advantages is an important condition for the extension of export outlet markets and growth in export volumes, which should become the main growth driver. Latvia's competitiveness in external and domestic markets will depend on its ability to close the productivity gap with the technologically developed countries. The increase in productivity is based not only on technological novelty, improvement of production process management, but also on reallocation of existing resources to produce products with higher value added.

In the medium term, the target scenario envisaged GDP growth by about 4.1% per year, but the fundamental precondition for this is to support economic competitive advantages by technological factors, manufacturing efficiency and innovation, as well as the ability to adapt and use the opportunities provided by global changes. In the long term (from 2031 to 2040) annual economic growth rates will become slower and may be within 3.7%.

Table 3.1

Target scenario framework

changes, %, annual average

	2011-2019	2020-2023	2022-2030	2031-2040
	Fact		Forecast	
Number of inhabitants	-1.1	-0.5	-0.7	-0.2
GDP at current prices	6.0	7.2	6.3	5.6
GDP at reference prices	3.3	1.4	4.1	3.7

Source: CSB data from 2011 to 2023, MoE forecasts starting from 2024

In conditions of the open labour market, the convergence of wages will continue and will result in a negative effect on competitiveness of companies in low value added segments. Population decline and lower increase of income in the long term as the base increases will have an impact on private consumption.

Figure 3.4

Latvian economy growth

GDP dynamics, 2004 = 100

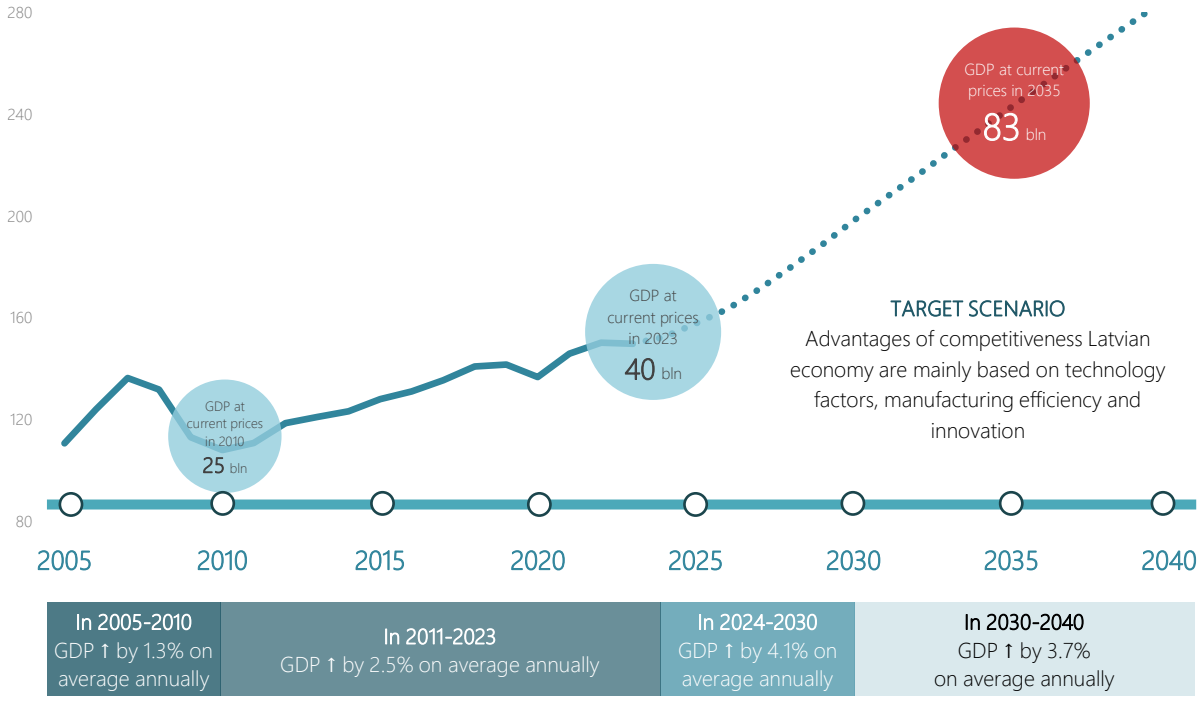


Figure 3.5

Overall assumptions for the target scenario

Medium and long-term objectives to achieve the objectives:

EXTERNAL ENVIRONMENT	The geopolitical situation has stabilised. Businesses find solutions to reorient their operations to new business niches and new outlets for goods. Supply chains adapt to new circumstances relatively quickly.
INVESTMENTS, TECHNOLOGIES	The funds available are mainly invested in high productivity companies. Investments not only in technological novelty, and improvement of production process management, but also in reallocation of existing resources to produce products with higher value added. Significant increase in private investment.
INNOVATION, RESEARCH	Funding of R&D increases significantly, reaching 1.5% of GDP in 2027. Private investments in research and innovation are growing.
DIGITALISATION AND ARTIFICIAL INTELLIGENCE (AI)	The current trend towards the spreading of digital services is intensifying. According to the digital maturity of each company, there is a continuing digital technology, including AI, deployment process. New products and market niches are emerging. The share of companies using cloud computing services, as well as those that have mastered and use big data analysis methods, has increased significantly.
GREEN DEAL	Timely reorientation and preparation for change. Search for new business niches for developing and exporting green technologies.
HUMAN CAPITAL	Additional public and private investment for skills development, staff reskilling to the sectors with the greatest growth potential. The supply of adult education in the context of new digital technologies to all groups of society, thereby mitigating the risks of growing inequalities. Active involvement of employers in improving the competences of existing employees, as well as creating new skill sets to enable people to qualify for new occupations in the context of economic transformation and robotisation. Simplified procedure for attracting foreign labour to companies that invest or are unable to attract employees with the required qualifications.

Global technological change and its impact on the national economy

In recent years, rapid and comprehensive changes have been taking place in the world, they will accelerate technological novelties and the main global technology trends are related to IT development, digitisation – AI and machine learning, the Internet of Things (IoT), big data and augmented analytics, smart cities, blockchain technologies, cloud computing, digital augmented reality, language digitisation and processing, voice interfaces, computer vision and face recognition, robots, autonomous vehicles, 5G technologies, genetics and gene sequencing, machine creativity and design, digital platforms, unmanned aircraft, 3D and 4D printers, cybersecurity, quantum computing. Nearly all surrounding things and devices will be connected, which will definitely change business models and the lifestyle of people. There will also be a change in demand structure, for example, people will increasingly use binding/appropriate services based on large-scale data analysis.

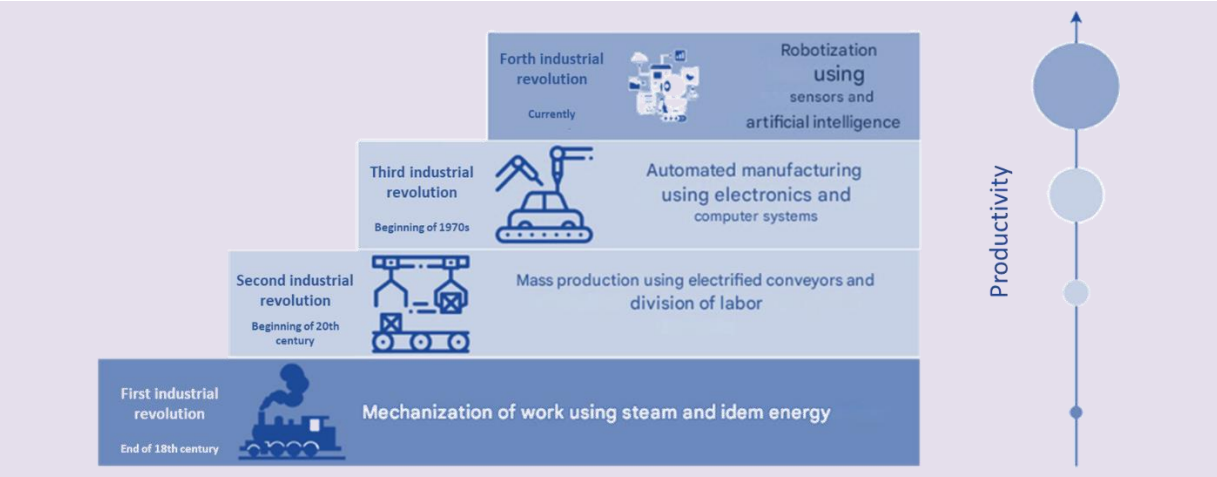
Also in Latvia, new technologies will influence almost all economic sectors. This will manifest as the use of new technologies in improving existing business processes, replacement of physical manual work with smart equipment, the use of big data in decision-making and demand satisfaction. In addition, the development of digital technologies creates new niches of products and services. Today, smart materials have dynamic functions adapted to different life situations and needs, enabling them to adapt to the environment. Smart materials are present in both sensors, actuators, including in the future they will play a more important role in the various technological solutions in healthcare.[1] In the future, we are likely to be able to produce nanoparticles that can be incorporated into paints in order to effectively capture sunlight and convert it into electricity at low cost; or nanomaterials that can create new capabilities for batteries of high energy capacity and low weight. Nanoelectronic devices, such as

[1] https://www.researchgate.net/publication/273515631_The_Grand_Challenges_in_Smart_Materials_Researc

nanocomputers, which can be incorporated into textiles and clothing and which provide a variety of functions as a result of the impact, such as hardness changes. Smart nanomaterials have the greatest impact on health care and medicine – implants, prostheses made of materials that can change their surface and biofunctionality in order to increase biocompatibility; or synthetic cells that can produce protein drugs when triggered by light, etc.[1] In some areas of technology, significant achievements have already been made in Latvia, such as 5G, unmanned aircraft, smart city, gene sequencing, language digitisation, big data. There are also developments and a scientific base for AI and quantum computing.

Figure 3.6

Industrialisation cycles and productivity



Rapid technological development will increase the pace of change and create new opportunities, but will exacerbate disunity of winners and losers. Automation and AI threaten to change industries more quickly than the economy is able to adapt, potentially moving employees and limiting the normal development path of poor countries.

Latvia's economic development will affect Europe's common climate policy. The EU aims to achieve that Europe becomes climate neutral by 2050 – its economy reaches zero emissions of greenhouse gases. The Green Deal provides for actions to promote the efficient use of resources through the transition to a clean, circular economy and mitigation of climate change, loss of biodiversity and pollution[2]. The European Green Deal will affect **all sectors of the economy**, particularly transport, energy, agriculture and industry.

In the energy sector, decarbonisation is the biggest challenge. Energy production will have to place much more emphasis on renewable and alternative energy sources. The replacement of fossil resources under the Green Deal will mean a significant reduction in oil, natural gas and coal consumption across the EU. The current geopolitical situation will only accelerate this.

The introduction of cleaner types of private and public transport will have an impact on existing supply chains for manufacturers of internal combustion engines. At the same time, such a transition may create new business niches in the production chains of alternative fuels. The transformation of the transport sector will require the development of smart infrastructure for alternative fuels, such as smart grids, hydrogen networks or carbon capture, storage and use, and the development of energy storage solutions.

In order to reduce energy consumption and costs, renovation and heat insulation of buildings are essential. Renovation of buildings means both increased production of construction materials, opportunities for developing innovative products and additional demand for the construction industry.

A major shift is expected in the agricultural sector, which includes activities such as carbon management and storage in soil, better management of mineral fertilisers, innovative ways to replace existing chemicals used in plant protection.

The transition to climate neutrality also closely affects the industrial sector. There will be an increasing focus on innovation to help businesses transform their existing activities and help them to replace old equipment with new, more energy-efficient equipment, which in turn will have a positive impact on productivity. This is particularly the

[1] http://www.jscholaronline.org/full-text/JNSM/e101/Smart-materials-from-nanotechnology-for-global-challenges.php
[2] https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_lv

case in manufacture of cement, which is the focus of attention due to its high energy intensity. The transformation of one industry and all its value chains needs 25 years[1]. Therefore, industries should already consider the potential effects of climate change when planning their long-term development. The Green Deal will require large financial investment and will be a labour-intensive process, while at the same time it can create new business opportunities.

In view of the rapid development of technology and the new climate initiatives, it is necessary to invest public resources wisely to maintain economic capacity in the short term and economic transformation measures in the medium and long term. To achieve faster productivity growth and to ensure sustainable economic growth, it is vitally important not only to invest available public finances in a sustainable manner, but also to encourage more private investment by stimulating lending growth, capital market development and the use of financial instruments.

Artificial intelligence changes the economic growth paradigm

AI has become one of the fastest-growing and most powerful technologies in the world in recent years, bringing significant changes to the economy and the labour market. With the ability to automate complex tasks, analyse huge amounts of data and even make decisions, AI has created new opportunities to boost the efficiency and innovation of companies.

The World Economic Forum Report 2023 on the future of jobs reveals that about three-quarters of organisations surveyed are planning to introduce AI into their operations, with one of two believing that the use of AI will contribute to creating new jobs in the future. The use of AI will mainly improve people's productivity rather than replace human work. This will not push people out of jobs, but will Improve their performance by filling knowledge caps and expanding access to information. The World Economic Forum expects AI to become a net job creator by 2027.

AI will change requirements in workplaces, creating a need for new skills. For example, cognitive skills are becoming increasingly important, showing an increase in the importance of solving complex problems at work. Both employers and employees will need to invest in the development of skills and reskilling to remain competitive in the labour market.

Opportunities for automation will continue to grow over the next years as AI methods become more advanced and gain widespread application across sectors. Technologies experiencing the fastest changes, such as generic AI technology, could change the structure of automated tasks in 2023-2027, considering the recent research findings, the Large Language Models are already capable of automating 15% of tasks. When combined with apps that can fix some problems with existing Large Language Models, the share could rise as much as 50%, increasing production significantly.

In an online seminar, McKinsey discussed with partners Lareina Yee and Michael Chui the conclusions of the study "The economic potential of generative AI: The next productivity frontier" on how companies should prepare to benefit and mitigate risks associated with AI. Generative AI will affect all sectors, however, retail and consumer goods industries, the financial services sector and the medical sector will be the biggest beneficiaries.

AI is expected to have a wide potential for use across all sectors of the economy, but the precise impact on the economy is difficult to predict at this stage with a high degree of confidence.

Generative AI will affect all sectors, however, retail and consumer goods industries, the financial services sector will be the biggest beneficiaries

In one of the most recent studies of generative AI at the McKinsey Global Institute exploring 63 different applications, AI was predicted to improve productivity in different ways. Based on natural language commands, AI will be able to improve productivity in customer service by creating marketing content and developing software codes. This type of improvement will increase the productivity value created by AI and data analysis by 15% to 40% compared to previous generations of technology. For AI to contribute to productivity growth, employees working with technology in the working environment will need to refocus and acquire new skills. The Institute predicted AI could boost productivity by 0.1% to 0.6% annually by 2040. Along with other technologies, job automation could add an extra 0.2 to 3.3 percentage points to productivity growth.

Development trends of sectors

In accordance with the assumptions of the Target Scenario until 2040, the structure of economic sectors will gradually change compared to the current situation in favour of sectors with higher value added. Across major sectors, the share of business services sectors might increase by 2040. The share of IT, industry and construction sectors in the economy will grow as well. At the same time, the share of agriculture, transportation, financial services and public services sectors might slightly reduce.

[1] EC Communication. European Green Deal. COM(2019) 640 final. Brussels, 11.12.2019 https://eur-lex.europa.eu/legal-content/LV/TXT/?qid=1588580774040&uri=CELEX:52019DC0640

Large enterprises, the growth of which will mainly be underpinned by the increase in productivity, will play an increasingly more important role in agriculture in the medium and long term.

According to the Target Scenario, the manufacturing industry will grow faster than economy in general in the medium and long term. At the same time, growth will not be so much related to extensive increases in material-intensive production volumes but to the use of the latest technological processes, digitisation, optimisation of processes, etc. More rapid development due to the above-mentioned factors is expected in high and medium high technology sectors, for example, in manufacture of vehicles, as well as manufacture of computers, electronic and electrical equipment. Relatively rapid growth rates are also forecast in the largest manufacturing sector – woodworking. The development of sectors that are rather focused on the internal market (e.g. food industry) will primarily be affected by the domestic demand. Manufacture of other non-metallic mineral products will be closely related to trends in construction.

Table 3.2

Development trends of sectors

changes, %, annual average

		2011-2019	2020-2021	2022-2030	2031-2040
		Fact		Forecast	
A	Agriculture, forestry, fishing	3.4	-0.4	3.4	3.5
BDE	Other industry	-4.1	4.6	4.2	4.0
B	Mining	1.3	-5.7	1.8	1.4
D	Electricity, gas, heat supply	-7.2	11.1	4.7	4.7
E	Water supply, wastewater, waste management	0.8	-3.4	3.8	3.0
C	Manufacturing	2.9	1.8	4.5	4.2
c10-12	*Food, drinks*	*-0.6*	*4.7*	*4.0*	*3.7*
c13-15	*Light industry*	*-1.0*	*-0.1*	*3.4*	*3.0*
c16	*Wood processing*	*4.2*	*-3.7*	*5.0*	*4.7*
c17-19	*Paper industry, publishing*	*3.7*	*-5.5*	*3.8*	*3.4*
c20-21	*Chemicals, pharmacy*	*1.2*	*4.0*	*4.8*	*4.5*
c22	*Rubber and plastic*	*3.2*	*-0.1*	*3.6*	*3.2*
c23	*Non-metallic mineral products*	*5.3*	*-0.8*	*4.2*	*3.9*
c25	*Finished metal products*	*8.8*	*1.4*	*4.5*	*4.2*
c26-28	*Electrical devices, machinery and appliances*	*10.4*	*12.8*	*5.2*	*4.8*
c29-30	*Manufacture of vehicles*	*5.3*	*1.4*	*5.6*	*5.2*
c31-32	*Manufacture of furniture, etc.*	*3.4*	*3.1*	*2.8*	*2.2*
c33	*Repair of machinery*	*2.9*	*1.8*	*4.5*	*4.2*
F	Construction	6.3	-3.8	6.0	4.2
G	Wholesale and retail trade	3.4	0.6	4.2	3.8
H	Transportation and storage	3.2	-4.7	3.0	4.1
I	Accommodation and food services	4.2	2.7	5.0	2.6
J	Information and communication	4.5	6.9	5.7	4.1
K	Financial and insurance activities	-2.3	2.0	3.2	3.1
L	Real estate activities	1.7	1.7	3.6	2.5
MNS	Business services	3.4	5.1	5.1	3.9
O	Public administration	1.6	3.3	2.5	3.6
P	Education	1.8	3.0	2.8	3.7
Q	Human health and social work activities	4.8	0.5	2.6	4.0
I	Arts, entertainment and recreation	4.6	-0.3	4.0	3.4
B1G	**GDP**	**3.1**	**1.4**	**4.1**	**3.7**

In the Target Scenario, one of the most rapid growths in the main sectors of the national economy is expected in the construction sector both in the medium and in the long term, which will be fostered by the implementation of large investment projects (for example, Rail Baltica) and by the need to gradually renew the current housing facilities.

Rapid growth will also be observed in information and communication. This is related to the increasingly growing demand for digitalisation of production and services processes, as well as global IT sector development trends.

Comparatively rapid growth rates are expected in accommodation and food service activities, which will underpin the extension of exports of tourism services and also growth in the demand for domestic tourism services.

Growth in transportation and storage will be largely fostered by the development of air transport and road transport sectors. At the same time, the dynamics in the transit sector will be considerably slower, underpinned by the need to search for new types of cargo and delivery paths to replace volumes of petroleum products and hard coal from Russia. The implementation of the Rail Baltica project will play an important role in the long term, including its expected impact on railway industry education.

The development of sectors oriented to domestic demand – trade and other business services – will be closely related to the dynamics in private consumption and the demand created by other sectors of the economy. In the trade sector, growth will largely be based on productivity growth, given the wider spread of automation solutions of different trade processes. At the same time, the development of public service sectors (public administration and defence, education, health and social work activities) will continue to be influenced in the long term by demographic trends and processes.

Given the need for economic transformation, the development of niche industries with high added value of products and services will play an important role in the coming years. Building clusters and suppliers of businesses around high value-added products and services will play an important role in transforming the economy. We will increasingly be confronted with high value added cross-sectoral products, which require synergistic cooperation between professionals in different areas.

3.2.2. DEMOGRAPHIC FORECASTS

According to the MoE's Target Scenario demographic forecasts, until 2040 the population of Latvia will continue to reduce, at the same time negative dynamics in population counts will slow down affected by improvements in international migration flows and the natural increase balance of the population. The main reason for the population decline in the medium and long term will be population ageing trends, and therefore the negative gap between birth and mortality rates will be present up until 2040. The most significant decline in the population count is expected in working age population, therefore demographic processes will leave a tangible impact on the labour market. It should be noted that the flow of Ukrainian war refugees in Latvia has also had a positive impact on population dynamics. In early 2023, compared to the beginning of 2022, the population in Latvia increased by 0.4%, which is the first increase in the total population in the last 30 years. While the influx of incoming war refugees as a whole has a positive impact on population dynamics, it should be noted that this effect may diminish over time due to the return of refugees to their homes or leaving for EU countries. Given this, a sustainable positive migration balance is expected around 2027-2028.

Changes in population count and age structure

Overall, the total population of Latvia is expected to reduce to 1.76 million in 2040, which is approximately 6.6% or 125 thousand less than at the beginning of 2023. It should be noted that, compared to the MoE's target scenario of demographic projections for 2022[1], population projections have been revised upwards overall (28.3 thousand more in 2040 than in the projections for 2022), mainly influenced by a larger influx of Ukrainian refugees than previously predicted, as well as lower mortality rates.

Table 3.3

Main indicators of natural population movement

thousands

	2023	2030	2040
Population at the beginning of the year	1883	1798	1758
Changes in the population compared to 2021	–	-84.8	-125.0
incl. migration impact	–	-0.8	46.3
incl. natural growth impact	–	-84.0	-171.3

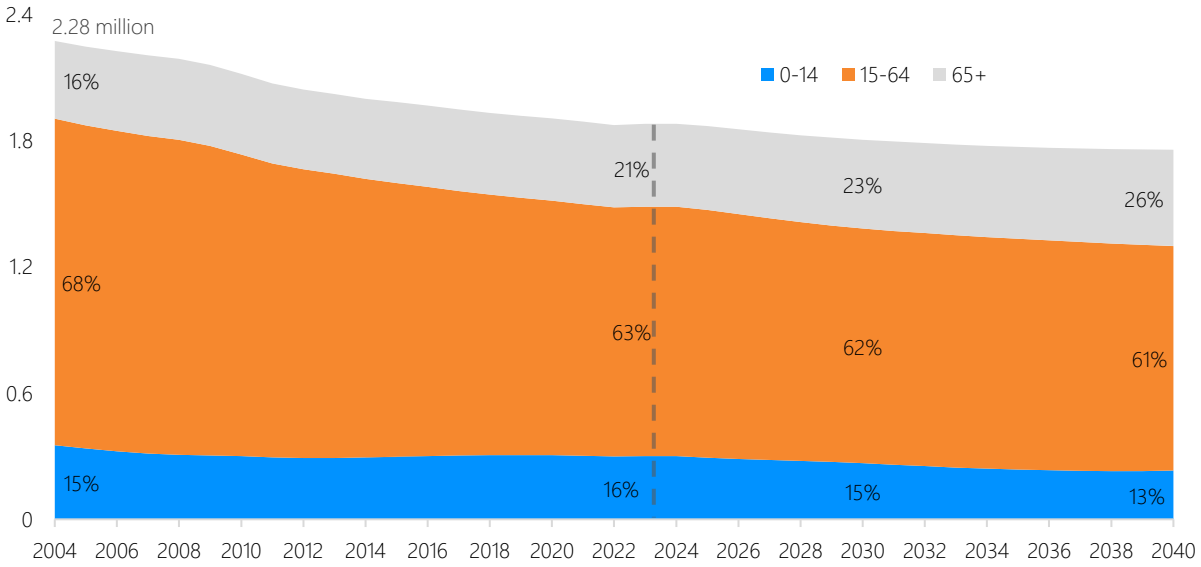
Source: CSB data for 2023, MoE forecasts for 2030 and 2040

It should be noted that the population has been declining in Latvia for a long time, moreover, population reduction has been observed among the working age population. The reduction in working age population has been largely affected by economic emigration of the population, in particular after the global financial crisis of 2008. It should be taken into account that the flow of economic emigrants mainly consists of the population in more economically active age groups, thus enhancing society's ageing trends and having a generally negative impact on the reproduction of the population.

Figure 3.4

Breakdown of the population by age groups

million and %



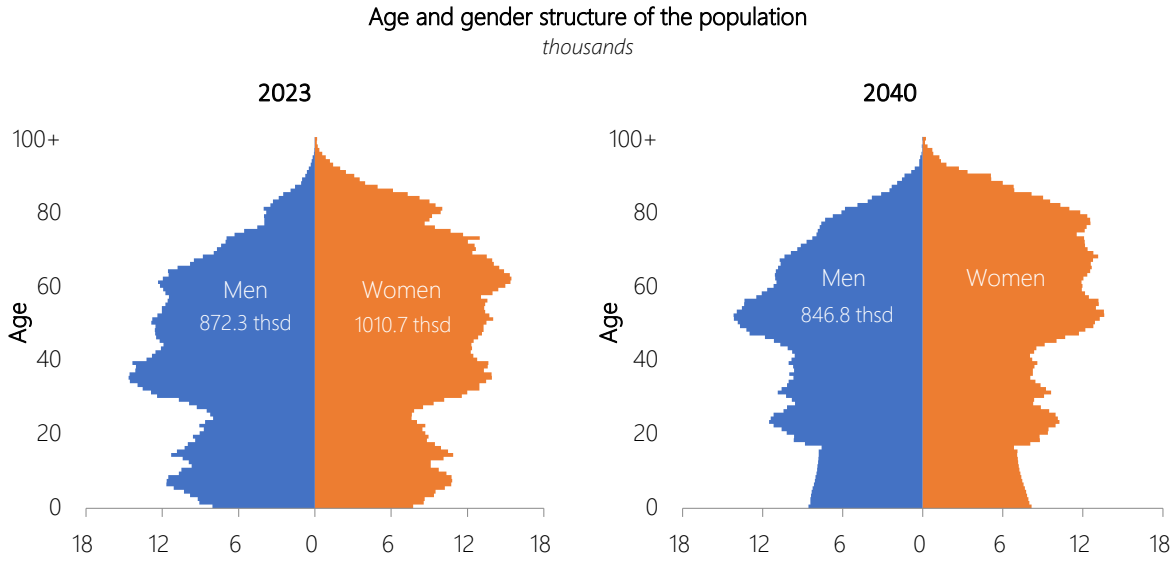
Source: CSB data until 2023, MoE forecasts starting from 2024

Overall, until 2040 the number of the population in the age group 15-64 is expected to reduce by 126.1 thousand or by 10.6%, compared to the beginning of 2023, and at the same time, the number of the population aged above 65 will increase by almost 67 thousand or by about 16.9%. Overall, these trends will determine the reduction of the share of the population aged 15-64 from 63% in 2023 to 60% in 2040.

[1] Informative report on medium and long-term labour market forecasts of MoE for 2022: https://www.em.gov.lv/lv/media/14720/download?attachment

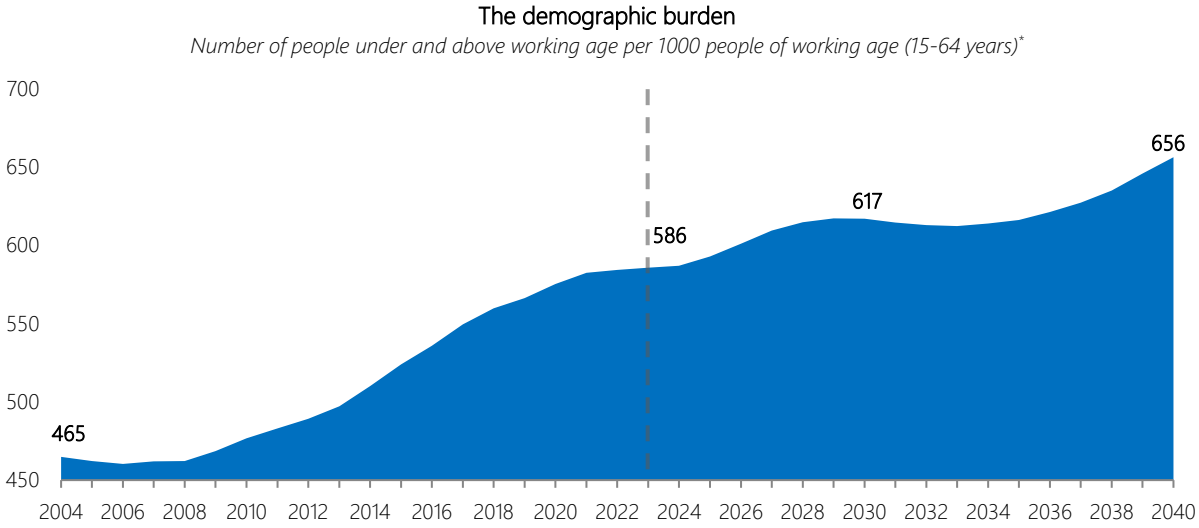
Considering society's ageing trends, the average age of the population is expected to increase to 45.7 years by 2040 – by an average of 2.8 years compared to the beginning of 2023 (42.9 years).

Figure 3.5



Along with the ageing of the society, the indicators of demographic burden will continue to rise in the future. By 2040, compared to 2023, the level of demographic burden is expected to rise by almost 12%, and it means that we will have 656 inhabitants out of working age per 1000 inhabitants of working age in 2040, moreover, 66% of them will be aged above 64.

Figure 3.6



Source: CSB data until 2023, MoE forecasts starting with 2024

It should be noted that negative demographic trends have considerable impact on the labour market. Labour reserves have been shrinking in Latvia for a long time influenced by negative demographic trends. In order to reduce the negative impact of ageing populations on the labour market and social insurance system, measures to foster the economic activity of the population are important in the medium term, as well as obstacles to the faster entry of young specialists to the labour market should be reduced. At the same time, in long term we should continue to focus on equalisation of the negative demographic balance.

Natural growth of the population

Although, in relative terms, the main naturally growing birth and death rates in the years to come will improve, in absolute terms there will still be a gap between newborns and deceased.

Overall, base trends of birth indicators are expected to remain positive in the medium and long term – the total fertility rate might increase by 38.2% by 2040 compared to 2023 and may reach the level of 1.880 points, which was observed in Latvia at the beginning of the 1990s. At the same time, it should be taken into account that the number of women of reproductive age (aged 15 to 49) will continue to reduce (by 18% or 70.8 thousand by 2040), therefore, the overall increase in the number of newborns in absolute terms will be relatively slow, especially in the medium term (from 0.5 to 0.7% per year). Their most rapid increase in the number of newborns is expected after 2030 – by an average of 0.9 to 1.4%. Overall, the number of newborns in 2030, compared to 2023, could be 539 newborns (3.7%) more than in 2023, and 2393 (16.5%) newborns more in 2040.

Table 3.4

Main indicators of natural population movement

	Fact*	Forecast	
	2023	2030	2040
Number of newborns per 1000 inhabitants (general birth rate)	7.7	8.4	9.7
Death rate per 1000 inhabitants (general death rate)	14.9	14.1	13.7
Natural growth per 1000 inhabitants	-7.2	-5.8	-3.9
Aggregate birth rate	1.360	1.666	1.880
Average life expectancy at birth (years)	75.5	77.7	80.1

Source: * MoE assessment based on CSB data for 2023, MoE forecasts for 2030 and 2040

For a normal replacement of generations, the total fertility rate no less than 2 is needed. For the first time in Latvia the aggregate birth rate has exceeded this level at the end of the 1980s.

Along with improvements in population welfare and wider access to health services, overall population mortality rates will decrease in both the medium and long term. Relative mortality rates of the population are expected to fall in almost all age groups by 2040, which will also affect the death rate per 1000 inhabitants – mortality per 1000 inhabitants by 2040 is expected to reduce by approximately 8%. The average life expectancy at birth will also rise from 75.5 years in 2023 to mean 80.1 years in 2040.

Against this background, the gap between the number of newborns and deceased is expected to gradually shrink over the coming years, however, it will still remain negative given significantly lower birth rates compared to absolute population mortality.

Long-term international migration of the population

The assumptions of the scenario of international migration of the population are based on the target scenario of economic growth, which envisages that, in the following years, Latvian GDP per capita will continue to gradually approach the average EU level, thus generally closing the income gap with more economically developed EU Member States.

Although there was a significant increase in immigration in Latvia in 2022 and 2023, which for the first time since the restoration of Latvia's independence has ensured a positive migration balance, it should be noted that such a tendency is temporary and the number of emigrants could exceed immigration again already in 2024. It should be considered that some of the Ukrainian refugees gradually return home, or, given the small size of the Latvian labour market, go further to countries with wider employment opportunities.

It should be noted that stable economic growth (economic breakthrough) and more qualitative and well-paid jobs in the labour market is a significant precondition for faster change in migration flows. To keep the population from leaving to seek better employment possibilities outside the borders of the country, as well as to create a foundation for contemplations on returning in those, who emigrated from Latvia in the previous years, the average wage in Latvia should be at least at the level of minimum wage in main target countries of Latvian migrants. In December 2023, the average wage in Latvia was EUR 1,692/month, which was still around 11% less than the minimum wage rate at that time in Ireland (EUR 1,909.70/month), but by around 15.3% less than in Germany (EUR

1,997/month). Although the pay gap between Latvia and the old economies of Europe has narrowed significantly over the last 5 years (for example, the difference between the average wage in Latvia and the minimum wage rate in Ireland has decreased by almost 24 percentage points between December 2018 and December 2023, while between Latvia and Germany – by almost 16 percentage points), however, despite that, with the current wage convergence rates, Latvia could reach the minimum wage level of Ireland only after about 2-3 years and of Germany – just after approximately 5 years. In view of this, it is important to accelerate Latvia's convergence with the economies of the EU's most developed countries, which would allow the income gap between Latvia and the destination countries of Latvian emigrants to be levelled more rapidly.

Table 3.5

Main indicators of international migration of the population

	2023-2029	2030-2039
Emigration, thsd	118.7	135.3
Immigration, thsd	117.9	182.3
Net migration, thsd	**-0.8**	**47.1**

Source: MoE forecasts

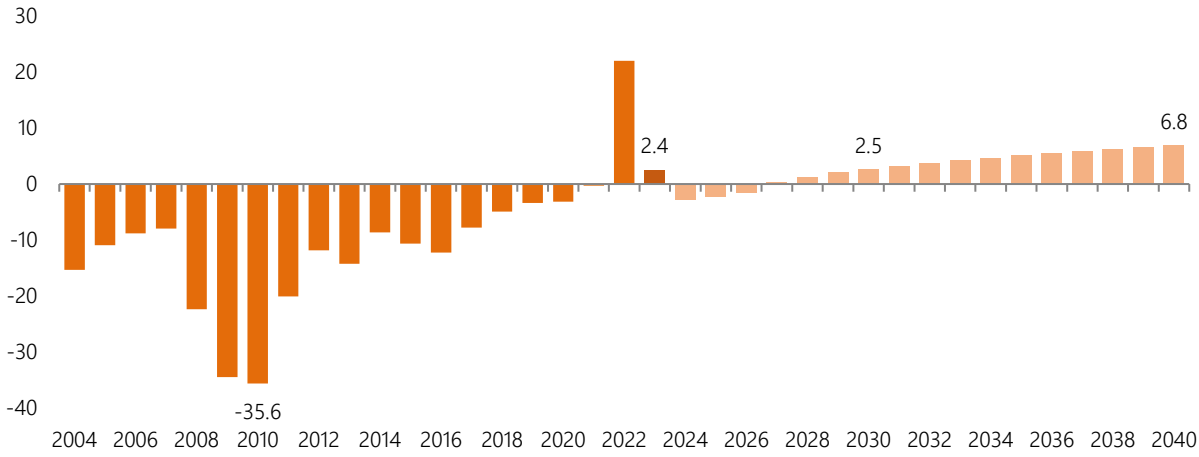
As the influx of Ukrainian war refugees into Latvia diminishes, as well as some refugees gradually return to their homes, by 2026 the number of immigrants in Latvia is expected to continue to shrink, as well as the number of emigrants is expected to continue to increase. It should also be noted that Russia's aggressive policy in the region is likely to discourage the rapid return of Latvian nationals to their homeland or the influx of economic immigrants into the country in the coming years, as well as the potential risks of escalation of the conflict in the region as a whole increase the likelihood of emigration of the population, so that the number of emigrants could again briefly exceed the number of immigrants in Latvia.

At the same time, as the geopolitical situation stabilises, as well as economic migration stimuli increase, taking into account the tense situation in the labour market, immigration of residents in Latvia could return to positive dynamics already starting in 2027. Sustainable positive net migration could be seen around 2028, when the political situation in the region would have stabilised and the gaps between the labour markets of Latvia and the EU's old countries have bridged. Improvements in the international migration balance will be one of the key factors in reducing long-term imbalances in the age structure of the population, which, in general, could also mitigate the negative effects of demographic trends on the labour market.

Figure 3.7

Net international migration of the population

thousands



Source: CSB, MoE forecasts starting from 2023

It should be noted that the migration target scenario provides that overall, by 2040, Latvia's labour market will continue to be closer to the labour markets of the EU's most developed countries, particularly in terms of wages, which will reduce the emigration of the population encouraged by economic factors, while more visibly providing

the basis for an increase in labour force immigration. In the medium term immigration of labour force will play an important role in securing the development of a balanced labour market, therefore the migration policy should be sound providing support for economic growth in the medium term, on the one hand, and not creating the risks for long-term development, on the other hand. In the short and medium term, it is essential to ensure the rapid integration of Ukrainian war refugees into the Latvian labour market, particularly in sectors where there is a lack of labour and which make a significant contribution to the economy. In the long term, obstacles to the re-migration of Latvian nationals should be further reduced by ensuring housing accessibility, employment opportunities matching skills and rapid access to the education and health system.

At the same time, as the number of third-country employees in Latvia increases, it is essential to reduce the risks in the labour market for this target group. Although the regulation in force generally provides that the wage paid by the employer must be not less than the average monthly gross wage of employees in the Republic of Latvia in the sector (according to CSB's last published information) or the minimum wage determined by the general agreement of the sector, one of the risks could be related to employers not complying with these conditions, and then applying a lower wage rate to guest workers and longer working hours in general may reduce the competitiveness of the Latvian labour market towards other EU countries in terms of labour attraction. Overall, lower hourly rates of remuneration for guest workers for work of similar size and content compared to local employees may have a negative impact on average wages in the economy, particularly in sectors and occupations with a high proportion of guest workers, which can potentially contribute to the outflow of local labour to higher-wage areas in other EU countries.

3.3. LABOUR DEMAND AND SUPPLY

3.3.1. LABOUR DEMAND FORECASTS

Development opportunities for manufacturing sectors, which depend on the capacity to implement structural changes in the sector, are one of the most important issues in the change of the economic paradigm. It is a necessary precondition for strengthening the competitiveness of Latvia in the global markets, simultaneously raising the export profitability. Efficient solutions to the labour shortage problem are also the most important factor in ensuring more rapid growth. It is critical to provide the growing and productive sectors with the labour force needed for growth promoting rearrangement of the labour force from less productive works to occupations with higher productivity and profitability. It is also essential to foster an increase in productivity and more efficient use of the labour resources available in traditional economic sectors, therefore investments in human capital and the availability of an effective adult education system are essential. Qualitative improvements in the labour market will play an increasing role in further development providing for a timely response to the main development challenges in the national economy – demography, rising labour costs, as well as mismatches between the skill supply and demand.

Given the still high uncertainty in external markets as well as the tense geopolitical situation, a wait-and-see attitude is expected to generally be observed in the labour market activity also in 2024. A significant increase in new jobs and employment as a whole is not expected in 2024. The situation in the labour market will continue to be influenced by supply side factors, taking into account the negative demographic background, as well as the reduction in the total labour supply, thus keeping unemployment at a low level. Overall, the unemployment rate in 2024 could reduce to an average of 6.3%, while the number of employees could remain close to the level of 2023. The increase in the number of employed will be observed in construction due to the construction of state infrastructure objects already started, in business services, especially in the service sectors most affected by the COVID-19 crisis – accommodation and food service activities and arts, entertainment and recreation sectors, as well as in public administration and defence activities. In the long term, although the expected growth rate is quite rapid, the demand for the labour force will remain almost unchanged and will decline even more in some sectors, as growth should mainly rely on the increase in productivity. This specifically concerns tradable sectors and mainly the sector of manufacturing, which operates in open products and services markets where competitiveness is a decisive factor. Taking into account the COVID-19 pandemic and the Russian invasion of Ukraine, the demand for labour force across the national economy in 2030 is expected to be 0.2% lower than in 2019 and 2.7% higher than in 2023. Consequently, labour demand will have reduced by 2.2% in 2040, in comparison to 2019, but increased by 0.7% compared to 2023, which is explained by the decline in the number of the employed from 2031 to 2040. Job opportunities will form mainly because of replacement demand when the existing labour force retires or leaves

the labour market. Demographic trends and the retirement age are the main factors affecting changes in the number of the population who have left the labour market and the increase in demand for replacement labour.

Figure 3.8

Changes in GDP, productivity and labour demand

2030 vs. 2021, annual average, %

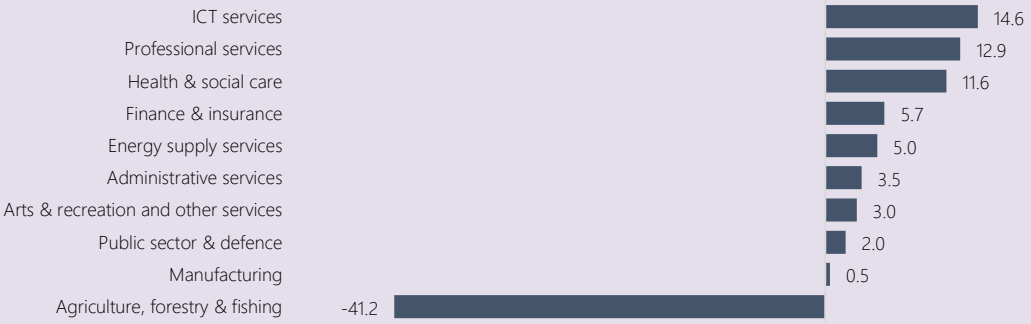
Source: MoE forecasts

Skill demand projections in Europe (*Cedefop* forecast)

According to Cedefop forecasts, the future situation in the EU labour market will be affected by uncertainty over the existing geopolitical situation as Russia continues hostilities in Ukraine. The changes will relate to refugee migration, supply chain breakdowns, food security issues and instability in the energy market, which will have an impact not only on the economy as a whole but also on the labour market. The changes will also be driven by rapid technological development, globalisation, demographic change (rising ageing and population education level) and the move towards service-based economy.

Changes in the employed in the EU by sectors

2035 vs. 2022, %



Source: Cedefop
* Agriculture, forestry, fishing: small sample size

According to the Cedefop projections, employment will increase by 5.6% in 2035, compared to 2022. Future increase in employment is expected to be underpinned mainly by services sectors, which will employ about half of the employed by 2035. The increase will mainly be driven by green economy and automation. However, supply trends – ageing of the population and increase in the level of education – should also be taken into account. The most rapid increase in employment is expected in ICT services (14.6%), professional services (12.9%), as well as human health and social work activities (11.6%).

An increase in the labour demand is projected also in financial and insurance services (5.7%), power supply services (5%), and administrative services (3.5%).

The most rapid shrinking of the employed is expected in agriculture (by 2/5 by 2035), but the situation in different EU countries varies. A small decline in the number of the employed is also expected in industrial sectors, where the most rapid decline is expected in mining and quarrying (by 21%). In manufacturing industry a small decline in the number of employed population is expected (by 0.5%). Industry trends will be underpinned by the development of robotisation and investment in manufacturing. The demand will grow rapidly in the areas related to progressive industry and activities with high added value (mainly nanotechnology, material sciences, electronics, ICT and biotechnology). Therefore, the interest of employers to recruit new employees having knowledge in digital technologies, computer technologies, and people with analytical thinking will grow.

Most of new job opportunities will come from the replacement demand

Previous waves of technological development have led to the transformation of the labour market, making some jobs or occupations obsolete and also creating new jobs. By 2035, approximately 120 million vacancies will be filled by the replacement demand and the expansion demand. Half of the new jobs will be high qualification jobs, slightly less (40%) – medium qualification jobs and only 9% – low qualification jobs. Due to expansion demand new jobs will mainly be created in high qualification occupations.

Future job opportunities in the EU until 2035 by occupation groups

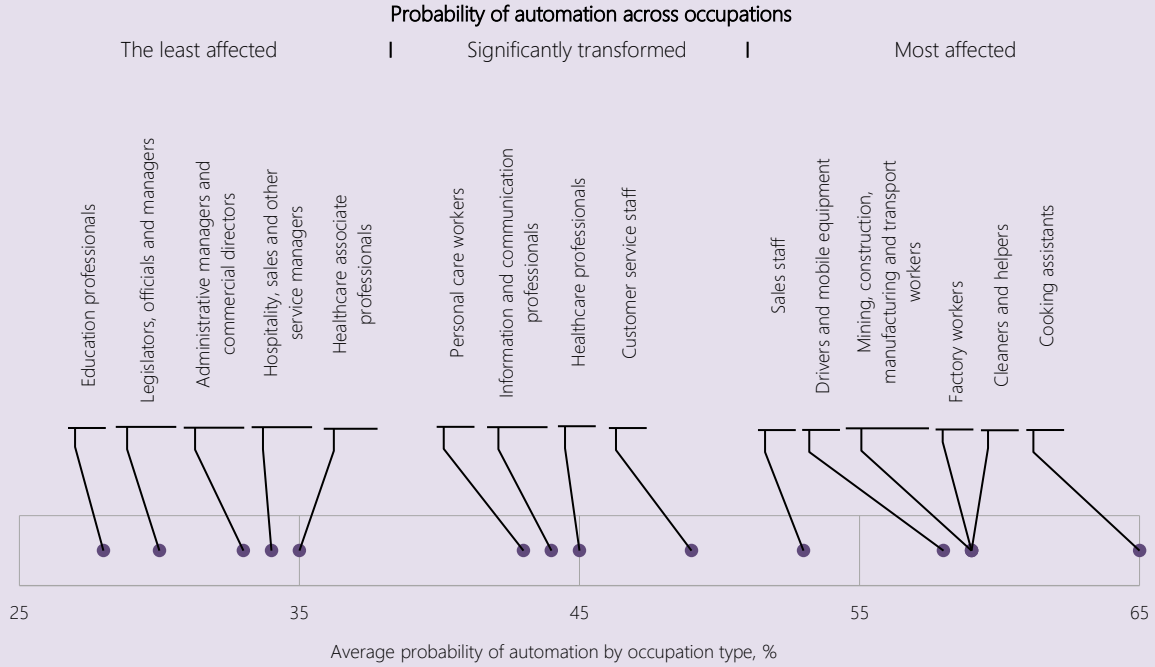
Source: *Cedefop*

The biggest share of new job opportunities will form in different groups of professionals (information and communications technology professionals, science and engineering professionals, business and administration professionals, legal, social and cultural professionals) and in groups of technicians and associate professionals (legal, social, cultural and related associate professionals and business and administration associate professionals) and in the group of managers (administrative and commercial managers). In individual groups of occupations, new jobs will be created only due to replacement demand – clerical support workers, skilled agricultural, forestry and fishery workers and craft and related trades workers.

Technology progress will have a considerable impact on employment, which will develop even more rapidly due to the crisis caused by Covid-19. It should be noted that innovation cycles have become more rapid in recent years, big data/cloud computing, 3D printers, autonomous vehicles and platform economy are only part of innovation, which has changed traditional product and service markets and has a significant impact not only on business models but also on labour and skills demand. In the coming years, increasingly more jobs are expected to face automation trends, the largest drop in jobs is expected in occupations with a large proportion of manual and repeating activities, and in specialities related to direct service, such as shop assistants and cash register clerks in retail trade, call operators and similar occupations. In the long term, automation trends are most likely to have an impact on the number of medium qualification jobs. It should be noted that technology polarises the labour market by creating high-qualification, well-paid jobs on the one hand and leaving low-qualification, low-paid jobs on the other hand, while pushing medium-qualification jobs out of the labour market. Occupations that require high level of education, a lot of social interaction and abilities in managing, planning and coordinating complex environment/circumstances will be least affected by development of technology. In turn, jobs that require relatively low levels of formal education or do not involve relatively complex social interaction, as well as occupations involving routine manual work, are more exposed to automation.

Impact of automation of workplaces on the labour market

Historically, the development of technologies has generally had a positive impact on employment, although many jobs can now be done more effectively and with fewer labour force contribution, the development of technologies has also brought many new job opportunities. At the same time, the current concern is that innovation cycles have become much more rapid, big data, cloud computing, 3D printing and platform economy are changing product markets, business models and jobs, and consequently the skills necessary in all sectors. Earlier, technology replaced routine, low-qualification work, but now it can perform non-routine jobs, such as financial market analysis, operations and legal services, etc. In addition, autonomous means of transport have become a reality, which may in future affect, for example, taxi or goods transport services. **Technology in general polarises the labour market by creating high-qualification, well-paid jobs on the one hand and low-qualification, low-paid jobs on the other hand pushing medium-qualification jobs out of the labour market.**



Source: *European Commission (2019), The changing nature of work and skills in the digital age*

Automation has the most impact on the industry. This sector is experiencing structural changes in labour force requirements, in particular in moving towards manufacturing of energy-efficient cars. Manufacture of electric cars, being less labour intensive, will reduce the number of assembly line jobs, but demand for these vehicles will boost new jobs in research, development and senior management positions in manufacturing. Demand for material science specialists, computer analysts and engineers will grow to support the transition to digitised manufacturing (Industry 4.0), connecting automotive and ICT sectors. This will lead to a reduction in low- and medium-qualification jobs.

***Jobs that require relatively low levels of formal education or do not involve relatively complex social interaction**, such as influencing or persuading others, training others, managing others, caring for others, and assisting, as well as occupations involving routine manual work, **are more exposed to automation**. Occupations that require high level of education, a lot of social interaction and abilities in managing, planning and coordinating complex environment/circumstances are least affected by development of technology.*

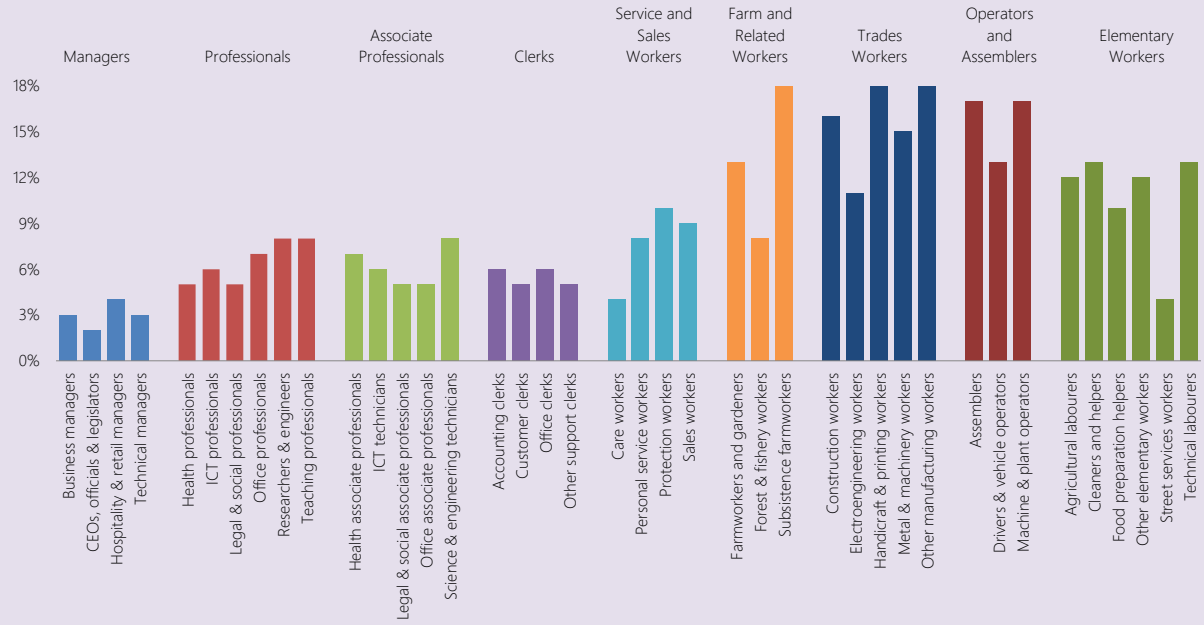
***Technologies may destroy jobs and create new ones, but most of them affect work content transformation**. The need to supplement digital skills with other technical skills, and not the least important, also personal and behavioural skills is an indication that people and technologies complement each other. Technologies may perform tasks and quickly collect and synthesise data, while the person should decide what the task will be and what these data mean.*

***Not only the content of work, but also its shape will change.** Part-time work, piecework and the share of self-employed persons will increase, while full-time employment will reduce. Work will become more flexible, and at the same time more insecure, less stable.*

Automation of workplaces in the EU

In accordance with Cedefop data, in 2022 the share of employees whose work is at the highest risk of automation was in the groups of occupations of craft and related trades workers, plant and machine operators and assemblers and agricultural occupations. There are many jobs the performance of which may be automated only partially. The lowest risk of automation is in high qualification occupations, such as managers, clerical support workers, and technicians and associate professionals. It is believed that only 2-4% of jobs can be automated in the group of occupations of managers. The share of employees at risk of automation is also low in the group of technicians and associate professionals. Those who work in ICT and health will be the most difficult to replace.

Share of employees in the EU at high risk of automation by major groups of occupations in 2022,
% of total employees in the occupation

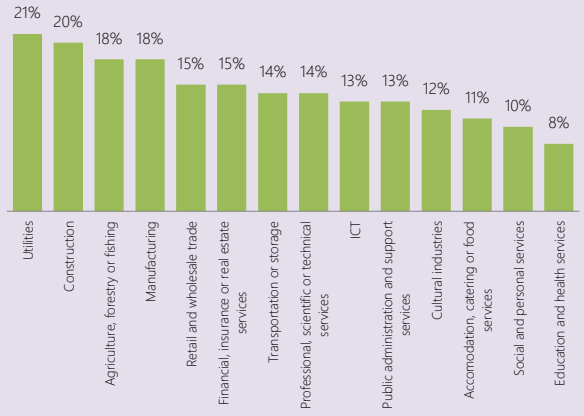


Source: https://www.cedefop.europa.eu/en/tools/skills-intelligence/trend-focus/digitalization-and-technology#9

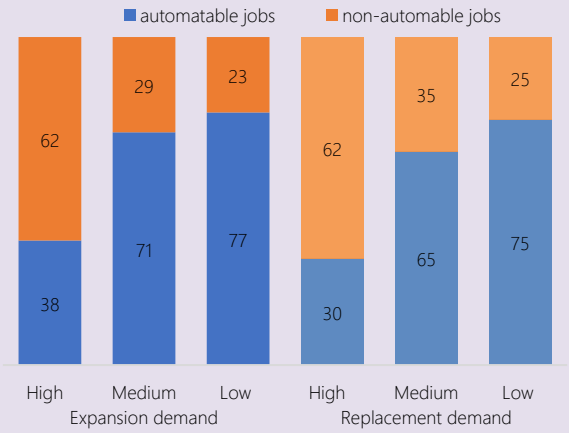
Technologies not only put certain occupations at risk, but also create new jobs. It is expected that most of new jobs (increase in employment) in the EU that will be created until 2030 are not at risk of automation. Growing sectors (in terms of future employment) with the lowest risk of automation of new jobs are public administration and defence activities, education, ICT, electricity and gas.

It is just the opposite with replacement demand. Most of jobs requiring low or medium qualifications will be subject to automation, while high qualification occupations will show an opposite trend. This is an indication that the demand for skills is related to new technologies (the employees, who will have to work with technologies will mainly be highly qualified). However, this does not mean that high level works are protected from automation (for example, business and administration associate professionals).

Sectors at high risk of automation
% of EU workers in the relevant sector



Jobs at risk of automation in the EU until 2030
by levels of qualification, %



Source: https://www.cedefop.europa.eu/en/projects/digitalisation-and-future-work/automation-work-and-skills-2; Cedefop (2021), Digital, greener and more resilient. Insight from Cedefop's European skills forecast

According to Cedefop data, the share of EU employees at very high risk of automation shows that the highest risk is in utilities (21%) and construction (20%), while the lowest risk is in education and healthcare sectors (8%).

The pace of technology introduction is uncertain as it depends on a wide range of factors. Among them are the willingness to invest in research and development, the price of technology versus labour costs, the digital and other skills available in the workforce, social partner engagement in promoting upskilling, and legislation. Although the trend shows that increasingly more jobs will be automated, new jobs and new occupations will be created as a result of this automation.

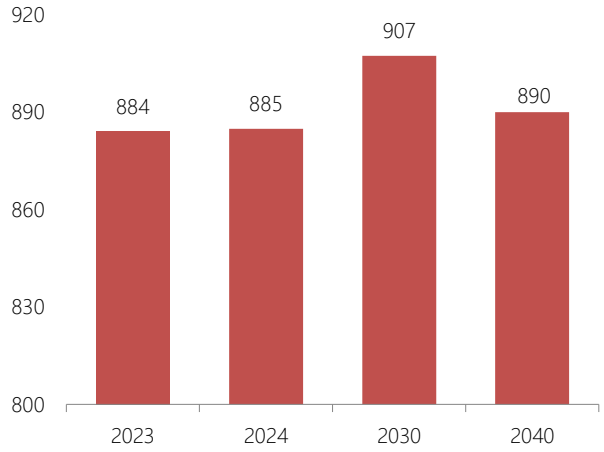
By 2030, labour demand will increase in all sectors except transportation, trade and agriculture. In the long term, there will be an increase only in business services, construction and other industry, while manufacturing will remain at the level of 2023.

Manufacturing will be one of the most rapidly growing sectors. However, the demand for labour force will grow very moderately. For this sector to be competitive in the medium and long-term, more than 3/4 of the total increase in the sector have to be ensured by growing productivity – technology transfer in production, development of research, innovation, and rising of employees' qualifications and skills. It is expected that in the long-term the medium and high-technology sectors (such as production of devices, mechanisms, electric and optical devices, etc.) will contribute most to the manufacturing sector, while the contribution of traditional sectors like wood processing and food processing will relatively reduce.

Figure 3.9

Labour demand

employed in the age group 15-74, thousands



Source: CSB data for 2023, MoE forecasts starting from 2024

The number of the employed in agriculture and forestry will gradually reduce, similarly to EU average. The share of the employed working in this sector in 2030 will be 6.4% of the total employed (in accordance with Cedefop projections, about 2% in the EU in 2035). In 2023, agriculture and forestry accounted for 4.7% of total value added. It means that productivity in agriculture and forestry is lower in comparison with other sectors, which will be of crucial importance for the growth of the sector in the next years.

Table 3.6

Changes in the labour demand by sectors

thousands

	2022	2023	2030	2040	Changes 2030-2023	Changes 2040-2023
Agriculture, forestry, fishing	60	59	58	55	-1	-4
Manufacturing	114	112	114	112	2	0
Other industry	23	21	21	22	0	1
Construction	72	70	82	80	12	9
Trade and accommodation	166	157	149	139	-8	-18
Transportation and storage	66	73	67	66	-6	-7
Other business services	180	187	208	218	21	32
Public services	205	205	208	198	4	-7
Total	**886**	**884**	**908**	**890**	**24**	**6**

Source: CSB data until 2023, MoE forecasts for 2030 and 2040

In the future, the demand for labour force will rapidly increase in construction. The development of the construction sector in the medium term will be largely ensured by public investment and the implementation of

large investment projects (Rail Baltica). On the other hand, growing industries and the need for new industrial buildings will create a demand. In the long term, the demand for energy efficiency and "green" construction will affect the development.

The sharpest increase in the number of the employed is expected in business services. In 2030, the demand for labour force will exceed the level of 2023 by 11% and will account for 23% of all the employed across the economy, while in the long term, the demand will grow by 17% thus constituting 1/4 of the total number of the employed across the economy. The growth of commercial services sector will mainly be facilitated by the development of other sectors of national economy and the growing demand for outsourced services.

Impact of artificial intelligence on the labour market

AI has become an important driver for innovation, impacting different sectors, improving business performance, innovation processes and customer service. AI is able to automate routine tasks and create new products and services, but its introduction raises concerns about the labour market, skill requirements and the future of jobs.

The EC paper "Artificial Intelligence: Economic Impact, Opportunities, Challenges, Implications for Policy" examines the impact of AI on the labour market:

- In the short term, the demand for specific skills for working with AI will increase.
- In the medium term, the demand for skills for routine work will decrease.
- In the long term, AI can replace high-qualification jobs such as programming performed by cognitive workers.

In Latvia, low digital skills can create a risk of job losses, because technology adoption is slower than elsewhere. The DESI index shows Latvia is 17th among EU countries in terms of digital requirements, which is below the EU average. The growth of the Latvian DESI index is slower than in most other EU countries.

Impact on sectors

Banking sector: AI can improve productivity and transform bank-client interactions by creating new business models.

Financial sector: The introduction of AI will change data input and analysis, reducing the need for low value knowledge and creating new jobs that require higher analytical and creative capabilities.

Retail: AI is already affecting retail, replacing cashiers with self-service checkouts that improve productivity and address staff shortages.

Insurance sector: Using AI and big data in the insurance sector requires new skills and can reduce the demand for traditional jobs, increasing the need for data scientists, engineers and IT professionals.

Occupations with high automation potential

Many occupations experience changes brought about by AI, where AI increases productivity at work but does not replace people in a specific area. Such occupations are related to medicine, law, agriculture and IT, where AI is able to replace monotonous tasks but is unable to replace the human factor.

Customer service: AI is used to provide automated responses and in self-service checkouts, reducing staff costs and improving customer service.

Accounting: AI-managed accounting services provide efficient and secure system operations that are more cost-effective than human work.

Warehouse employees: AI automates warehouse processes such as finding and loading goods, reducing the need for manual jobs.

Administrators: AI is used for call management and customer service, for example, through the AimeReception system.

Up to 30% of jobs could be automated by 2030. Employees in low-paid occupations and employees without tertiary education will be more likely to be forced to change their occupations. Some occupations, such as hospital attendants, babysitters and doormen, will remain less automated due to low pay and low incentive to invest in automation.

Overall, the introduction of AI changes the structure of the labour market, increasing the need for the renewal of skills and continuous learning. This creates both challenges and opportunities for employees and businesses to adapt to the new technology environment.

In the medium and in the long term the demand for highly qualified specialists will grow the most. In the medium term, it will mainly be determined by the increase in the demand for labour force in business services, public services and construction. In the long term, the sharpest increase in demand is expected in business services and trade, as well as in manufacturing and construction.

Table 3.7

Changes in the labour demand by occupational groups

%

	Changes compared to 2023		Structure	
	2030	2040	2030	2040
Occupations in national armed forces	20.1	23.2	1.1	1.2
High qualification occupations, including:	9.8	16.8	47.0	51.0
Managers	5.9	7.1	10.7	11.0
Professionals	8.4	13.1	21.9	23.4
Technicians and Associate Professionals	15.3	30.6	14.4	16.6
Medium qualification occupations, including:	-1.1	-6.8	41.1	39.6
General Office Clerks	-15.1	-41.1	4.4	3.1
Services Workers	-4.6	-13.4	13.4	12.4
Skilled Agricultural Workers	-3.6	-12.0	3.0	2.8
Craft Workers	11.3	17.0	12.0	12.9
Plant and Machine Operators	-1.6	-2.9	8.3	8.4
Low qualification occupations	-10.9	-32.6	10.8	8.3
Total	**2.7**	**0.7**	**100**	**100**

Source: MoE forecasts

Although in the medium term and in the long term demand in the group of medium qualification occupations will reduce, it will still remain high for craft workers. The most rapid increase in demand is expected in construction. At the same time, in the medium term the demand will shrink in all sectors, except manufacturing, construction and business services. In the long term, the demand in the group of medium qualification occupations will reduce in all sectors, except manufacturing and construction.

Table 3.8

Changes in the employed in economic sectors by occupational groups

compared to 2023, in thousands

	Agriculture	Manufacturing	Other industry	Construction	Trade	Transport	Other business services	Public services	Total
	2030								
Occupations in national armed forces	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7
High qualification occupations, including:	1.3	2.8	1.0	4.3	2.3	-0.4	21.3	5.6	38.2
Managers	0.2	-0.2	0.0	1.4	0.4	-0.7	3.0	1.2	5.4
Professionals	0.6	1.2	0.5	1.1	0.8	0.3	9.3	1.7	15.4
Technicians and Associate Professionals	0.5	1.8	0.6	1.8	1.1	0.0	9.0	2.7	17.3
Medium qualification occupations, including:	-0.8	1.6	-0.3	8.0	-8.6	-4.7	1.4	-0.9	-4.2
General Office Clerks	-0.1	-0.8	-0.3	0.0	-1.8	-1.7	-1.8	-0.8	-7.2
Services Workers	0.1	0.0	0.0	0.0	-7.0	-0.1	1.4	-0.3	-5.8
Skilled Agricultural Workers	-1.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	-1.0
Craft Workers	0.1	2.2	0.1	7.2	0.2	-0.1	1.3	0.0	11.0
Plant and Machine Operators	0.2	0.3	-0.2	0.8	0.0	-2.8	0.4	0.1	-1.2
Low qualification occupations	-1.4	-2.4	-0.4	-0.3	-1.8	-1.4	-1.5	-2.8	-12.0
Total	**-0.8**	**2.0**	**0.3**	**12.1**	**-8.1**	**-6.4**	**21.2**	**3.6**	**23.7**

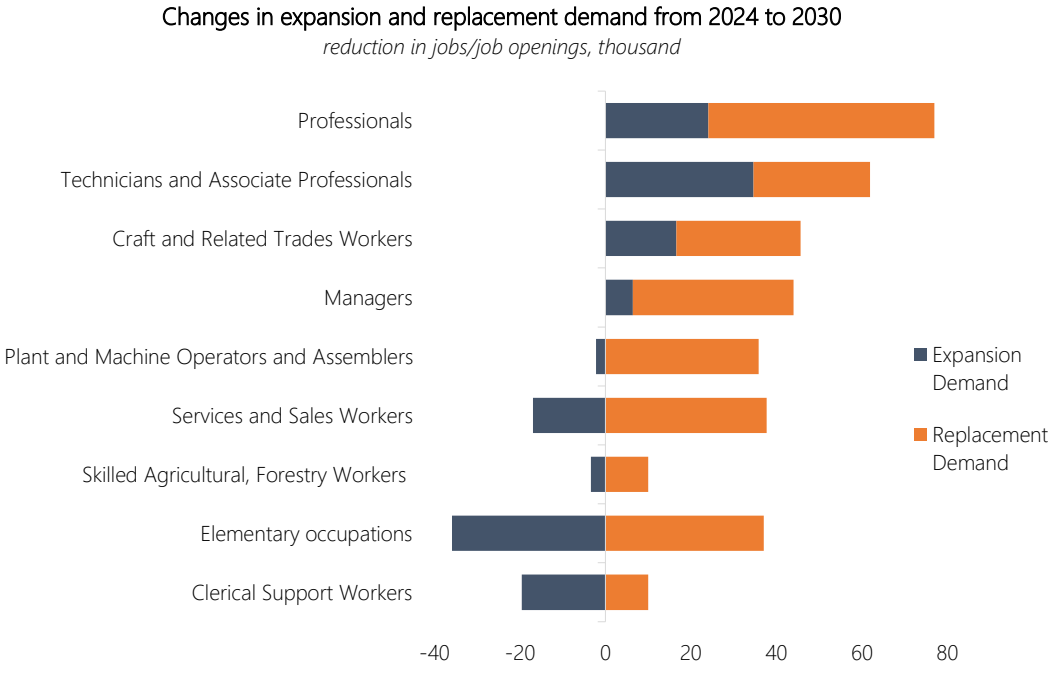
Table 3.8 continued

	Agriculture	Manufacturing	Other industry	Construction	Trade	Transport	Other business services	Public services	Total
	2040								
Occupations in national armed forces	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9
High qualification occupations, including:	2.7	5.2	2.5	5.1	6.4	1.6	39.2	2.6	65.3
Managers	0.4	-0.8	-0.1	0.8	1.3	-0.8	4.9	0.8	6.5
Professionals	1.3	2.4	1.2	1.4	2.1	1.2	15.7	-1.1	24.1
Technicians and Associate Professionals	1.0	3.7	1.4	2.9	3.0	1.2	18.6	2.8	34.6
Medium qualification occupations, including:	-3.2	1.2	-0.8	8.7	-18.9	-6.0	-2.0	-4.6	-25.6
General Office Clerks	-0.2	-2.2	-0.7	-0.2	-4.0	-3.2	-6.7	-2.3	-19.5
Services Workers	0.1	-0.1	0.0	0.0	-16.3	0.1	1.4	-2.4	-17.1
Skilled Agricultural Workers	-3.5	0.0	0.0	0.0	0.0	0.0	0.1	0.0	-3.4
Craft Workers	0.2	3.7	0.3	8.4	1.2	0.2	2.6	0.0	16.6
Plant and Machine Operators	0.1	-0.2	-0.4	0.5	0.2	-3.1	0.6	0.1	-2.2
Low qualification occupations	-3.6	-6.4	-1.0	-4.4	-5.4	-2.6	-5.4	-6.9	-35.8
Total	**-4.2**	**0.0**	**0.7**	**9.4**	**-17.9**	**-7.0**	**31.8**	**-6.9**	**5.8**

Source: MoE forecasts

The most rapid drop in labour demand will be observed in low qualification occupations. This will be common for all sectors. Taking into account the demographic trends, supply of labour force with an appropriate qualification might substantially decrease in the future, therefore the role of vocational secondary education will only increase.

Figure 3.10



Source: MoE forecasts

In the next years, job opportunities will form mainly because of replacement demand, when the existing labour force retires or leaves the labour market. Demographic trends and the retirement age are the main factors affecting changes in the number of the population who have left the labour market and the increase in demand

for replacement labour. 278 thousand jobs are expected to be vacated by 2040 due to labour ageing and leaving the labour market, of which 118 thousand vacancies will be created in high qualification occupations, 123 thousand in medium qualification occupations, and 37 thousand in elementary occupations.

The most significant increase in replacement demand in high qualification occupations is expected in occupations of professionals – nearly 1/3 of those currently employed in the corresponding occupations could leave the labour market by 2040. The most significant replacement labour demand in the occupations of professionals is expected in subgroups of education and health professionals. At the same time, the most significant increase in replacement demand in medium qualification occupations is expected in the occupations of drivers and mobile plant operators, personal care workers, stationary plant and machine operators, food processing and woodworking workers, agricultural workers, as well as protective services workers. Overall, replacement demand could represent nearly 70% of the total vacancies in the labour market by 2040.

3.3.2. LABOUR SUPPLY PROJECTIONS

Based on economic growth and demographic scenarios, the MoE has developed labour force (economically active population) supply projections until 2040. Both in the medium and long term, total labour supply in the Latvian labour market will continue to be affected by demographic processes – the reduction in the working age population and changes in the age structure of the population. At the same time, the negative impact of demographic trends on labour supply during the entire forecast period will continue to be compensated by the increase in participation (economic activity) of the population.

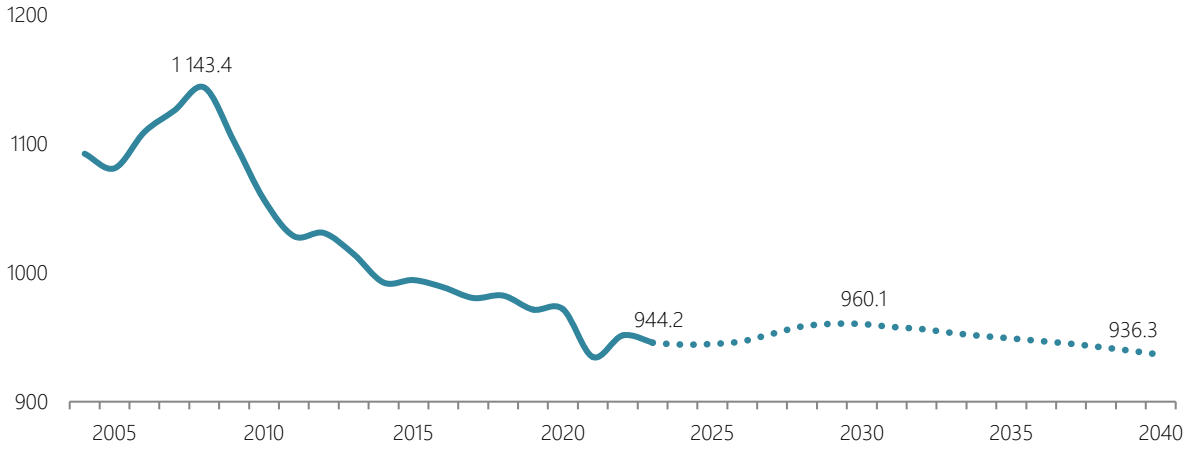
Until 2030, the labour supply will generally remain stable with a slight growth trend. This will mainly be underpinned by the increase in economic activities of the population and the reduction of the negative impact of migration on the number of the working age population. Economic growth, as well as the increasing shortage of labour force will facilitate rising participation of the population in the labour market. An increase in the labour demand in the medium term, in the conditions of limited availability of labour resources, will open wider possibilities to many groups of inactive population (housekeepers, students, retirement-age people, etc.). An increase in wages will also play an essential role in the promotion of participation of the population.

At the same time, in the long term (in the period after 2030), the compensatory effects of the increase of economic activity of the population on labour supply are likely to fade and demographic processes will prevail, so a downward trend in labour supply is expected in 2030 – 2040 as a whole. It should be taken into account that economic activity of the population is close to its potential, therefore a long-term increase in participation of the population in the labour market will be limited and new labour stock will mainly be provided by the external attraction of labour force.

Figure 3.11

Labour supply

in the age group 15-74, thousands



Source: CSB data until 2023, MoE forecasts starting from 2024

Given the increase in the level of participation of the population in the labour market, **it is expected that labour supply in general could increase by 14.5 thousand (1.5%) by 2030, compared to 2023.** Meanwhile, after 2030 labour supply will be increasingly more affected by demographic processes and it should shrink again. Overall, the economically active population might reduce by about 9 thousand or 1% by 2040, compared to 2023.

Table 3.9

Participation of the population in the labour market

% of the total number of the population in the respective age group

	2023	2030	2040
Total	**68.6**	**72.5**	**74.3**
15-24	34.9	43.0	48.6
25-34	86.8	89.8	91.1
35-44	89.4	92.6	94.0
45-54	86.5	90.7	91.8
55-64	75.5	86.4	87.4
65-74	24.5	30.0	30.4

Source: CSB data for 2023, MoE forecasts for 2030 and 2040

By 2040, the economic activity rate could generally rise by 5.7 percentage points compared to 2023 and reach 74.3% in the age group 15-74. The population aged 25-54 will continue to show higher economic activity. Furthermore, the most significant increase in economic activity is expected in the pre-retirement age group aged 60-64, as well as among youths (aged 15 to 24).

Before 2030 the most significant reduction in labour force is expected in the 25-34 age group. It is mainly related to the demographic hole caused by the low birth rates of 1990s entering the respective age cohort. Meanwhile, labour supply will mainly grow in the age group 15-24 and 65-74 affected by demographic changes (increase in the population in the respective age cohort) and increase in economic activity.

Table 3.10

Changes in the economically active population by age groups

thousands

	Economically active population			Changes compared to 2023		Impact of changes in participation rate compared to 2023		Impact of demographic changes compared to 2023	
	2023	2030	2040	2030	2040	2030	2040	2030	2040
Total	**945.7**	**960.1**	**936.3**	**14.5**	**-9.3**	**81.4**	**86.3**	**-66.9**	**-95.6**
15-24	64.3	86.0	88.5	21.8	24.2	12.9	14.6	8.9	9.6
25-34	181.9	148.6	174.7	-33.2	-7.2	3.8	8.5	-37.1	-15.7
35-44	235.2	225.9	168.8	-9.2	-66.3	16.0	8.2	-25.3	-74.6
45-54	218.7	223.6	228.7	4.9	10.0	8.5	13.5	-3.6	-3.5
55-64	194.0	207.7	209.4	13.7	15.4	25.6	27.5	-12.0	-12.1
65-74	51.7	68.3	66.3	16.6	14.6	14.5	13.9	2.1	0.7

Source: CSB data for 2023, MoE forecasts for 2030 and 2040.

Labour supply by obtained education

Overall, in the medium- and long-term labour supply with higher education will continue to increase, while a reduction is expected among economically active population with vocational and general secondary education. At the same time, labour supply with basic and lower education will increase in the medium term. Relevant changes in the coming years will mark a known polarisation of labour supply, increasing the supply of high qualification and also low qualification labour, on the one hand, but reducing the supply of medium qualification labour at the same time.

The share of labour supply with higher education in total labour supply could increase by almost 6.2 percentage points by 2040, compared to 2023, and reach almost half (46.4%) of the total labour supply. In contrast, the share of labour supply with vocational education and vocational secondary education will continue to decrease – by 9.7 percentage points, compared to 2023, falling to 19.7% of the total labour supply. Labour supply with general secondary education will also decrease slightly – by 0.3 percentage points (to 22.2% in 2040). On the other hand, the share of labour supply with basic and lower education in the total labour supply could increase by 4.4 percentage points (to 12.3%) in the medium term by 2030, compared to 2023, and by 3.8 percentage points (11.7%) by 2040.

If the current education supply structure remains, **the largest increase in labour force with higher education is expected in the fields of social sciences, business, and law**. Consequently, the increase in the labour supply with the appropriate qualification will account for about 40% of the total labour force increase with higher education in 2040.

At the same time, a reduction in labour supply is expected in individual thematic groups in higher education mainly underpinned by a lower level of reproduction of the labour force with the relevant qualification – the number of young professionals entering the labour market is lower than the number of those leaving the labour market due to retirement and other factors.

In the coming years, labour force ageing will manifest the most in thematic groups of education like education, engineering, manufacturing and construction, as well as agriculture. It should be noted that in 2023 more than half of the total labour supply with corresponding education was over 45 years old – in the thematic group of education (62%), engineering, manufacturing and construction (56%), and agriculture (62%). More of them will leave the labour market in the next 10-20 years.

Similarly, **drop-outs of students in STEM disciplines are still a serious problem**, which considerably limits the potential labour force increase in these areas. Every year, about 28% of students of STEM education programmes drop out of studies.

Medium qualification labour supply will keep declining both in the medium and long term. The most considerable drop is expected among the population with vocational education and vocational secondary education – labour supply will reduce by about 17% or 47.6 thousand by 2030, compared to 2023, and by almost 94 thousand or 34% by 2040. A more moderate labour supply reduction is expected with general secondary education – by about 6.7 thousand or 3.2% by 2030 and by 4.8 thousand or 2.3 per cent by 2040.

Labour supply reduction with vocational secondary education is expected almost in all academic groups of education with the exception of life sciences and computing, as well as humanities and arts. The most considerable reduction is expected in the thematic group of engineering, manufacturing and construction, which currently accounts for about half of the total labour supply with vocational education. It should be noted that about 55% of the economically active population with education in this thematic group is aged above 50 years, therefore, almost 62 thousand employees with relevant qualifications could leave the labour market by 2040 at an average rate of 3650 specialists per year. At the same time, the relevant thematic group of education currently has about 1890 graduates per year, therefore, in order to ensure the preservation of labour supply with relevant qualifications at the current level, twice more young specialists than presently should be prepared.

Table 3.11

Labour supply by thematic groups of education

	thousands			structure, %			changes in thousands compared to 2023	
	2023	2030	2040	2023	2030	2040	2030	2040
Higher education, including:	**379.9**	**405.4**	**434.3**	**40.2**	**42.2**	**46.4**	**25.6**	**54.4**
Education	46.4	47.2	42.1	4.9	4.9	4.5	0.7	-4.4
Humanities and arts	25.7	28.3	31.3	2.7	2.9	3.3	2.6	5.6
Social sciences, business and law	150.6	163.0	175.2	15.9	17.0	18.7	12.4	24.6
Life sciences, mathematics and computing	26.4	27.8	30.9	2.8	2.9	3.3	1.4	4.6
Engineering, manufacturing and construction	54.8	55.6	58.4	5.8	5.8	6.2	0.8	3.6
Agriculture	6.1	6.3	7.0	0.6	0.7	0.7	0.2	0.9
Health and welfare	35.7	41.1	50.8	3.8	4.3	5.4	5.4	15.0
Services	25.9	28.8	33.6	2.7	3.0	3.6	2.8	7.7
Thematic groups n.e.c.	8.2	7.3	5.1	0.9	0.8	0.5	-0.8	-3.1
Secondary education, including:	**491.1**	**436.8**	**392.3**	**51.9**	**45.5**	**41.9**	**-54.3**	**-98.8**
Vocational education and vocational secondary education:	**278.5**	**230.8**	**184.5**	**29.4**	**24.0**	**19.7**	**-47.6**	**-93.9**
Education	2.5	1.8	0.7	0.3	0.2	0.1	-0.7	-1.9
Humanities and arts	10.7	11.3	13.1	1.1	1.2	1.4	0.7	2.4
Social sciences, business and law	24.6	19.1	15.0	2.6	2.0	1.6	-5.5	-9.6
Life sciences, mathematics and computing	7.4	8.0	9.1	0.8	0.8	1.0	0.6	1.8
Engineering, manufacturing and construction	144.7	114.8	82.5	15.3	12.0	8.8	-30.0	-62.2
Agriculture	12.2	10.1	8.1	1.3	1.1	0.9	-2.1	-4.1
Health and welfare	11.9	9.5	8.6	1.3	1.0	0.9	-2.4	-3.3
Services	54.0	48.3	43.1	5.7	5.0	4.6	-5.7	-10.9
Thematic groups n.e.c.	10.4	7.9	4.2	1.1	0.8	0.4	-2.5	-6.2
General secondary education	**212.7**	**205.9**	**207.8**	**22.5**	**21.4**	**22.2**	**-6.7**	**-4.8**
Basic or lower education	**74.7**	**117.9**	**109.7**	**7.9**	**12.3**	**11.7**	**43.2**	**35.0**
Total	**945.7**	**960.1**	**936.3**	**100.0**	**100.0**	**100.0**	**14.5**	**-9.3**

Source: 2023 – MoE assessment based on LFS data of 2023. MoE forecasts for 2030 and 2040.

Note: n.e.c. – not elsewhere classified.

Overall, the number of students in vocational education is still significantly smaller than necessary to reduce the negative effect of ageing labour force trends on labour supply with medium qualification. In order to ensure the reproduction of medium qualification labour supply, at least twice as many students as today should be enrolled in vocational education, as well as the number of early school leavers should decline. Similarly, adult upskilling and reskilling measures in vocational education play an important role in reducing the decrease in the labour supply with medium qualification. Still, approximately 303.4 thousand (31%) of the population aged 25-64 have insufficient levels of education (general secondary education, basic education or lower education) to successfully integrate into the labour market, so it is essential to provide these people with opportunities to return to the education system and to expand their professional skills/qualifications.

The supply of low qualification labour with basic and lower levels of education may grow in the coming years. In 2023, 10.4% of the population aged 20-64 had a level of education not higher than basic education. Approximately 71% or 80.3 thousand of them were aged between 20 and 44 years (approximately 14% of the total population in the age group concerned), and therefore a significant share of the corresponding population group will only continue to reach the highest economic activity age cohorts in the coming years (the highest economic activity of the population is generally observed between 30 and 54 years), therefore, increasing the supply of low qualification labour in the labour market as a whole.

The most significant increase in labour supply with basic and lower education could be seen until 2032, while this could gradually decrease starting from 2033. Overall, labour supply with basic and lower education levels could grow by 43.2 thousand by 2030.

The relatively high number of early school leavers in the second half of 1990s is having a significant impact on the increase in the supply of low qualification labour in the medium term. Drop-outs from secondary education also have a significant impact on the flow of the population with basic education – although they start studies, most do not complete them.

3.3.3. MATCHING OF THE LABOUR DEMAND TO THE LABOUR SUPPLY

In the medium term, the situation in the labour market will improve, but will become even more complicated, which, on the one hand, will be determined by growing labour demand (in terms of new jobs and replacement demand), which is necessary to maintain economic growth, and, on the other hand, falling labour supply under the influence of demographic trends. Thus, the insufficiency of the labour force in different sectors of the national economy will become even more distinct in the next years. Also, the shortage of labour force will be intensified by the mismatch between requested and proposed skills in the labour market, as well as regional imbalances in the labour market.

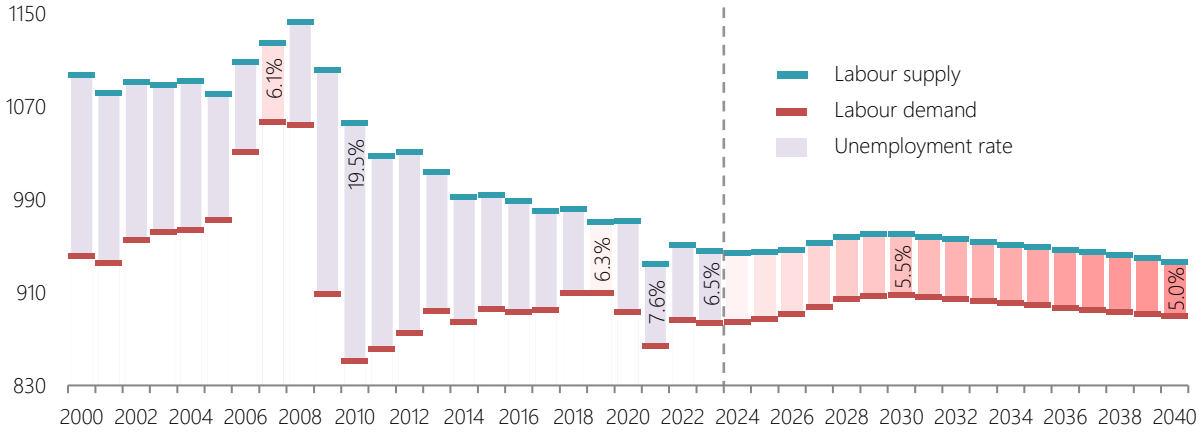
Overall, by 2030, free labour force reserves will reduce to 52 thousand (of the current 61 thousand), but by 2040 this difference might reduce to 46 thousand. Overall, the number of job seekers/ unemployment in the medium and long term will be close to the natural level and will mainly consist of frictional and structural unemployment.

Economic growth will remain primarily based on productivity growth in the coming years. Despite the uncertainty due to the current geopolitical situation, as Russia continues hostilities in Ukraine, an increase in labour demand is expected until 2030 – the number of employed might increase by 2.7% or 24 thousand compared to 2023. At the same time, labour demand might grow slower in the long term, taking into account increasing rates of automation of different jobs and replacement of labour force with technologies. Therefore, **main job opportunities will be created by replacement labour demand –** an increase in vacancies due to current employees leaving the labour market (leaving the labour market due to retirement, disease or other reasons).

Figure 3.12

Matching of labour demand to labour supply

Labour demand and supply, thousands; unemployment rate, %



Source: CSB data until 2023, MoE forecasts starting from 2024

Unemployment in 2024 will reduce as the economy recovers after the rise in inflation caused by the cost of energy and food due to Russia's invasion of Ukraine, and will reduce little by little in the next years approaching its natural rate. By 2030, unemployment might slide to the level of 5.5%, while the number of job seekers to 52 thousand. After 2030 unemployment indicators will stabilise at about 5%, while the negative effects of demographic trends on labour supply will still be largely compensated by the increase in economic activity of the population, as well as equalisation of labour force migration flows.

Table 3.12

Forecasts of key indicators of the employment and unemployment rates

in the age group of 15-74

	2023	2030	2040
Population in private households, at the beginning of the year, thousands	1377.7	1324.1	1260.0
Number of the employed population, thousands	884.2	907.8	889.9
changes in the employed population, thousands compared to 2023	–	23.7	5.8
changes in the employed population, % compared to 2023	–	2.7	0.7
Economically active population, thousands	945.7	960.1	936.3
Number of job seekers, thousands	61.5	52.3	46.4
Employment rate, the employed to the total population	64.2	68.6	70.6
Participation rate, economically active population to the total population	68.6	72.5	74.3
Unemployment rate, percentage of the unemployed (job seekers) in economically active population	6.5	5.5	5.0

Source: CSB data until 2023, MoE forecasts for 2030 and 2040

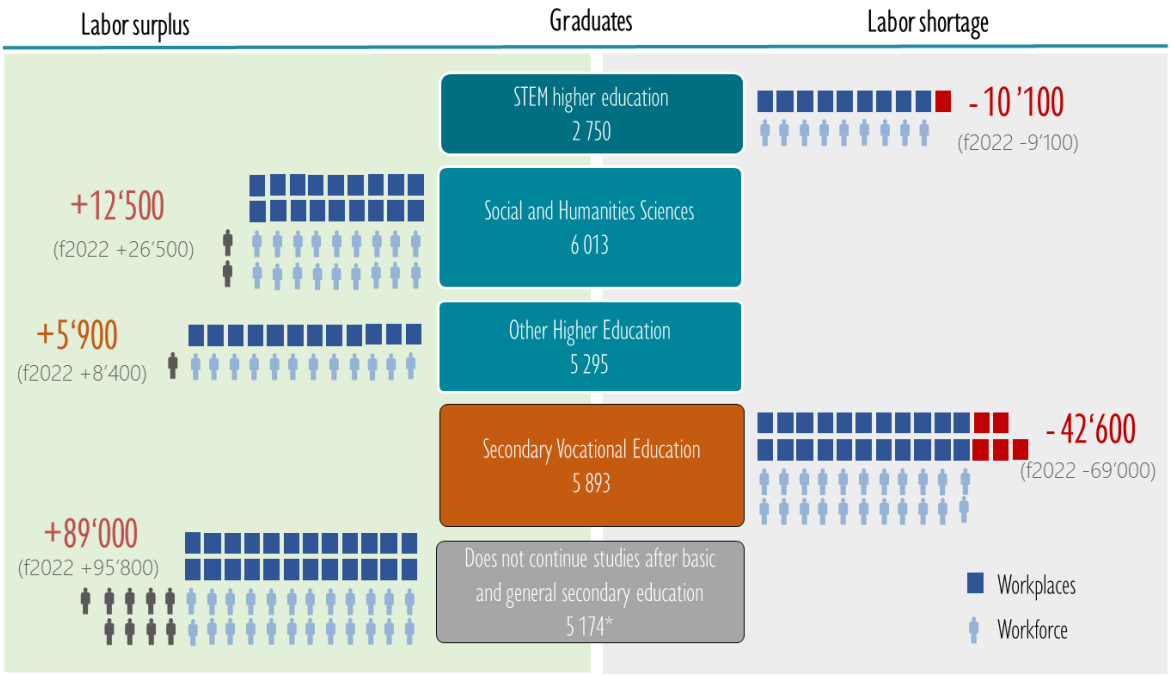
Correspondence by thematic groups of education

By 2040 labour demand will continue shifting towards the demand for specialists with higher education. Similar trends will be observed in supply as well. At the same time, the ratio of labour demand and supply will not be equal in all segments of education.

Figure 3.13

Projected labour force surplus/shortage and number of graduates by stages and areas of education

difference between supply and demand in 2030, number of graduates in 2023



* MoE assessment, based on graduates of 2023.
Source: CSB data for 2023, MoE forecasts for 2030

Overall, high qualification labour demand and supply in the medium and long term will be close to a balance, which means that the possibilities of manoeuvres in terms of attraction of highly qualified labour force will be limited. The most significant labour shortage in the high qualification labour segment may be for specialists with STEM education (by 2030 the shortage for high qualification specialists in STEM may increase to ~ 10.1 thousand), while the labour surplus is expected among specialists with education in social sciences and humanities – by 2030 the

labour surplus with higher education in the thematic areas of social sciences, business and humanities may reach ~ 12.5 thousand.

In comparison with the medium and long-term labour market forecasts of MoE for 2022, the projected labour shortage after specialists with STEM education has increased by almost 1 thousand (forecasts of 2022: ~ 9.1 thousand in 2030). The increase in labour shortages has been driven mainly by supply side factors – a more rapid shrinking of labour supply with STEM education compared to the forecast of 2022, as well as fewer enrolments and graduates in STEM education programmes in 2022 compared to 2021. Similarly, structural changes in the economy and labour market demand side are generally moving at a slower pace than expected in the growth target scenario, thus achieving the growth targets for 2030 requires overall faster structural changes in labour demand, which increases the risks of labour shortages, taking into account a shorter period of time for the labour supply adjustment process.

Overall, similar trends are observed in the labour supply with higher education in social sciences and humanities (mainly in the thematic group of social sciences, business and law education), thus reducing the expected surplus of the labour force with the corresponding qualification in 2030. In comparison with the forecasts of 2022, the projected surplus has reduced more than two times (earlier ~ 26.5 thousand in 2030).

More evident shortage of specialists with vocational education will be observed. By 2030 the gap between labour demand and supply with vocational education might increase to 46 thousand. Compared to the forecasts of 2022, the overall labour shortage projection for 2030 has been reduced, taking into account both the slower reduction of labour supply with vocational education, which has been partly affected by the entry of Ukrainian refugees into the labour market of Latvia, as well as a lower labour demand (number of employees) with vocational education in the base year of forecasts (2023) – while labour shortage with vocational education persists, employees with general secondary education or basic education and in some cases also with higher education are attracted to part of medium qualification jobs.

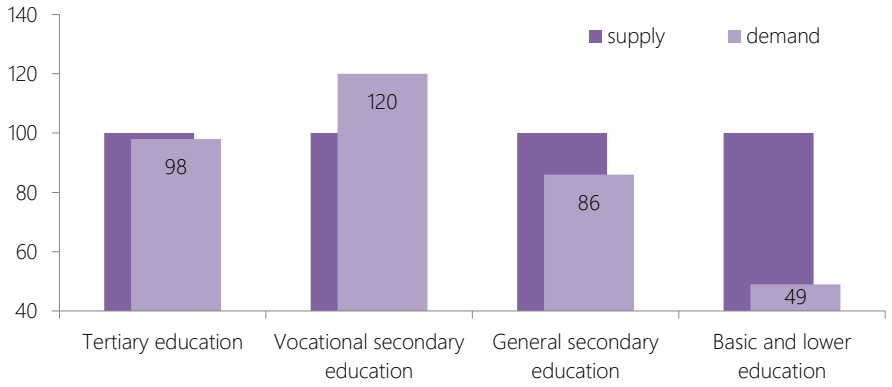
Given that there are still significant risks of labour shortages with vocational education, it is expected that in the future some of the medium qualification jobs may also have to attract labour without professional qualification, which in general may reduce the aggregate contribution of each individual job to the added value chain.

At the same time, a significant surplus of labour force with general secondary education and basic education is expected. The surplus of labour force with such qualification might reach almost 90 thousands by 2030 (29.4 thousand with general secondary education and 60.3 thousand with basic education). The surplus of labour force in these groups will be largely predetermined by the drop in labour demand for that qualification – elementary occupations and manual work is increasingly replaced with different technological solutions. It is also expected that labour supply with basic education and lower education level in the medium term will increase, and therefore in 2030 half of these people might have problems in finding relevant job and get included in the labour market.

Compared to the MoE forecasts of 2022, the projected labour surplus with general secondary education and basic education has decreased affected by both supply side factors – lower economic activity among residents with general secondary education and basic education than previously projected, as well as demand factors – along with the shortage of skilled labour, labour shortages are compensated by the attraction of employees with general secondary education, basic education or lower education.

Sufficiency of labour force by education levels

supply vs. demand in 2030, % supply vs. demand



Tertiary education

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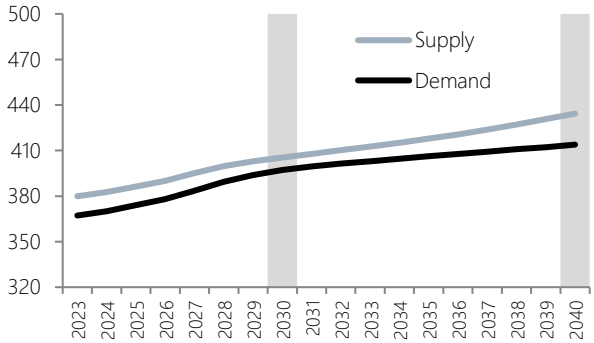

Vocational secondary education

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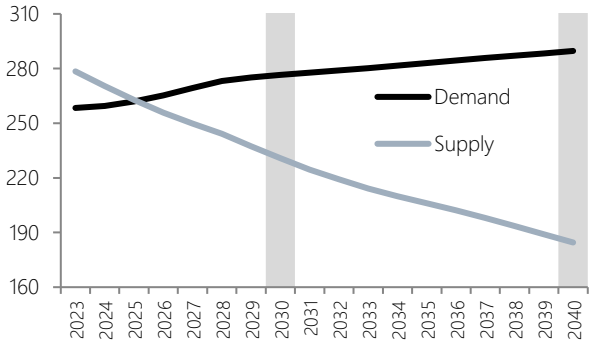
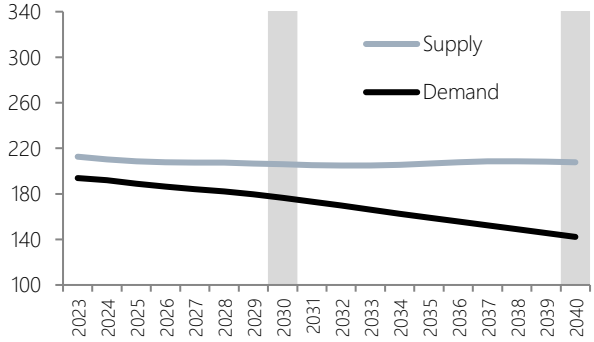


General secondary education

thsd.



Basic and lower education

thsd.

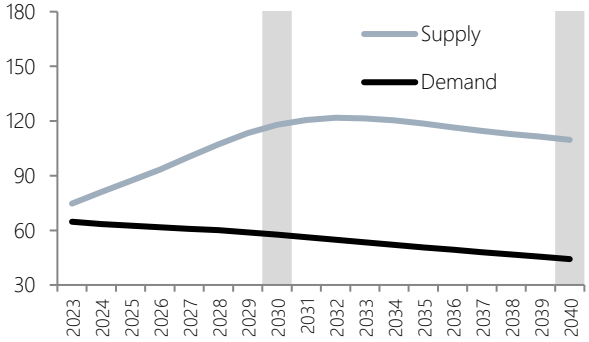
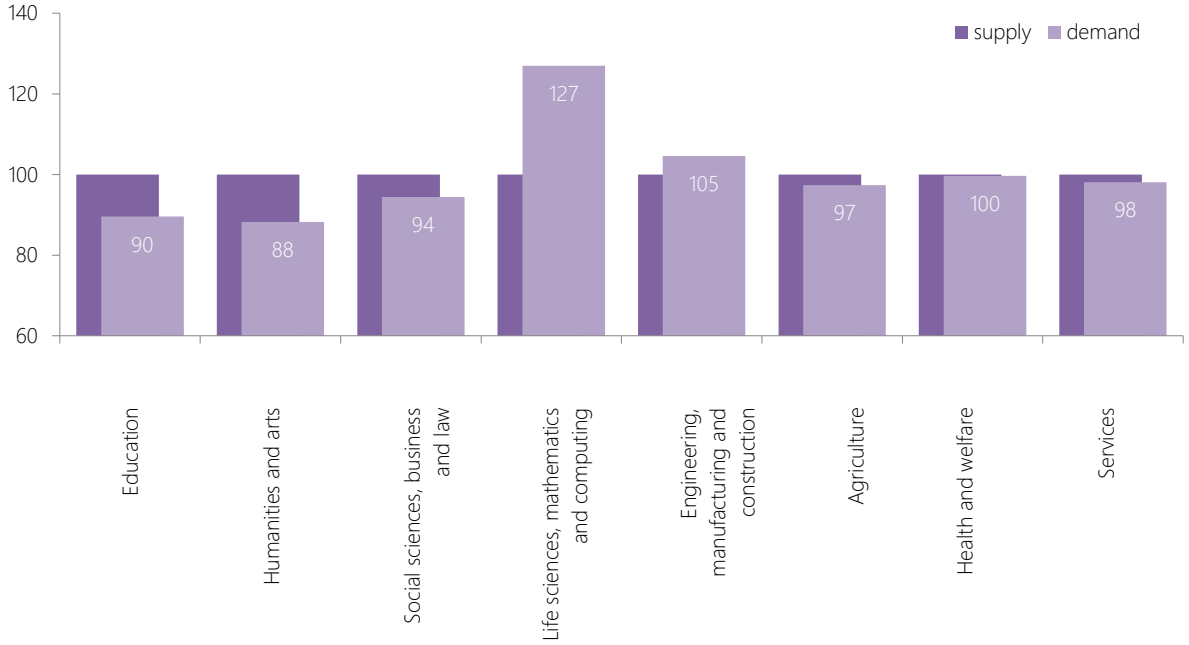


Figure 3.15

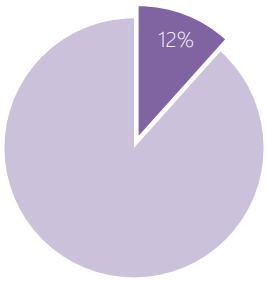
Forecasts of the labour supply and demand with higher education by academic disciplines

%, demand vs. supply in 2030

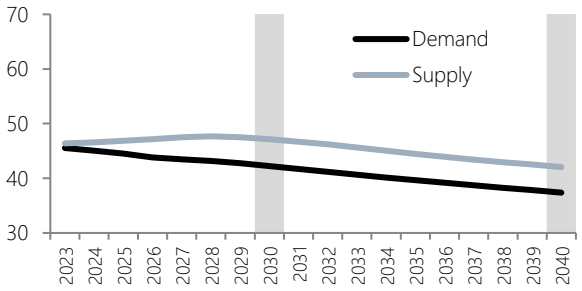


Education

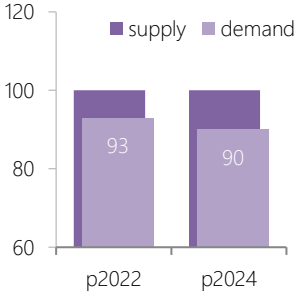
Supply structure
%, in 2030



Dynamics of the supply and demand
thousands

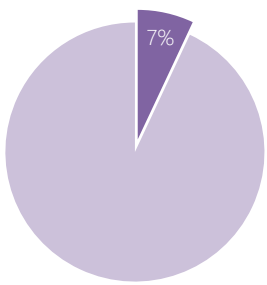


Mismatch
demand vs. supply,
%, in 2030

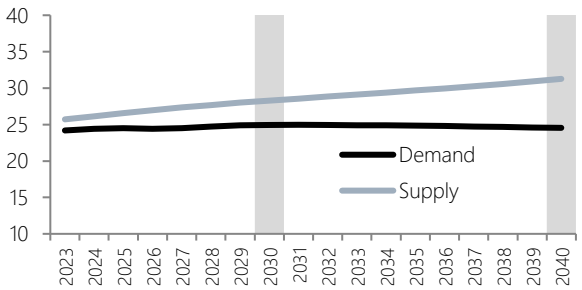


Humanities and arts

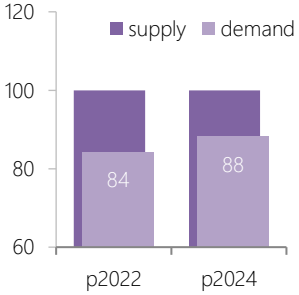
Supply structure
%, in 2030



Dynamics of the supply and demand
thousands

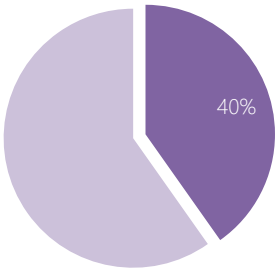


Mismatch
demand vs. supply,
%, in 2030

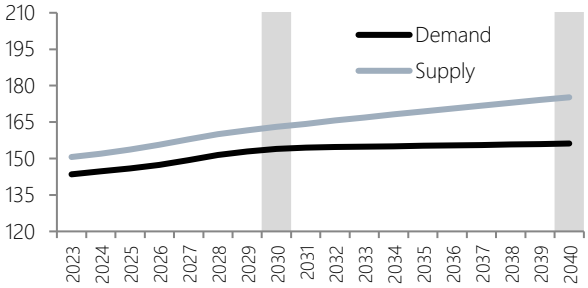


Social sciences, business and law

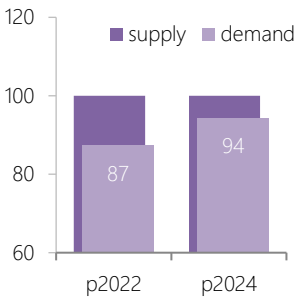
Supply structure
%, in 2030



Dynamics of the supply and demand
thousands

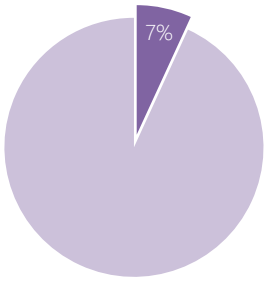


Mismatch
demand vs. supply,
%, in 2030

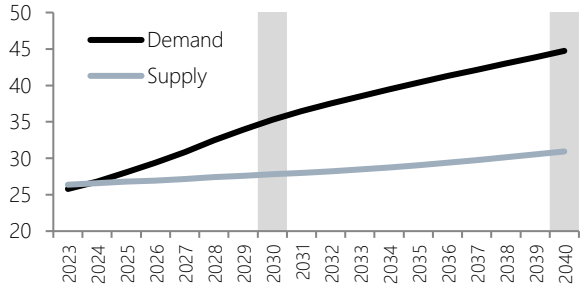


Life sciences, mathematics and computing

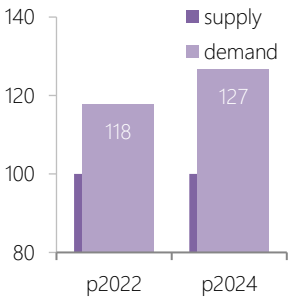
Supply structure
%, in 2030



Dynamics of the supply and demand
thousands

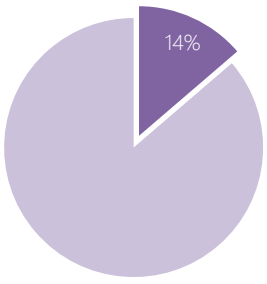


Mismatch
demand vs. supply,
%, in 2030

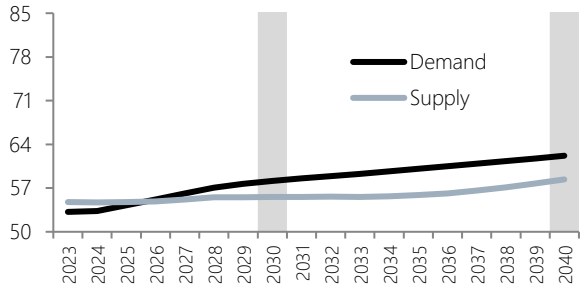


Engineering, manufacturing and construction

Supply structure
%, in 2030



Dynamics of the supply and demand
thousands



Mismatch
demand vs. supply,
%, in 2030

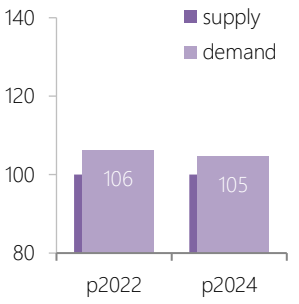
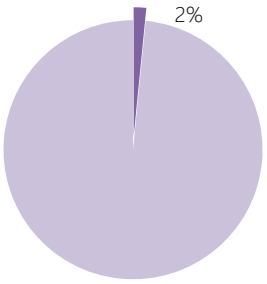


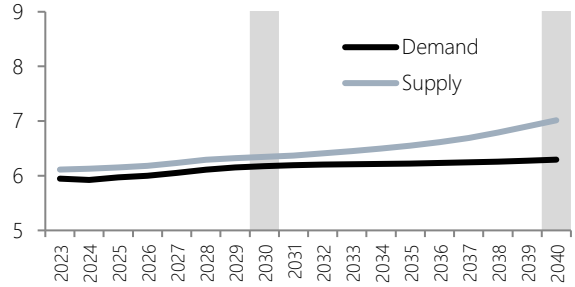
Figure 3.15 continued

Agriculture

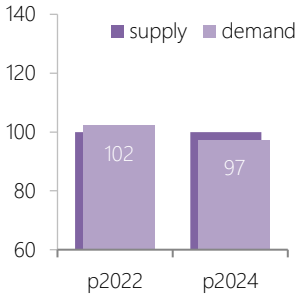
Supply structure
%, in 2030



Dynamics of the supply and demand
thousands

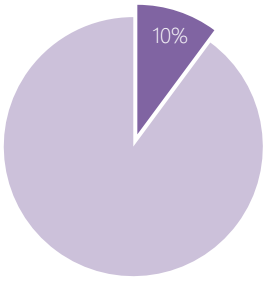


Mismatch
demand vs. supply,
%, in 2030

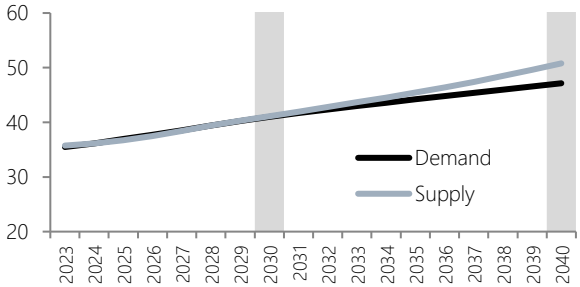


Health and welfare

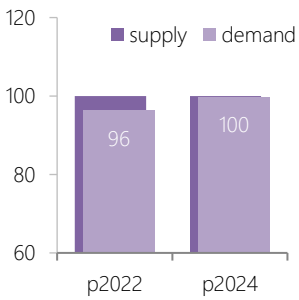
Supply structure
%, in 2030



Dynamics of the supply and demand
thousands

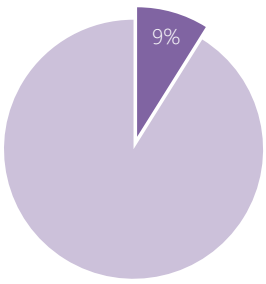


Mismatch
demand vs. supply,
%, in 2030

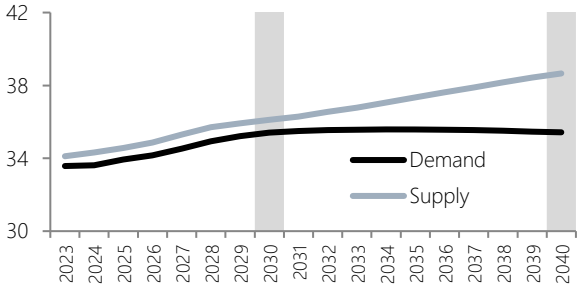


Services

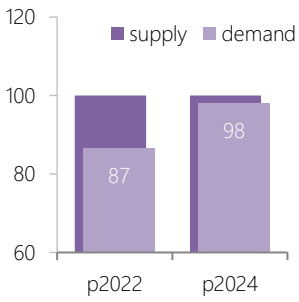
Supply structure
%, in 2030



Dynamics of the supply and demand
thousands



Mismatch
demand vs. supply,
%, in 2030



Source: CSB data for 2023, MoE forecasts starting from 2024

If the structure of supply of higher education remains the same, the most significant shortage of labour force in the higher education group is expected among specialists with engineering, life sciences and ICT (STEM) education. By 2030, the shortage of specialists with relevant qualification might exceed 10 thousand, mainly in areas like computer sciences, architecture and building, physical sciences and engineering.

Fewer specialists with STEM education are still prepared than the labour market will need in the following years, the situation has slightly deteriorated compared to MoE labour market forecasts of 2022, when a shortage of about 9 thousand specialists with STEM education was projected for 2030. It should be noted that the share of STEM graduates among all the graduates in the period from 2008 to 2023 has increased from 13% to 20%, which has also generally increased the supply of young specialists in the labour market.

In the thematic group of agriculture, labour demand and supply in the current forecasts will be close to a balance like in the forecasts of 2022. However, in the thematic group of agriculture the number of graduates has reduced in recent years and is still insufficient to compensate for the drop in the number of agricultural specialists due to ageing of labour force.

At the same time, the situation in the thematic group of health and social care keeps being balanced, where labour demand and supply will generally be in balance in the medium term. However, labour supply may slightly exceed demand in the long term. It should be noted that the number of graduates in health and social care education has increased by more than 22% over the last 7 years and has quintupled since 2000.

In relative terms, the largest surplus of labour force with higher education is projected in humanities and services thematic groups. It should be noted that since 2009, when the number of graduates in these education programmes was the highest, it has reduced by 40 per cent.

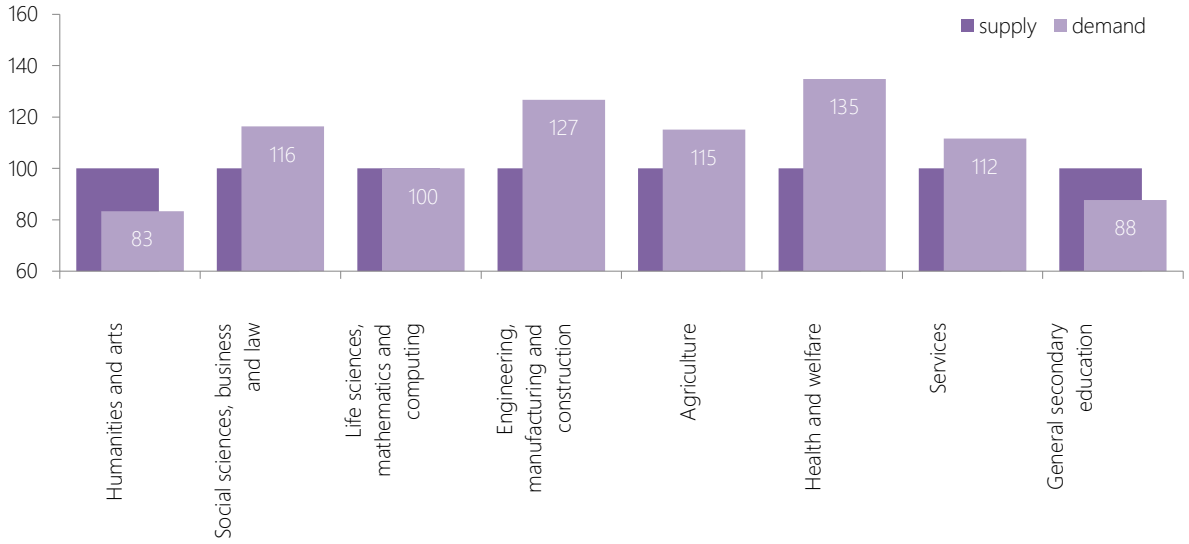
In absolute terms, the biggest surplus is still expected in the labour force with education in social sciences and business, but the surplus has generally decreased – by 13.6 thousand specialists in 2030 – compared to the forecast of 2022. It should be noted that the number of graduates in social sciences and business programmes has been dropping rapidly in the last 10 years – by approximately 42%. If the number accounted for 40% of total graduates of higher education institutions 10 years ago, then it accounted for slightly more than one third in 2023. It should be taken into account that these changes in education supply will have a tangible effect on the labour market only in the long term – in 15-20 years, therefore the gap between supply and demand for specialists with relevant qualifications in the following years will continue to grow.

There will still be a labour surplus in the thematic group “Education” both the medium and long term. Overall labour demand for education specialists could decrease in the coming years due to both the optimisation of the school network and the overall decrease in the number of learners. At the same time, it should be noted that the labour supply with respective qualifications will reduce – the number of young professionals entering the labour market is lower than the number of those leaving it due to retirement and other factors. In 2023, almost half (47%) of the total labour supply with higher education in academic discipline “Education” was over 50 years old, therefore, most of them will leave the labour market in the next 10-15 years. It should be noted that overall the projected surplus of labour force in the thematic group “Education” has increased compared to the projections of 2022, underpinned both by the steeper decrease of the total labour demand in the thematic group “Education” in the forecast base period, compared to 2021, as well as by the higher number of enrolled students in 2023, compared to previous periods.

Figure 3.16

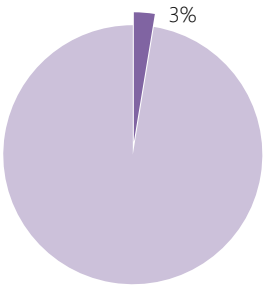
Forecasts of the labour supply and demand with secondary education by academic disciplines

%, demand vs. supply in 2030

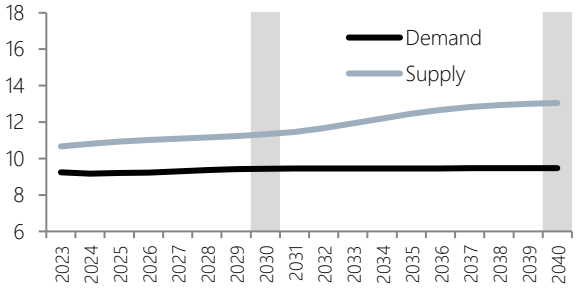


Humanities and arts

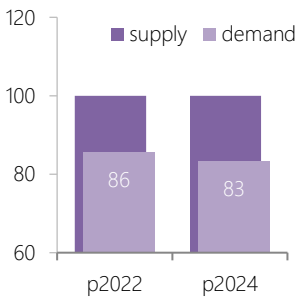
Supply structure
%, in 2030



Dynamics of the supply and demand
thousands

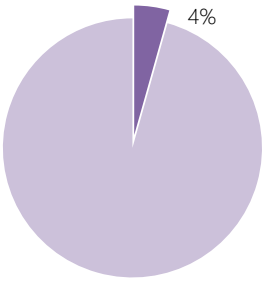


Mismatch
demand vs. supply,
%, in 2030

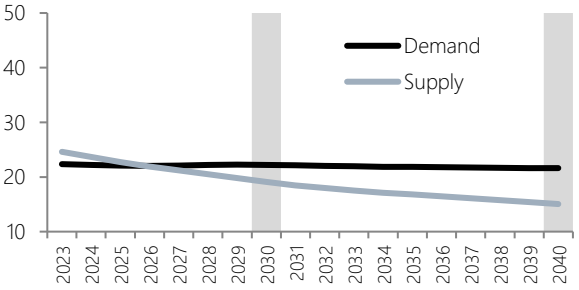


Social sciences, business and law

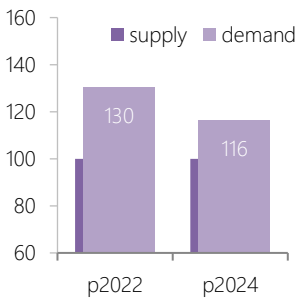
Supply structure
%, in 2030



Dynamics of the supply and demand
thousands

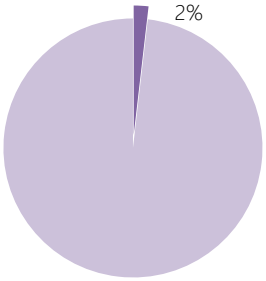


Mismatch
demand vs. supply,
%, in 2030

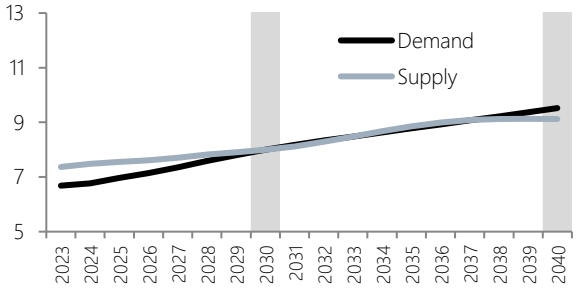


Life sciences, mathematics and computing

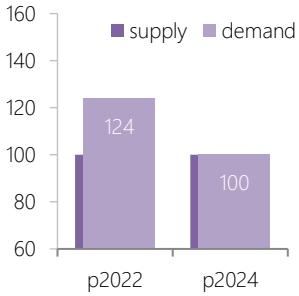
Supply structure
%, in 2030



Dynamics of the supply and demand
thousands

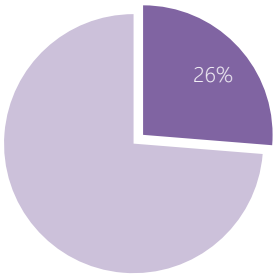


Mismatch
demand vs. supply,
%, in 2030

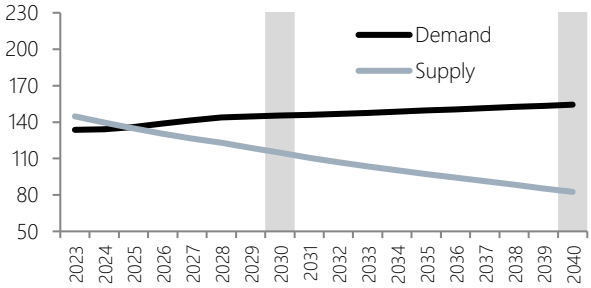


Engineering, manufacturing and construction

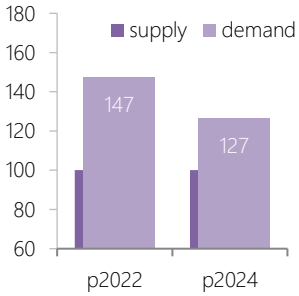
Supply structure
%, in 2030



Dynamics of the supply and demand
thousands

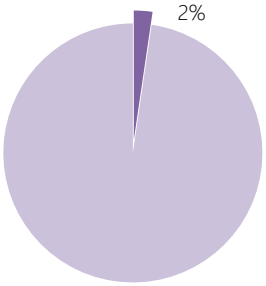


Mismatch
demand vs. supply,
%, in 2030

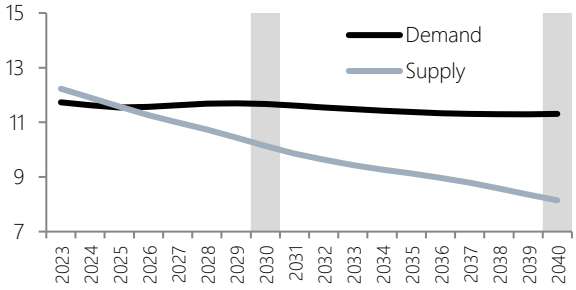


Agriculture

Supply structure
%, in 2030



Dynamics of the supply and demand
thousands



Mismatch
demand vs. supply,
%, in 2030

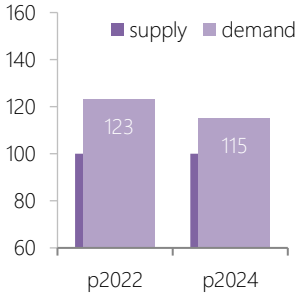
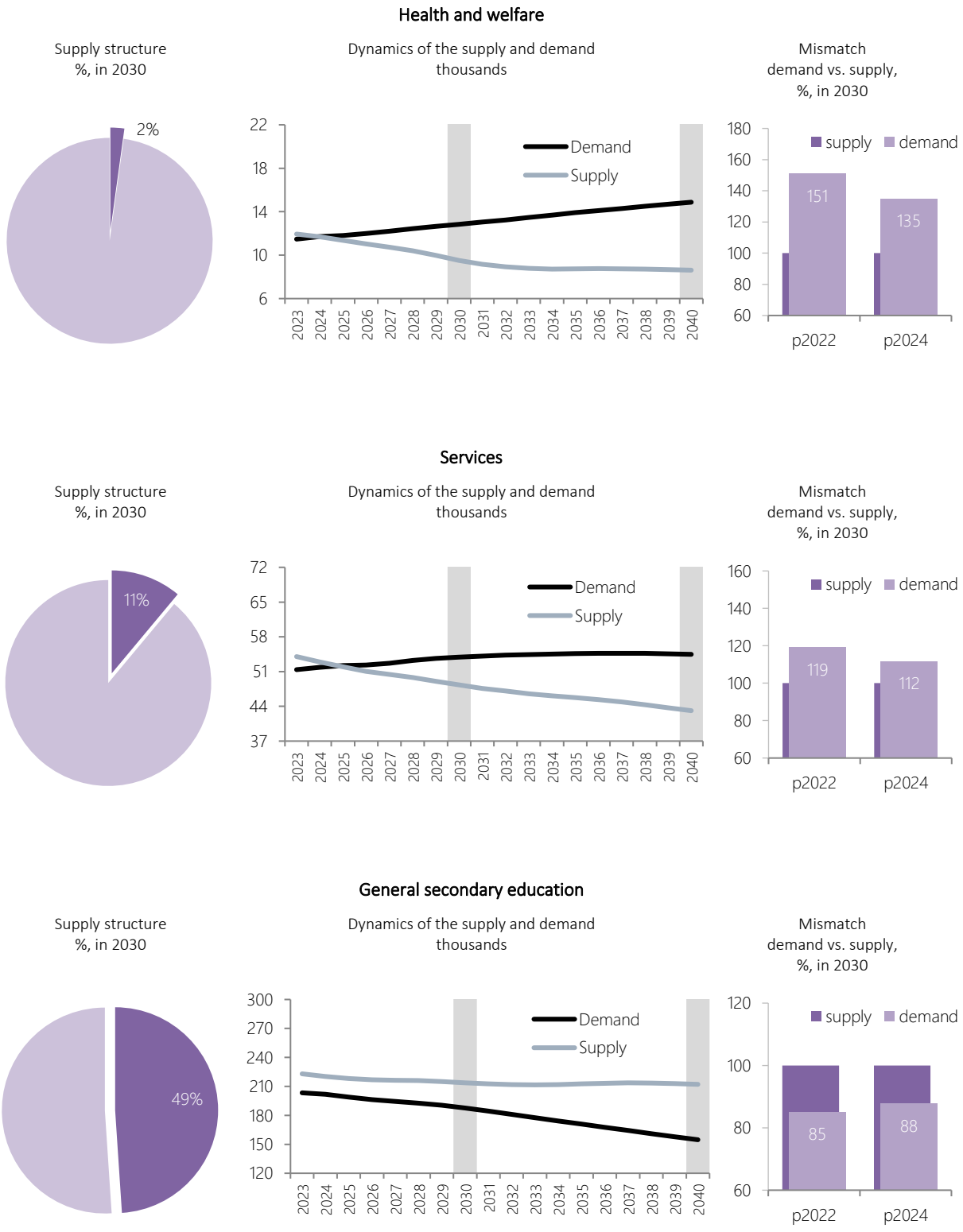


Figure 3.16 continued



Source: CSB data until 2023, MoE forecasts starting from 2024

Insufficient labour supply **with vocational education** is expected almost in all thematic groups of education. The ratio between labour demand and supply has reduced in all thematic groups except general secondary education. The biggest shortage is expected in engineering, manufacturing and construction – mainly in areas like construction, and civil construction, mechanics and metalworking, machine building, energy, as well as woodworking technologies and manufacture of products. By 2030 shortage of medium qualification professionals in engineering, manufacturing and construction might increase to about 31 thousand professionals. In relative terms, the shortage of specialists with education in engineering and manufacturing has reduced compared to the

labour market forecasts of 2022, but the trend of gradual growth of the shortage will exist in the long term, which largely reflects structural changes in the relevant education supply – since 2008 the share of enrolled students and graduates in the relevant academic discipline has dropped by 4 and 8 percentage points, respectively. It should be noted that the number of enrolled students has increased significantly in the last two years and their share of the total number of enrolled students has reached the level of 2011.

Similarly to engineering, the share of graduates reduced also in social sciences, business and law, health and welfare and services. Moreover, shortage in health and welfare increases also due to ageing of labour force, as well as many medical education programmes do not have vocational secondary education level anymore and mainly restructure into colleges, which means appearance of considerably less young professionals with appropriate qualification.

At the same time, a shortage of labour force may form and the difference between demand and supply will gradually grow due to ageing in the thematic group of agriculture by 2030. The comparatively small supply of specialists with relevant qualifications in the labour market should also be taken into account.

Table 3.13

Labour demand and supply forecasts by thematic groups of education

If the current structure of labour force preparation is retained

	2030			2040		
	demand thousands	supply thousands	matching %	demand thousands	supply thousands	matching %
Higher education, including:	397.1	405.4	98	413.9	434.3	95
Education	42.2	47.2	90	37.4	42.1	89
Humanities and arts	25.0	28.3	88	24.5	31.3	78
Social sciences, business and law	153.9	163.0	94	156.2	175.2	89
Life sciences, mathematics and computing	35.3	27.8	127	44.7	30.9	145
Engineering, manufacturing and construction	58.1	55.6	105	62.2	58.4	106
Agriculture	6.2	6.3	97	6.3	7.0	90
Health and welfare	41.0	41.1	100	47.1	50.8	93
Services	35.3	36.1	98	35.4	38.7	92
Secondary education, including:	453.1	436.8	104	431.9	392.3	110
Vocational secondary education, including:	276.5	230.8	120	289.7	184.5	157
Education	2.1	1.8	114	1.5	0.7	230
Humanities and arts	9.4	11.3	83	9.5	13.1	73
Social sciences, business and law	22.2	19.1	116	21.6	15.0	144
Life sciences, mathematics and computing	8.0	8.0	100	9.5	9.1	104
Engineering, manufacturing and construction	145.4	114.8	127	154.4	82.5	187
Agriculture	11.7	10.1	115	11.3	8.1	139
Health and welfare	12.8	9.5	135	14.9	8.6	173
Services	53.9	48.3	112	54.5	43.1	126
General secondary education	176.5	205.9	86	142.2	207.8	68
Basic and lower education	57.6	117.9	49	44.2	109.7	40
Total	**907.8**	**890.0**	**95**	**960.1**	**936.3**	**95**

Source: MoE forecasts

Matching of labour demand to labour supply by occupational groups

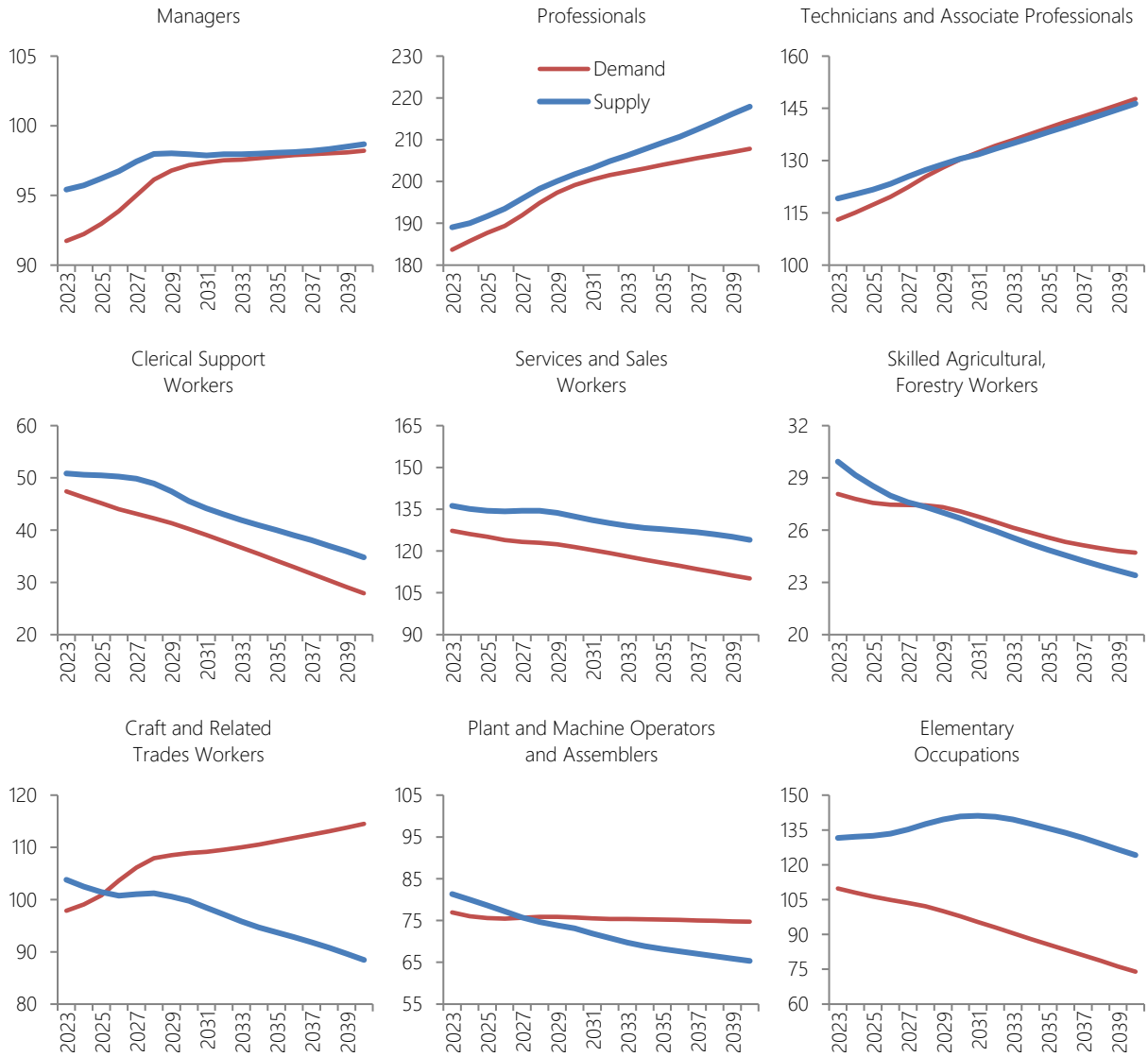
In the medium and long term, there will be a significant **shortage of labour force among medium qualification employees** in occupations like metal and machinery trades workers, building workers, drivers and mobile plant operators, electrical and electronic trades workers, food processing and woodworking trades workers, stationary plant and machine operators. A drop in labour supply is expected in almost all of these specialities in the following years, which, on the one hand, is determined by the ageing of the labour force and exit of the labour force from the labour market, but, on the other hand, by an insufficient supply of vocational education in relevant specialities.

At the same time, the biggest surplus of labour force will be in services and sales occupations, as well as in clerical support occupations, where most of the employed have general secondary education, while the number of job seekers with such education will remain high.

Figure 3.17

Forecasts of the labour supply and demand by occupational groups

thousands



Source: CSB data for 2023, MoE forecasts starting from 2024

Both labour demand and supply for **high qualification occupations** will continue to grow in the medium and long term, so the general demand and supply will keep their balance. At the same time, the most distinct shortage of labour force might form in individual high qualification occupations. The most serious shortage of labour force in the medium term might form in occupations of ICT professionals (database and network professionals, software and applications developers and analysts, information and communications technology operations and user support technicians, telecommunications and broadcasting technicians), in science and engineering occupations

(mathematicians, actuaries and statisticians, process control technicians, electrotechnology engineers, physical and earth science professionals, architects, planners, surveyors and designers, as well as ship and aircraft controllers and technicians), as well as health professionals (medical doctors and paramedical practitioners, nursing and midwifery associate professionals), as well as managers of different levels (sales and development managers, production managers in agriculture, forestry and fisheries, and in ICT).

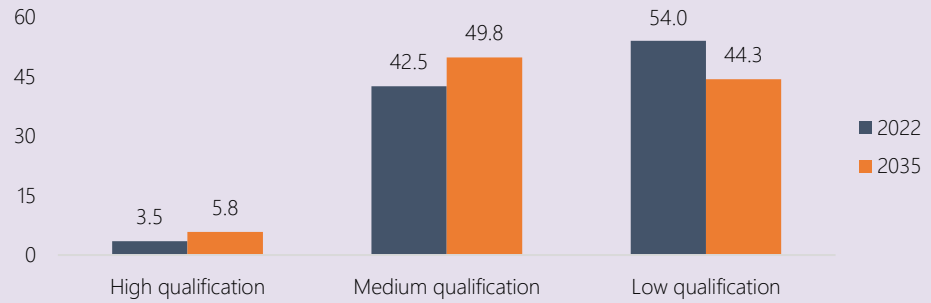
Mismatches between skill demand and supply in Europe*

The pandemic is expected to lead to an increase in skill mismatches in Europe. The development of digital technologies will also lead to increasing imbalances in the labour market. The issue of population ageing and the challenges of the silver economy in the labour market will become increasingly more pressing. Policy initiatives on reskilling or improvement of existing skills will therefore be particularly important.

The share of high qualification labour will grow. According to Cedefop, high qualification labour will grow from 26% in 2021 to 40% in 2030 (compared to 21% in 2000), while low qualifications will decrease significantly and represent only 15% of the total labour force in 2030. Demand for low qualification labour force will be considerably below supply, and people with basic or no education will find it more and more difficult to find a job, because labour force with higher qualifications will force them out of the labour market. The share of labour force with medium qualification will remain almost unchanged and will account for 45% of the entire labour force in 2030.

ES-27 existing and projected employment share by education level

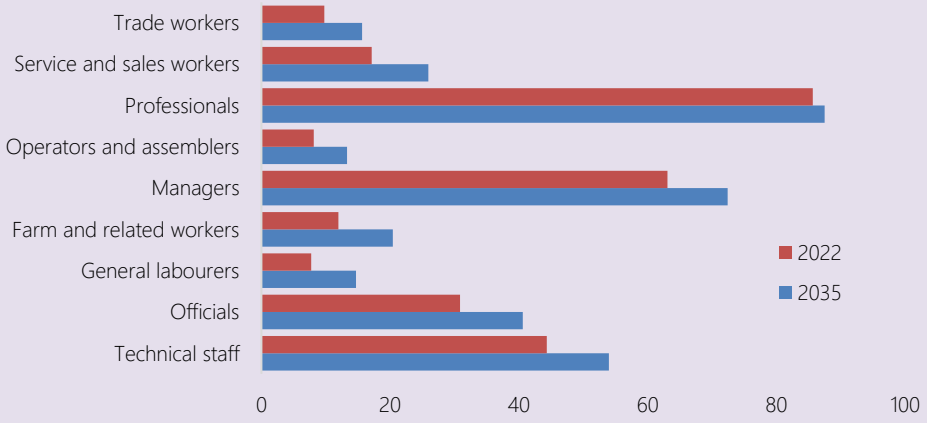
2035 vs. 2022, thousands



Although demand for high qualification labour force will even slightly increase supply in 2030, in the nearest years, the demand for higher qualification labour force could grow more rapidly than supply. As young labour market entrants are higher educated than older cohorts leaving the labour market (many of which have the skills required but not the corresponding formal qualification), the share of higher-qualified workers is expected to increase. Some high-qualified workers will end up in positions typically requiring a lower qualification. At the same time, there was the expectation that occupations requiring high-level skills will be the ones with the most hiring difficulties in 2030, because automation will contribute to making the skills of current workers obsolete. This will create a situation when a workforce has higher qualification/education but insufficient professional skills.

Share of employees with higher education qualification in EU-27 by occupation

2035 vs. 2022, %

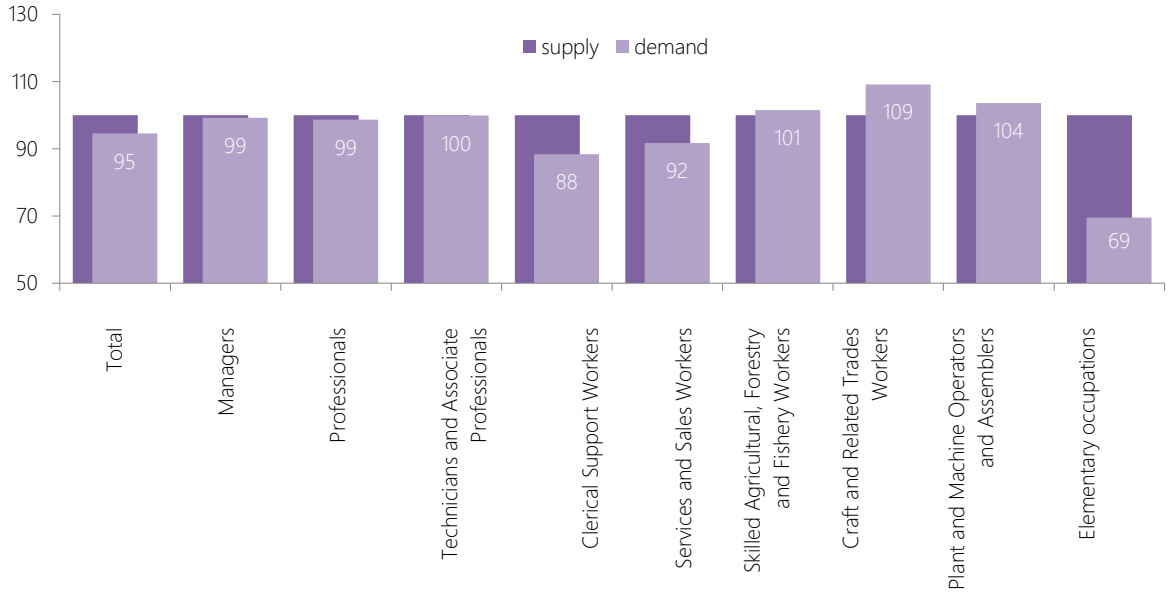


* According to Cedefop's forecasts

Figure 3.18

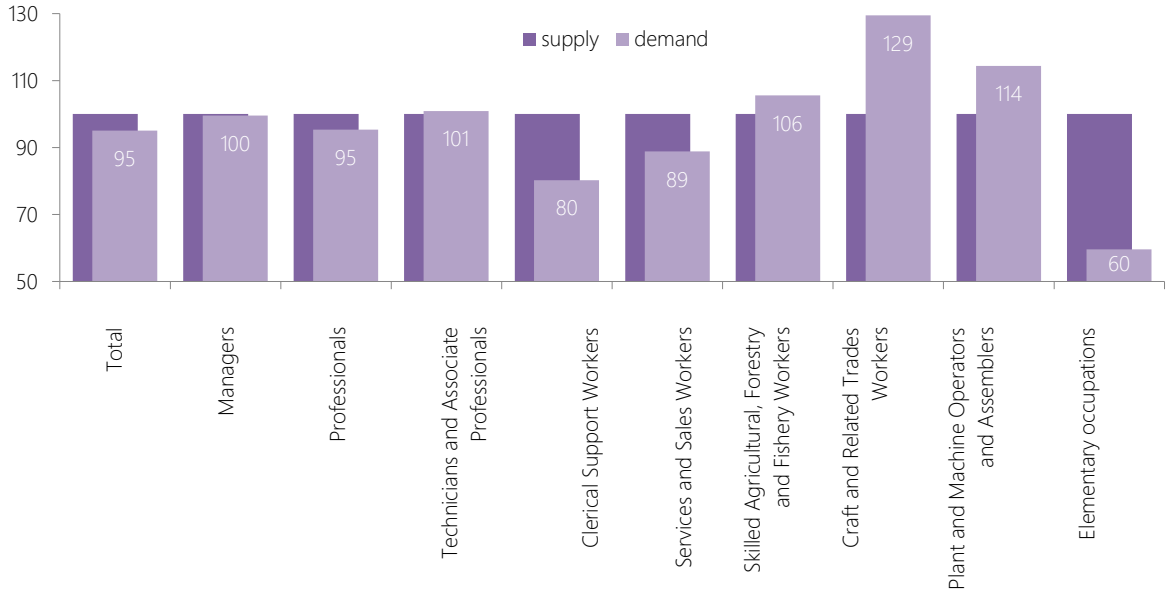
Ratio of the labour demand to labour supply by occupational groups

2030, demand vs. supply, %



Ratio of the labour demand to labour supply by occupational groups

2040, demand vs. supply, %



Source: MoE forecasts

It is expected that a considerable surplus of the labour force will still be in elementary occupations, taking into account the increase in labour supply with basic education in the medium term, as well as a considerable surplus of the labour force with general secondary education. It should be taken into account that in the medium and long term, along with automation trends, a considerable drop in jobs is expected in occupations with high share of manual and repetitive actions.

If the current structure and volume of labour force is retained, in the long-term disproportions in the aforementioned medium qualification occupations (plant and machine operators, as well as craft and related trades workers) will deepen and the supply in craft and related trades workers occupations will be considerably lower than the demand. Demand will exceed supply also in the group of skilled agricultural, forestry and fishery workers, as there is a high share of pre-retirement age people in this occupational group and at the same time a comparatively small number of newcomers from the education system.

4. OVERVIEW OF IMPLEMENTED AND PLANNED EDUCATION AND EMPLOYMENT MEASURES

4.1. DIRECTIONS FOR IMPROVEMENT OF THE EDUCATION SUPPLY

On 21 June 2021, the CM approved the Education Development Guidelines 2021-2027 "Future Skills for the Future Society"[1], which cover all the types and degrees of education. In all areas of education the guidelines will mainly focus on the implementation of the initiated reforms and the development and provisions of necessary support systems (human resources, cooperation networks, governance, quality), thus strengthening the sustainability of changes. Major changes planned in four areas of education:

- general education – to introduce and strength the competence approach with a view to improving teaching, learning and performance of students, attracting new teachers, ensuring renewal of teachers and providing a targeted support system to strengthen inclusive education;
- vocational education – to strengthen vocational education institutions as centres of sectoral excellence and innovation, to develop flexible and sustainable education supply and to strengthen coordinated and strategic cooperation with representatives and employers of economic area;
- higher education – to strengthen the quality of academic staff and to ensure sustainable academic careers, to promote excellence in higher education and to strengthen the governance of higher education institutions;
- adult education – to increase participation in adult education, particularly for population groups less engaged in training, to increase the quality of adult education and create a sustainable and socially responsible funding system for adult education.

4.1.1. LATEST MEASURES IN GENERAL EDUCATION

Creating a sustainable education ecosystem and new teacher wage financing model. On 21 November 2023, the CM approved the informative report "Complex solutions for the provision of high-quality education in general basic and secondary education: a sustainable education ecosystem and an effective funding model", which offers criteria for the reform of the network of general education institutions, as well as a framework for a new model for the financing of teachers' remuneration in general basic and secondary education institutions. The Ministry of Education and Science continues to work on the establishment of a sustainable network of general education institutions to ensure access to quality education following the principle – a primary school as close as possible to the place of residence of the student and a strong basic and secondary school, in which the quality supply of study programmes corresponding to a competence approach is ensured. The Ministry of Education and Science is developing a new teacher wages financing model "Programme in School". This means that teachers will receive fair and equal wage, regardless of the location of the school or the number of pupils. The new funding model is based on the criteria of a good school and an optimal class, providing that funding is calculated for a particular educational institution, taking into account the volume of the educational programme it implements. The model provides equivalent similar funding for schools across the national territory. It is also planned to increase funding for support staff, including guaranteed state funding for social educators and career advisers. The new teacher wage model is planned to come into force from 1 September 2025.

Transition to studies in Latvian. In the school year 2023/2024, the transition to studies only in the official language in Latvian pre-school and basic education institutions, which previously implemented minority educational programmes, has commenced – "Unified school". Currently, the education process in grades 1, 4 and 7 is implemented only in the official language. From 1 September 2024, students in grades 2, 5 and 8 will start their studies only in the official language, but from 1 September 2025 – grades 3, 6 and 9 will also join. At the same time, during the basic education phase, there is a transition to a second foreign language, which is an official language of the EU or a language for which intergovernmental agreements in the field of education have been concluded. Activities are implemented to provide support for the transition of schools to studies in Latvian by promoting cooperation between schools, exchange of teacher experience and acquisition of new skills.

[1] https://likumi.lv/ta/id/324332-par-izglitibas-attistibas-pamatnostadnem-20212027-gadam

Introduction of competence-based curriculum. In 2023, the reform of the content of general education initiated in 2019 was completed, introducing a competency approach in basic and secondary education in study content, which also included the development of the teacher support system and improvement of the study process. The content of general education based on the competence approach provides for the mastering of the curriculum is intended not only at the optimal level, but also in optional subjects and courses – in depth at a higher level thus promoting a more targeted path for young people to higher education. Activities for the establishment of a professional support centre are planned within the framework of the 2021-2027 programming period of the EU funds, which will provide methodological support to educational institutions, including the development of teaching and methodological materials in different subjects.

Promoting STEM education. From the school year 2025/2026, secondary school graduates will be obliged to pass a state examination in natural sciences at the general level of mastering curriculum or in physics, chemistry or biology at least at the optimal level.

With the help of ESF support, the curriculum and examples of teaching aids from preschool to secondary school in all areas of education, including STEM, have been developed. In cooperation with Latvian institutions of higher education, digital study materials have been developed in secondary education in subjects such as physics, design and technologies, programming, chemistry and biology. To promote the use of technologies in schools, training for educational technology mentors was organised in 2023, as well as support was provided to educational institutions in the implementation of digital solutions and courses for the improvement of the professional competence of teachers were provided. The learning platform *skolo.lv* and digital storage of study resources *mape.gov.lv* functionality and content collection have been improved.

To increase the interest of children and young people in STEM, interest education institutions of public importance[1] will be able to receive additional state budget funding for teachers' remuneration and development of interest education programmes from 1 September 2024. Currently, 6% of state earmarked subsidies for interest education programmes are used for STEM interest education programmes. The additional state support granted provides for a gradual increase in funding for the development of interest education programmes in STEM areas, reaching 20% of the total earmarked subsidy amount for local governments for the implementation of interest education in the school year 2026/2027. The allocated funding for STEM interest education programmes provides for an increase in the number of students by 9200 students in 2024, by 10,800 in 2025 and each subsequent year.

To address the shortage of teachers, including in STEM areas, the short-term solution is the "Teaching Power" teacher education project. Within the project, people with pre-acquired higher education in a specific area are involved and prepared for teacher's work, enabling to enter the education system quickly. In 2023, 70 participants qualified as a teachers as part of the project, while 31 graduated from the two-year phase. On 1 September 2023, a new course began – 89 prospective teachers, who will work in schools while studying pedagogy in the selected university.

In December 2023, the Ministry of Education and Science, the foundation "Possible Mission" and Riga Technical University (RTU) signed a memorandum on the establishment of a teacher Leadership development programme, Enefit energy company has also joined them. More than 150 STEM subject teachers are expected to be prepared in three years.

Support for the development of individual competences and talents of pupils. With the ESF support, measures to develop the competences of pupils, mainly in the field of STEM, have been implemented, both by providing support for advanced learning of the curriculum and by extending the opportunities for interest education in basic education. By December 2023, more than 195 thousand pupils have been involved in the activities. Furthermore, support for the implementation of national and international measures for the development of talents of students is also provided. The organisation of olympiads and scientific contests in learning subjects at national and international level is ensured and support for the development of talented students and the professional improvement of teachers for work with talented learners, including for the development of achievements and talents of girls in the STEM area is provided. Between 2017 and 2023, 760 students participated in 144 international events, including obtained 28 gold, 93 silver and 187 bronze medals and 73 certificates of recognition in international subject olympiads and scientific research competitions[2]. Further financing of study subjects olympiads and scientific research activity of students is planned with the support of the EU funds for

[1] The status of a state interest education institution is granted to interest education institutions, which implement interest education programmes, including in STEM fields, and additionally perform the functions of providing methodological support for interest education and improvement of professional competence of teachers. It is planned that each planning region (Kurzeme, Latgale, Vidzeme, Zemgale) has not more than two interest education institutions of national importance, but in Riga – not more than three interest education institutions of national importance.

[2] Informative Report of the Ministry of Education and Science "On the necessary funding for the provision of study subjects olympiads and scientific research work of students in 2024".

2021-2027 under the responsibility of the Ministry of Education and Science, which will be implemented by the National Centre for Education.

Support for reducing early school leaving. Using support from EU funds, preventive and intervention measures are implemented with the support of EU funds involving local governments, schools, teachers and parents to identify in a timely manner the children and youths at risk of school leaving and provide them with customised support. Economic support (compensation for public transport, official accommodation facilities, catering expenses, acquisition of personal learning aids, etc.), individual advisory support (involvement of psychologists, speech therapists and other professionals) and tutorials in subjects, incl. STEM, is provided. In 2023, the ESF project "Support for reducing early school leaving" (PuMPuRS) was completed. It was launched in 2017 and supported around 50 thousand students in 599 educational institutions. 41 local governments became cooperation partners during the project implementation. Teachers and support staff from educational institutions were also supported. In order to ensure the sustainability of the project, early school leaving prevention systems and implementation plans for 2024-2028 have been developed in local governments.

During the 2021-2027 programming period of the EU Structural Funds, investments are intended for the implementation of an integrated "school-community" cooperation programme for reducing the risk of exclusion in educational institutions. The objective of the planned support is to further develop the local government educational ecosystem approach by promoting inter-institutional cooperation and involvement of parents of the student in the educational process, thus ensuring coordinated action to reduce the risk of social exclusion and early school leaving for students and promoting the mastering of general education curriculum.

Students who do not pass centralised examinations in grade 9 are obliged to study in grade 9 again to get basic education. Discussions are currently taking place on the initiative of the Ministry of Education and Science to introduce an equalising school year during which the students, who had not passed examinations would learn not only those subjects in which their knowledge and skills were insufficient, but also professional orientation subjects.

Since 2014, more than 5 thousand young people (aged 15-29) in the NEET situation (not in education, employment, or training) have been supported under the "KNOW and DO!" project. The ESF+ co-financing is intended to further contribute to the integration of NEET youths into education and employment. By 2027, 2250 young people are planned to be involved in the activities.

Strengthening of inclusive (special) education. By ensuring access to inclusive education, 365 general educational institutions implement special educational programmes during the school year 2023/2024. 10 special educational institution development centres operate in the country. Within the framework of the 2021-2027 programming period of the EU Funds, improvement of the infrastructure and learning environment is ensured for the implementation of efficient, high-quality and modern education in special educational institutions. In order to increase the capacity of special educational institutions in ensuring quality special education, it is planned to organise the network of special educational institutions by the end of 2029, improve the learning environment, improve the provision of material technical and educational aids. It is intended that no more than one special educational institution (except Riga State City), which implements licensed special education programmes in one place, operates in each local government after 31 August 2025. Priority support is given to special education development centres.

Career guidance helps pupils to take a conscious and motivated decision on their further education or work career, and thus also fosters the reduction of early school leaving. Educational institutions or local governments provide, to the extent possible, the services of an educator-career adviser and implement career guidance measures. The State Education Development Agency (SEDA) provides regular methodological and informative support for career advisers in educational institutions and local government educational administrations.

Improvement of the process of organising state examinations. In 2023, the implementation of the project "Improvement of the process of organising state examinations" was completed, ensuring the possibility of taking state examinations or parts thereof in an e-environment, improving the possibilities for the exchange of information and data processing. Within the framework of the project, the state examination information system has been improved and new solutions have been introduced, such as the introduction of state examination tasks into the system (establishment of the task bank), and e-services have been developed. From 2023 onwards, centralised examinations take place online. The assessment of centralised examinations also takes place online and electronically signed certificates are prepared.

Modernisation of infrastructure of general education institutions. By attracting ERDF co-funding, 92 general education institutions established by local governments have been modernised by 2023 creating a modern, ergonomic learning environment meeting sanitary requirements **supplemented** with modern ICT equipment and solutions necessary for the study process. New buildings for education institutions (for example in Ādaži and Ogre Municipality local governments), and also new outbuildings are intended to be constructed in individual local governments, where an increase in pupils is observed and the existing infrastructure is insufficient.

Reducing the digital gap in general and vocational secondary education. The "Educational Resources Registration and Monitoring Information System" (RUMIS) for the registration and issuance to students of computers and other aids necessary for the educational process has been developed. The Memorandum of Cooperation Computer for every child signed by senior officials of the state and Latvian Association of Local and Regional Governments on 14 May 2021 provides for the provision by 2025 of an appropriate computer for each pupil and teacher, as well as the creation of a computer library in schools. With the funding available from REACT-EU, 524 general education institutions were provided with 25.7 thousand computer equipment units for students in grades 7-9 in 2023. As part of RRF, 35.8 thousand units of portable computer equipment were purchased for the most socially vulnerable students. Computer equipment for other groups of students, as well as teachers and support staff involved in the provision of general education, will be purchased within the 2021-2027 programming period of the EU Funds.

Teaching staff forecasting and employment planning system. By the end of 2023, work has been completed on the development of a research and analytics tool, which is a prerequisite for creating a system for forecasting the demand and supply of teachers and planning employment in general and vocational education is expected to be developed, which will enable timely response to the needs of the system in preparation and improving the professional competence of teachers, effective employment planning of teachers in education institutions, to plan support activities at local government and national level.

4.1.2. LATEST MEASURES IN VOCATIONAL SECONDARY EDUCATION

The **reform of the content of vocational education**, which was launched during the 2014-2020 programming period of the EU Funds, has been completed, while the initiatives initiated within the framework of several projects, such as WB training, are planned to be continued and developed with the support of EU funds and other financial instruments. A modular approach has been introduced in the implementation of vocational education programmes, enabling educational institutions to implement one or more modules individually and to issue a certificate for mastering the module concerned. From 2023, educational institutions may enrol persons in vocational education programmes at later stages so that they can continue/complete their studies. Competence acquired in previous education or professional experience shall be evaluated and recognised for a person to acquire only the missing general or professional competences for the acquisition of a specific professional qualification in a shorter period of time in an individualised way. By 2029, a digital platform "Professional Qualifications System" (e-PKS) for the management and updating of vocational education curriculum infrastructure is expected to be equally applicable to initial vocational education and to adult vocational continuing education and professional improvement.

The OECD study "Education at a Glance 2023" published in 2023 recognised Latvia's vocational education system as one of the most effective among the member states of the study.

Development of excellence and innovation in vocational education. Since 2017, with the support of EU funds, the State Education Development Agency has organised a national professional skills competition for *SkillsLatvia* for vocational education students, as well as prepares contestants for participation in international skills competition for young professionals "EuroSkills" and "WorldSkills". Teachers will continue to be supported in vocational education institutions in working with talented students in the acquisition and improvement of professional skills.

Implementation of career guidance measures. The implementation of career guidance measures continues – visits to companies, meetings with graduates, targeted selection of internship places, etc., the position of a career adviser in technical and other vocational education institutions is ensured as far as possible, students have the opportunity to receive individual and group career guidance.

Implementation of WB training and internships in vocational education. Additional EU funds funding was available in 2023, providing an opportunity to involve additional 650 students in WB training and 1130 students in training internship in companies. Since the beginning of the EU project, a total of more than 16 thousand students, 37 vocational education institutions and more than 2700 companies have participated in training internships and WB training. The strengthening of WB training in vocational education will continue.

Modernisation of infrastructure of vocational education institutions. With the support of the ERDF, significant improvements have been made so far in the educational environment of educational institutions, including study rooms equipped with the necessary equipment, training grounds and workshops were newly created, dormitories and sports infrastructure were renewed for the implementation of educational programmes. 66 education programmes have been modernised, total investments in infrastructure modernisation have in the 2014-2020 programming period of the EU Funds was EUR 96.2 million. In future, investments of EUR 41.5 million are planned in the educational environment of educational institutions for the acquisition of required skills for sectors, ensuring the sustainability of previous investments and strengthening of results, as well as development of ICT and digital solutions, equipment of STEM study rooms, as well as improvement of energy performance of buildings of educational institutions.

Strengthening cooperation with social partners and industry organisations. In order to ensure the preparation of specialists in accordance with labour market requirements. Starting from the beginning of 2016, a collegial advisory institution – convent, has been working in all of the vocational education institutions under MoES. The aim of this convent is to facilitate development of vocational education institutions setting the strategic direction of their operation in accordance with market demands.

The Sectoral Expert Councils (SEC) continue to work with the involvement of sectoral experts in the development and implementation of vocational education curriculum and evaluation of qualification examinations, as well as in the implementation of reforms in vocational education, incl. resolving the matters related to the demand and supply of professionals in the respective sector in the labour market.

4.1.3. LATEST MEASURES IN HIGHER EDUCATION

Internal governance reform of higher education institutions. In 2023, the ESF project "Support for the commencement of the functioning of councils of state institutions of higher education" implemented by the Ministry of Education and Science was concluded. It aimed to ensure the continuity of the activities of state institutions of higher education by switching to a new internal governance model and defining further strategic development directions. Within the framework of the project, the strategic specialisation of 14 state-founded institutions of higher education has been approved, the development strategies of 13 state-founded institutions of higher education have been approved and coordinated with the Ministry of Education and Science and support has been provided for ensuring the operation of 14 boards established by institutions of higher education.

Introduction of the tenured professorship foundation. In 2023, the Ministry of Education and Science initiated the introduction of a guaranteed employment or tenure system in Latvia at research universities, while ensuring the smooth development of all groups of branches of science. Within the framework of the tenure system, it is intended to provide elected academic staff with stable employment with an open-ended employment contract, as opposed to entering into an employment contract only for the time of election – six years, as is currently the case, when they obtain a specific academic position, for example, associate professor or professor, and meet previously known professional and scientific qualification criteria. Considering that the tenure system is functioning well in other European countries, it is one of the solutions for developing human capital development in research and innovation in Latvia. The tenure system is planned to be fully implemented in 2024.

Gradual implementation of the institutional funding model. Amendments to the Law on Higher Education Institutions which came into force on 1 January 2024 provide for gradual implementation of the institutional funding model (changes in pillar 1 of higher education funding) in Latvia. The main objective is to improve and modernise the existing financing model and principles of state higher education institutions by strengthening compliance with national demand. It is intended to avoid the situation when the Ministry of Education and Science and the Council of Higher Education determine at the micro level the number of places financed by the state budget broken down by study programmes. All higher education institutions will be able to apply to participate in the pilot project.

The current funding model for higher education has been improved. From 2023, performance funding (pillar 2 of higher education funding) is granted to higher education institutions taking into account the number of graduates in areas with labour shortages, as well as considering whether their graduates are employed in high qualification positions corresponding to specialists with higher education. Previously, the performance funding structure consisted exclusively of scientific and research criteria. Along with the abovementioned changes, the ministry provides an incentive for higher education institutions to focus on the result (preparation of graduates) rather than the process (implementation of the study programme).

Support for prospective and new teachers. In 2023, the Ministry of Education and Science launched a support programme for prospective and new teachers, who link their activities after studies to work in school. Within the framework of the support programme, the Ministry of Education and Science has developed a thematic scholarship priority area for pedagogy students, providing a state budget scholarship of EUR 300 per month starting with year 1. The scholarship has been introduced in order to provide the number of teachers required in state educational institutions and to promote the interest of graduates of secondary education in pedagogical studies, especially in the priority areas of education in the country (STEM, official languages of the European Economic Area and teaching of Latvian language and literature). Scholarship beneficiaries are subject to the requirements for academic performance, internship and employment in an educational institution. Within the framework of the support programme for new students of pedagogy, the ministry has updated the costs of a study place in the priority pedagogical education programmes of the country, thus setting requirements for higher education institutions to increase the quality of studies and modernise the study environment.

In 2023, a programme co-financed by the EU Funds was launched, which provides for the introduction of an induction year in the study programmes preparing teachers. In the first year after a teacher's qualification is obtained, new teachers will be given systemic support to facilitate their further integration into the environment of the educational institution and remaining in the teaching profession. The project is implemented by the University of Latvia and its implementation is planned until 30 June 2026.

Development of digital skills in higher education. Ensures governance efficiency, performance of academic staff, growth of quality of studies, international competitiveness, and the development of higher education institutions as centres of digital excellence. With the support of EU Funds, academic and scientific staff of Latvian higher education institutions and scientific institutions master high-level digital skills (latest trends and methods in the preparation and teaching of the content of technology courses) at the State University of New York at Buffalo. The purpose of these trainings is to ensure the transfer of mastered knowledge in Latvian higher education institutions. Since 2019, 74 lecturers of Latvian higher education institutions have mastered high-level digital skills at the State University of New York at Buffalo.

Within the framework of the EU Recovery Assistance programme REACT-EU, university cooperation projects were implemented between November 2022 and December 2023 (total funding EUR 7.1 million, 12 institutions of higher education, as well as sectoral organisations involved in the implementation of projects) for the development of digital skills for students, improving the content of studies, training methodology and implementing appropriate digital technological solutions. The support has contributed to the development of ICT education by enabling all students to substantially improve their digital skills in line with the needs of today's labour market. Support was received by lecturers for the introduction of new digital content, training methodology and digital technological solutions.

Within the RRF digital transformation component, investments are planned for mastering high-level digital skills (total funding of EUR 17 million). Until 2026, it is intended to increase the number of specialists with high-level digital skills (DigiComp level 7-8), who are capable of using high technologies for the development of knowledge and technology-intensive new products and services in different sectors, at the same time contributing to the strengthening of Latvia's role in the preparation of high-level ICT specialists in the region. Investments in the implementation of training and related R&D activities are planned in three areas – quantum technologies, high performance computing and language technologies. The projects are planned to be implemented from Support programmes for the development of digital skills will also be continued with other support measures in the 2021-2027 programming period of the EU Funds, where digital transformation is one of the EU's priorities.

Exemptions from taxes. The tuition fees paid by employers for the acquisition of higher education by their employees in state-accredited educational institutions of Latvia, EU educational institutions of Member States and European Economic Area countries are not considered income from paid employment if the acquisition of higher education is related to the acquisition of skills required by the employer. This is provided by amendments to the Law on Personal Income Tax, which entered into force on 1 January 2024. This allows employers to pay employees for higher education without the tuition fee for the employee/employer being subject to labour taxes.

4.1.4. LATEST MEASURES IN ADULT EDUCATION

Improvement of the quality of adult education. Amendments to the Education Law were made on 15 September 2022, by which the Cabinet of Ministers approved the procedure by which local governments issue and revoke permits for the implementation of non-formal education programmes in order to promote accessibility and quality of non-formal education, including digital skills, in Latvia. An educational document – a certificate containing a description of learning outcomes – will further be issued for the mastering of a non-formal education programme. In 2023, work on the creation of a common framework in Latvia was concluded, providing that the European Digital Competence Framework for Citizens (DigComp) is used for the assessment of basic digital skills, identification, planning and evaluation of learning needs. Guidelines for the development and implementation of non-formal education programmes have been developed to support the implementation of the new framework.

At the same time, work on a common methodology for systemic supervision of the quality of adult education will be launched within the scope of SO 4.2.4.2. The SO 4.2.4.2 project intends to provide methodological support to educational institutions, to collect and analyse information regarding the situation in adult education and to inform the public regarding the quality aspects of adult education, as well as to perform evaluation and supervision of activities of implementers of adult education and the implementation of adult education programmes.

Individualised and flexible adult education supply. On 1 April 2022, amendments to the Vocational Education Law entered into force, which provide for the implementation of modular vocational education programmes in adult education, and define the educational documents issued for the mastering of a programme module. The introduction of a modular approach is restructuring of curriculum of vocational education programmes, enabling people to manage change effectively and adapt more quickly to new development trends in the sector. Taking into account the abovementioned amendments to the Vocational Education Law, the Ministry of Education and Science developed criteria and procedures by which a vocational education institution assessed the competence acquired in previous education or professional experience of a person to enrol him or her in a vocational education programme for continuation of education and acquisition of professional qualification in later stages. Work is underway to improve the framework to determine the requirements and procedures for recognising a person's professional qualifications or part thereof. In 2023, the CM approved regulations determining the samples of documents certifying vocational education, professional qualification, professional improvement and professional orientation education recognised by the state, the procedures for the production and issuance thereof, as well as the sample of a module certificate and the sample document regarding the mastering of the part of the vocational education programme and the procedures for the issuance thereof. In February 2024, the CM approved a new national standard for continuing vocational education and professional improvement. In order to meet the growing need for a higher level of professional competence and skills, the new standard also provides opportunities for continuous vocational education to achieve professional qualifications of levels 5-8. These changes will allow vocational education institutions to develop the offer of continuing vocational education appropriate to the labour market.

All the vocational education institutions under MoES implement adult education. Their development and investment strategies for 2021-2027 in adult education plan to increase the number of adult learners and to offer vocational continuing education programmes and assessment of competences obtained outside the formal education system in all professional qualifications.

As part of the development of a sustainable and socially responsible support system for adult learning, work continues on the development of the Individual Learning Accounts (ILA) approach. Until 31 May 2026, it is planned to develop and approbate the ILA approach and platform fit for the Latvian context, which will strengthen implementation, management of individual learning paths and storage of information regarding learning results, as well as promote participation of adults in education, helping to acquire and improve digital skills of society, including promoting access to learning opportunities of international and foreign learning platforms, using resources of ILA. The funding of the measure consists of EUR 14.30 million of RRF funding and is planned that by 31 May 2026 at least 3,500 adults will get help in mastering digital skills using resources from individual learning accounts.

Similarly, within the framework of the reform of the RRF plan, it is planned to develop and pilot Skills Funds fit for the Latvian context. The support is intended for the development of the public-private partnership instrument, Skills Funds, where the beneficiary will be a partnership between institutions representing employers and employees and public institutions. The indicative funding available for 2024-2029 is EUR 5.8 million from ESF. The purpose of financing is to develop a model for financing, operation and management of skills funds fit for Latvia, with the intention to become a self-regulating and self-financing structure in the long term, developing a system based on social dialogue for strategic human capital development of the sector and attraction of new employees.

Support for improving the qualifications of employees and support for reducing barriers to participation. The ESF project "Improvement of professional competence of employees" was launched in 2017 and was completed in December 2023. It was implemented by the State Education Development Agency (SEDA) in cooperation with Latvian local governments, educational institutions and the State Employment Agency (SEA). Within the framework of the project, 77 thousand participants, including 14.6 thousand persons with a low level of education, completed different educational programmes in 10 rounds. More than half of the employed involved in the project improved their digital skills within the training. In the project, employees had the opportunity to receive compensation for passing a professional qualification examination and obtaining a qualification, certifying the professional knowledge and skills acquired in the course of work or personal life in a profession. 1909 persons in total made use of this possibility. The project involved 124 educational institutions offering a total of 2,309 different educational programmes. The training of employees will continue during the 2021-2027 programming period of the EU Funds under the ESF+ project "Support for adult learning based on individual needs of adults", the implementation rules of which were approved by the CM on 5 May 2024. It is planned that by 31 December 2029 28 thousand employees, including self-employed persons, will be able to acquire new knowledge and develop skills, acquire professional qualification or reskill. Priority support will be provided to employees with a low level of education providing support for 14 thousand employees with a low level of education. At the same time, within the framework of the project, the SEDA will develop a description of a conceptual solution and its implementation plan in order to reach, inform and motivate employees with a low level of education to engage in training. In assessing the progress of project implementation, the SEDA will update the conceptual description and plan of the solution once a year.

Support to entrepreneurs for improving skills of employees. In order to promote the digital transformation and competitiveness of the company, investments for the development of the digital skills of companies are planned within the framework of the RRF digital transformation component. The Recovery Fund support programme was approved on 12 September 2023. Its objective is to improve the digital skills of micro, small, medium-sized and large Latvian enterprises, including skills that contribute to export promotion, basic high-level digital management skills at the level of enterprise management and skills for the use of digital technologies in different business processes. The Recovery Fund financing available for the investment is 20 million euro, and by mid-2026 at least 2521 companies are expected to receive support for the improvement of the digital skills of employees within the framework of the programme. Training for the improvement of digital skills development for company employees is available through European Digital Innovation Hubs (EDIHs) or associations representing companies or industry associations selected in a competition. Associations provide basic skills training courses for employees of companies online, face-to-face and in a hybrid format, while EDIH provide training courses for employees of companies in specialised areas. 9 projects of associations have been received in 2 rounds as part of the support programme so far. This investment is planned to continue within the 2021-2027 programming period of the EU Funds, with EUR 10 million more channelled to it.

During the 2021-2027 programming period of the EU Funds, it is also intended to provide support to increase the competence of employees based on the needs of employers' sectors, motivating employers to involve their employees in training for skills development, thereby promoting competitiveness and productivity of entrepreneurs. Funding of EUR 14.5 million will be available until the end of 2029 for the implementation of the ESF+ measure "Support for sectoral needs based adult education", and at least 8352 employees employed by employers, including self-employed persons, are expected to be involved in the training. It is planned to provide support to at least 464 undertakings. Training is intended in the fields of telematics and logistics, engineering, engineering trades and management, manufacturing and processing, programming, mathematics and statistics, health, hotel management, tourism management, tourism and leisure organisation, etc.

Support to employers in promoting skills development in Latvia

In September 2023, the EC Directorate-General for Structural Reform Support, in cooperation with the OECD, completed the implementation of the Technical Support Instrument project "Support employers in promoting skills development in Latvia" applied by the MoES which started in 2021. The objective of the project was to support Latvia in the development of a new regulatory framework that will support and stimulate employers (especially small and medium-sized enterprises) to improve the skills of their employees or to promote reskilling as provided for by the delegation to the CM included in the Education Law "to define support measures for employers for additional training of employees, including the criteria for receiving such support and the procedures for implementing support measures". The project included extensive consultations with Latvian stakeholders, including the involvement of the Ministry of Economics, the Ministry of Education and Science, as well as social and cooperation partners and sectoral associations in discussions and workshops. Within the framework of the project: (1) an assessment of the main obstacles has been carried out and the circumstances have been clarified which promote investments of Latvian employers in the skills of their employees; (2) examples of international good practice were identified that encourage employers to invest in the skills of their employees; (3) practical guidelines have been developed in order to develop the regulatory framework for supporting employers and promoting investment in the development of skills of employees; (3) proposals for support measures (improvement of subsidised training provided by employers' associations; development of an online tool for companies to assess skills shortages and learning needs; attraction of external experts to assess skills shortages and learning needs of micro, small and medium-sized enterprises, etc.) have been developed; (4) monitoring framework, including methodology and monitoring indicators, have been developed, which will contribute to the evaluation of the implementation of the implemented support measures; (5) a roadmap has been established for further courses of action to support a system of sustainable and socially responsible adult education.
The results of the project have been taken into account in the development of the regulatory framework of the MoE in order to stimulate employers to improve the skills of their employees, as well as to improve the planned support measure for employers. In the long term. The implementation of the proposals developed within the framework of the project, together with other planned support measures (e.g. Skills Funds initiative, Individual Learning Account initiative), will contribute to the development of a sustainable and socially responsible adult education support system.

Development of digital skills. As part of the RRF project "Development of public digital skills", 40,000 citizens without or with low digital skills will be provided with digital skills development, including with the support of a mentor, by mid-2026. The objective of the project is to promote the development of digital self-service skills in society, thus promoting better integration of persons into modern society, including employment, modern solving of everyday domestic issues and improvement of quality of life, in particular the use of digital services of the state and local governments and access to digital information.

Within the framework of the RRF Plan, it is planned to create a new approach for the preparation of ICT specialists, i.e. the self-directed ICT learning school study environment and educating around 500-600 new ICT specialists by 2027. Investments are also envisaged for scaling up existing initiatives for the training of non-formal education ICT specialists, in particular by supporting the involvement of women in ICT work, the implementation of intensive training for people who wish to change careers and acquire the necessary skills for IT work. It is planned to involve about 400 persons in the training by 2027. The funding of the measure is the Recovery Fund funding of EUR 7.6 million.

OECD study of adult skills

On 16 June 2023, the acquisition of data on education, skills and competencies of the population was completed in the Programme for the International Assessment of Adult Competencies OECD's PIAAC, which was implemented throughout the territory of Latvia by the Ministry of Education and Science and the University of Latvia in cooperation with the research centre SKDS. Participation in the OECD's PIAAC allows to evaluate literacy, numeracy and problem solving skills of 16-65 years old population and their use in daily life and at work. The first results of the OECD's PIAAC study will be published on 10 December 2024. The data obtained will allow for the analysis of human capital capacity, discrepancies between the supply of skills and demand in the labour market and the impact of the respective skills on the amount of remuneration, as well as to compare the quality of Latvian human resources internationally.

The **network of coordinators of adult education of local governments** is constantly strengthened – training takes place, development and implementation of the programme for improvement of competence of adult education coordinators, etc. In cooperation with the Baltijas Datoru Akadēmija, an informal education programme "Use of digital services to solve everyday life situations" has been developed and piloted in local governments, involving adults with low digital skills. Informal education programmes for adults in the field of financial literacy have been developed and piloted in cooperation with the Bank of Latvia. A new monthly activity, Open e-door days in adult education, has been launched in 2024.

In addition, vocational training, reskilling and skills improvement measures for unemployed persons and persons at risk of unemployment are implemented within the framework of active labour market policy (for details on ALMP measures see section 4.3 of the report).

4.2. ACTIVE LABOUR MARKET POLICY AND FACILITATING INTERNAL MOBILITY

Active and preventive labour market measures implemented by the SEA

The services and measures provided by the SEA foster economic activity and competitiveness of the population in the labour market. They are constantly reviewed and improved to improve their efficiency and adapt them to the current situation in the Latvian economy and labour market. The most significant active labour market policy (ALMP) measures implemented:

- training measures – vocational training (reskilling) and professional improvement (upskilling), on-the-job training, acquisition of non-formal education, competitiveness improvement measures (basic competences) and support for online course training, including support is available for persons at risk of unemployment (employees);
- employment measures – measures for the most vulnerable groups of unemployed (subsidised jobs), temporary paid public works, measures to facilitate the start-up of business activities or self-employment, summer employment of pupils;
- job search support measures and consultations – profiling of the unemployed and drawing up an individual job search plan, career planning consultations, informative days;
- other support measures – activation measures for the long-term unemployed, also persons with addictions, support for regional mobility (getting to work or training), etc.

In September 2021, the CM approved Social Protection and Labour Market Policy Guidelines for 2021-2027[1]. The medium-term objective of ALMP is to establish an inclusive working environment for anyone and to take care of the quality of existing jobs, thus supporting long-term participation in the labour market. Plans until 2027:

- to achieve 80% employment rate of the population in age group between 20 and 64;
- to achieve 50% employment rate among persons with disabilities in age group between 20 and 64;
- to reduce the share a long-term registered unemployed to 15%.

The improvement and development of existing ALMP measures is planned in such a way that it would help all working-age population get included in the labour market, with special support for disadvantaged population and population at higher risk of unemployment (people with low levels of education, long-term unemployed, people with disabilities, elderly people, etc.). The development of an inclusive labour market involves the provision of timely and tailor-made support to improve employment or self-employment prospects, support for the transition from economic inactivity to employment and between different professions and sectors, the development of high-quality and secure workplaces, the prevention of the risk of poverty of the employed, the creation of opportunities for reskilling and education throughout the working life.

[1] https://likumi.lv/ta/id/325828-par-socialas-aizsardzibas-un-darba-tirgus-politikas-pamatnostadnem-2021-2027-gadam

Measures to facilitate internal labour mobility

In order to reduce regional differences in the labour market and increase the involvement of the population in employment, as well as to increase opportunities of regions to respond to growing labour force needs and recruit necessary workers several measures were implemented to promote internal labour mobility.

Promotion of the availability of rental housing in regions. The availability of labour force in regions with higher economic activity is delayed by the lack of high-quality housing corresponding to the paying capacity of the population. The MoE has developed several support programmes and continues working on new projects to address the issue of the availability of quality housing in Latvia. Since November 2022, real estate developers may start applying for a new state support programme of AS "Attīstības finanšu institūcija ALTUM" for the construction of low-cost rental houses in the regions of Latvia. The total funding of the programme is EUR 42.9 million and it is financed from the EU Recovery Fund. With the support of this programme, it is planned to promote the construction of around 700 new apartments by 2026. Affordable modern housing will be rented out to households unable to buy apartments on market terms. Given the existing housing affordability problems, particularly in regions, and the OECD recommendations, support programmes for the construction of low-cost rental housing are among the priorities of MoE in 2023.

Implementation of the housing support programme. Since 2015, the housing support programme facilitating the possibility for families with children to provide the first contribution for purchasing or constructing housing has helped more than 26 thousand families with 39 thousand children to get housing of appropriate size. The total amount of guarantees during the programme was more than EUR 214 million. Since 2018, when the programme was extended providing that also persons under the age of 35 and having higher or vocational education can get a guarantee for the first instalment for the loan for acquisition or construction of housing. Over 6000 guarantees have been granted to young specialists by the spring of 2024. In 2020, an additional support programme named "Balsts" was created, which provides large families with the possibility of obtaining a non-repayable state subsidy for the acquisition or construction of housing. The amount of the subsidy, according to the number of children in the family, is between EUR 8 and 12 thousand. The subsidy was increased by EUR 2 thousand if the housing met the energy efficiency requirements for nearly zero-energy buildings. Since the programme started, more than 1140 families with more than 3500 thousand children have received subsidies. A total of EUR 9.6 million have been granted in subsidies.

Mobility support within the scope of ALMP measures. In order to facilitate the acceptance of job or training offer outside the declared place of residence, the costs of transport and rental of accommodation are covered for participants upon request within the activities implemented by the SEA, when they start a new legal employment relationship (in the first four months) or start training (during the entire training implementation period). The financial compensation is paid for each month of the legal employment relationship, up to a maximum of EUR 200 per month to cover the accommodation rental costs or EUR 10 per day to cover transport costs. In 2023, regional mobility support was granted to 1393 customers of the SEA (1628 in 2022).

Training for unemployed and people at risk of unemployment

Improvement of activities for professional training, reskilling and improvement of skills of the unemployed and people at risk of unemployment. 28.5 thousand people in total (number of participations) were involved in training activities for the unemployed, job seekers and persons at risk of unemployment implemented by the SEA in 2023 – 11.5 thousand more than in 2022. This can be explained by the intensification of the support of the SEA for diversification and reaching out to customers and extension of the target group of persons at risk of unemployment to be involved in the training, in particular involving elderly employed persons, employed persons with disabilities, employed persons with a low level of education, etc.

The cooperation between the SEA and employers to promote the improvement of skills of the unemployed and job seekers and labour force availability continues. The opportunities for employers to get involved in the selection of the unemployed when looking for candidates for new jobs and also by fostering training of the unemployed at their immediate employer and mastering of skills at the workplace are provided and popularised through the involvement in SEA activities such as "Training at the employer's" and "Training at the employer's with the involvement of sectoral associations" aimed at supporting the unemployed and job seekers in working in ICT, engineering and manufacturing, transportation and storage sectors. Associations of these sectors have the possibility to receive a grant for coordination, management of activities, attraction of relevant teachers and other activities. The SEA continues to expand training support, including providing support for the involvement of adults

in open online course platforms (such as *coursera.com*) and free Google programmes. In addition, the SEA continues to develop the availability of services related to digital skills testing and advisory support for those wishing to engage in training.

In 2024, in order to support labour market transformation and reduce skills inequalities among the population by attracting RRF funding (project "Involvement of unemployed persons, job seekers and people at risk of unemployment in the labour market"), continuous improvement of knowledge and skills of 17 thousand unemployed, job seekers and persons at risk of unemployment will be promoted through the SEA.

To reduce skill mismatches and promote adult education for the unemployed, including those, who have not completed vocational education programmes, yet have extensive work experience or have developed skills outside the formal education system, the possibility to get a document certifying qualification, which is recognised by the state, is offered by undergoing evaluation and recognition of competences obtained outside the formal education system. Similarly, the legislation provides for modular vocational education programmes for unemployed persons and other customer registered with the State Employment Agency. When implementing these training programmes, attention is also paid to quality aspects by setting additional requirements to education institutions with regard to the provision of the material and technical base, compliance with environment accessibility requirements, performance indicators set in the training process, etc. For a more informed choice of training programmes, SEA customers have access to career consultations and ICT tools are publicly available on the SEA website (labour market forecasting tool, search of education institutions, etc.), as well as newly developed SEA skills assessment e-career tests.

In 2022, within the framework of the evaluation commissioned by the Ministry of Finance "Evaluation of 2022 of the efficiency, effectiveness and impact of investments of EU funds in sustainable and quality employment and labour mobility in the 2014-2020 programming period"[1], the efficiency and effectiveness of investments in training measures implemented by the SEA in the promotion of employment was evaluated using contrafactual evaluation methods. The evaluation shows that training measures have a beneficial and positive impact on participants' ability to become employed after a certain period of time (the employment situation of the participants was compared with the control group over 6, 12 and 18 months). Similarly, the period of 2022 showed a record-high employment rate following completion of the training. Within six months of participation in professional training, 48.2% of the persons who completed the training are employed, which is considered to be a high impact evaluation rate also among the EU Member States. According to the evaluation of the Ministry of Finance, even better results were observed for the "Training at the employer's" measure, where up to 70% of participants found work within 6 months after completing participation. It is planned that the SEA will continue to provide the necessary training support to the population, including by promoting targeted participation in training for low qualification persons who lack the knowledge and skills necessary for the labour market, intensifying monitoring of the quality of training programmes, applying additional criteria, for example, support for participation in training is provided to low-income persons.

4.3. LABOUR FORCE MIGRATION MEASURES

The labour force migration system in Latvia is aimed at attracting a higher qualification labour force (mainly measures to reduce administrative barriers to the attraction of labour force from third countries), as well as protecting the local labour market, thus promoting productivity development and investment in human resources.

Several amendments to legislation have been made in recent years to promote the attraction of skilled labour in Latvia. In January 2024, amendments to CM Regulations regarding the amount of financial resources necessary for a foreigner and determination of the existence of financial resources came into force, which stipulates that to receive a visa and the right to employment, the wage paid by an employer shall be not less than the average monthly gross wage in the sector (according to the last published CSB information) or the minimum wage specified in the general agreement of the sector. If the average wage in the foreigner's expected employment sector is higher than the average monthly gross wage of employees in the Republic of Latvia in the previous year, then the amount of financial resources (wage) required for the foreigner shall be not less than the average monthly gross wage of employees in the Republic of Latvia in the previous year (EUR 1537 in 2023). It has also been decided to waive the requirement to submit a copy of a document certifying the education/experience of a foreigner in cases where the profession is not regulated in Latvia. At the same time, it is intended to maintain the obligation for the

[1] The study is available: https://petijumi.mk.gov.lv/node/3417

inviter (employer) to verify the qualification and suitability of the invited employees for the performance of the work.

On 9 January 2024, amendments to the Immigration Law came into force aiming to restrict dishonest employers – inviters of the foreign labour force, providing for the right for the Office of Citizenship and Migration Affairs (OCMA) to decide on a prohibition to a natural or legal person to invite foreigners for a period of up to 1 year. This is expected to reduce the number of dishonest applicants for visas and residence permits who do not comply with the requirements of the laws and regulations related to the employment of foreigners, thus also reducing the risks to Latvia's reputation.

In 2024, the MoE, in cooperation with MoW, continues to develop a simplified labour attraction procedure for foreign labour attraction to investment and exporting companies, including providing employers with a duty of cooperation with the SEA and supporting the attraction of the labour force necessary for the Latvian labour market. The MoE is also working on creating a one stop shop agency to attract highly qualified foreign talents in cooperation with the OCMA, the Ministry of Foreign Affairs, the MoW and the SEA.

Reemigration. A targeted remigration support measure is a network of five regional remigration coordinators created by the Ministry of Smart Administration and Regional Development (earlier the Ministry of Environmental Protection and Regional Development) (MoSARD), providing one regional coordinator in each planning region. Potential remigrants have the possibility to receive a free of charge consultation and support of the regional coordinator in resolution of matters of particular importance for them, which are related to their return to the specific region in Latvia. Since the creation of the network, a system has been established and strengthened in 2018 to help people returning to Latvia. 4534 persons have returned to Latvia with the support of the re-migration coordinators between 2018 and the end of 2023. The MoSARD, together with planning regions and local governments, is also implementing a support measure for remigrants to promote entrepreneurship. The total public funding for this objective is EUR 1,2 million for the period from 2024 to 2026.

The SEA, including in cooperation with diaspora organisations, embassies of Latvia abroad, Latvian employers, etc., continues to implement activities promoting remigration, including ensuring the availability of information to the diaspora on labour and business opportunities in Latvia. EU residents have the ability to remotely use a number of SEA services, including the SEA CV and vacancy portal. In 2021-2023, the SEA EURES consultants, also involving experts from different fields, filmed a programme series "Be informed when you return to Latvia" to provide the most up-to-date information to remigrants regarding job opportunities and living conditions in Latvia, services and support of state and local government institutions and necessary documents both abroad before departure and when returning to Latvia. The number of views of programmes on the web reached 9 thousand.

Several measures have been implemented to promote the employment of Ukrainian civilians (war refugees) in Latvia since March 2022, mainly through the SEA. In order to employ a Ukrainian inhabitant, the employer does not have to register a vacancy at the SEA, nor does it have to ensure remuneration at least in the amount of the average Latvian wage, as in the case of employment of citizens of other third countries. Refugees from Ukraine also have simplified requirements for official language proficiency – it is possible to work without knowledge of Latvian if it does not interfere with the performance of job duties. When starting employment, a one-off benefit for starting employment and self-employment is available to Ukrainian civilians – both types of benefit are in the amount of the minimum monthly wage of Latvia (EUR 500 – in 2022, EUR 620 in 2023, EUR 700 in 2024).

5. SUMMARY AND RECOMMENDATIONS

The Ministry of Economics has updated medium- and long-term labour market forecasts covering the employment needs of sectors by occupations and education until 2040. The forecasts are based on the target scenario for economic growth and their corresponding demographic forecasts. Labour market forecasts take into account the current global economic development processes, as well as geopolitical challenges and AI development trends.

MoE labour market forecasts are the quantitative basis for further discussions among employment, education and structural policy makers, social partners, scientists and other stakeholders in order to crystallise action directions, promoting a balanced development of the labour market.

I MACROECONOMIC FRAMEWORK AND ASSUMPTIONS OF THE FORECASTS

The labour market forecasts are based on the economic growth scenario developed by MoE and the macroeconomic forecast that matches it. Although the geopolitical situation in the region has a negative impact on the economy, the long-term goals of economic development, which have already been identified in policy planning documents and are related to the need to increase exports and productivity of Latvian goods and services, remain unchanged. The initiatives launched earlier by the EU, such as the Green Deal and digitisation, also remain topical.

The target scenario has been drafted in accordance with the objective set out in the informative report on the economic development of Latvia – to make Latvia's GDP volumes double by 2035 (reaching EUR 83 billion at current prices), compared to today's situation. The target scenario has taken into account the existing settings of the structural policy defined in policy documents – Sustainable Development Strategy of Latvia until 2030, National Development Plan of Latvia for 2027, National Industrial Policy Guidelines for 2027.

From 2024 to 2030, the scenario provides for economic growth by an average of 4.1% per year, but from 2031 to 2040 annual growth rates will be within an average of 3.7% per year. The preconditions for growth in the medium and long term are to support economic competitive advantages by technological factors, manufacturing efficiency and innovation, as well as the ability to adapt and use the opportunities provided by global changes.

Economic growth in the medium term will continue to be limited by the tense geopolitical situation, which will, however, be compensated by the increase in growth potential in the long term. The geopolitical situation in the region has changed significantly after Russia invaded Ukraine. Taking into account the narrowing of Latvia's historical economic ties with Russia and Belarus, as well as the slowdown of growth in the main export markets of Latvia, the Latvian economy has generally grown slower than expected previously. It should be taken into account that the tense geopolitical situation in the nearest years will continue to limit Latvia's economic growth, however, in the long term, new and diversified raw material supply markets, strengthening of energy independence of the state and reorientation from Russia to more solvent Western markets will generally increase the growth potential of the Latvian economy. It should be noted that the Latvian economy has shown strong resilience to external shocks in the last 2 years and overall the direct impact of the narrowing of economic ties has been limited. Latvia has also been able to adapt to changing conditions faster than previously assessed, which shows the advantages of a small country to better adapt and take advantage of new economic opportunities.

The decisive precondition for faster economic growth is to increase the productivity level. Due to the expected demographic trends, the decisive precondition for faster economic growth is to increase the productivity level. One of the main challenges is to create new competitive advantages, which is related investments in human capital, technologies, innovation and research, digitisation. The creation of new competitive advantages is an important condition for the extension of export outlet markets and growth in export volumes, which should become the main growth driver. Latvia's competitiveness in external and domestic markets will depend on its ability to close the productivity gap with the technologically developed countries. The increase in productivity is based not only on technological novelty, improvement of production process management, but also on reallocation of existing resources to produce products with higher value added. In the medium and long-term, more rapid development is expected in the sectors, which are able to boost their productivity through overcoming the technological lag, modernisation of production and investments, investments in human capital, research and innovation. The increase in labour productivity over the period from 2024 to 2030 could be around 3.7% a year on average, which constitutes about 90% of economic growth in the relevant period, while from 2031 to 2040 economic growth could be fully based on productivity growth.

The inflow of Ukrainian war refugees has generally improved Latvia's future demographic prospects. Although the number of inhabitants in Latvia will continue to decline in the coming years, the arrival of Ukrainian war refugees in Latvia has generally slowed down the pace of population decline, which has also generally improved Latvia's future demographic prospects. It should be noted that in 2022, for the first time since the restoration of Latvia's independence, there was a positive migration balance in the demographic balance – the number of immigrants exceeded the number of emigrants from Latvia by more than 22 thousand. A positive migration balance, although to a lesser extent, remained also in 2023. Although some of the Ukrainian war refugees will return home in the coming years, those who have been able to successfully integrate into Latvian society could also remain permanently in Latvia or return in the future, thus generally having a positive impact on Latvia's demographic situation in the long term.

Despite a slower decline in the population, the ageing of society will continue in the long term and the working age population will reduce. Until 2040 the population of Latvia is expected to continue to reduce, at the same time negative dynamics in population counts will slow down affected by improvements in international migration flows and the natural increase balance of the population. The main reason for the population decline in the medium and long term will be population ageing trends, and therefore the negative gap between birth and mortality rates will be present up until 2040. The most significant decline in the population count is expected in working age population, therefore demographic processes will leave a tangible impact on the labour market. In accordance with MoE demographic forecasts, overall, the Latvian population will decrease to approximately 1.76 million or by almost 125 thousand by 2040, compared to the beginning of 2023. The reduction of the population in the age group 15-64 is expected by almost 126.2 thousand or about 11%. Meanwhile, the share of elderly people will continue to increase – the population above 64 years will increase by almost 67 thousand or about 17% by 2040.

II MEDIUM- AND LONG-TERM LABOUR MARKET TRENDS

In the long term, the labour market will remain tense and unemployment will be near natural levels. Long-term demographic trends narrow the quantitative supply of labour, while the polarisation of public skills, regional disproportions and the ageing of skills exacerbate the risks of structural mismatches and labour shortages. Overall, unemployment will continue to decline both in the medium and long term. It is expected that the unemployment rate is expected to fall below 6% as early as 2026. Both medium and long-term unemployment will also be close to its natural level (between 5% and 6%) and will be based on frictional and structural unemployment. The highest unemployment risks are expected for residents with low levels of education and no professional skills/professional qualifications, as well as from centres of economic activity in remote regions, as well as from economic activity centres in distant regions. At the same time, the resilience of the Latvian economy to external shocks has proven itself in previous years, confirming the limited direct impact of sanctions and export market narrowing on the Latvian labour market, thus regardless of geopolitical situation and economic shocks, the possibilities of employers' manoeuvres in the labour market will continue to be limited.

In the medium term, economic growth will increase labour needs, in the long term growth will be supported by productivity growth and the number of employed may shrink. Both in the medium term and in the long term, trends in labour demand and employment dynamics will continue to be largely determined by the increase in labour productivity, which is a key prerequisite for maintaining Latvia's global competitiveness, so the number of employees could grow slowly in the coming years. At the same time, along with the double rate of economic growth (compared to the previous decade), overall, an increase in labour demand could be on average faster by 2030 than in previous years. At the same time, taking into account both productivity growth and demographic trends (limited labour resources), a downward trend could return to the dynamics of the number of employed in the long term. In view of this, the employed population could grow by approximately 23.6 thousand or 2.7% by 2030, compared to 2023, and decrease by approximately 18 thousand (2%) after 2030 until 2040. The highest level of labour demand could be reached in 2030, when the number of employees will be close to 908 thousand.

The most significant increase in new jobs is expected in the medium term in construction, professional, scientific and technical activities, as well as information and communication. Overall, the above sectors will create about 29 thousand new jobs by 2030, which will compensate for the decrease in the number of employed in other sectors, for example, in the trade sector, where the number of employed is expected to decrease by nearly 14 thousand in the corresponding period. At the same time, in the long term (up to 2040) the most significant contribution of new jobs could be made by the business services sector, especially information and communication, as well as professional, scientific and technical activities.

Supply side factors will continue to determine the labour market situation. The decline in the population will become slower until 2040, but ageing of society will continue and working age population will reduce, which will also affect the overall labour supply in the future. At the same time, the negative impact of demographic trends on labour supply during the period will continue to be compensated by the increase in the participation of the population in the labour market. The inflow of Ukrainian war refugees into Latvia has also had a positive impact on the working population, which has also increased the potential labour supply in the labour market. However, such an effect is limited in the long term because part of the war refugees gradually returns home. In the medium term, economic growth as well as increasing labour shortages will contribute to increasing participation of the population in the labour market, thus opening wider possibilities to many groups of inactive population (housekeepers, students, retirement-age people, etc.). An increase in wages will also play an essential role in the promotion of participation of the population. At the same time, in the long term (in the period after 2030), the compensatory effects of the increase of economic activity of the population on labour supply are likely to fade and demographic processes will prevail, so a downward trend in labour supply is expected in 2030 – 2040 as a whole. It should be taken into account that economic activity of the population is close to its potential, therefore a long-term increase in participation of the population in the labour market will be limited and new labour stock will mainly be provided by the external attraction of labour force.

Overall, labour supply could increase to 960 thousand by 2030 (by 14.5 thousand or 1.5% higher indicator than in 2023), meanwhile, after 2030 labour supply will be increasingly more affected by demographic processes and it should shrink again – to 936 thousand (by about 9 thousand or 1% less than in 2023).

Labour force ageing trends, as well as the low reproduction rates will have the greatest impact on the availability of medium qualification labour force in the medium and long term. By 2040, the economically active population with vocational secondary education might reduce by more than 1/3 or almost 94 thousand, but the shortage of labour force with relevant qualifications might increase up to 105 thousand employees. Sectors like transport services and storage, construction, manufacturing, as well as agriculture and trade, where the share of medium qualification jobs is about 50% or more, and high share of employees of pre-retirement age will experience shortage of medium qualification labour force the most.

The change in the structure of the economy will increase the demand for high-qualification labour and reduce the number of low and medium-qualification jobs. The increase in productivity levels will be largely driven by the restructuring of the economy from low and medium-low-technology sectors to high-technology sectors, thereby affecting not only overall labour demand, but also its structure by increasing the share of high qualification jobs on the one hand, but reducing the share of low and medium qualification jobs on the other hand. Overall, by 2040, the share of high qualification jobs could increase by approximately 7.2 percentage points in total labour demand, while the share of medium- and low qualification occupations could decrease by 3.1 percentage points and 4.1 percentage points, respectively, compared to 2023. Proportionally, changes in the structure of the economy are likely to have an impact on elementary occupations. By 2040, labour demand might reduce by almost 33% or 35.8 thousand jobs in elementary occupations and by almost 26 thousand or 6.8% in medium qualification jobs. The number of higher qualification jobs could grow by more than 65 thousand by 2040, thus creating 454 thousand jobs or about half (almost 51%) of the total number of jobs in the economy. The increase in higher qualified jobs as a whole will increase demand for labour force with higher education. Labour demand with higher education is expected to increase by 46.7 thousand by 2040. At the same time, it should be noted that nearly 26% of the higher qualification occupations currently employ employees with secondary (25%) or lower (1%) education, but these employees will be gradually replaced in the coming years.

Labour productivity will continue to be underpinned by job automation, accelerated by greater use of AI. If robotisation and digitisation of various services and manufacturing processes have been one of the most important drivers of productivity in previous decades, a new technological cycle has begun with the wider development of large language models and other AI-based products and services. Trends in job automation so far mainly affected simpler, manual and repetitive jobs, which basically covered middle-qualification occupations and labour force, however, the development of AI opens up much wider possibilities for automation, from improvements in work organisation and customer service to the creation of new products and services, thus affecting almost all segments of the labour market. Although the development of AI allows making the performance of manual work more efficient, unlike previous automation cycles, a greater impact is expected on higher-qualification occupations and service workers in different areas. Among the jobs with high likelihood of AI application are receptionists and customer service clerks, accountants, sales workers, researchers and data analysts, designers, IT professionals. At the same time, AI will have less impact on the professions of managers, health, education, lawyers, actors and other occupations, where human participation plays an important role. Although AI affects a broad share of the labour market, the significant impact of AI on the total number of jobs is not expected until 2040. It should also be noted that the development of AI also creates new jobs, for example,

providing AI services and process monitoring, thus increasing the demand for specialists with skills to work and apply AI in daily work.

Main job opportunities will be created by replacement demand. 278 thousand jobs can be vacated by 2040 due to labour ageing and leaving the labour market, of which 118 thousand vacancies could be opened in high qualification occupations, 123 thousand in medium qualification occupations, but 37 thousand in elementary occupations. The most significant replacement labour demand is expected is expected in occupations of professionals – about 30% of those currently employed in the corresponding occupations could leave the labour market by 2040. Overall, replacement demand could represent nearly 70% of the total vacancies in the labour market by 2040. The most significant increase in replacement demand in high qualification occupations is expected in occupations of professionals – nearly 1/3 of those currently employed in the corresponding occupations could leave the labour market by 2040. The most significant replacement labour demand in the occupations of professionals is expected in subgroups of education and health professionals. At the same time, the significant increase in replacement demand in medium qualification occupations may appear in occupations of drivers and mobile plant operators, personal care workers, stationary plant and machine operators, food processing and woodworking workers, agricultural workers, as well as protective services workers. Overall, replacement demand could represent nearly 70% of the total vacancies in the labour market by 2040.

III RECOMMENDATIONS FOR REDUCTION OF LABOUR MARKET IMBALANCES

The employment promotion and skills development measures implemented in recent years have generally had a positive impact on both the employment of the population and on sufficiency of labour force and skills matching. At the same time, despite improvements, many structural problems remain relevant – insufficient preparation of STEM professionals, a high percentage of young people who do not pursue secondary or higher education or leave the education system early, an insufficient number of students in vocational education, a high share of low qualification population, and other problems. Similarly, the impact of educational measures is often slow and the scale of the impact is insufficient, while the opportunities provided by adult education are not sufficiently exploited and do not reach, in the necessary scope, the main target groups – the population with a low level of education and without qualification.

In order to mitigate the possible disproportions in the labour market in the future, the issues have to be solved in a complex manner. For example, it is difficult to increase the number of students in life sciences and engineering, if the pupils of basic and secondary schools have poor knowledge and little interest in the exact sciences. In addition, it has to be noted that the possible solutions in the higher, secondary, vocational secondary and basic education will give visible results only in the long-term. Changes in formal education have relatively little impact on the medium term problems. Therefore, effective adult training and continuing education play an important role in the improvement of the professional quality and mitigation of labour market disproportions. It is very important to increase the involvement of the population with basic education and general secondary education in adult education measures. Such population usually is economically inactive – no job, not registered as job seekers. The provision of a qualitative supply of continuing education to adults plays a crucial role for higher education institutions and also vocational education institutions and employers.

It should be noted that most of the measures focusing on balancing of the labour market supply are already being implemented, however, they are often not mutually coordinated and structured according to their purpose. It is necessary to pay increasing attention to the following areas in order to reduce mismatches in the labour market that are expected in the future:

i. Reduction of the shortage of high qualification labour force with STEM education, in particular ICT directions:

- extension of adult education supply in higher education institutions in the field of STEM and in particular in ICT directions – restoration and deepening of knowledge in the obtained speciality, reskilling opportunities for persons with higher education to other areas;
- reducing drop-outs of students – strengthening of the quality of studies of mathematics and life sciences, as well as ICT in general and vocational education for preventive reduction of student drop-outs in higher education institutions; improvement of the system of selection of students to be admitted;

- strengthening of the career guidance system for young people motivating them for studies in STEM areas, including the development of information campaigns and the development of methodological materials for career advisers;
- strengthening of the quality of STEM education – raising provision of study places, introducing the supply of modular programmes and development of micro-qualifications;
- renewal of academic staff and strengthening of competences in STEM, incl. ICT disciplines – increasing qualification criteria for academic staff, incl. developing criteria for evaluating the competences of applicants for academic positions and academic staff, improving the conditions for employment and remuneration of academic staff, ensuring professional improvement of academic staff, strengthening digital competence, increasing the involvement of doctoral students in academic and research work, as well as obtaining a doctoral degree within an optimal period of time (three to four years), while at the same time reducing drop-outs of doctoral students;
- development and strengthening of transversal competences in STEM and ICT areas, in particular development of business, innovation capacity, social and communication competences, in the study process;
- updating the supply of STEM, incl. ICT study programmes in line with the industry development needs, as well as introducing WB learning in the study process, promoting the involvement of employers in the efficient use of resources in higher education, reducing fragmentation of study programmes and ensuring the development and export of robust research-based study programmes corresponding to the strategic specialisation of the higher education institution;
- improving the technical provision and equipment of higher education institutions in STEM, incl. ICT disciplines, in particular to strengthen digital performance;
- development of the scholarship system, including support for individual social risk groups (e.g. support for students' parents, students from poor and socially vulnerable families);
- extending the availability of student loans, incl. STEM and ICT disciplines;
- support programmes in STEM, incl. ICT disciplines to ensure access to education for people with disabilities.

ii. Reduction of shortage of medium qualification labour force:

- Increasing the number of students in vocational education programmes, in particular in vocational education programmes corresponding to construction, mechanics and metal working, machine building, manufacture of woodworking and printing products, as well as transport services;
- to continue work on modular approach to the implementation of education programmes;
- to increase the number of students mastering skills and competences in WB training;
- promotion of further studies of graduates of vocational education institutions in higher education – synergy between vocational secondary education programmes and first level professional higher education programmes in colleges, as well as between study programmes of colleges and relevant bachelor's study programmes in higher education institutions should be strengthened;
- extension of the supply of adult education in vocational education with a focus on extension of the adult education supply for people with general secondary education and basic education ensuring that they obtain a professional qualification;
- strengthening of capacity of SECs, including revision of their composition and functions, incl. creating a co-financing instruments for financing of sectoral expert councils in the medium-term;
- extension of convents of vocational education institutions – ensuring regional level representation.

iii. Reduction of the share of labour force with low level of education:

- reduction of the number of young people entering the labour market without a specific professional qualification and skills, including reduction of early school leavers at all stages of education or do not continue studies after basic education and general secondary education;
- targeted adult education measures for the population with general secondary education, basic and lower education, regardless of the status of their economic activity;
- measures to improve motivation of people with low education to increase the involvement of labour force in the education process, reducing the barriers to participation – maintaining and extending existing support for the participation of poorly skilled people in education, such as scholarships, mobility benefits, nursing services for dependent family members;
- extension of the availability of employment consultations to the population with general secondary education, basic and lower education, incl. addressing the target groups, which are not registered at SEA;
- greater involvement of employers/sectors in measures to improve the qualifications of employees, such as broader training support instruments in companies, support for training during working hours, etc.

iv. Horizontal measures for reduction of shortage of medium qualification labour force

a. *Strengthening the capacity of the education system*

- to continue the development of the teacher remuneration system to ensure the competitiveness of remuneration and the prestige of the occupation in the labour market;
- ensuring proper funding for the support staff of education institutions (career advisers, school psychologists, etc.);
- to continue to strengthen the quality of education at all stages of the education system, including by reducing the education quality gap between regions and state cities[1];
- to align the maximum number of students to be admitted to vocational education institutions with places in dormitories, if necessary by examining alternative support for accommodation services or providing additional places in dormitories.
- to ensure adequate financing in accordance with the current expenditure for the implementation of vocational education programmes and increase of the number of state financed places to achieve the ratio of 50:50.

b. *Reduction of the negative impact of demographic trends on labour supply*

- promotion of population replacement – state support to families with 2 and more children (increase of the state family allowance, support to the availability of public services);
- return migration support measures – to maintain a network of regional return migration coordinators, which provides information and helps families of emigrants to return to Latvia;
- measures to increase economic activity of the population – support to the population with general secondary education, basic education or lower education, who are not registered at the SEA, training of the unemployed with the employer, regional mobility support;
- targeted measures for quick integration of refugees in the Latvian labour market and their involvement in the labour market – determining a one-stop-shop contact point;
- development of incentive support mechanisms to support the integration of seniors (retirement age) into the labour market;

[1] The difference between the highest and lowest values of the compulsory centralised examinations index of educational institutions in the school year 2021/2022 was 32 percentage points: https://www.viis.gov.lv/dati/oce-rezultatu-indekss

- a revision of the service pension system, including an assessment of the categories and reasonableness of service pensions, balancing the period of active working life with the possibility of remaining on the labour market for longer periods;
- development of simplified labour force attraction procedure for investment and exporting companies for attracting foreign labour force – reducing administrative burden and speeding up administrative coordination processes. However, we note that the attraction of foreign labour force is only a short-term solution for those undertakings which do not find the labour force appropriate to their needs in Latvia;
- targeted measures for the involvement of persons with debt obligations in legal employment, thus contributing to their official employment;
- targeted measures to promote official employment and sustainable integration of foreign students studying in Latvia into the labour market, according to the field of study;
- smart labour force migration – simplified attraction of highly qualified labour force in the areas where shortage of local labour force and relevant skills is observed.

c. *Reduction of regional differences in the labour market*

- mobility support within the scope of active employment measures – transportation and rent compensation to promote mobility of the unemployed;
- more active use of investments and the cohesion policy in weaker developed regions, thus promoting creation of jobs and employment opportunities in territories with higher unemployment;
- promoting the availability of labour force in territories with growing employment – improvement of the housing guarantee programme, support programme for construction of houses for rent in economic activity regions.

d. *Development of adult education:*

- development of a flexible adult education system based on the needs of the individual and the labour market – support is provided for different target groups through a more appropriate approach for reaching each of them and motivating (adult education based on individual needs, career guidance consultations/mentoring, training at the request of employers and industries);
- to consider the possibility of creating a sustainable adult education financing model, incl. creation of a Skills Fund – considering the possibility, in the form of a pilot project, of setting up a training fund for the needs of sectors, where employers make contributions and which would further serve for preparation of missing specialists;
- to continue introducing a culture of continuous learning in society, incl. in companies, thereby ensuring the restoration, reskilling and development of skills of the population in line with pressing labour market needs;
- to ensure the development of digital skills of the population as well as opportunities for businesses to receive support for digital skills training, in particular on digitisation and AI solutions.

In order to ensure a faster adaptation of labour supply to the needs of the future labour market, apart from measures for improvement of labour supply, it is vital to strengthen the competitiveness of manufacturers and promote the restructuring of the national economy from low to medium and high technology sectors, as well as promoting the attraction of foreign investments.

ANNEX

DETAILED LABOR MARKET MEDIUM AND LONG-TERM FORECASTS

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Table 1

Development trends of sectors

%, growth compared to the previous year

	2016	2017	2018	2019	2020	2021	2022	2023
Gross domestic product	**2.4**	**3.3**	**4.0**	**0.6**	**-3.5**	**6.7**	**3.0**	**-0.3**
Agriculture, forestry, fishing	-4.3	1.9	-3.6	20.0	-0.4	1.1	6.5	-8.1
Mining	-2.8	9.1	9.1	-8.6	6.2	-5.0	-19.5	-2.5
Manufacturing	1.7	6.8	7.5	0.9	0.1	10.3	2.7	-5.2
Food industry	-1.0	-2.0	10.0	-7.9	6.9	7.2	2.0	2.7
Light industry	1.7	10.6	6.5	-7.3	-3.0	4.6	5.8	-7.3
Wood processing	1.5	8.5	15.2	3.3	-2.2	-3.7	-0.3	-8.5
Paper industry and publishing	-1.9	7.4	2.4	17.9	8.7	-2.5	-2.0	-23.1
Chemical industry	1.7	7.9	14.4	20.9	-2.6	20.0	7.0	-6.3
Manufacture of rubber and plastic products	3.8	9.5	1.6	-4.5	10.3	2.7	-1.1	-11.2
Manufacture of other non-metallic mineral products	11.5	8.3	5.3	2.3	-6.6	17.6	6.1	-16.9
Metalworking	3.3	18.0	2.9	16.9	-2.4	14.1	1.2	-6.3
Manufacture of electrical and optical equipment	1.1	13.9	-1.9	-7.7	12.6	29.1	0.1	11.3
Manufacture of vehicles	12.0	6.7	5.0	-24.8	-23.8	36.9	20.3	-15.7
Manufacture of furniture	2.9	4.9	7.5	1.5	-0.3	37.5	2.8	-19.9
Other manufacture	-1.0	5.9	-15.9	-16.8	-21.8	-0.7	9.3	26.1
Electricity and gas supply	12.1	-2.5	-28.5	-7.1	21.5	15.4	-8.4	-0.1
Construction	-9.6	14.7	12.4	1.3	-5.9	-13.6	-11.3	18.6
Trade	4.5	2.6	3.9	2.2	-4.2	19.8	-6.1	-5.1
Transportation and storage	1.7	6.6	3.8	-2.1	-18.6	6.6	3.0	-7.8
Accommodation and food service activities	4.4	9.3	7.6	-4.9	-31.4	-4.1	57.3	7.4
Information and communication	5.0	8.7	9.6	3.6	0.6	12.6	12.6	2.5
Financial and insurance activities	-0.2	-17.7	-2.4	-9.9	0.6	16.0	-9.4	2.3
Real estate activities	1.6	-1.6	2.3	-1.0	-1.9	5.8	0.1	3.1
Commercial services	3.9	4.6	2.7	-0.6	-2.0	5.2	17.3	1.1
Public administration and defence; compulsory social security	1.4	3.7	2.7	0.2	2.8	0.5	3.7	6.1
Education	1.2	4.4	3.1	-4.4	1.1	-0.8	4.1	7.8
Human health and social work activities	1.2	4.4	9.3	4.8	-3.4	6.1	1.0	-1.5
Arts, entertainment and recreation	5.0	5.1	6.1	1.9	-33.5	2.8	29.4	11.7

Table 2

GDP growth rates and forecasts

%, growth compared to the previous year

	Fact					Forecast					
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025-2030 annual average	2031-2040 annual average
GDP	**2.4**	**3.3**	**4.0**	**0.6**	**-3.5**	**6.7**	**3.0**	**-0.3**	**1.8**	**4.5**	**3.7**
Agriculture, forestry and fishing (A)	-4.3	1.9	-3.6	20.0	-0.4	1.1	6.5	-8.1	2.2	3.6	3.4
Manufacturing (C)	1.7	6.8	7.5	0.9	0.1	10.3	2.7	-5.2	-0.2	5.3	4.1
Other types of industry (BDE)	10.1	-1.1	-23.8	-7.4	19.6	12.8	-11.0	-0.4	1.8	4.6	3.9
Construction (F)	-9.6	14.7	12.4	1.3	-5.9	-13.6	-11.3	18.6	4.7	6.2	4.1
Trade, accommodation and food service activities (GI)	4.5	3.3	4.3	1.3	-7.3	17.8	-1.9	-3.7	0.3	5.0	3.6
Transportation and storage (H)	1.7	6.6	3.8	-2.1	-18.6	6.6	3.0	-7.8	-0.9	3.7	4.0
Other business services (JKLMNRST)	2.6	-0.4	3.3	-0.9	-3.4	7.8	7.5	2.8	2.7	4.8	3.3
Public services (OPQ)	1.3	4.1	4.3	-0.1	0.8	1.4	3.1	4.8	2.6	2.6	3.6

Table 3

Key indicators of employment and unemployment

%, age 15-74

	Fact							Forecast			
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2030	2040
Employment rate (the employed to the total population)	61.6	62.9	64.5	65.0	64.2	62.5	63.9	64.2	64.6	68.6	70.6
Participation level (economically active population to the total population)	68.2	68.9	69.6	69.4	69.9	67.7	68.6	68.6	68.9	72.5	74.3
Unemployment rate (share of the unemployed (job seekers) in economically active population)	9.6	8.7	7.4	6.3	8.1	7.6	6.9	6.5	6.3	5.5	5.0

Table 4

Number of the employed in economic sectors and labour demand forecasts

thousands

	Fact							Forecast			
	2016	2017	2018	2019	2020	2021	2022	2023*	2024	2030	2040
Total	**893.3**	**894.8**	**909.4**	**910.0**	**893.0**	**864.0**	**886.2**	**884.2**	**885.0**	**907.8**	**889.9**
Agriculture, forestry and fishing (A)	68.7	61.5	63.4	66.4	64.5	58.6	59.9	59.3	58.8	58.4	55.1
Manufacturing (C)	123.6	121.0	117.2	115.3	114.9	109.4	114.4	111.9	111.8	114.0	111.9
Other types of industry (BDE)	25.7	24.5	23.3	19.3	19.7	22.2	23.4	20.9	20.7	21.1	21.6
Construction (F)	66.2	63.1	74.7	81.2	76.6	72.4	72.1	70.4	72.3	82.5	79.8
Trade, accommodation and food service activities (GI)	154.8	161.1	172.0	169.9	160.5	158.3	166.2	156.9	154.8	148.7	138.9
Transportation and storage (H)	83.4	79.7	80.9	74.4	69.4	66.9	65.9	73.4	71.1	67.0	66.5
Other business services (JKLMNRST)	173.2	182.9	179.0	178.3	185.0	172.3	179.5	186.6	189.4	207.8	218.4
Public services (OPQ)	197.8	201.1	198.9	205.2	202.3	203.9	204.8	204.7	205.9	208.3	197.8

* MoE estimation

Figure 1

Distribution of the employed by sectors and age groups

2023, %

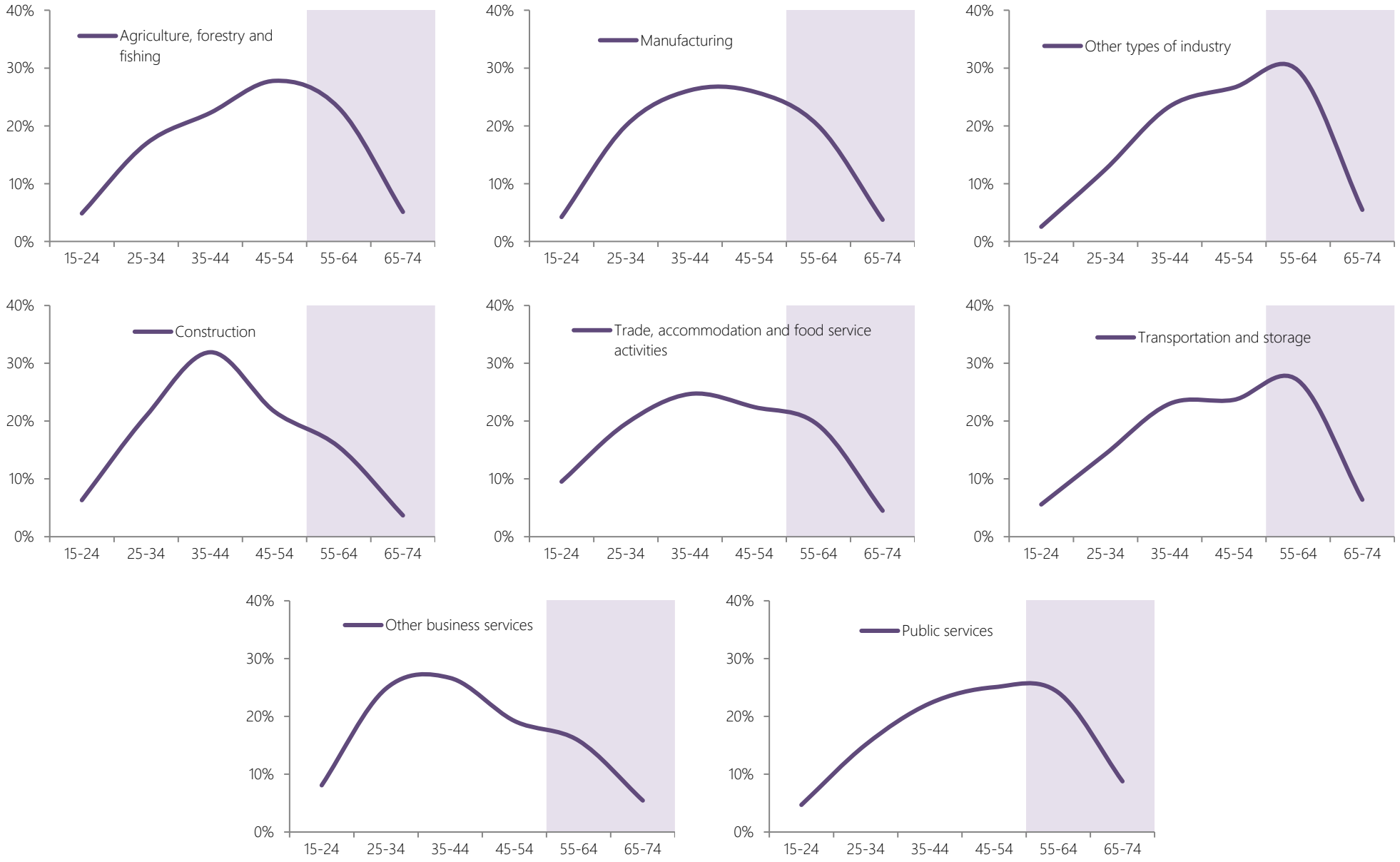

Table 5

Structure of the employed by occupational sub-major groups

2023

Degree of qualification of occupation	Major groups of occupations	OC code	Sub-major groups of occupations	Occupations	%
High qualification occupations	Managers	11	Chief Executives, Senior Officials and Legislators	Chief Executives, Senior Officials and Legislators	7.1
				Managing Directors and Chief Executives	92.9
		12	Administrative and Commercial Managers	Business Services and Administration Managers	85.4
				Sales, Marketing and Development Managers	14.6
		13	Production and Specialized Services Managers	Production Managers in Agriculture, Forestry and Fisheries	9.7
				Manufacturing, Mining, Construction and Distribution Managers	44.8
				Information and Communications Technology Services Managers	8.1
				Professional Services Managers	37.5
		14	Hospitality, Retail and Other Services Managers	Hotel and Restaurant Managers	20.4
				Retail and Wholesale Trade Managers	40.3
				Other Services Managers	39.3
	Professionals	21	Science and Engineering Professionals	Physical and Earth Science Professionals	13.7
				Mathematicians, Actuaries and Statisticians	0.6
				Life Science Professionals	6.2
				Engineering Professionals (excluding Electrotechnology)	38.3
				Electrotechnology Engineers	14.5
				Architects, Planners, Surveyors and Designers	26.7
		22	Health Professionals	Medical Doctors	36.2
				Nursing and Midwifery Professionals	33.6
				Traditional and Complementary Medicine Professionals	0.5
				Paramedical Practitioners	9.1
				Veterinarians	1.3
				Other Health Professionals	19.3
		23	Teaching Professionals	University and Higher Education Teachers	7.6
				Vocational Education Teachers	6.2
				Secondary Education Teachers	18.1
				Primary School and Early Childhood Teachers	53.5
				Other Teaching Professionals	14.6
		24	Business and Administration Professionals	Finance Professionals	15.3
				Administration Professionals	67.8
				Senior specialists in sales, marketing and public relations	16.8

Table 5 cont.

High qualification occupations		25	Information and Communications Technology Professionals	Software and Applications Developers and Analysts	64.7
				Database and Network Professionals	35.3
		26	Legal, Social and Cultural Professionals	Legal Professionals	30.1
				Librarians, Archivists and Curators	9.5
				Social and Religious Professionals	23.7
				Authors, Journalists and Linguists	14.6
				Creative and Performing Artists	22.1
	Technicians and Associate Professionals	31	Science and Engineering Associate Professionals	Physical and Engineering Science Technicians	54.2
				Mining, Manufacturing and Construction Supervisors	11.6
				Process Control Technicians	8.1
				Life Science Technicians and Related Associate Professionals	8.0
				Ship and Aircraft Controllers and Technicians	18.0
		32	Health Associate Professionals	Medical and Pharmaceutical Technicians	44.5
				Nursing and Midwifery Associate Professionals	0.0
				Traditional and Complementary Medicine Associate Professionals	0.0
				Veterinary Technicians and Assistants	2.2
				Other Health Associate Professionals	53.3
		33	Business and Administration Associate Professionals	Financial and Mathematical Associate Professionals	24.3
				Sales and Purchasing Agents and Brokers	30.1
				Business Services Agents	15.5
				Administrative and Specialized Secretaries	17.2
				Government Regulatory Associate Professionals	12.9
		34	Legal, Social, Cultural and Related Associate Professionals	Legal, Social and Religious Associate Professionals	34.5
				Sports and Fitness Workers	24.1
				Artistic, Cultural and Culinary Associate Professionals	41.4
		35	Information and Communications Technicians	Information and Communications Technology Operations and User Support Technicians	81.6
				Telecommunications and Broadcasting Technicians	18.4
Medium qualification occupations	Clerical Support Workers	41	General and Keyboard Clerks	General Office Clerks	3.0
				Secretaries	28.7
				Keyboard Operators	68.3
		42	Customer Services Clerks	Tellers, Money Collectors and Related Clerks	27.4
				Client Information Workers	72.6
		43	Numerical and Material Recording Clerks	Numerical Clerks	31.5
				Material Recording and Transport Clerks	68.5
		44	Other Clerical Support Workers	Other Clerical Support Workers	100.0

Table 5 cont.

Medium qualification occupations	Services and Sales Workers	51	Personal Services Workers	Travel Attendants, Conductors and Guides	4.6
				Cooks	24.1
				Waiters and Bartenders	12.7
				Hairdressers, Beauticians and Related Workers	25.3
				Building and Housekeeping Supervisors	18.3
				Other Personal Services Workers	15.0
		52	Sales Workers	Street and Market Salespersons	3.3
				Shop Salespersons	82.9
				Cashiers and Ticket Clerks	5.5
				Other Sales Workers	8.3
		53	Personal Care Workers	Child Care Workers and Teachers' Aides	34.2
				Personal Care Workers	65.8
		54	Protective Services Workers	Protective Services Workers	100.0
		61	Market-oriented Skilled Agricultural Workers	Market Gardeners and Crop Growers	67.7
				Animal Producers	31.4
				Mixed Crop and Animal Producers	1.0
		62	Market-oriented Skilled Forestry, Fishery and Hunting Workers	Forestry and Related Workers	86.0
				Fishery Workers, Hunters and Trappers	14.0
		63	Subsistence Farmers, Fishers, Hunters and Gatherers	Subsistence Mixed Crop and Livestock Farmers	98.9
	Craft and Related Trades Workers	71	Building and Related Trades Workers (excluding Electricians)	Building Frame and Related Trades Workers	69.0
				Building Finishers and Related Trades Workers	24.0
				Painters, Building Structure Cleaners and Related Trades Workers	7.0
		72	Metal, Machinery and Related Trades Workers	Sheet and Structural Metal Workers, Moulders and Welders, and Related Workers	17.2
				Blacksmiths, Toolmakers and Related Trades Workers	21.5
				Machinery Mechanics and Repairers	61.3
		73	Handicraft and Printing Workers	Handicraft Workers	36.6
				Printing Trades Workers	63.4
		74	Electrical and Electronic Trades Workers	Electrical Equipment Installers and Repairers	88.8
				Electronics and Telecommunications Installers and Repairers	11.2
		75	Food Processing, Woodworking, Garment and Other Craft and Related Trades Workers	Food Processing and Related Trades Workers	28.0
				Wood Treaters, Cabinet-makers, and Related Trades Workers	34.9
				Garment and Related Trades Workers	27.2
				Other Craft and Related Workers	9.8

Table 5 cont.

Medium qualification occupations	Services and Sales Workers	81	Stationary Plant and Machine Operators	Mining and Mineral Processing Plant Operators	8.7
				Metal Processing and Finishing Plant Operators	0.6
				Chemical and Photographic Products Plant and Machine Operators	4.9
				Rubber, Plastic and Paper Products Machine Operators	10.5
				Textile, Fur and Leather Products Machine Operators	12.4
				Food and Related Products Machine Operators	12.0
				Wood Processing and Papermaking Plant Operators	24.6
				Other Stationary Plant and Machine Operators	26.4
		82	Assemblers	Assemblers	100.0
		83	Drivers and Mobile Plant Operators	Locomotive Engine Drivers and Related Workers	3.4
				Car, Van and Motorcycle Drivers	14.2
				Heavy Truck and Bus Drivers	46.8
				Mobile Plant Operators	30.5
				Ships' Deck Crews and Related Workers	5.1
Low qualification occupations	Elementary Occupations	91	Cleaners and Helpers	Domestic, Hotel and Office Cleaners and Helpers	7.8
				Vehicle, Window, Laundry and Other Hand Cleaning Workers	31.3
		92	Agricultural, Forestry and Fishery Labourers	Agricultural, Forestry and Fishery Labourers	100.0
		93	Labourers in Mining, Construction, Manufacturing and Transport	Mining and Construction Labourers	67.2
				Manufacturing Labourers	21.1
				Transport and Storage Labourers	11.8
		94	Food Preparation Assistants	Food Preparation Assistants	100.0
		95	Street and Related Sales and Services Workers	Street and Related Services Workers	100.0
		96	Refuse Workers and Other Elementary Workers	Refuse Workers	82.5
				Other Elementary Workers	17.5

Figure 2

Distribution of the employed by occupations and age groups

2023, %

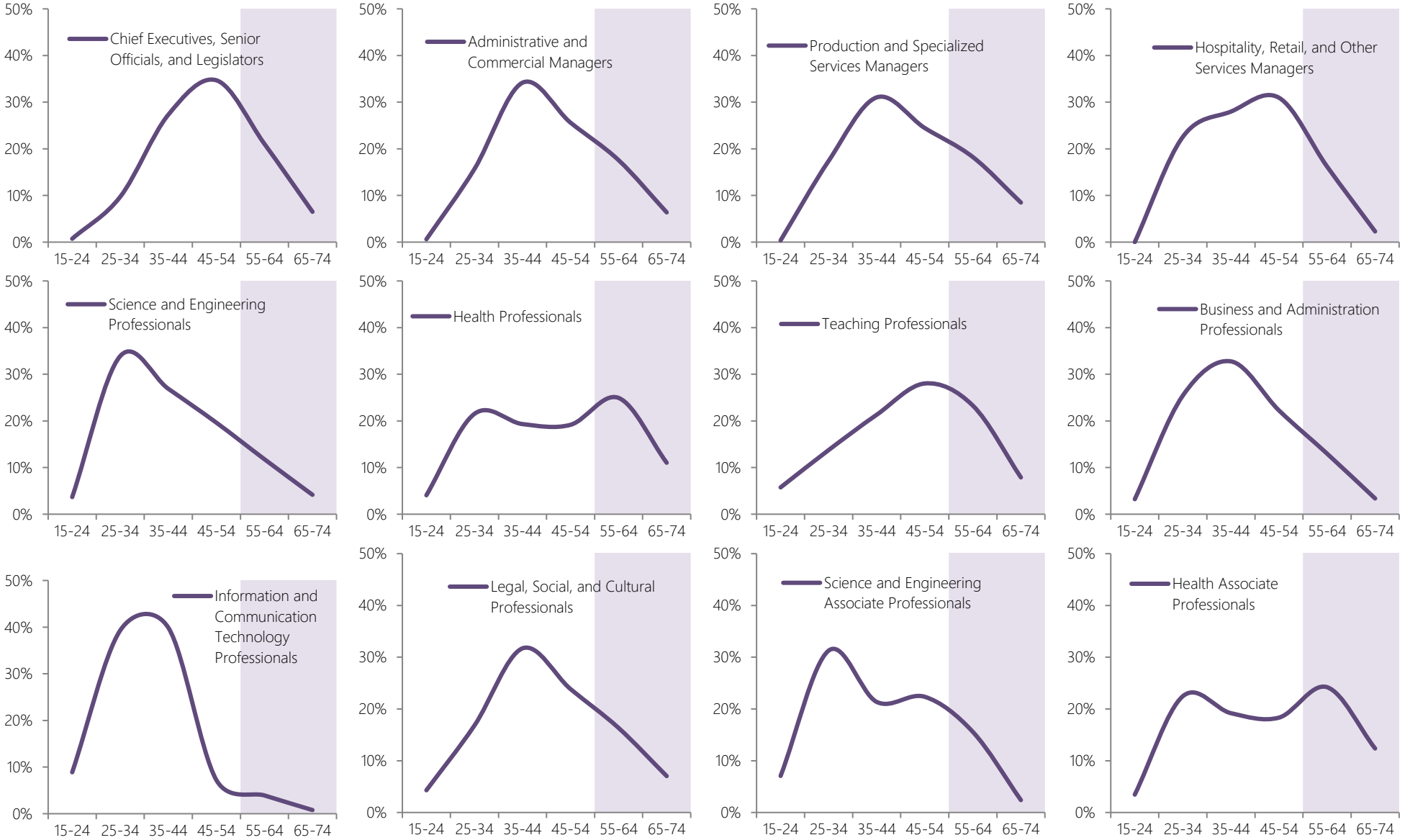

Figure 2 cont.

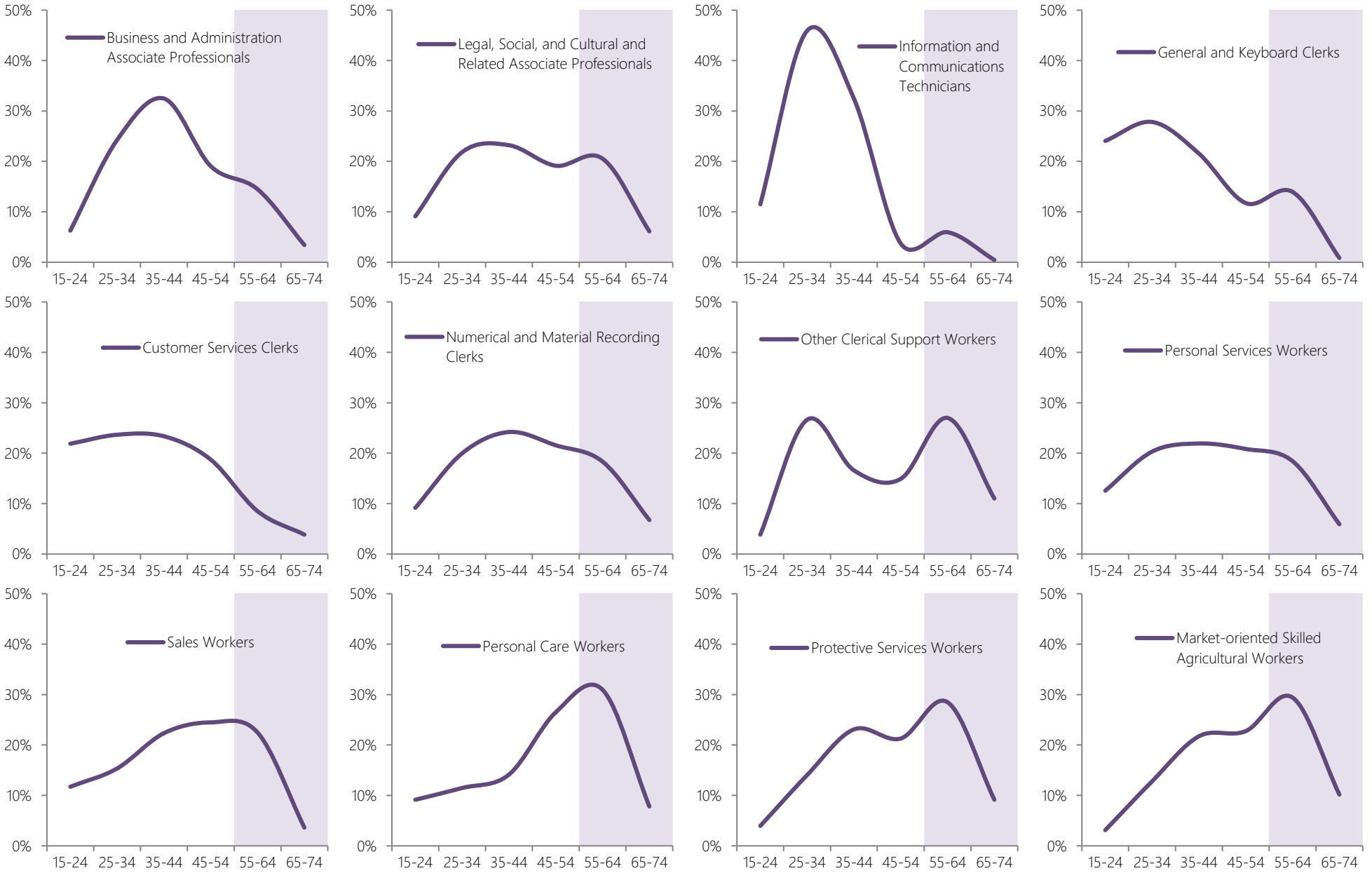

Figure 2 cont.

Classification of occupations (ISCO-08) and description of sub-major groups

Code	Sub-major group of occupations	Explanation
		High qualification occupations
		I Managers
11	Chief Executives, Senior Officials and Legislators	This sub-major group includes legislators, senior officials and chief executives who define and formulate the public policy, make, ratify and amend laws and regulations, represent the country and act on behalf of it, supervise the implementation of the public policy and observation of laws and regulations, or perform similar tasks in the interests of organisations of national scale; chief executives of enterprises who define and formulate main principles of operation of their enterprise, plan, manage and coordinate the work of business units.
12	Administrative and Commercial Managers	Managers in this sub-major group manage any forms of property and enterprise having any type of economic operation, develop their technical, economic and social development prospects; finance, administration and business services managers of business units plan, direct and coordinate their actions being directly controlled by their immediate superior in the enterprise consulting with managers of other business units.
13	Production and Specialized Services Managers	Production and specialized services managers in this sub-major group manage any forms of property and enterprise having any type of economic operation, develop their technical, economic and social development prospects; managers of business units plan, direct and coordinate production processes, provision of services and other activities of their enterprises being directly controlled by their immediate superior in the enterprise consulting with managers of other business units.
14	Hospitality, Retail and Other Services Managers	Hospitality, retail and other services managers in this sub-major group manage any forms of property and enterprise having any type of economic operation, develop their technical, economic and social development prospects; managers of business units plan, direct and coordinate production processes, provision of services and other activities of their enterprises being directly controlled by their immediate superior in the enterprise consulting with managers of other business units.
		II Professionals
21	Science and Engineering Professionals	Professionals in this sub-major group perform education work, research, develop and improve theories, concepts and operational methods, and apply their knowledge in sectors of physics, astronomy, meteorology, chemistry, geophysics, geology, mathematics, statistics, computing, biology, zoology, botany, ecology, physiology, agronomy, biochemistry, microbiology, architecture, construction and technology.
22	Health Professionals	Professionals in this sub-major group conduct scientific research, improve and develop theories, concepts and operational methods, and apply scientific knowledge in medicine, patient care, dentistry, veterinary medicine, pharmacy, and promotion of health.
23	Teaching Professionals	Professionals in this sub-major group teach the theory and practice of one or more disciplines, conduct research, and improve and develop concepts, theories and operational methods pertaining to their particular discipline, prepare scholarly papers and books, give private lessons, teach and educate mentally handicapped people, design and modify curricula, inspect and advise on teaching methods and aids, participate in discussions concerning the organisation of teaching and related activities at schools and universities, teach subjects for children and organise educational activities for children below primary school age, teach subjects for students and organise educational activities for vocational purposes and professional improvement, organise extra-curricular activities and hobby groups, organise the work of a boarding school and dormitory at an education institution, as well as teach how to fly aircraft, navigate ships, drive motor vehicles, railway and other engines, machine tools, and perform evaluation of competence.
24	Business and Administration Professionals	Professionals in this sub-major group conduct research, improve and develop theories and operational methods, and apply knowledge relating to information dissemination and organisation and management of business, as well as to industrial property, philosophy, psychology, economics, history, sociology, anthropology, other social sciences, linguistics, application of laws, creative activity and organisation of plays. Draft laws, regulations and methodological documents, plan the development of a national economy sector or branch, necessary materials and financial resources, conduct analytical work, examine applications of the population, organise and manage guarding and control of the Latvian state border, enforce deprivation of liberty as a criminal punishment and arrest as a security measure.
25	Information and Communications Technology Professionals	Professionals in this sub-major group conduct research, plan the design of information and communications technology, write tests, provide advice and improve information technology systems, hardware and software and related concepts for specific applications, develop, maintain and support databases and other information systems to ensure optimal performance and data integrity and security.

Table 6 cont.

26	Legal, Social and Cultural Professionals	Professionals in this sub-major group conduct research, improve and develop theories and operational methods, and apply knowledge relating to information dissemination and organisation, and management of business, as well as to philosophy, psychology, history, sociology, anthropology, other social sciences, linguistics, application of laws, creative activity and organisation of plays, conduct analytical work.
		III Technicians and Associate Professionals
31	Science and Engineering Associate Professionals	Associate professionals in this sub-major group perform technical tasks connected with research, the application of concepts and operational methods in the fields of technical science, life science, as well as computing and engineering science, work with technical devices, control operation of aircraft and ship systems, study manufacturing and other processes, and safety and safety performance of manufactured products.
32	Health Associate Professionals	Associate professionals in this sub-major group perform technical functions in the fields of medicine, veterinary medicine, sanitation, pharmacy and related fields.
33	Business and Administration Associate Professionals	Associate professionals in this sub-major group perform technical tasks connected with the practical application of knowledge relating to finance, sales, business administration, bookkeeping, legal, statistical and other services, government activities relating to job placement, guarding and control of the Latvian state border, customs operations, taxation, social security, licensing, police.
34	Legal, Social, Cultural and Related Associate Professionals	Associate professionals in this sub-major group perform technical tasks in the field of legal, statistical and other types of services, government activities related to social area, recreation, sport and religion.
35	Information and Communications Technicians	Technicians in this sub-major group provide technical support for users of communications systems, computer systems and networks, perform technical tasks related to telecommunications, broadcast image and sound as well as other types of telecommunications signals on land, sea or in aircraft.
		Medium qualification occupations IV Clerical Support Workers
41	General and Keyboard Clerks	Clerks in this sub-major group perform tasks necessary for management of a body to solve manufacturing or supply problems efficiently and successfully; process financial, statistical, bookkeeping and other information and systematise it by use of computer technology or other office equipment.
42	Customer Services Clerks	Clerks in this sub-major group deal with clients directly, perform money-handling operations, arrange travels, inform clients, organise business meetings. This sub-major group also includes clerks operating telephone switchboards.
43	Numerical and Material Recording Clerks	Clerks in this sub-major group process financial, statistical, bookkeeping and other information and systematise it by use of computer technology or other office equipment.
44	Other Clerical Support Workers	Clerks in this sub-major group process information and systematise it by use of computer technology or other office equipment.
		V Services and Sales Workers
51	Personal Services Workers	Workers in this sub-major group provide personal services, arrange travels, provide housekeeping, catering services.
52	Sales Workers	Workers in this sub-major group sell different goods, art articles, knitting, newspapers, periodicals in wholesale or retail shops, at stalls and on markets and streets; demonstrate goods, explain their classification and quality, as well as display clothing, pose as models for photography, sculpture or painting, or pose for films in the field of advertising.
53	Personal Care Workers	Workers in this sub-major group provide care, supervision and assistance for children, patients, convalescent, disabled and elderly persons in residential, medical and social settings, assist medical, nursing and social work professionals, veterinary, pharmaceutical or other medical professionals in hospitals, other medical and social settings.
54	Protective Services Workers	Workers in this sub-major group extinguish fires, rescue people, property and material values during and after fires, maintain law and order, arrest suspected offenders, provide certified guarding services to legal and natural persons, provide continuous guarding, isolation and control of detained persons at places of detention.
		VI Skilled Agricultural, Forestry and Fishery Workers
61	Market-oriented Skilled Agricultural Workers	Skilled agricultural workers grow and harvest agricultural cultures suited for the Latvian conditions, produce a variety of animal husbandry products, breed animals, cultivate, conserve and exploit forests, keep bees. Products are delivered to marketing organizations or sold at markets.
62	Market-oriented Skilled Forestry, Fishery and Hunting Workers	Skilled forestry, hunting and fishery workers hunt animals, breed and raise, harvest and catch fish, cultivate, conserve and exploit forests and deliver products to marketing organizations or sell at markets.

Table 6 cont.

63	Subsistence Farmers, Fishers, Hunters and Gatherers	Subsistence farmers, fishers, hunters and gatherers who produce for subsistence, grow crops, vegetables, fruit and other cultures, breed, raise and tend livestock, gather wild fruit and plants, hunt animals, and harvest and catch fish.
		VII Craft and Related Trades Workers
71	Building and Related Trades Workers (excluding Electricians)	Workers in this sub-major group construct, maintain and repair buildings and other structures, shape and finish stone for building and other purposes.
72	Metal, Machinery and Related Trades Workers	Workers in this sub-major group make moulds and cores for casting metal; weld, cut and shape metal; erect heavy metal structures; perform similar works under the surface of water; forge steel and other metals to make tools, machinery, articles; set and operate various machine tools, fit, maintain and repair engines, including electrical and electronic devices.
73	Handicraft and Printing Workers	Workers in this sub-major group make and repair precision instruments – nautical, meteorological, optical and other instruments, make jewellery and precious metalware; make, paint and decorate porcelainware, ceramics and glassware; produce handicraft articles from wood, flowers, textile, leather and related materials; perform printing works.
74	Electrical and Electronic Trades Workers	Workers in this sub-major group assemble, adjust, fit and repair electrical machinery and other electrical apparatus and devices in buildings, plants, workshops and in other places, audio and video equipment, install, service and repair information technology and telecommunication equipment in central sites or individual locations, install, lay and repair supply lines and cables.
75	Food Processing, Woodworking, Garment and Other Craft and Related Trades Workers	Workers in this sub-major group treat and process agricultural and manufacturing raw materials into food and other products, produce and repair goods made of wood, textiles, leather and other materials, perform control and inspection operations.
		VIII Plant and Machine Operators and Assemblers
81	Stationary Plant and Machine Operators	Operators in this sub-major group require experience and knowledge to operate and monitor industrial machinery and equipment. They frequently need to cope with machine-paced operations and adapt to technological innovations in machinery and equipment.
82	Assemblers	Assemblers in this sub-major group assemble prefabricated parts or components according to instructions and technological requirements.
83	Drivers and Mobile Plant Operators	Operators in this sub-major group drive and tend trains and motor vehicles, drive motor vehicles at plants, drive agricultural machinery and equipment; operate tractor equipment and other machinery used for quarrying and mining, construction of buildings, tunnels and roads; carry out deck duties on board ships and other water-borne craft.
		Low qualification occupations
		IX Elementary Occupations
91	Cleaners and Helpers	Workers in this sub-major group perform cleaning tasks in households, hotels, offices, hospitals and other establishments, as well as in aircraft, trains, coaches, trams, trolleybuses and similar vehicles.
92	Agricultural, Forestry and Fishery Labourers	Labourers in this sub-major group perform simple and routine tasks in agriculture, forestry, fishery, hunting using simple hand-held tools, manual labour and physical effort.
93	Labourers in Mining, Construction, Manufacturing and Transport	Labourers in this sub-major group perform simple and routine tasks in mining, quarrying, building, manufacturing and transport operations using simple hand-held tools, manual labour and physical effort.
94	Food Preparation Assistants	Assistants in this sub-major group assist in food preparation tasks and kitchen tasks.
95	Street and Related Sales and Services Workers	Workers in this sub-major group clean shoes on streets and in other public places, wash car windows or run errands, sell different non-food items on streets or in other public places such as stadiums, cinemas, theatres.
96	Refuse Workers and Other Elementary Workers	Workers in this sub-major group collect garbage from buildings, streets and other public places, sweep streets, pavements, squares, deliver correspondence or goods, carry luggage, stand guard at public places, perform cloakroom attendant duties, collect money from sold goods, parkings and other vending machines, read meters of utility services and perform other tasks not elsewhere classified.

Labour demand and supply forecasts by occupational groups

If the current structure of labour force preparation is retained

Degree of qualification	Major groups of occupations	OC code	Sub-major groups of occupations	Employed population – demand, thousands				Economically active population – supply, thousands				Supply vs demand, %	
					Forecast				Forecast				
				2023	2024*	2030	2040	2023	2024*	2030	2040	2030	2040
			Kopā	**884.2**	**884.9**	**907.8**	**890.0**	**945.7**	**944.2**	**960.1**	**936.3**	95	95
High qualification occupations	Managers	11	Chief Executives, Senior Officials and Legislators	39.3	39.2	39.8	38.4	40.8	40.6	40.6	38.9	98	99
		12	Administrative and Commercial Managers	23.3	23.4	24.2	23.8	24.9	24.7	24.4	23.9	99	100
		13	Production and Specialized Services Managers	23.3	23.6	25.7	26.9	23.7	24.1	25.6	26.9	100	100
		14	Hospitality, Retail and Other Services Managers	5.9	6.1	7.4	9.1	6.1	6.2	7.3	9.0	102	101
	Professionals	21	Science and Engineering Professionals	25.0	25.9	32.4	41.2	26.7	26.9	30.6	39.5	106	104
		22	Health Professionals	25.4	25.9	28.9	32.8	25.5	25.3	26.0	30.4	111	108
		23	Teaching Professionals	43.7	43.4	41.4	38.5	44.1	44.5	46.6	46.0	89	84
		24	Business and Administration Professionals	44.2	44.3	44.9	40.9	46.0	46.0	47.7	48.1	94	85
		25	Information and Communications Technology Professionals	23.4	23.8	27.1	29.4	24.4	24.7	25.1	25.5	108	115
		26	Legal, Social and Cultural Professionals	22.0	22.5	24.4	24.9	22.5	22.8	25.7	28.4	95	88
	Technicians and Associate Professionals	31	Science and Engineering Associate Professionals	24.2	24.8	30.1	37.3	25.7	26.0	28.9	35.5	104	105
		32	Health Associate Professionals	7.6	7.8	9.0	10.9	7.9	8.2	10.4	13.5	87	81
		33	Business and Administration Associate Professionals	64.6	64.9	69.0	70.7	68.2	68.4	70.4	71.3	98	99
		34	Legal, Social, Cultural and Related Associate Professionals	10.6	11.0	12.3	13.5	11.2	11.3	11.9	12.8	104	106
		35	Information and Communications Technicians	6.1	6.6	10.0	15.3	6.1	6.4	9.0	13.3	111	115
Medium qualification occupations	Clerical Support Workers	41	General and Keyboard Clerks	8.1	7.8	6.3	3.1	8.9	8.9	8.3	6.4	76	49
		42	Customer Services Clerks	14.6	14.4	12.1	6.8	16.3	16.4	15.5	10.4	78	65
		43	Numerical and Material Recording Clerks	22.4	21.8	19.4	15.2	23.4	23.0	19.3	15.2	101	100
		44	Other Clerical Support Workers	2.3	2.3	2.5	2.8	2.3	2.2	2.5	2.8	102	100

Table 7 cont.

Degree of qualification	Major groups of occupations	OC code	Sub-major groups of occupations	Employed population – demand, thousands				Economically active population – supply, thousands				Supply vs demand, %	
					Forecast				Forecast				
				2023	2024*	2030	2040	2023	2024*	2030	2040	2030	2040
Medium qualification occupations	Services and Sales Workers	51	Personal Services Workers	41.6	42.4	45.6	46.0	45.1	44.5	44.3	45.1	103	102
		52	Sales Workers	49.6	47.4	38.6	27.2	54.1	54.0	51.7	40.2	75	68
		53	Personal Care Workers	23.8	23.9	24.4	24.8	24.2	23.8	23.3	23.9	105	104
		54	Protective Services Workers	12.3	12.4	12.9	12.1	12.9	12.8	13.1	14.8	98	82
	Skilled Agricultural, Forestry and Fishery Workers	61	Market-oriented Skilled Agricultural Workers	17.9	17.8	18.0	17.6	19.3	18.7	17.3	16.9	104	104
		62	Market-oriented Skilled Forestry, Fishery and Hunting Workers	5.8	5.8	6.0	6.1	6.1	6.1	5.8	4.7	104	131
		63	Subsistence Farmers, Fishers, Hunters and Gatherers	4.4	4.2	3.0	1.0	4.5	4.4	3.6	1.8	83	56
	Craft and Related Trades Workers	71	Building and Related Trades Workers (excluding Electricians)	31.4	32.3	37.8	39.6	34.8	34.5	35.4	32.1	107	123
		72	Metal, Machinery and Related Trades Workers	31.8	31.8	33.7	36.2	32.4	31.9	30.6	27.2	110	133
		73	Handicraft and Printing Workers	2.9	2.9	2.8	2.6	2.9	2.9	2.8	2.3	102	115
		74	Electrical and Electronic Trades Workers	11.0	11.2	12.9	14.4	12.1	11.8	10.3	8.0	125	180
		75	Food Processing, Woodworking, Garment and Other Craft and Related Trades Workers	20.8	20.8	21.6	21.7	21.6	21.4	20.6	18.8	105	115
	Plant and Machine Operators and Assemblers	81	Stationary Plant and Machine Operators	14.9	14.9	15.1	14.8	16.2	16.0	14.1	12.4	107	120
		82	Assemblers	4.3	4.3	4.5	4.7	4.4	4.3	4.4	4.5	103	104
		83	Drivers and Mobile Plant Operators	57.7	56.8	56.0	55.2	60.7	59.7	54.5	48.4	103	114
Low qualification occupations	Elementary Occupations	91	Cleaners and Helpers	22.9	22.8	21.3	17.5	26.6	26.2	26.2	23.4	81	75
		92	Agricultural, Forestry and Fishery Labourers	10.6	10.3	9.2	7.0	12.1	12.2	13.4	11.1	69	63
		93	Labourers in Mining, Construction, Manufacturing and Transport	51.5	50.5	45.4	33.3	64.9	65.9	72.8	65.6	62	51
		94	Food Preparation Assistants	5.0	5.1	4.9	3.8	6.2	6.3	6.5	5.0	75	75
		95	Street and Related Sales and Services Workers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
		96	Refuse Workers and Other Elementary Workers	19.8	19.4	17.0	12.4	21.9	21.5	21.9	19.0	78	65

* MoE estimation, based on LFS 2020 data

Labour demand and supply distributed by education fields

thousands

	Forecast			
	2023	2024*	2030	2040
Total demand, including:	**884.2**	**884.9**	**907.8**	**890.0**
Higher Education	367.2	369.9	397.1	413.9
Vocational secondary education	258.4	259.6	276.5	289.7
General secondary education	193.9	192.1	176.5	142.2
Basic education	64.7	63.4	57.6	44.2
Total supply, including:	**945.7**	**944.2**	**960.1**	**936.3**
Higher Education	379.9	382.6	405.4	434.3
Vocational secondary education	278.5	270.4	230.8	184.5
General secondary education	212.7	210.2	205.9	207.8
Basic education	74.7	81.0	117.9	109.7

* MoE estimation, based on LFS 2023 data

HIGHER EDUCATION

Labour demand and supply forecasts distributed by education areas

thousands

Code	Academic discipline	Employed population – demand				Economically active population - supply				Difference between the labour supply and demand	
		Forecast				Forecast					
		2023	2024*	2030	2040	2023	2024	2030	2040	2030	2040
	Tertiary education, total	**367.2**	**369.9**	**397.1**	**413.9**	**379.9**	**382.6**	**405.4**	**434.3**	**8.3**	**20.4**
14	Teacher training and education science	45.5	45.0	42.2	37.4	46.4	46.6	47.2	42.1	4.9	4.7
21	Arts	13.0	13.3	14.5	15.5	13.7	14.0	15.4	17.3	1.0	1.8
22	Humanities	11.2	11.1	10.5	9.0	12.0	12.2	12.9	14.0	2.4	5.0
31	Social and behavioural science	50.5	50.1	48.4	41.9	53.8	53.2	52.1	46.2	3.8	4.3
32	Journalism and information	2.7	2.7	2.6	2.3	3.6	4.2	4.9	5.5	2.3	3.2
34	Business and administration	65.1	66.1	73.7	80.6	67.7	68.8	77.6	93.3	3.9	12.7
38	Law	25.1	25.8	29.3	31.5	25.5	25.8	28.4	30.2	-0.9	-1.3
42	Life sciences	1.7	1.7	1.8	1.9	1.8	1.9	2.2	3.0	0.4	1.1
44	Physical sciences	6.4	6.5	7.5	8.9	6.6	6.4	6.0	6.2	-1.5	-2.6
46	Mathematics and statistics	1.4	1.8	4.4	7.9	1.5	1.5	1.4	1.4	-2.9	-6.5
48	Computing	16.2	16.8	21.6	26.1	16.5	16.8	18.2	20.3	-3.4	-5.7
52	Engineering and engineering trades	29.6	29.6	32.4	34.8	30.3	30.4	32.4	36.3	0.0	1.4
54	Manufacturing and processing	4.5	4.5	4.5	4.3	4.9	4.9	4.4	3.6	-0.2	-0.7
58	Architecture and building	19.1	19.2	21.2	23.0	19.5	19.4	18.9	18.5	-2.4	-4.5
62	Agriculture. forestry and fishery	5.2	5.1	5.2	5.2	5.3	5.3	5.4	5.8	0.1	0.6
64	Veterinary	0.8	0.8	0.9	1.1	0.8	0.8	1.0	1.2	0.0	0.1
72	Health	29.3	30.0	34.9	41.4	29.5	29.8	34.6	44.7	-0.3	3.3
76	Social services	6.2	6.2	6.1	5.8	6.3	6.3	6.5	6.1	0.4	0.3
81	Personal services	8.2	8.2	8.6	8.6	8.3	8.4	9.2	10.7	0.6	2.0
84	Transport services	8.6	8.7	10.0	11.3	8.9	8.7	8.4	9.3	-1.6	-2.0
85	Environmental protection	2.4	2.4	2.3	2.0	2.4	2.4	2.4	2.2	0.2	0.2
86	Security services	6.2	6.3	7.1	7.3	6.3	6.7	8.8	11.4	1.6	4.1
	Academic disciplines n.e.c.	8.1	8.0	7.4	6.1	8.2	8.1	7.3	5.1	-0.1	-1.1

* MoE estimation, based on LFS 2023 data

Note: n.e.c. – not elsewhere classified.

Table 10

SECONDARY EDUCATION

Labour demand and supply forecasts distributed by education areas

thousands

Code	Academic discipline	Employed population – demand				Economically active population - supply				Difference between the labour supply and demand	
		Forecast				Forecast					
		2023	2024*	2030	2040	2023	2024*	2030	2040	2030	2040
	Secondary education, total	**452.3**	**451.6**	**453.1**	**431.9**	**491.1**	**480.7**	**436.8**	**392.3**	**-16.3**	**-39.6**
	Vocational education and vocational secondary education, including:	258.4	259.6	276.5	289.7	278.5	270.4	230.8	184.5	-45.7	-105.1
14	Teacher training and education science	2.4	2.4	2.1	1.5	2.5	2.4	1.8	0.7	-0.3	-0.9
21	Arts	8.3	8.2	8.6	8.9	9.7	9.9	10.7	12.6	2.0	3.7
22	Humanities	1.0	0.9	0.8	0.6	1.0	0.9	0.6	0.5	-0.2	-0.1
31	Social and behavioural science	1.1	1.1	1.0	0.7	1.2	1.1	0.7	0.3	-0.2	-0.4
32	Journalism and information	0.6	0.6	0.5	0.4	0.6	0.6	0.4	0.2	-0.1	-0.2
34	Business and administration	20.5	20.5	20.7	20.5	22.7	21.8	17.8	14.5	-2.8	-6.0
38	Law	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
42	Life sciences	0.5	0.5	0.5	0.3	0.5	0.5	0.5	0.3	0.0	0.0
44	Physical sciences	0.8	0.7	0.7	0.5	0.9	1.0	0.9	0.6	0.3	0.1
46	Mathematics and statistics	0.8	0.8	0.7	0.5	0.8	0.9	1.1	0.3	0.4	-0.2
48	Computing	4.5	4.7	6.2	8.2	5.1	5.1	5.5	8.0	-0.7	-0.3
52	Engineering and engineering trades	78.0	77.8	81.4	87.0	84.4	81.2	65.1	44.6	-16.2	-42.4
54	Manufacturing and processing	32.9	32.8	34.0	33.1	34.7	33.6	28.0	18.5	-5.9	-14.6
58	Architecture and building	22.8	23.6	30.0	34.3	25.6	24.8	21.6	19.5	-8.4	-14.8
62	Agriculture. forestry and fishery	9.7	9.6	9.7	9.6	10.1	9.7	7.9	6.3	-1.8	-3.3
64	Veterinary	2.0	2.0	1.9	1.7	2.1	2.2	2.2	1.9	0.3	0.2
72	Health	11.0	11.0	11.2	11.4	11.5	11.2	9.0	7.9	-2.2	-3.5
76	Social services	0.5	0.7	1.6	3.5	0.5	0.5	0.5	0.7	-1.1	-2.7
81	Personal services	37.1	37.5	40.3	41.5	39.1	38.5	36.4	34.2	-3.9	-7.2
84	Transport services	11.3	11.5	11.0	11.1	12.0	11.5	9.1	5.8	-1.9	-5.3
85	Environmental protection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86	Security services	2.9	2.9	2.6	2.0	2.9	2.9	2.8	3.1	0.2	1.2
99	Not known or unspecified	9.5	9.7	11.0	12.5	10.4	10.0	7.9	4.2	-3.2	-8.3
	General Secondary Education	193.9	192.1	176.5	142.2	212.7	210.2	205.9	207.8	29.4	65.6

* MoE estimation, based on LFS 2023 data

Table 11

Aggregation of economic sectors

Aggregated economic sectors	Matching sectors of national economy at NACE 2 letter level
Agriculture	A Agriculture, forestry and fishing
Manufacturing	C Manufacturing
Other types of industry	B Mining and quarrying
	D Electricity, gas, steam and air conditioning supply
	E Water supply, sewerage, waste management and remediation activities
Construction	F Construction
Trade, accommodation and catering services	G Wholesale and retail trade; repair of motor vehicles and motorcycles
	I Accommodation and food service activities
Transportation and storage	H Transportation and storage
Other business services	J Information and communication
	K Financial and insurance activities
	L Real estate activities
	M Professional, scientific and technical activities
	N Administrative and support service activities
	R Arts, entertainment and recreation
	S Other service activities
Public services	O Public administration and defence; compulsory social security
	P Education
	Q Human health and social work activities

Table 12

Discussion of labour market matters in involved councils

Council	Organisations involved in the council	Objective
		National level councils
National Tripartite Cooperation Council (NTCC)	Representatives nominated by the Cabinet of Ministers, Employers' Confederation of Latvia, and Free Trade Union Confederation of Latvia	Ensures and facilitates the cooperation among the government, employer and employee organisations at a national level with the aim to ensure coordinated solving of socio-economic development problems in line with public and national interests, by drafting and implementing strategies, programmes and regulatory acts, in relation to social and economic matters. Examines draft policy planning documents and regulatory acts, provides proposals for their improvement to the respective ministries, including in relation to employment.
Tripartite Sub-council for Co-operation in Vocational Education and Employment (PINTSA)	15 authorised persons – representatives proposed by the Cabinet of Ministers, Employers' Confederation of Latvia, and Free Trade Union Confederation of Latvia	Part of the NTCC institutional system. Its goal is to facilitate the cooperation among the government, employer and employee organisations in the field of national policy of vocational education and employment, development and implementation of strategies, including to review the national development plans, concepts, draft regulatory acts in the field of vocational education and human resource development and employment, to provide proposals for their improvement and to evaluate proposals and provide suggestions to state institutions and public organisations, related to vocational education and employment.
Demographic Affairs Council	Representatives of the Cabinet of Ministers, Saeima, NGOs, social partners, scientists	An advisory and coordinating state institution, which was established in order to facilitate a single national demographic policy and its implementation on all levels of state administration. The Council evaluates and coordinates the implementation of the national demographic policy, and informs mass media on demographic policy matters.
Higher Education Council (HEC)	12 Council members: representatives of the Employers' Confederation of Latvia, MoES, Latvian Academy of Sciences, Rectors' Council, Student Union of Latvia, etc.	An independent institution of the Republic of Latvia, which drafts the national higher education strategy, realizes cooperation between higher education institutions, state institutions and the society, with regard to higher education development, supervises the quality of higher education and ensures adoption of qualitative decisions, in the field of higher education.
		Advisory Councils
National Economy Council (NEC)	MoE, Latvian Chamber of Commerce and Industry, Employers' Confederation of Latvia, Free Trade Union Confederation of Latvia, Latvian Association of Local and Regional Governments, representatives of sector associations, experts	An advisory institution, which was established by the Ministry of Economics, Latvian Chamber of Commerce and Industry, Employers' Confederation of Latvia, Free Trade Union Confederation of Latvia, Latvian Association of Local and Regional Governments. The goal of the NEC is to facilitate drafting and implementing of a business-friendly environment policy in Latvia, as well as to promote the implementation of principles of sustainable development in the national economy.
Employment Board	MoE, MoES, MoW ministers	The goal is to coordinate inter-sectoral cooperation required for planning, development, implementation, and monitoring of labour market reform or re-arrangement, thereby reducing the disproportion in the Latvian labour market.
12 sectoral expert councils (SEC)	Sectoral employers' organisations or their associations, sectoral trade union organisations, Latvian Chamber of Crafts, MoES, MoE, MoW, Ministry of Culture, Ministry of Transport, Ministry of Agriculture, Ministry of Environmental Protection and Regional Development, SEA and other institutions participate in SECs voluntarily. The work of SECs is managed by a SEC secretariat, which is comprised of advisers from the Free Trade Union Confederation of Latvia, Employers' Confederation of Latvia and National Centre for Education.	Its goal is to forecast the development of the sector, studying and ensuring the demand and supply in education and labour market.

Table 12 cont.

Council	Organisations involved in the council	Objective
Adult Education Management Council (AEMC)	Representatives of MoES, MoW, MoE, Ministry of Defence, Ministry of Culture, Ministry of Health, Ministry of Agriculture, Ministry of Justice, Cross-Sectoral Coordination Centre, Employers' Confederation of Latvia, Latvian Chamber of Commerce and Industry, Latvian Association of Local and Regional Governments, Latvian Association of Large Cities, LPIA, LABS, planning regions	An inter-sectoral consultative institution to ensure coordination of measures of the Adult Education Management Model Implementation Plan for 2016-2020 and supervision of the implementation of the plan. The tasks envisage to determine and approve objectives and tasks of adult education, to set priority target groups for adult education, to approve the curriculum to be implemented, to decide on funding allocation principles, to assess the results of the implementation of adult education on a regular basis, etc.
MoW Commission for establishing fields of training for unemployed, job seekers and persons subject to risk of unemployment	MoW, MoE, MoES, SEA, Employers' Confederation of Latvia, Free Trade Union Confederation of Latvia, Latvian Association of Local and Regional Government, other experts	A commission set up by the MoW for determining training sectors, occupations, as well as basic social and professional skills, where training for the unemployed and job seekers should be provided.
Advisory Council "Education to Everyone"	The Council is chaired by the MoES Minister. Representatives of ministries and other state administration institutions, local and regional governments and private sector, public and international organisations	Its goals are to facilitate the development of lifelong learning and access to education for all the population, to promote integration of vulnerable and socially excluded persons, by offering various learning opportunities, to widen the interaction of formal and non-formal education, by providing lifelong learning opportunities and facilitating people's inclusion in the society and their competitiveness in the labour market, to facilitate the development of basic skills of people and their ability to use them according to their personal and public needs.
Cooperation Council for the Career Guidance System	MoES, National Centre for Education, State Service of Education Quality, MoW, SEA, Social Integration State Agency, MoE, Latvian Career Development Support Association, Employers' Confederation of Latvia, Free Trade Union Confederation of Latvia, Latvian Association of Local and Regional Governments, Latvian Adult Education Association and State Education Development Agency	An inter-sectoral institution for information exchange and consultations, with the aim to develop and facilitate career guidance measures and to enhance their quality and promote choice of a further education or professional career direction that would suite the abilities, interests and age of everyone.
MoW Commission for establishing fields of training for unemployed, job seekers and persons subject to risk of unemployment	MoW, MoE, MoES, SEA, Employers' Confederation of Latvia, Free Trade Union Confederation of Latvia, Latvian Association of Local and Regional Government, other experts	A commission set up by the MoW for determining training sectors, occupations, as well as basic social and professional skills, where training for the unemployed and job seekers should be provided.

Notes:

Sectoral associations – include enterprises representing a single sector, are aware of the situation in the specific sector.

Planning regions – five planning regions have been created in Latvia. Their aim is to ensure the planning of regional development and the coordination and cooperation among local governments and other state administration institutions in Latvia.