EESTI PANK
EUROSÜSTEEM

LABOUR MARKET REVIEW

1
2021

The labour market review by experts from Eesti Pank covers developments in the supply and demand of labour in Estonia, and the cost of it in wages. The central bank observes the labour market for two reasons. Firstly, labour is an important production input, as a change in the supply or activity of labour can directly affect potential growth. Secondly, events in the labour market can have a major impact on inflation.

As the euro area monetary policy targets price stability, and the Estonian economy is very open, the economy adjusts to changes principally through the prices and volumes of production inputs. For this reason it is important for the labour market to be flexible and for wage rises to correspond to productivity growth, as otherwise the increase in production costs could lead to excessive inflation.

By Lauri Matsulevitš, Kaspar Oja, Orsolya Soosaar, Katri Urke
ISSN 2346-6936

CONTENTS

SUMMARY

The decline in the Estonian economy in 2020 was smaller than those in most other countries in the European Union. Under the restrictions introduced to stop the spread of the second wave of Covid-19, a large part of the Estonian economy was allowed to stay open in the second half of the year, and the situation in the labour market remained stable. Expectations of employers for employment improved in late 2020 and early 2021 and labour shortages were increasingly felt, but these indicators did not yet reflect the broad restrictions that were introduced in March 2021. They have probably restrained the recovery in the economy and hurt the labour market, but there are not yet any data on their impact.

The Covid-19 pandemic has reduced the demand for labour. The labour force survey shows that 4.3% fewer people were employed in Estonian institutions and businesses in the second half of 2020 than a year earlier. Employment increased in the public sector, notably healthcare and education, and shrank in the private sector. The crisis has affected different sectors very differently. Accommodation and food service have been hit the most and they employed around a fifth fewer people than a year earlier, while other parts of the services sector such as information and communications have done relatively well. Cooling was apparent in manufacturing and construction quite some time before the pandemic reached Estonia, and registry data show that employment fell in those sectors in the second half of 2020 too.

Several factors helped to soften the blow to people in Estonia of the fall in demand for labour. The steep fall in the number of hours worked per worker during the first wave of the virus showed that companies reduced labour inputs much more than they cut jobs. They were probably helped in this by the wage subsidy measures. As the situation worsened in the local labour market in the second half of the year, the number of residents of Estonia working abroad, particularly in Finland, rose. The number of workers from outside the European Union employed at Estonian businesses, which has been rising for several years, also dropped much more steeply than the number of permanent residents of Estonia employed. This was certainly because the restrictions on movement in the spring hindered hiring, but the number of new registrations was substantially lower than previously in the second half of the year as well.

The labour force participation rate fell during the first wave of the coronavirus crisis, but this fall proved temporary in Estonia as it did in most other countries of the European Union. The recovery in the labour force participation rate in Estonia did not come from young people returning to the labour market, but from the middle-aged and older people of working age. The recovery in labour force participation is important because people who remain outside the labour market and have no hope of finding work are at risk of poverty, and it is hard for labour market policy measures to reach them.

After rising sharply in the second quarter, unemployment increased further in the third quarter of 2020, though this was because of a rise in the labour force participation rate. The number registered as unemployed also rose in the second half of the year, though mainly for seasonal reasons. Registered unemployment among the young and in Harjumaa also continued to rise in the second half of the year, even when seasonally adjusted. There was also an increase in unemployment among service and sales staff, indicating that demand for labour was also falling in parts of the services sector in the autumn. The growth in registered unemployment among sales staff and unskilled workers indicates that it is the workers with less protection than the average who have lost their jobs during the crisis.

Although wage growth recovered in summer 2020, the pandemic has reduced wage pressure appreciably in Estonia. Wages rose more slowly in the second half of the year than they did before the crisis in both the private and public sectors, and data on the wage distribution indicates this slowdown was broadly based. The average wage in accommodation and food service, which was hit hardest by the crisis, had not returned by the end of the year to where it was a year earlier. Economic activity picked up in the second half of the year but labour was not hired at the same rate that the economy recovered at, and so value added per employee, or labour productivity, was greater than a year earlier.

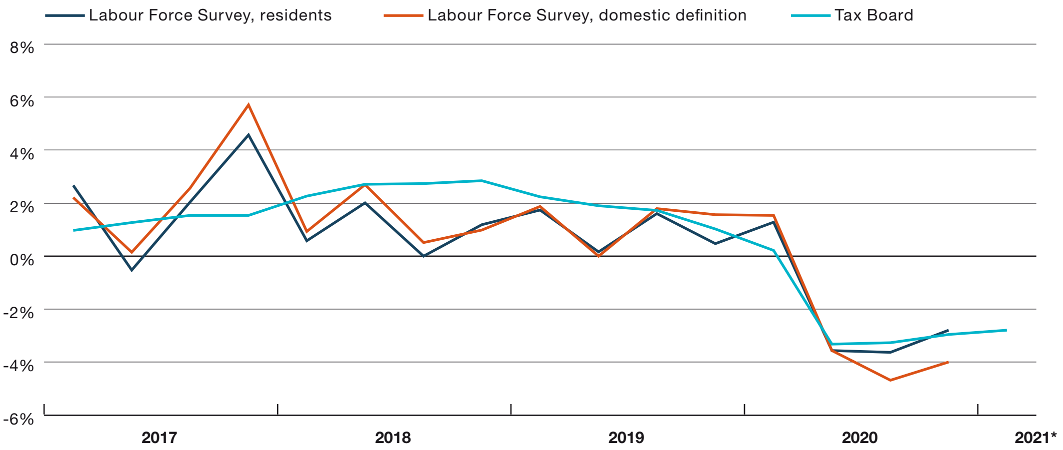
It is still too early for the labour market data released so far to show the impact on the labour market of the tightened restrictions in 2021. These restrictions will undoubtedly have affected the decisions of businesses, but several circumstances are different from what they were during the emergency situation last year. There is less uncertainty about the meaning of the restrictions, as businesses now have some experience of them and have adapted to the new circumstances. The upward trend in the share of the population that has been vaccinated and the experience from last year give confidence that the restrictions will prove only temporary and that domestic clients at least will return quite quickly once the restrictions have been removed. Employment has by now fallen quite a long way and the sectors where there is a danger of further redundancies are counterbalanced by sectors where the number of employees is very likely to rise in future. The public sector is supporting growth in employment for example, as will construction once construction projects are relaunched. The wage subsidy measures will again soften the impact of the restrictions, though they are somewhat smaller than they were last spring.

DEMAND FOR LABOUR

EMPLOYMENT

The coronavirus pandemic and the recession caused a broad fall in employment in the second quarter of 2020. The loss of jobs slowed as the economy improved in the second half of the year, but there was no significant recovery yet in employment. Various data sources put employment in the second half of the year at 3-4.3% lower than a year earlier, and it remained at the same level in the first months of 2021. Employment of permanent residents of Estonia in local businesses and institutions fell in the summer months, but more workers were working abroad than previously. Data from the Tax and Customs Board on declared wage recipients show a smaller fall in the second half of the year than data from the labour force survey do (see Figure 1).

Figure 1. Change in employment in different data sources



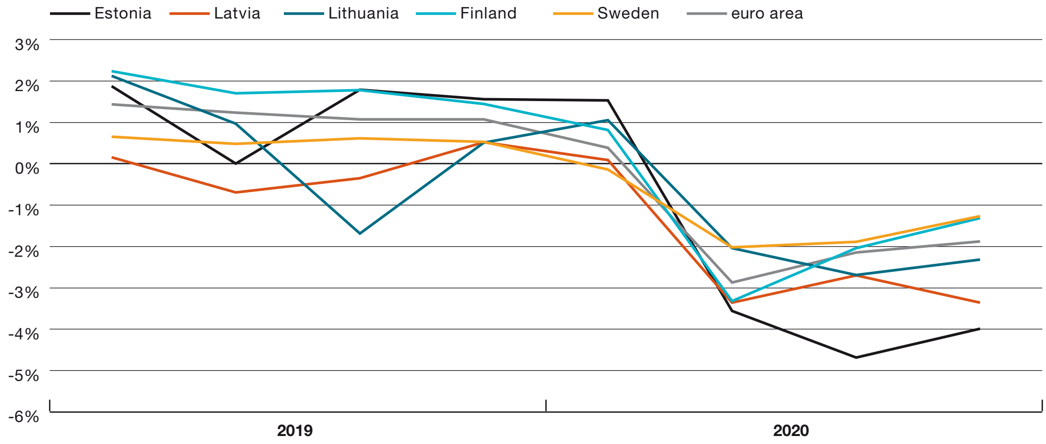
* 2021 Q1 is proxied by February
Sources: Statistics Estonia, Tax and Customs Board, Eesti Pank calculations

The Estonian economy contracted by less than the euro area average during the crisis, but the fall in employment was still larger than average even so. The fall in employment was also deeper in Estonia in the second half of the year, like in Latvia for example (see Figure 2). The labour market in Estonia is more cyclical than those in most countries in the European Union. Differences in the labour markets are affected by labour market institutions, including job protection, and the various measures taken by governments during the crisis[1].

The number of short-term workers from outside the European Union working in Estonian companies increased sharply in the years before the crisis. Borders were closed and visas were no longer issued during the emergency situation in spring 2020 however, and this cut the number of such workers drastically. It became possible to hire workers from abroad again in the second half of the year, but demand for additional labour was by then much lower than previously. Not only has demand for labour in general been weaker, but testing and quarantine requirements have made it more costly to hire labour from abroad than it was before the pandemic. There were 31% fewer current registrations for short-term work in the fourth quarter of 2020 than there were a year earlier (see Figure 3). The number of new registrations was down 24%, meaning that the number of short-term workers will fall further in the near future. The number of current registrations fell in all sectors. The number of short-term workers from outside the European Union fell by 32% in manufacturing and 30% in construction, which are the sectors where most of them are employed.

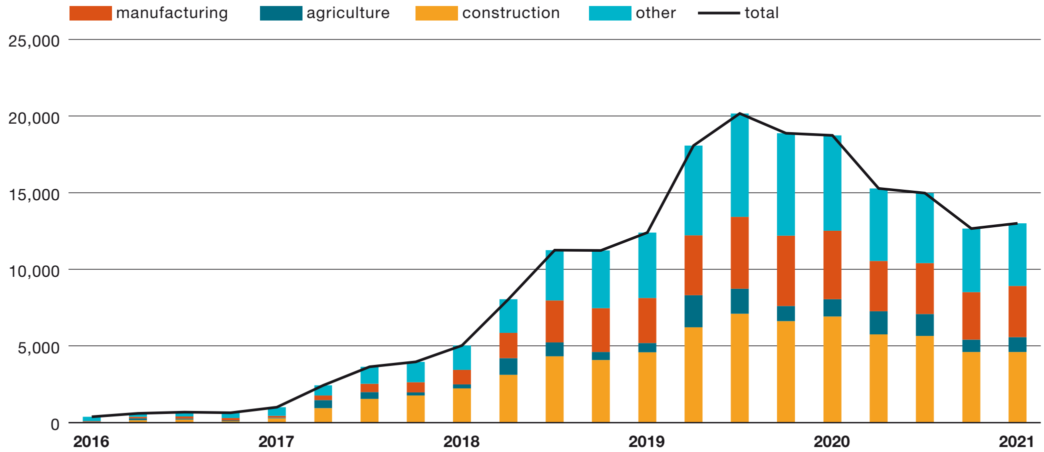
1 For more see Box 1 in Labour Market Review 2/2020 *The relative reaction of employment to the crisis in different countries.*

Figure 2. Change in employment as domestic definition in Estonia and neighbouring countries



Sources: Eurostat, Eesti Pank calculations

Figure 3. Number of current short-term work registrations, end of quarter

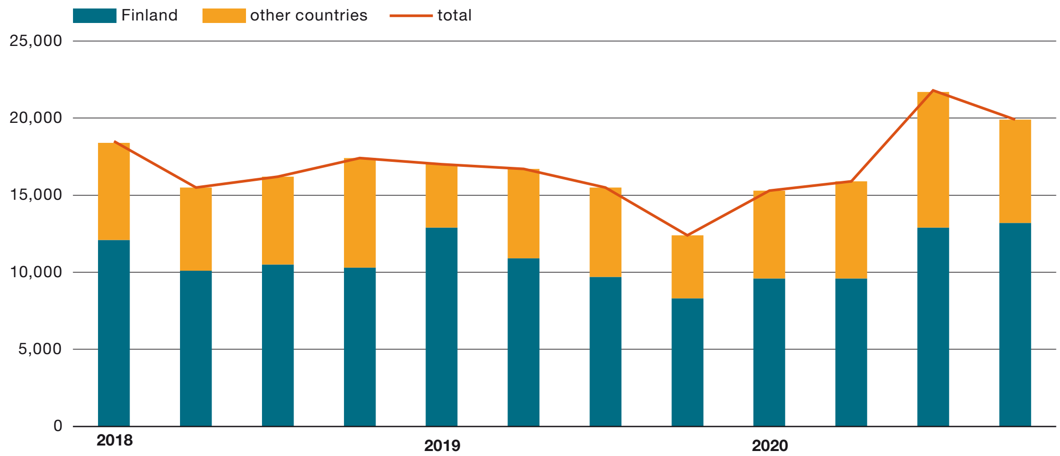


Sources: Police and Border Guard Board, Eesti Pank calculations

The Estonian labour market adjusted not only through reduced hiring of labour from abroad, but also through increased migration for work by residents of Estonia. Data from Statistics Estonia show a rise in the second half of 2020 in the number of residents of Estonia working abroad, with the largest part of them employed in construction in Finland. Cross-border movement was restricted in the first half of 2020 and the number of people going abroad to work fell, but in the final quarter of the year there were 60% more permanent residents of Estonia working abroad than there were a year earlier (see Figure 4).

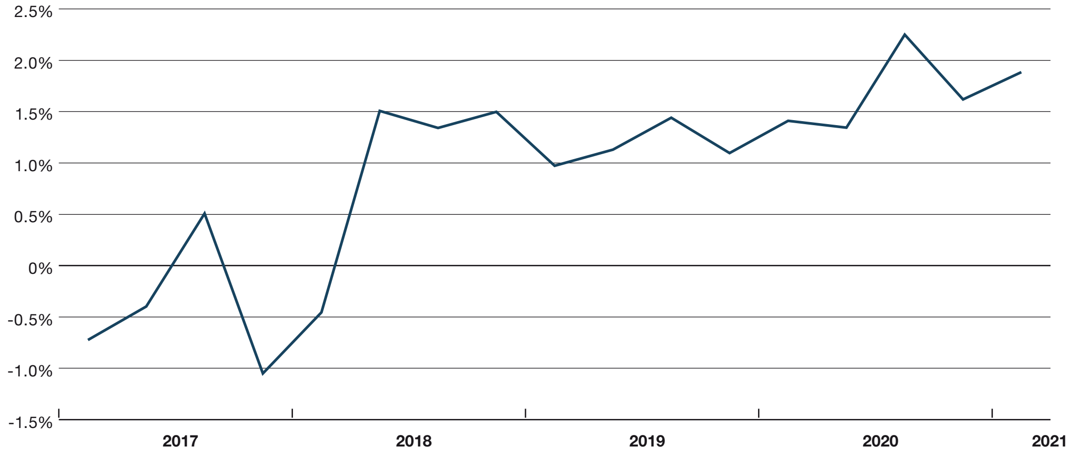
As expected, employment by the general government did not decline during the economic crisis. Statistics from the Tax and Customs Board show the number of people registered as receiving a wage from a government institution rose by 1.9% in the second half of 2020. Employment was also up in the fourth quarter on a year earlier in public administration, healthcare and education, where the majority of those receiving a wage are employed by the general government.

Figure 4. Number of Estonian residents working abroad, thousands



Source: Statistics Estonia

Figure 5. Change in the number of public sector employees from tax declarations



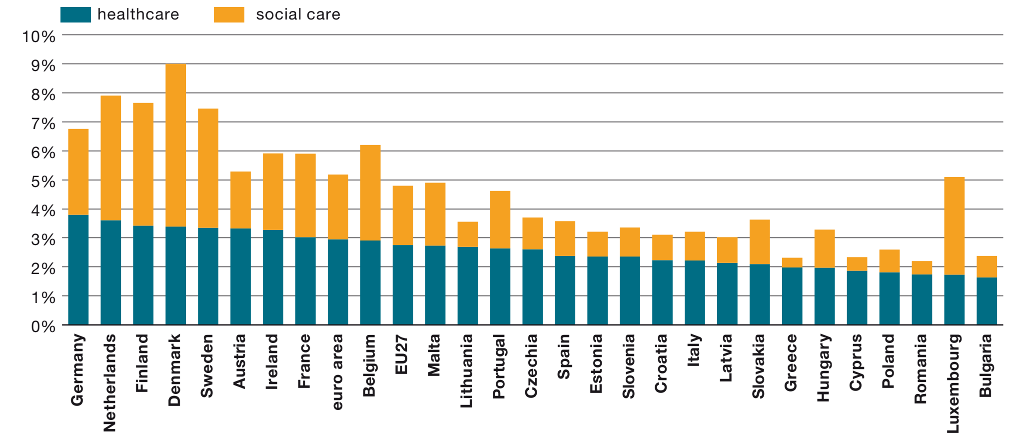
Source: Tax and Customs Board

Box 1: Employment and wages in healthcare in Estonia in comparison with those in the European Union

The current pandemic has focused increased attention on healthcare. At a point when demand for labour has been reduced in many sectors by the crisis, there is currently a shortage of labour in healthcare. This box reviews employment and wage levels in healthcare in Estonia and in other European Union countries. One in five of the people employed in healthcare in Estonia are aged over 60 and so are reaching retirement age, meaning the shortage of labour could become a real problem in the years ahead.

Slightly fewer people are employed in healthcare in Estonia as a ratio to the number of residents than the European average (see Figure B1.1). Healthcare in Estonia employs 2.4% of all residents, but in the European Union the average is 2.7%. Taking healthcare and social care together makes the employment gap to the European average notably wider. The share of people employed in social care varies between countries, reflecting differences in their social care systems.

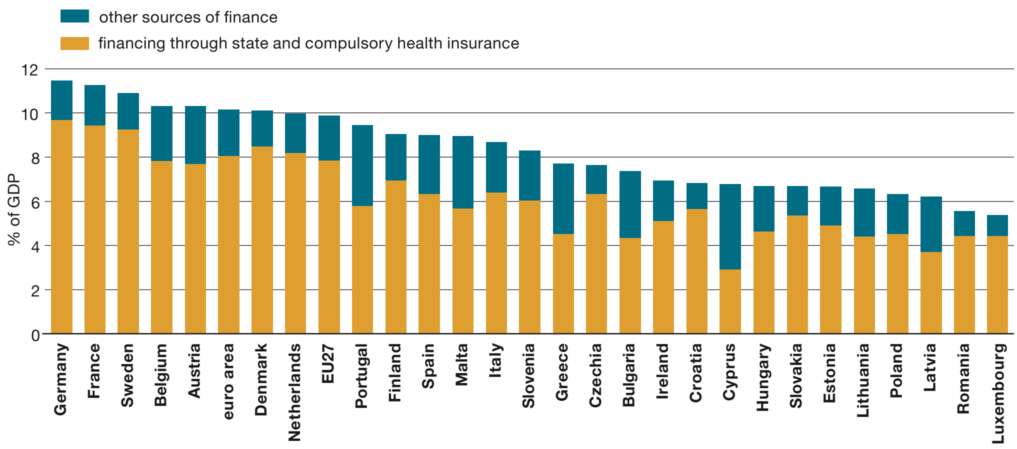
Figure B1.1. The share of the total population employed in healthcare and social care in 2019



Source: Eurostat

There is a clear relation between the size of the healthcare sector in a country and the spending by the state and by individual people on healthcare, and this is positively related to the standard of living in the country. The richer the country, the more capacity there is for spending on healthcare. Estonia is among the lowest placed countries in the European Union for total spending on healthcare (see Figure B1.2) and household out-of-pocket payments as a share of total spending on healthcare are significantly larger than the European Union average. Given the relative size of spending on healthcare, Estonia manages to maintain a relatively large healthcare system.

Figure B1.2. Healthcare spending, 2018

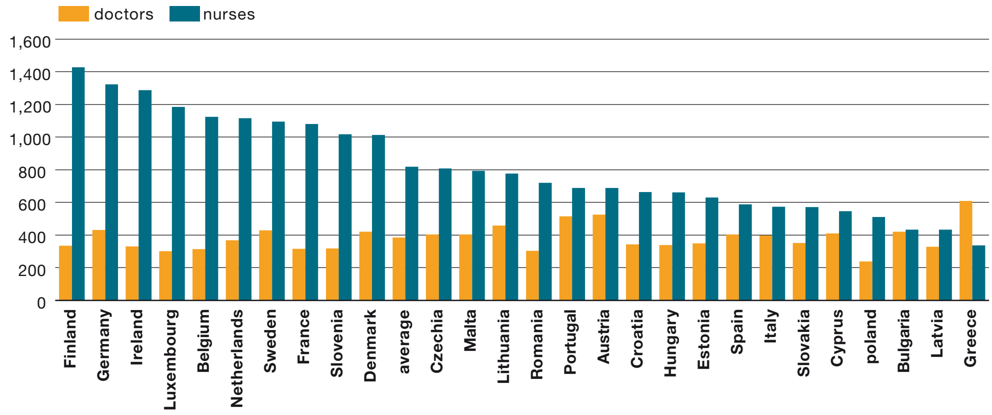


Source: Eurostat

A bottleneck that the current pandemic has revealed in the Estonian healthcare system is the shortage of nurses. Data from Eurostat show there to be a little over 600 nurses working in the Estonian healthcare system for every hundred thousand residents (see Figure B1.3). This is around a quarter fewer than the average in the European Union. A report on healthcare produced in 2017 by OSKA[2] predicted rapid growth in demand for nurses in the decade ahead. Although there are slightly fewer doctors per hundred thousand residents in Estonia than in most other European countries, the difference is much smaller.

2 Urve Mets, Vootele Veldre, SA Kutsekoda (2017), OSKA study of the health care sector. https://oska.kutsekoda.ee/en/field/health-care/

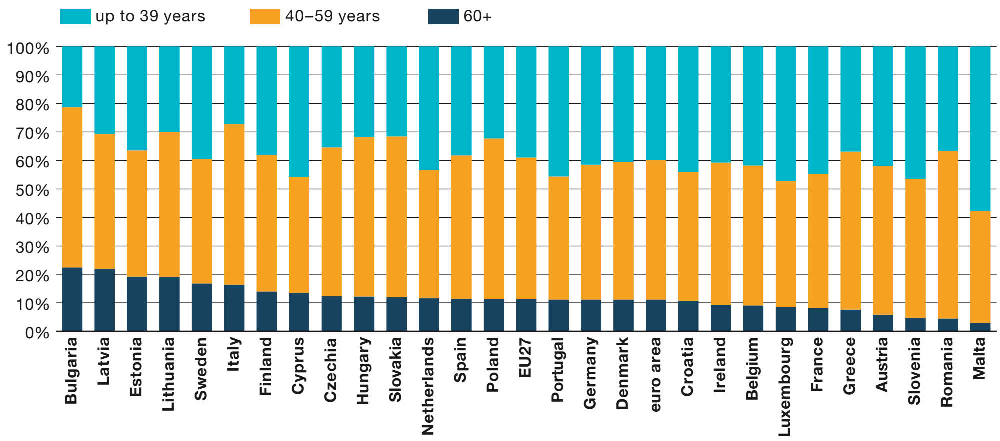
Figure B1.3. Nurses and doctors per 100,000 residents in 2018*



* Where data from 2018 are not available, the latest available data are used
Sources: Eurostat, Eesti Pank calculations

One potential cause of labour shortages in the Estonian healthcare system in the years ahead is the age structure of people employed in healthcare. One fifth of people working in healthcare in 2019 were aged over 60 (see Figure B1.4). The share of older employees in healthcare in Estonia is one of the highest in Europe and those employees will need to be replaced in the years ahead as they start to retire. The OSKA report found that increased retirement will cause a need for replacement employees among doctors. The share of young people working in healthcare in Estonia is currently at the European average, but the number of current graduates may struggle to fill the number of positions left open by those retiring.

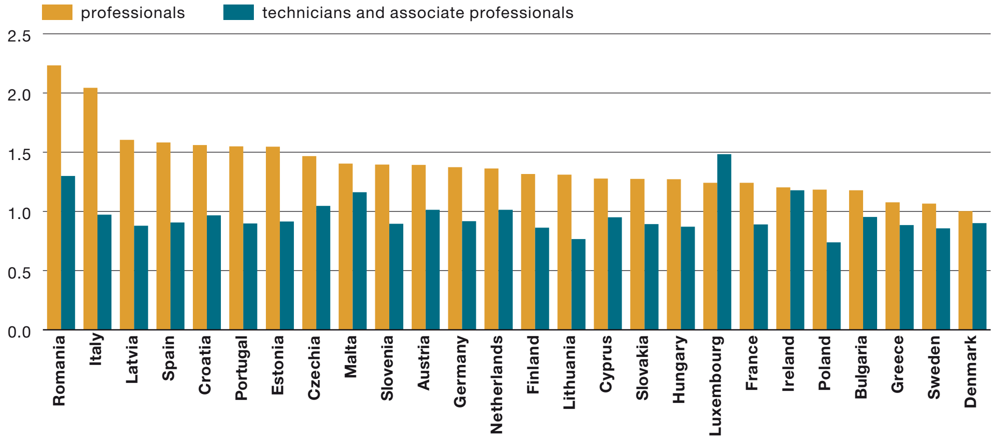
Figure B1.4. The age structure of healthcare workers



Sources: Eurostat, Eesti Pank calculations

This means there will be pressure to hire in the Estonian healthcare system in the coming years. One response is to make sure that there are sufficient places on courses for studying to work in healthcare, and another is that the wage level in the sector is important. Comparing the salaries of senior and mid-level specialists working in healthcare and social care in Estonia to the national average wage level shows that the top specialists working in healthcare receive quite a high wage relative to the national average when compared to the situation in other countries (see Figure B1.5). The wage levels of jobs that require a slightly lower level of qualification in healthcare and social care are below the average in international comparison when put against the national average wage. It should also be remembered that the free movement of labour means that not only is the relative wage level within the country important, but so is the real wage level in comparison to those in other countries, especially neighbouring countries.

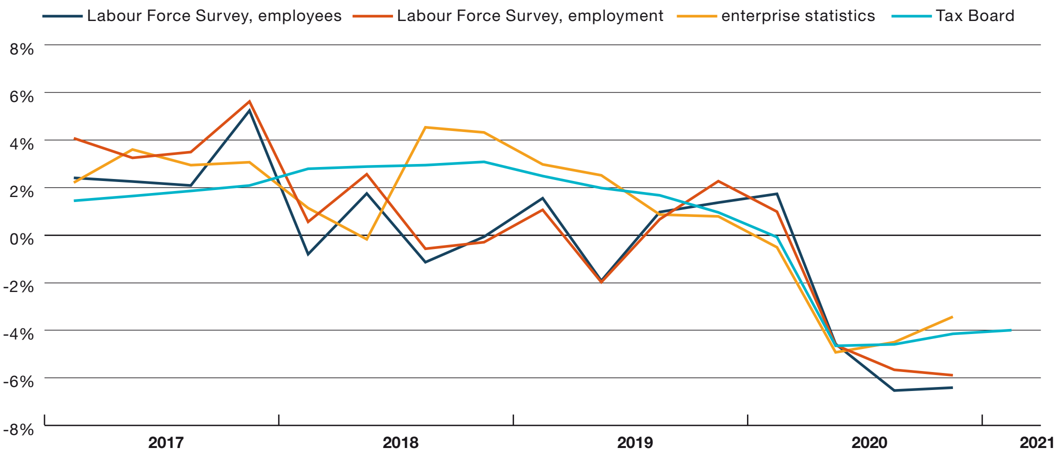
Figure B1.5. The average hourly wage in healthcare and social care as a ratio to the average of the whole economy in 2018*



* The average wage in Austria, Greece and Portugal for work in public administration, national defence and compulsory health insurance
Sources: Eurostat, Eesti Pank calculations

The labour force survey showed that private sector employment fell to be lower in the second half of 2020 than in the second quarter. Employment was also lower than a year earlier in the enterprise statistics and in the data from the Tax and Customs Board, but those data showed the situation in the third and fourth quarters of 2020 to be better than in the second. Various data sources put employment in the private sector at 4-6% lower in the fourth quarter than a year earlier (see Figure 6).

Figure 6. Change in the number of private sector employees in different data sources



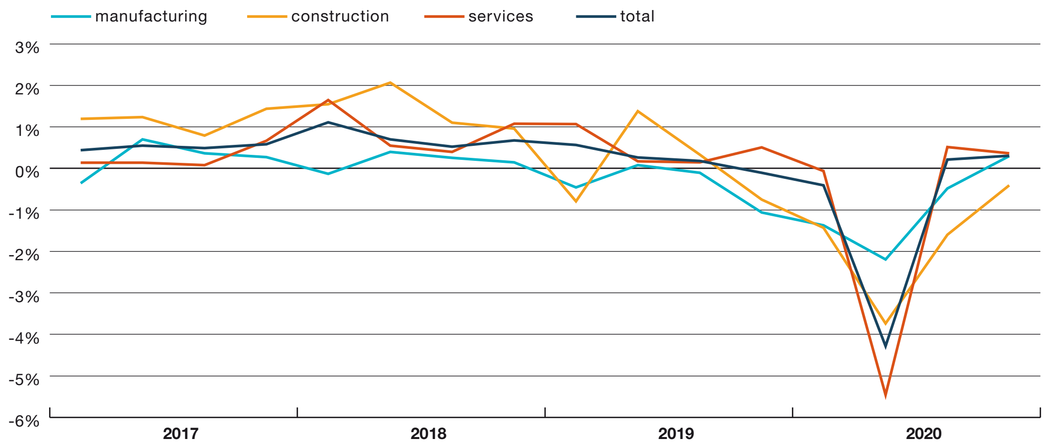
Sources: Statistics Estonia, Tax and Customs Board, Eesti Pank calculations

The sample used in the labour force survey is too small to allow any conclusions to be drawn about employment by sector and by quarter, and its confidence bounds[3] are very wide. For this reason data from the Tax and Customs Board are mainly used here for observing employment by sector. Quarterly changes in employment show clearly that the immediate impact of the pandemic crisis was largest in the

3 The confidence bounds are the lower and upper limits of the confidence interval. The confidence interval is the area calculated from the sample that the actual value of the parameter being estimated is most likely to fall into.

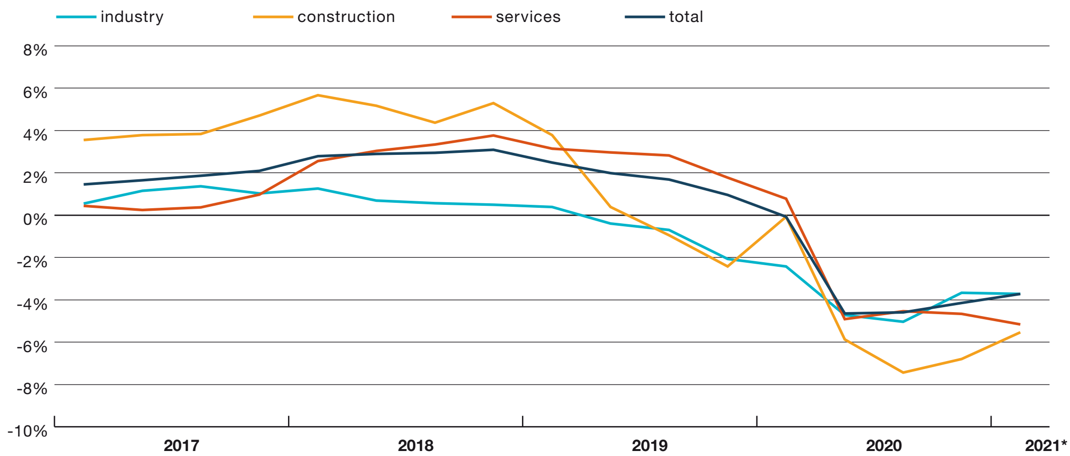
service sector, but in the second half of the year employment started to rise in quarterly terms earlier in that sector than in the industrial sector (see Figure 7). Employment in manufacturing was lower than a year earlier, while in the service sector it was at a similar level (see Figure 8).

Figure 7. Quarterly change in the number of declared wage recipients



Sources: Tax and Customs Board, Eesti Pank calculations

Figure 8. Yearly change in the number of declared wage recipients



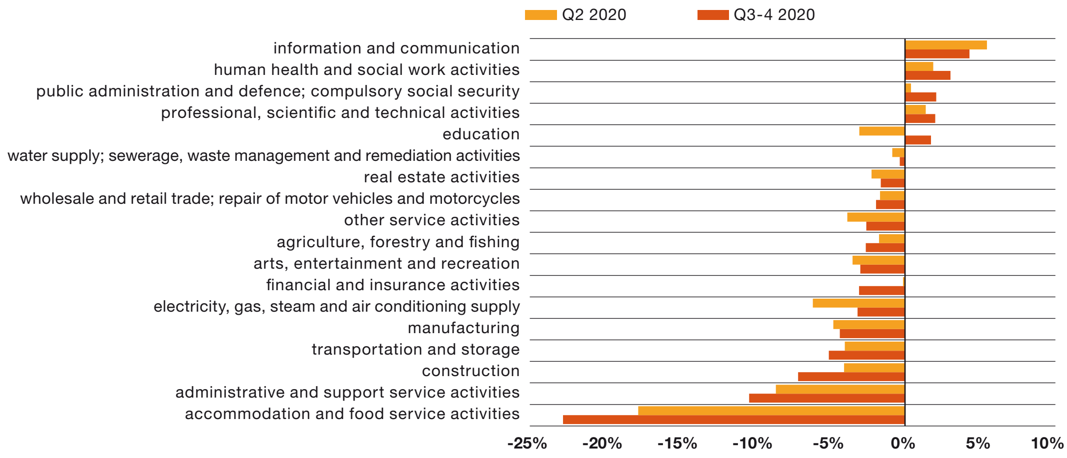
* 2021 Q1 is proxied by February
Sources: Tax and Customs Board, Eesti Pank calculations

The pandemic and the restrictions introduced to stop the spread of the virus affected different parts of the service sector very differently. Accommodation and food service suffered the heaviest blow, and employment there was around a quarter less in the second half of 2020 than a year earlier (see Figure 9). Turnover in that sector was down 33% on the year and value added at constant prices was down 30.4%. Employment in information and communications in the meantime was up 4.3% in second half of 2020, though the growth was still slower than the 8.9% it achieved in 2019.

Data from the Tax and Customs Board on wages declared show that employment was substantially lower in the second half of the year than a year earlier in construction too, which is borne out by the enterprise statistics (see Figure 10). The labour force survey does not show any decline in employment in construction, but this may be because the sample is too small to give an accurate estimate. Employment started to fall in construction in the second half of 2019, and was restrained during the pandemic crisis by development projects being put on hold and by construction being paused.

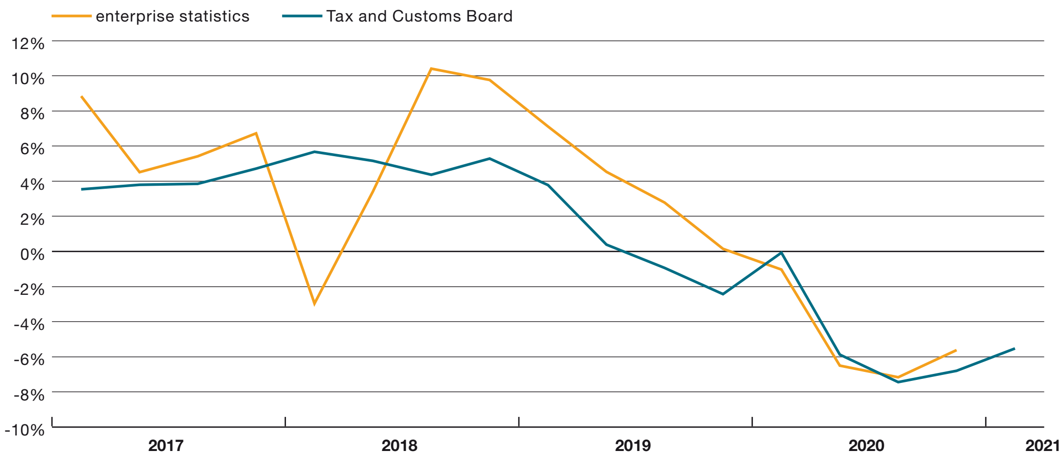
Both corporate data on employment and data received from the Tax and Customs Board cover people working short-term in Estonia as well as permanent residents of the country. Data from the Tax

Figure 9. Change in the number of declared wage recipients in Q2 and Q3-4 2020



Sources: Statistics Estonia, Eesti Pank calculations

Figure 10. Change in the number of employees in construction in different data sources



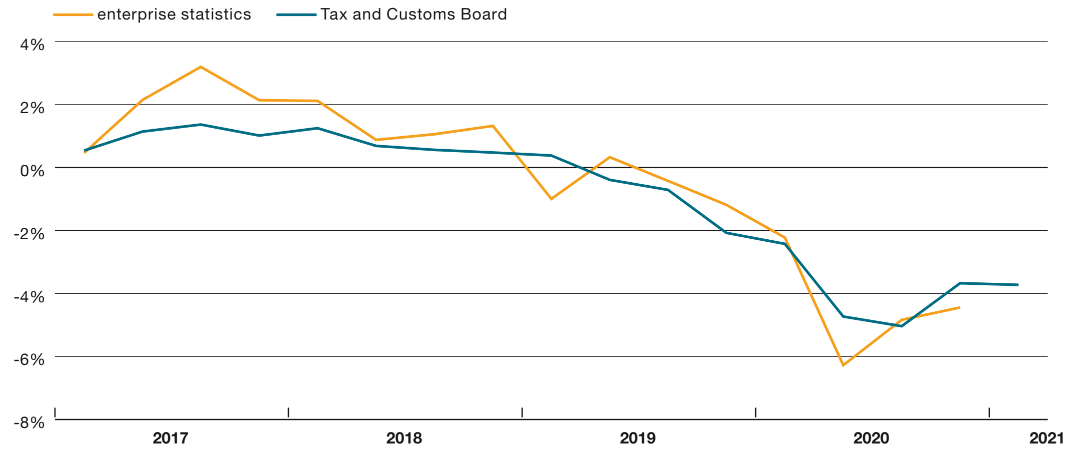
Sources: Statistics Estonia, Tax and Customs Board, Eesti Pank calculations

and Customs Board showed that there were about 2800 fewer people employed in construction in the fourth quarter of 2020 than a year earlier. There was a similar fall of around 2000 people in the number of current short-term registrations for work in construction. The fall in demand for labour in construction is in line with the rise in the number employed in construction abroad. Working abroad, especially in Finland, offers new opportunities to construction workers who do not have job opportunities in Estonia.

Demand for labour in the sector should increase again in future, as several large construction companies announced in the first quarter of 2021 that they would continue with projects that had been put on hold. Sentiment surveys also show that the expectations for employment of employers in construction have improved sharply since the fourth quarter of 2020. The share of construction companies that see labour shortages as a problem to further expansion has also started to increase again.

Employment in manufacturing, which is the sector most oriented to exports, also fell in the second half of 2020 by around 4.5% in both the data from the Tax and Customs Board and the enterprise statistics (see Figure 11). Different branches of manufacturing face very different circumstances with employment increasing in production of medicines and chemical processing, which have been supported by sharply increased demand for cleaning and disinfectant products and the raw materials for them. Employment fell in contrast throughout the whole year in wood processing, which is the largest branch of manufacturing, employing 17% of the people in the sector. Employment in wood processing started to increase at the end of 2020 and in early 2021 and exports of wood products started to grow again in the fourth quarter.

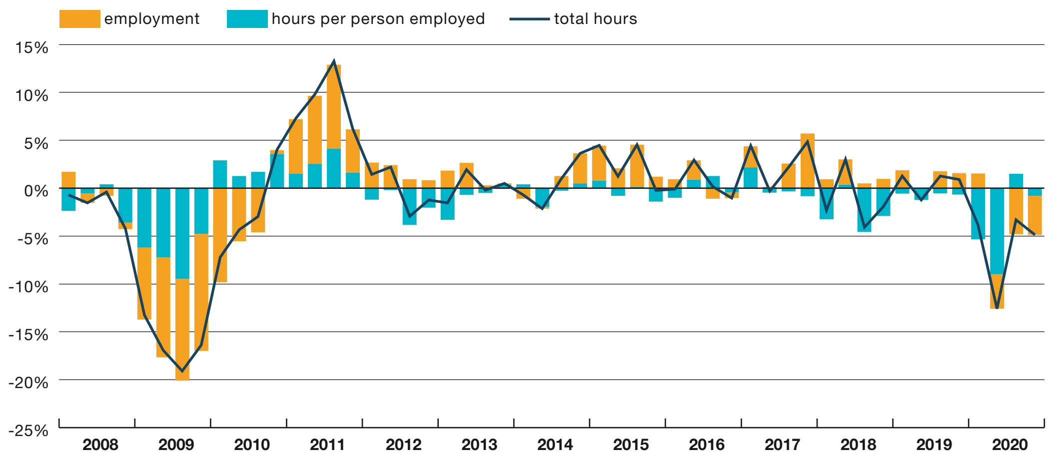
Figure 11. Change in the number of employees in manufacturing by different data sources



Sources: Statistics Estonia, Tax and Customs Board, Eesti Pank calculations

How labour adjusts to reduced economic activity can be better shown by looking at employment as the change in the total number of hours worked. The total number of hours worked fell more than employment in the economy did, because the number of hours worked per employee fell. Hours worked per employee was a larger source of the fall in hours worked in the first half of 2020 than the fall in employment was, and it provided a much larger share of the fall than it did when the financial crisis broke out in 2008 (see Figure 12). This is probably because of the wage subsidy, as one condition of it was that workloads should be reduced.

Figure 12. Change in the total number of hours worked in the economy

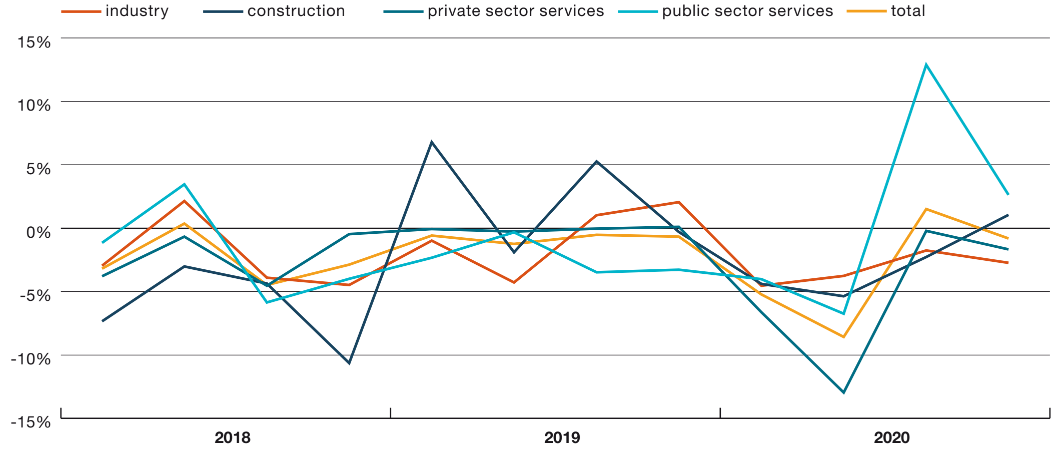


Sources: Statistics Estonia, Eesti Pank calculations

Hours worked per employee fell most in the service sector, though hours worked in that sector returned in the second half of 2020 to their level of the year before. The public sector raised the average figure for hours worked, as workloads there increased substantially. The figure in the private sector was a little lower in the second half of the year than it was a year earlier (see Figure 13).

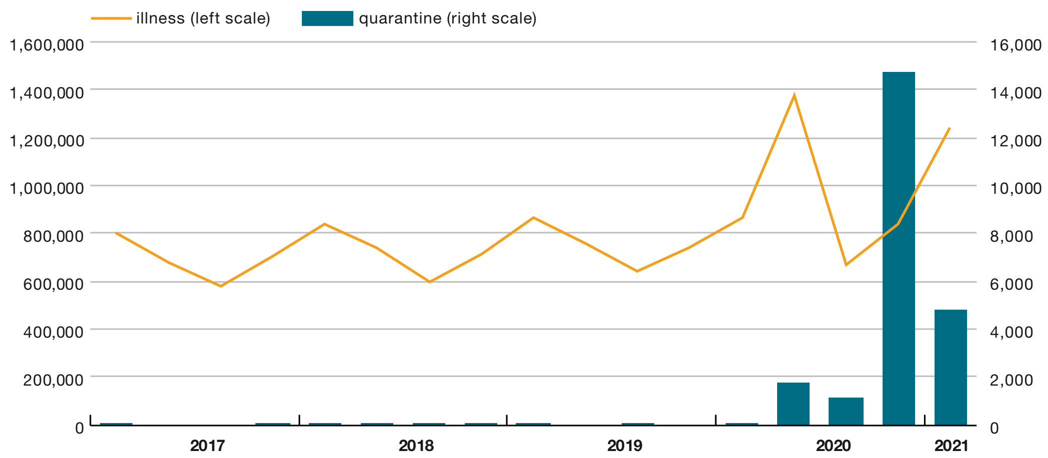
The fall in hours worked during the pandemic coincided as expected with a rise in the number of days off taken because of illness, which is shown by the number of sick days compensated by the Estonian Health Insurance Fund (see Figure 14). Adding days off work for illness covered by the employee or the employer to the sick days paid for by the health insurance fund suggests that up to a quarter of the reduction in hours worked in the second quarter of last year came from additional days off work because of illness. When infection was increasing again in the fourth quarter, compensation for quarantining

Figure 13. Change in the number of hours worked per person employed



Sources: Statistics Estonia, Eesti Pank calculations

Figure 14. Sick days reimbursed by reason



Source: Health Insurance Fund

started to be used more. The rules for work incapacity benefit changed in the first quarter of 2021 to favour employees and employers more, as the contribution from the employee and the number of sick days paid by the employer were both reduced.

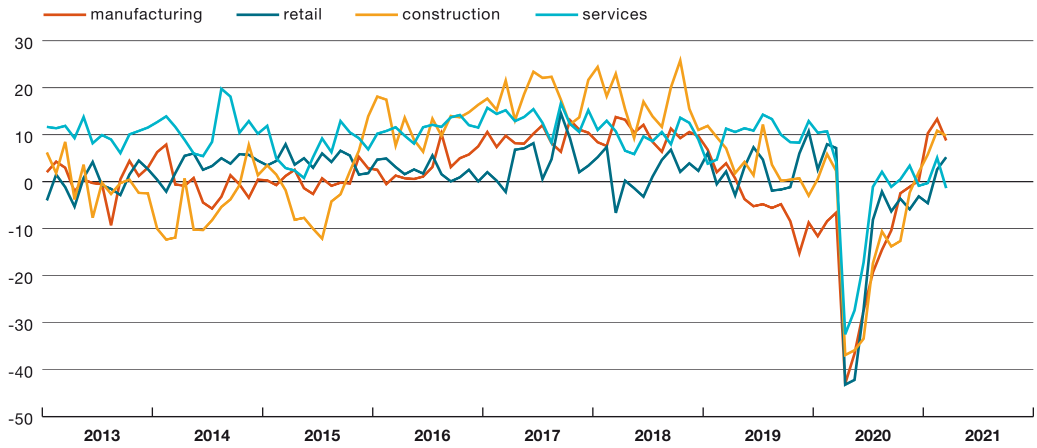
The drop in employment in 2020 affected men and women differently. When the pandemic erupted it was the service sector that was hit first, especially accommodation and food service, where the share of women in employment is relatively large. This meant that employment among women fell faster than employment among men in the first half of the year. The drop in employment deepened in the second half of the year in manufacturing and construction though, and so the employment rate for men fell further. The employment rate for men was 2.9 percentage points lower in the fourth quarter than a year earlier, and the rate for women was down 1.5 percentage points.

Young people were the age group particularly hit in the labour market during the pandemic, as employment for them fell much more sharply than it did for older age groups. The youth unemployment rate has risen at the same time and the labour force participation rate has fallen. Some of the young people who have remained outside the labour market have probably gone into education, as there was a rise in the number of people aged 20-24 entering both professional education and higher education in the academic year 2020/2021.

The labour markets in different regions moved in different directions in the second half of 2020. The number of people employed in Tallinn and north-eastern Estonia continued to fall, while employment in central and southern Estonia was higher in the fourth quarter than a year earlier.

The expectations of employers for future movements in employment were notably more optimistic in the early months of 2021 looking forward than they were in the second half of 2020, especially in manufacturing and construction, which were affected less by the pandemic (see Figure 15). Sentiment also improved somewhat in retail, where companies expecting employment to increase in the coming three months were again in the majority in February having not been so for a year. It should be noted though that sentiment surveys are carried out at the start of the month and the most recent surveys from March do not yet show in full the tightening of the restrictions on 11 March, which increased uncertainty in services and in retail.

Figure 15. Employment expectations*



* The index shows the net balance of companies expecting employment to increase or decrease
Sources: European Commission, Eesti Pank calculations

Box 2: Participation in further education by residents of Estonia

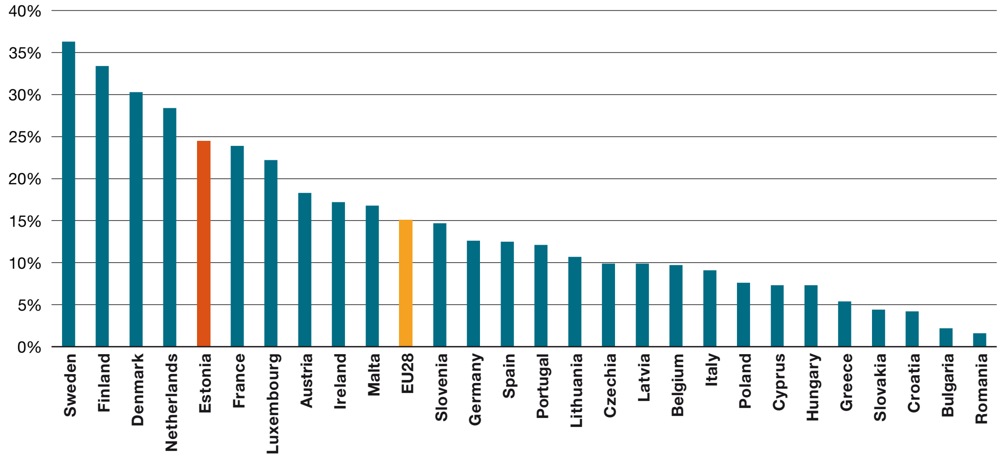
The Covid-19 pandemic has substantially changed expectations for the skills of employees. The report by OSKA on the impact of the Covid-19 pandemic[4] emphasises the need for lifelong improvements in skills alongside formal education. It is not only those who are already unemployed who need further training and retraining. The OSKA research refers to digital skills, as the amount of remote work increases and digitisation picks up pace. Other skills that are needed depending on the sector can include additional professional language and communication skills. These are skills that can be developed through lifelong or additional learning and that give those who gain them a better position in the labour market during more difficult times.

Estonia can only be compared to other countries for its participation rate in further education or higher education for qualifications. Some 24.5% of adults in employment in Estonia participate in further or higher education, which is above the average in European Union (see Figure B2.1).

The labour force survey produced by Statistics Estonia covers professional training more closely. Questions on participation in training allow estimates of how much people participate in self-development and how interested they are in it, and this can then help promote competitiveness and choices in the labour market. The share of people participating in further training in Estonia in

4 Research into how the recession caused by Covid-19 has affected the need for changes in labour and skills. Monitoring and forecasting system for the needs of labour OSKA. 2020.

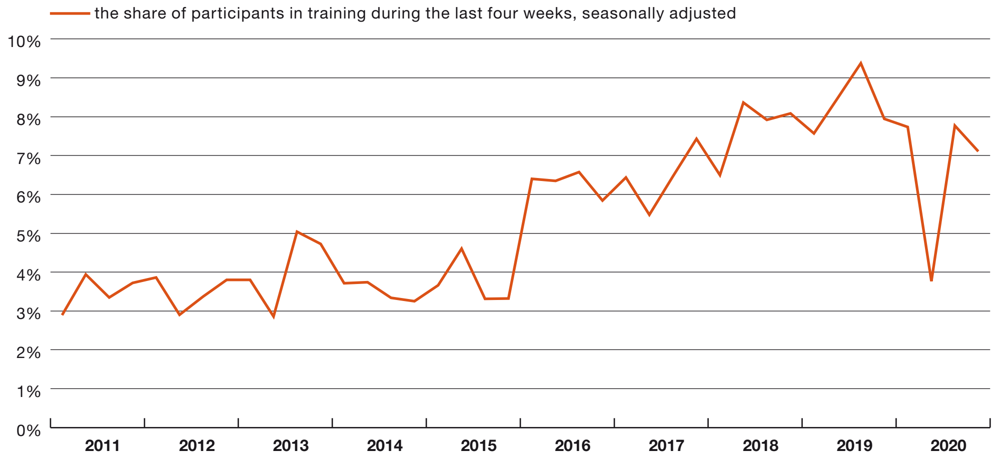
Figure B2.1. Participation rate in education and training 2019*



* Data on the four previous weeks
Source: Eurostat

the past five years has risen and it remained at its previous level during the pandemic crisis. The fall in participation in the second quarter of 2020 can be explained by the introduction of restrictions on training and further education (see Figure B2.2).

Figure B2.2. Participation in professional training



Sources: Statistics Estonia, Eesti Pank calculations

Analysis of data in the labour force survey 2011-2020 shows that employees who have an above-average position in the labour market are more likely to participate in professional training.

The probability of participating in training is determined above all by sector and wage level. Workers in areas connected to the public sector are more likely to attend training, as the requirements for additional training are often more strictly regulated there. The positions that stand out for participation in training are managers and senior professionals. The probability of participating in training also increases with the wage level.

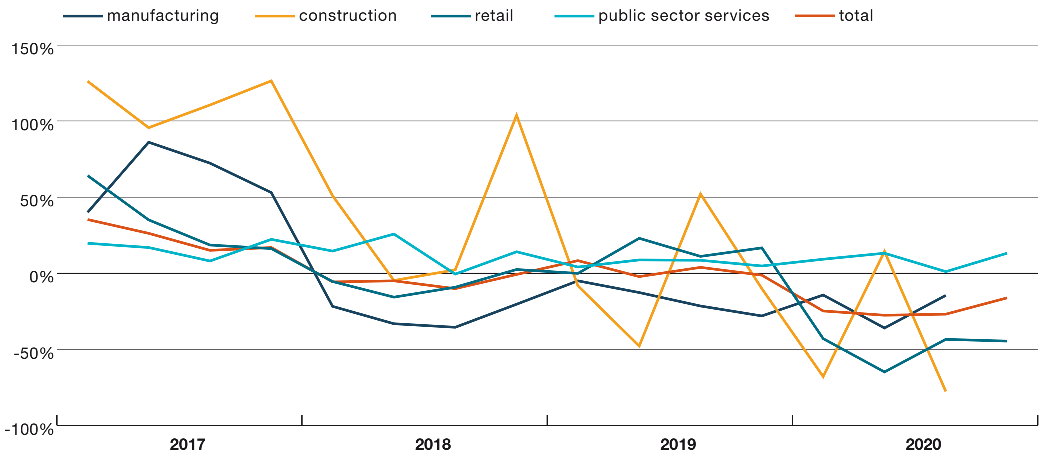
As might be expected, the level of education people have already attained is connected to their inclination to study further and so people with secondary and higher education are more likely to attend further training than those with a low level of education. Women are more likely to attend further training than men are, even given the other factors that affect participation. Some sectors where men are the majority of employees, such as construction, reduce the probability of participation in training, while areas where women are in the majority, such as healthcare and education, raise it. North-eastern Estonia is a regional exception, and Russian-speakers participate less in training.

Employees on lower wages have suffered more from the coronavirus pandemic and the region with the highest unemployment is north-eastern Estonia, partly because of changes in the mining and energy industries. People formerly employed in elementary occupations account for around a fifth of registered unemployment there. The statistics on participation in training show that people in these groups are less likely to participate in further training than other groups are. Reduced training in turn reduces flexibility and the options in the labour market and probably also the readiness and ability to change jobs if needed.

VACANCIES AND LABOUR MOBILITY

The labour mobility survey showed that the number of vacancies fell in 2020 by around a quarter (see Figure 16). There were fewer jobs available in almost all sectors, and only in the public sector were there more vacancies than in 2019. The number of vacancies in manufacturing had started falling in 2018 and 2019, but the fall in vacancies in retail and sectors serving the private sector, where there are frequently so few vacancies that data protection laws mean statistics cannot be published on them, was clearly a consequence of the coronavirus pandemic. There was no significant recovery in the second half of 2020.

Figure 16. Change in the number of vacancies

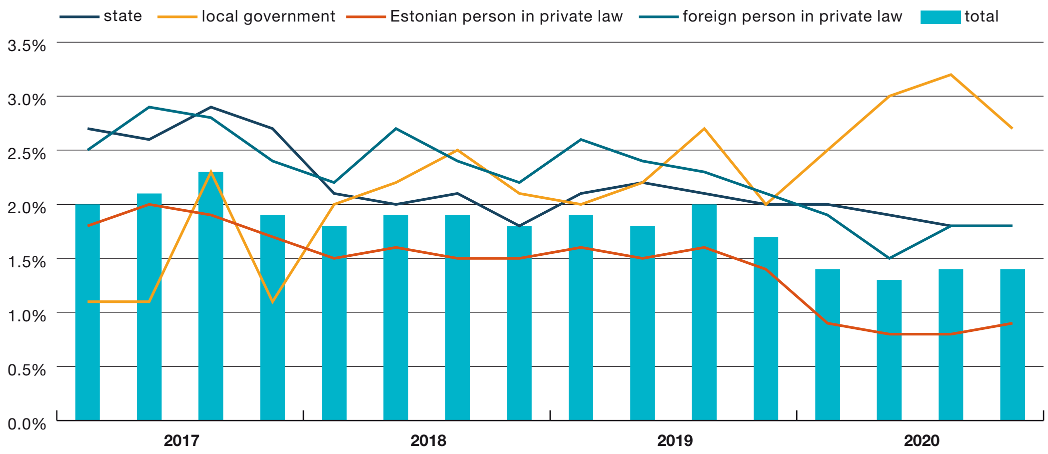


Sources: Statistics Estonia, Tax and Customs Board, Eesti Pank calculations.

The number of vacancies in the public sector mainly increased in local government administration (see Figure 17), while the vacancy rate in state administration was down a little. The number of vacancies in the private sector has remained high in foreign-owned businesses. It started falling in the first quarter of 2020 in Estonian private businesses, indicating that the low hiring rate may have had additional causes besides the coronavirus crisis.

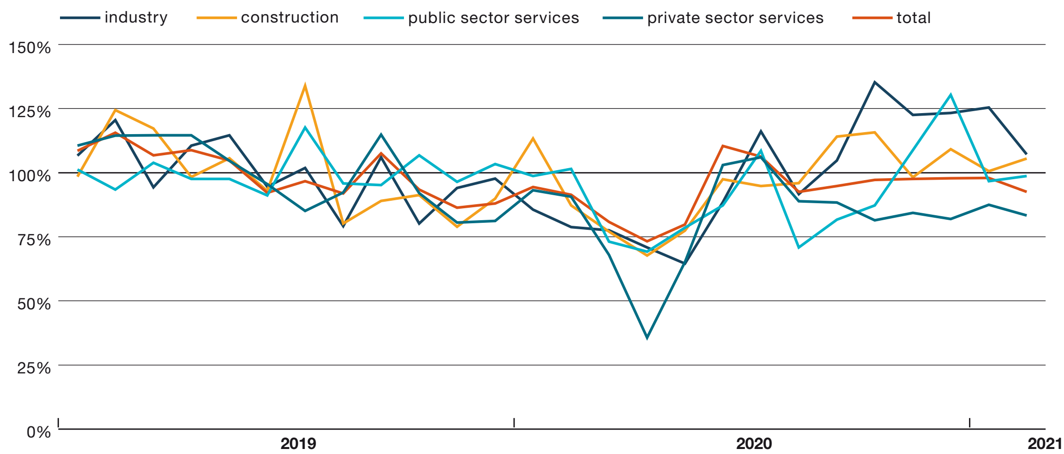
More optimistic signs about a recovery in vacancies are given by the number of vacancies intermediated by Töötukassa, which started to rise in yearly comparison in the second half of 2020. After the fall in the first half of the year, 28% more job offers were added in construction in the fourth quarter than a year earlier. This is in line with the relatively optimistic expectations for growth in employment of construction companies. There were also more vacancies added in manufacturing in both the fourth quarter of 2020 and the first months of 2021. The pause imposed by the restrictions resulted in a reduction in new vacancies on offer in accommodation and food service. The regions where vacancies have grown fastest have been Lääne-Virumaa, Järvamaa and Jõgevamaa.

Figure 17. Change in the number of vacancies by type of employer



Source: Statistics Estonia

Figure 18. The number of new vacancies mediated by Töötukassa, 2019 average = 100%

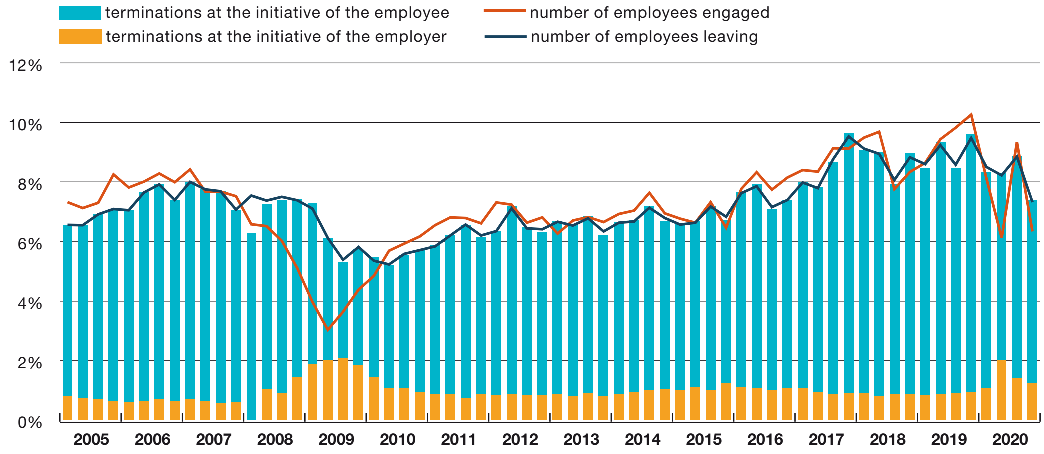


Sources: Töötukassa, Eesti Pank calculations

Labour mobility was very volatile last year, changing in response to the restrictions provoked by the spread of infection or to the opening of the economy (see Figure 19). There was a steep drop in the second quarter in the hiring rate for new employees, but in the third quarter it recovered as the economy opened up in the summer, and then it fell in the fourth quarter back to its level of the second quarter as the infection rate started to rise. At the same time the rate of employees leaving employment at the initiative of the employer fell, though in the second half of the year it remained above its average of recent years.

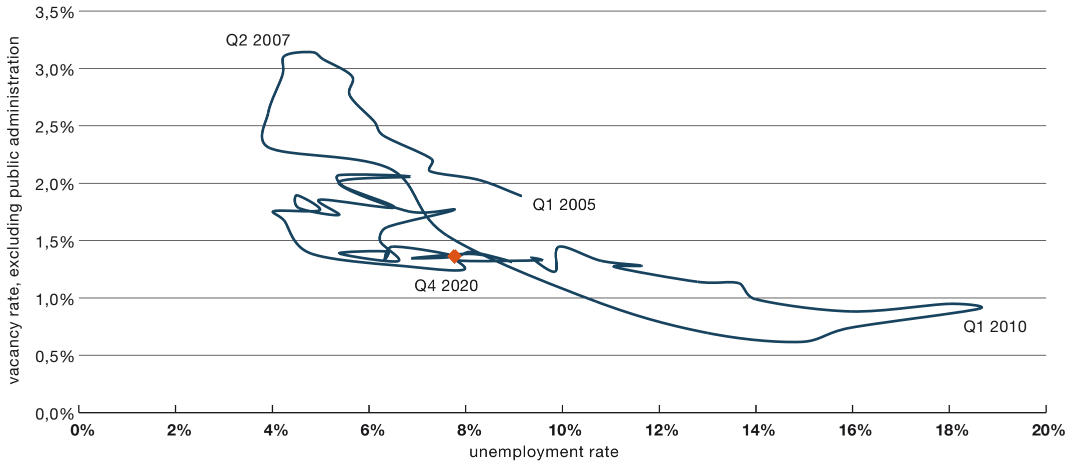
The relationship between vacancies and unemployment is inversely proportional, so that when the unemployment rate is high, vacant positions are scarce, and when unemployment is low, there are a lot of vacancies. This match between jobs and available labour is shown by the Beveridge curve (see Figure 20). During an economic crisis the curve moves downwards and to the right, as was seen in the coronavirus crisis of 2020. In recent years the point estimates of the Beveridge curve have moved closer to the zero point on the axes than during the previous economic cycle. This indicates that the match between jobs and available labour has improved.

Figure 19. Labour mobility, seasonally adjusted



Sources: Statistics Estonia, Eesti Pank calculations

Figure 20. The Beveridge curve



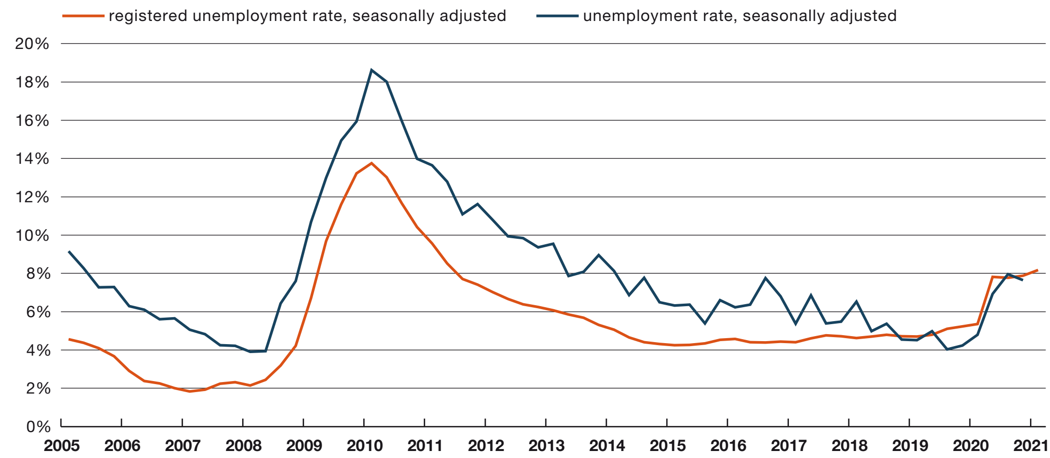
Sources: Statistics Estonia, Eesti Pank calculations

UNEMPLOYMENT

Demand for labour dropped sharply in the first wave of the Covid-19 pandemic in the second quarter of 2020 and in consequence the unemployment rate leapt up. As it was hard to look for work during the emergency situation and there was reduced hope of finding a job, some people who had lost their jobs left the labour market. The rise in unemployment was consequently smaller than the fall in employment. As the restrictions on business were eased in the summer months and the third quarter and the spread of the virus was brought under control, labour force participation also recovered and the unemployment rate rose mainly because jobseekers were returning to the labour market. Both the labour force survey and data from Töötukassa (see Figure 21) indicate that the unemployment rate remained more or less stable in the second half of the year once the usual seasonal fluctuations are accounted for. Unemployment rose to be higher in the autumn months than in the summer for seasonal reasons.

Although the registered unemployment rate and the unemployment rate estimated by the labour force survey have been about the same since the middle of 2018, the two indicators use different definitions of unemployment. The labour force survey definition is that an unemployed person is someone of working age who is not in work but is actively looking for work and is ready to start within two weeks. This review uses a broader definition of working age covering everybody aged 15-74. This definition is based on that of the International Labour Organisation (ILO) and so is comparable internationally.

Figure 21. Unemployment

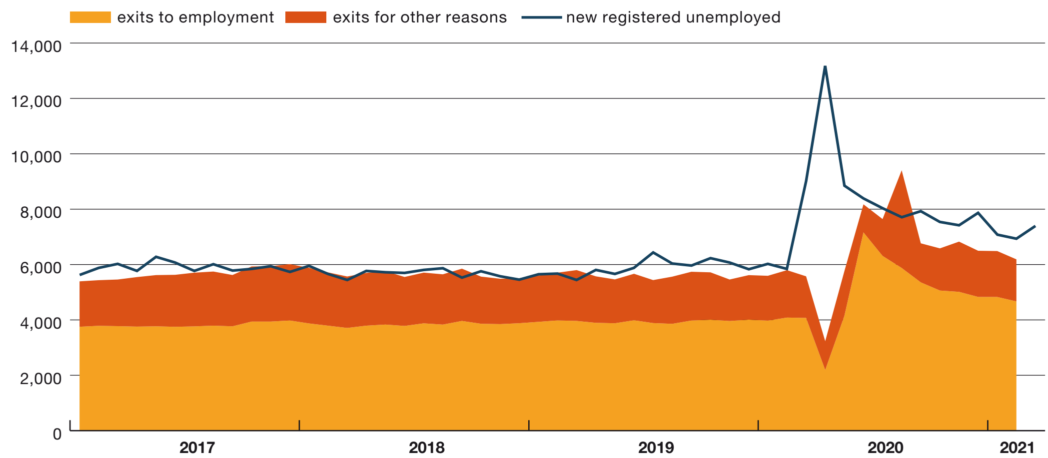


Sources: Statistics Estonia, Töötukassa, Eesti Pank calculations

People can register as unemployed with Töötukassa from age 16 until retirement age. Not all the unemployed register though, as they may believe that they can find a new job on their own, or they may have no right to unemployment benefits. Until 2018 the share of the unemployed in the sample of the labour force survey who had contacted Töötukassa fluctuated around 50%, but from 2019 it increased and by the end of 2020 it had reached around 73%. The registered unemployed do not necessarily meet the ILO definition of unemployment, as they may for example not be ready to start work quickly enough.

Flows into and out of registered unemployment show the inflow doubling during the crisis for one month, and although flows have been decreasing since then, there were still notably more people registering as unemployed each month than a year earlier (see Figure 22). The rise in the number registered as unemployed was accelerated in the spring not only by people becoming unemployed, but also by the sharp drop-off in hiring, though this picked up strongly again in subsequent months. Exits from registered unemployment for other reasons, such as studying, increased in August.

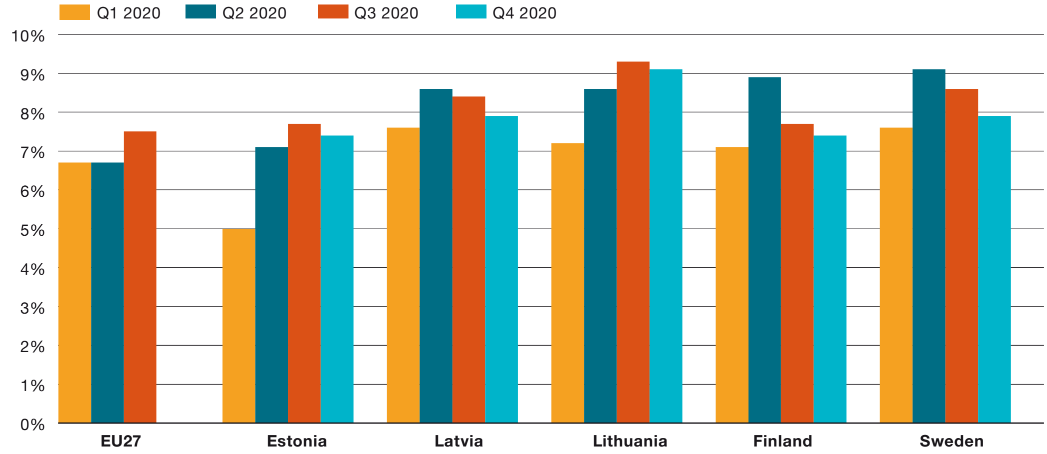
Figure 22. Registered unemployment flows, seasonally adjusted



Sources: Töötukassa, Eesti Pank calculations

Unemployment rose during the first wave of the virus by more in Estonia than in the countries of the European Union on average and there was then no major fall in the unemployment rate during the second half of the year, as also happened in Lithuania (see Figure 23). Of the countries in the European Union that have published employment data for the fourth quarter of 2020, Estonia had the biggest drop in employment from the first quarter of 2020 to the end of the year. Other countries alongside Estonia where employment had suffered more than the average by the end of the year, and so the unemployment rate was notably higher than before the crisis, were Lithuania and Spain.

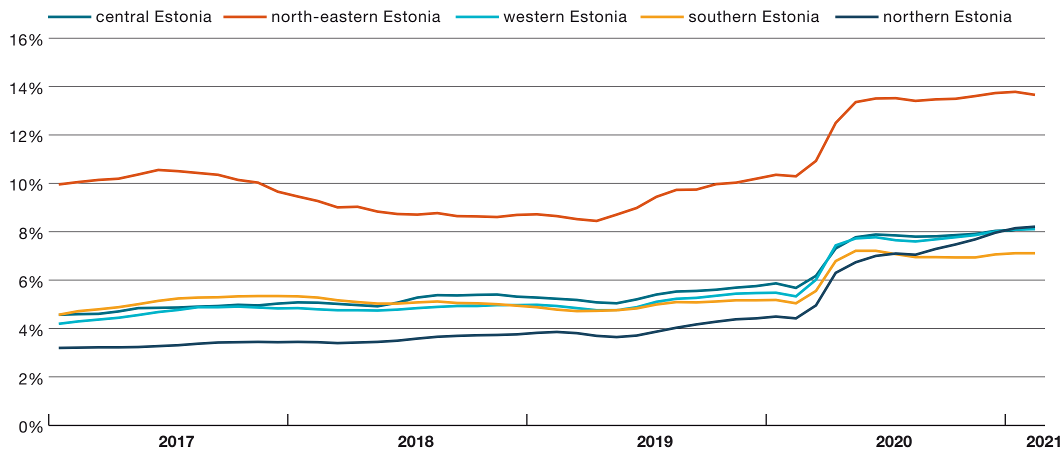
Figure 23. Unemployment rate in European countries in 2020



Sources: Eurostat, Eesti Pank calculations

The data on registered unemployment and those from the ILO show the regions where unemployment has grown faster to be Harjumaa and Ida-Virumaa. As there are very wide confidence bounds in the quarterly estimates of unemployment by region in the labour force survey, the number registered as unemployed is used here as a ratio to the estimates of the labour force in the labour force survey. The registered unemployment rate in Harjumaa reached 8.2% in February 2021, which was 3.8 percentage points higher than a year earlier (see Figure 24). Unlike in other regions, the registered unemployment rate continued to rise in Harjumaa in the second half of 2020. The rise in unemployment in Harjumaa, especially among residents of Tallinn, was driven by the drop in demand for labour in the service sector, which is very dependent on foreign tourism. The unemployment rate in Ida-Virumaa reached 15.5% in the final quarter of 2020 according to the labour force survey, having doubled over the year. The registered unemployment rate there was lower at 13.3%, but it rose by February 2021 to 14.5%. The crisis of competitiveness in the oil shale sector and the cooling in manufacturing had made the registered unemployment rate in Ida-Virumaa start rising in the middle of 2019. In other parts of Estonia the registered unemployment rate rose to be around two percentage points higher than before the pandemic.

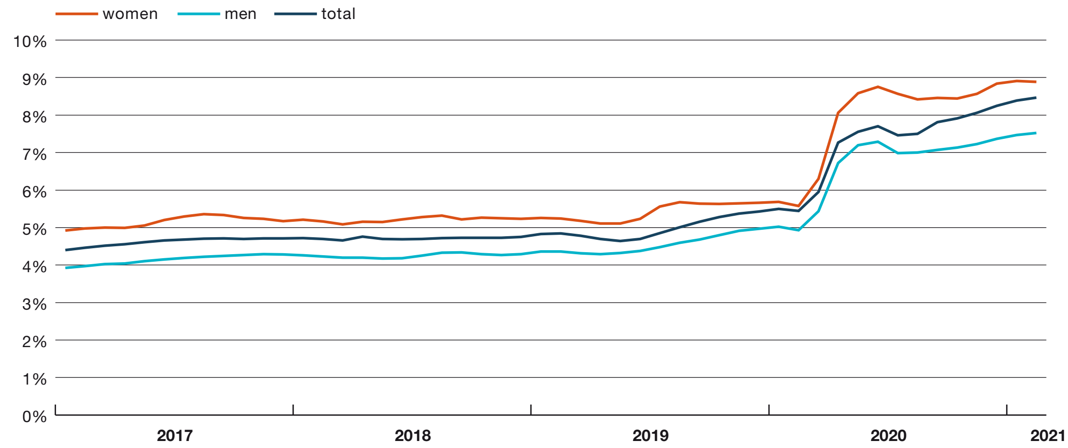
Figure 24. Registered unemployment rate by region, seasonally adjusted



Sources: Töötukassa, Statistics Estonia, Eesti Pank calculations

As unemployment dropped sharply in the first wave of the coronavirus crisis in the service sector, where women are in the majority among employees, the unemployment rate for women rose more at the start of the crisis than the rate for men did. The labour force survey shows that the unemployment rate for women came down a little in the final quarter of the year, while that for men rose, and for the year overall the unemployment rate for men of 7% was a little higher than that for women at 6.6%. The registered unemployment rate for women was 3.3 percentage points higher over the year and reached 8.9% by February 2021, while that for men rose by 2.5 percentage points and was 7.5% (see Figure 25). The registered unemployment rate has over time been consistently higher for women, which may be due to differences in behaviour, a lower probability of working unofficially and so an increased probability of receiving benefits, and a greater readiness to use the labour market services provided by Töötukassa.

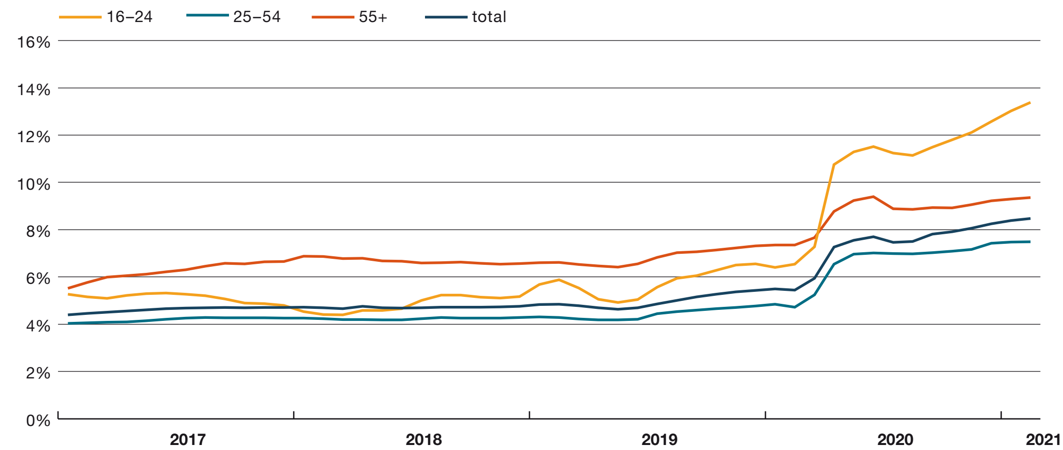
Figure 25. Registered unemployment rate by gender, seasonally adjusted



Sources: Töötukassa, Statistics Estonia, Eesti Pank calculations

The position of young people aged below 25 in the labour market is more sensitive to the economic cycle than that of people in their middle working years. The employment rate for the young rises by more than the average during booms, and in recessions youth unemployment rises by more than the average, and the same happened during the Covid-19 pandemic crisis. An average of 32% of young people were in employment in 2012-2014, while in 2018-2019 around 40% were. One young person in five was employed before the pandemic in accommodation and food service or in entertainment and leisure, and these were the sectors hit most by the crisis. The registered youth unemployment rate rose further in the second half of 2020, while the rate for those aged over 25 remained more or less stable (see Figure 26).

Figure 26. Registered unemployment rate by age group, seasonally adjusted

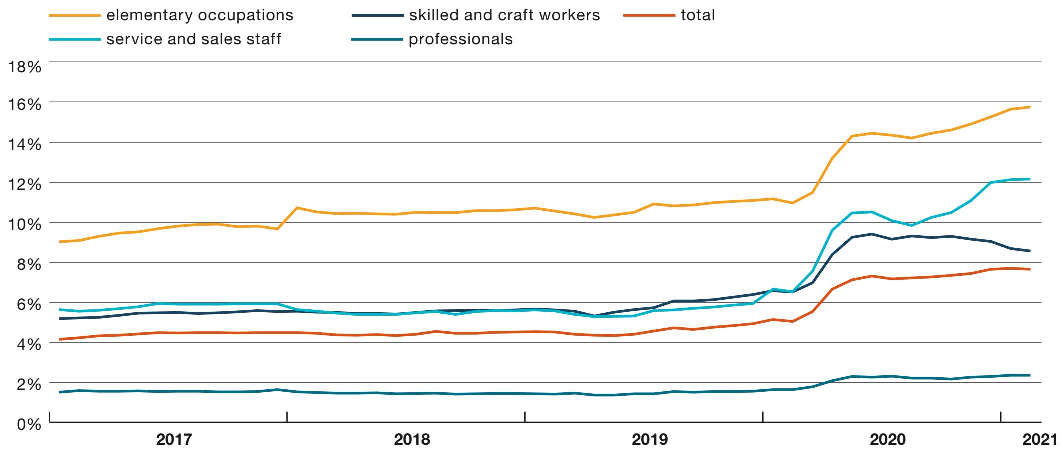


Sources: Töötukassa, Statistics Estonia, Eesti Pank calculations

The labour force survey shows that the unemployment rate for those aged over 50 rose by about the same amount as the rate for those in their middle working years, while the registered unemployment rate for them rose a little more modestly. This can partly be explained by the structure of employment, as there are more people working in education and health among those aged over 50 than among those in the middle working years, and employment did not fall in those sectors during the pandemic, while a smaller share of the older workers are employed in accommodation and food service. There is also a smaller share of the older workers employed in information and communications, which did relatively well during the pandemic. Social insurance benefits make it easier for those over 50 to exit the labour market during a recession than it is for the young, though the labour force survey finds only minor growth overall in the flow of people in this age group from unemployment into inactivity.

The nature of the coronavirus pandemic crisis meant that the recession was felt differently in different sectors and also by employees in different jobs. The growth in unemployment in different occupations can be approximated by taking the occupations people previously worked in and comparing the total number employed in that position currently and previously. It should be noted that this indicator does not cover those looking for work who did not previously have a job or whose previous occupation is not covered by the data, and of course people can find jobs that do not exactly match their previous work experience and previous occupation. The most jobs have been lost in the service sector and so the number of registered unemployed has increased most for service and sales staff (see Figure 27). The unemployment rate for the unskilled is consistently high and is also more sensitive than the average to changes in the economic cycle. A little more than a tenth of those aged under 25 or over 50 are employed as unskilled workers.

Figure 27. Registered unemployment rate by job type, seasonally adjusted



Sources: Töötukassa, Statistics Estonia, Eesti Pank calculations

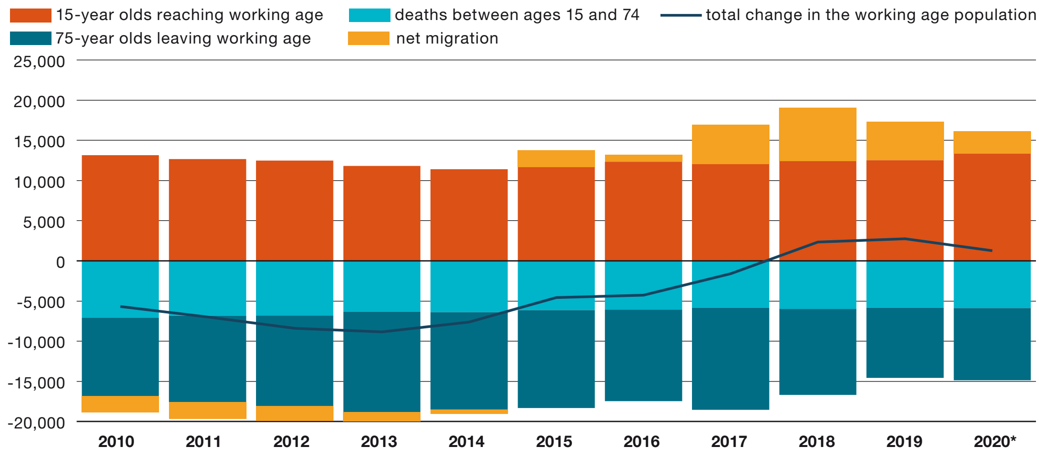
The risk of unemployment falls as the level of education rises. There are very few former professionals registered as unemployed as a ratio to professionals in employment, and the unemployment rate is also low for people with higher education. This is partly because of young people entering the labour market before they have completed their higher education, as many of them are looking for their first job and so their unemployment rate is very high. The pandemic caused unemployment to rise for people with all levels of education, but by more than the average for those with lower levels of education and by less than the average for those with higher education.

LABOUR SUPPLY

The supply of labour within Estonia is defined by the number of people of working age permanently resident in Estonia who are either in employment or actively looking for work and able to work. This means the labour supply depends partly on the number of people of working age, and partly on the readiness of those people to participate in the labour market. The lag in population statistics means that the Estonian labour force survey uses the population as at 1 January in extrapolating its estimates, and so changes in migration and mortality enter the labour market estimates with a lag.

There are several population processes that affect the number of residents of working age in Estonia (see Figure 28). The natural change is defined by how many young people reach working age and how many people reach retirement age, and the mortality of people of working age. For the broadest definition of working age, the number of people of working age is affected by the numbers approaching the ages of 15 and 75. The number of births in Estonia was higher in 2007–2010, and so the number of young people reaching working age is expected to rise in the coming years. Equally, it is the small birth cohorts born immediately after the Second World War that have been reaching the age of 75 in recent years, and the number reaching retirement age will in future rise. The effect of the population structure will peak in 2021, and afterwards the number of people of working age will start to fall. The number of people of working age is not only affected by the population structure, but is also raised by steadily declining mortality. The Covid-19 pandemic did not have any great impact on mortality in 2020.

Figure 28. Change in the working age population aged 15–74

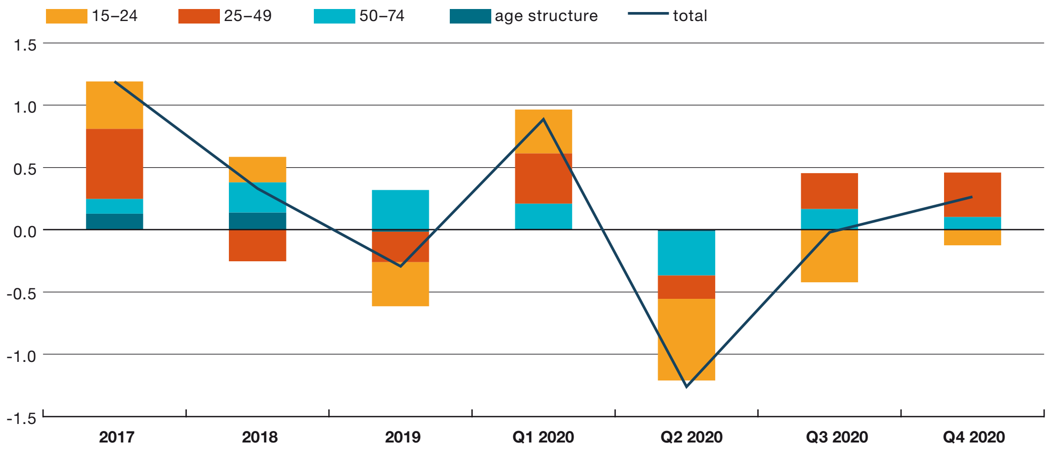


* projection
Sources: Statistics Estonia, Eesti Pank calculations

The labour force in Estonia has been increased in the past six years not only by natural changes but also by a positive migration balance. Initial estimates based on migration registered with Statistics Estonia show the Estonian population grew because 3000 more people came to live in Estonia than left to go abroad, which is less than the registered migration in previous years. The pandemic has significantly affected migration as the closure of international borders to stop the spread of the virus made it much harder to move to live and work abroad. At the same time the situation in the Estonian labour market worsened, reducing the chances of finding a job in the country. However, the restrictions introduced by Estonia were much looser than those in Western European countries, and this together with the increased ability to work from home may boost return migration. It is probable that emigration declined together with immigration, as moving to study abroad or to find work there became more complicated.

Besides the number of people of working age, the willingness of those people to participate in the labour market affects the supply of labour. The labour force participation rate fell in the second quarter of 2020 by 1.3 percentage points, but this was a temporary consequence of the crisis, and labour force participation recovered in the second half of the year (see Figure 29). On average 72.4% of working-age residents were working or looking for work in the second half of 2020, which was about the same as in the second half of 2019.

Figure 29. Contributions to the yearly change in the participation rate by age

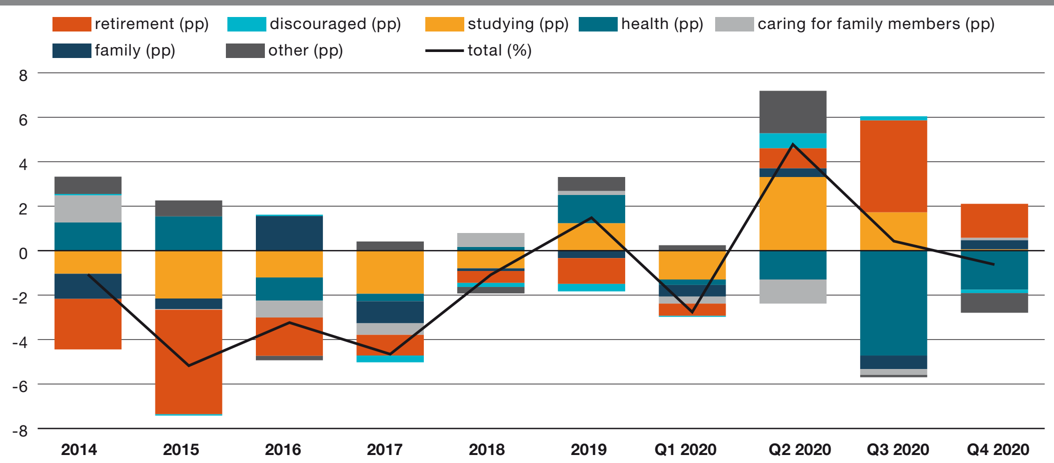


Sources: Statistics Estonia, Eesti Pank calculations

Regions where labour force participation fell in 2020 were Harjumaa and Ida-Virumaa, where the labour force participation rate was lower in the second half of the year than in the previous year. The crisis affected the labour force participation of women more than that of men. In the second half of the year participation rates for women and for men were not much different from what they were a year earlier. A member of a household who is outside the labour market may decide to participate in the labour force during an economic crisis because the main earner in the household is at increased risk of losing their job.

After falling quite broadly in the second quarter during the emergency situation, labour force participation recovered in the second half of the year, particularly because of a rise in the participation rate of people in their middle and later working years. Participation by younger people was lower in the second and third quarters than a year earlier because of the crisis, which is in line with the fall in demand for labour in precisely those sectors where people aged 15-24 often work, notably in seasonal jobs in tourism, accommodation and food service. As young people often work at the same time as studying, their non-participation in the labour market also meant that the number who were inactive because of studies rose (see Figure 30). Alongside those who are inactive because of studies, the number of people who exited the labour market because they reached retirement age rose in the second half of 2020, having generally been falling in previous years. Surprisingly though, there were fewer people who stayed out of the labour market because of disability and health, especially among those aged 25-49.

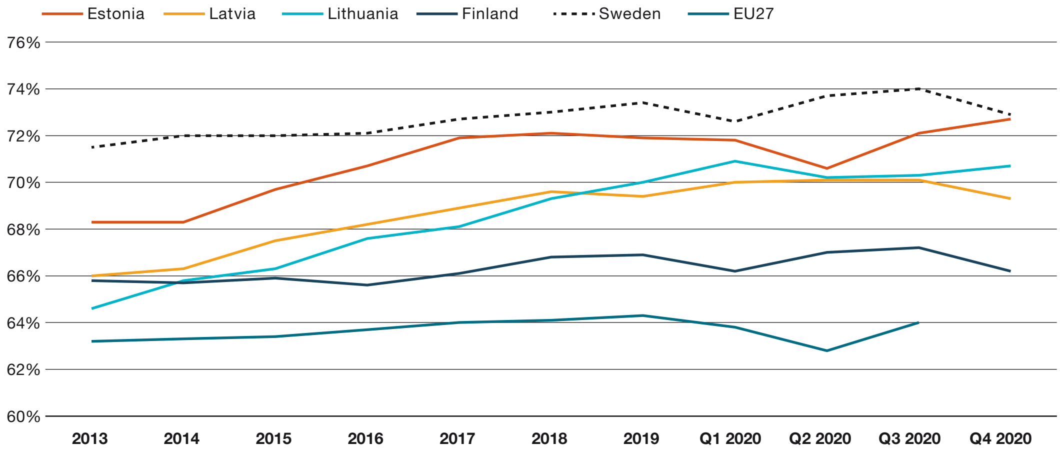
Figure 30. Yearly change in the number of non-participants



Sources: Statistics Estonia, Eesti Pank calculations

Like it did in Estonia, the labour force participation rate fell at the start of the coronavirus crisis in most other countries in the European Union (see Figure 31). The fall did not last for long as activity in the labour market increased in the second half of the year. This can be seen in changes to the average figure for the European Union, where the states from Western Europe have a heavier weighting. A fall in the labour force participation rate can be seen in Finland among Estonia's neighbours, while there were no major changes in the other countries.

Figure 31. Labour force participation rate, 15–74



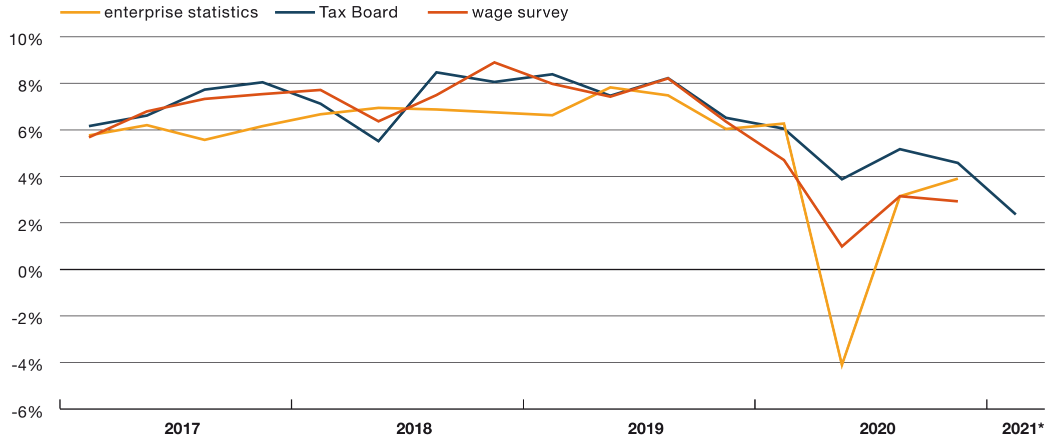
Source: Eurostat

THE COST OF LABOUR AND PRODUCTIVITY

AVERAGE WAGES

After a sudden stop in the second quarter of 2020, wage growth picked up in the second half of the year (see Figure 32). Even so, wages rose notably more slowly in the second half of the year than they did in 2019, which is in line with the fall in demand for labour. The rate of rise in the full-time equivalent gross monthly wage increased from 1% in the quarter of the crisis to 3% in the second half of the year. Data from the Tax and Customs Board and from the enterprise statistics showed wage growth slowing similarly. Unlike the other data sources, the enterprise statistics did not include the wage subsidies that mainly came in the second quarter.

Figure 32. Yearly change in the average wage



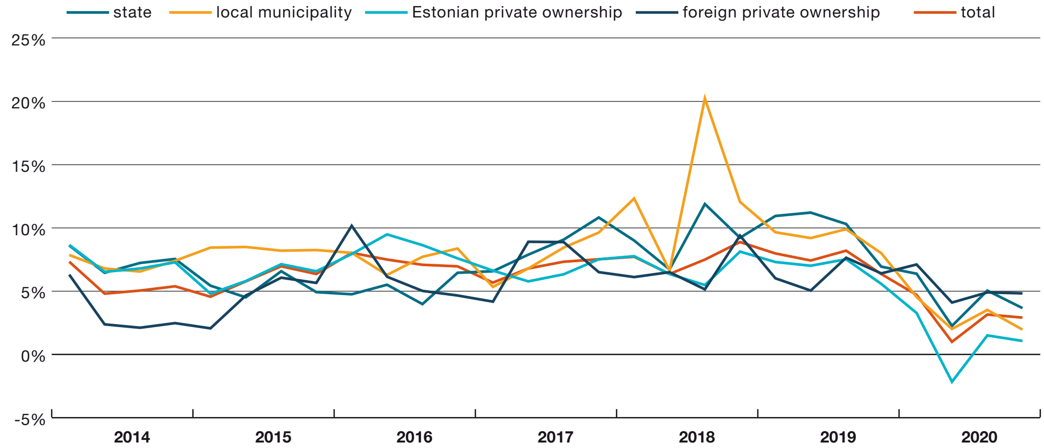
* Q1 2021 proxied by February
Sources: Statistics Estonia, Tax and Customs Board, Eesti Pank calculations

The growth in the full-time equivalent average monthly wage has in earlier years been very similar to the growth in the average declared wage income. The difference between the estimates of wage growth from the Tax and Customs Board and from the wage survey widened in early 2020, which is largely due to the wholesale and retail sector. The wage survey found that the average wage in wholesale and retail fell, but this is not indicated by the data from the Tax and Customs Board. The seasonally adjusted average wage in the second quarter of 2020 was 2.2% lower than in the first quarter according to the wage survey, and was 3.8% higher in the third quarter than in the second. Although the average gross monthly wage is quoted as full-time equivalent, the calculation for it only makes adjustment for part-time work, and not for changes in the current hours worked by full-time employees. The average hourly wage also grew more slowly over the year, but the change was smoother than that for the monthly wage. The wage subsidy scheme introduced for the first time makes it hard to be sure how much of the slower growth in the average monthly wage was due to the fall in hours worked per employee, which reached 5.1% in the second quarter.

By ownership of employer, wage growth was slowest in the second half of 2020 at Estonian-owned companies (see Figure 33), but this was probably affected above all by the fall in wages in retail. Growth in wages in the public sector was perceptibly slower than in earlier years, even though demand for labour and workloads were increased in education and healthcare because of the pandemic. The average wage rose fastest in the second half of 2020 at foreign-owned private companies. This is probably because of the size of those companies and their sectoral structure.

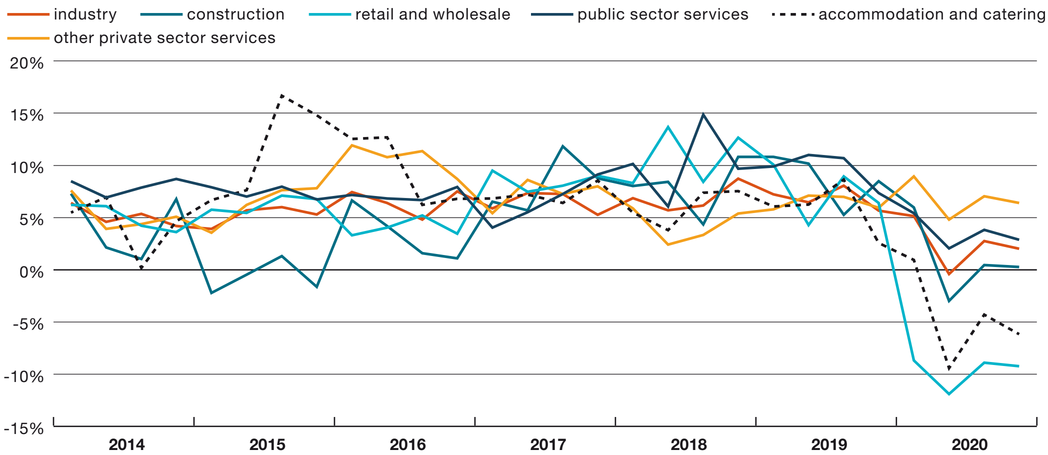
The sector where wage growth was slowed most by the crisis was accommodation and food service, where wages were around 5% lower in the second half of 2020 than they were a year earlier (see Figure 34). Wage statistics show that wages fell further in retail than they did in accommodation and food service, but

Figure 33. Wage growth by type of ownership



Sources: Statistics Estonia, Eesti Pank calculations

Figure 34. Wage growth by sector



Sources: Statistics Estonia, Eesti Pank calculations

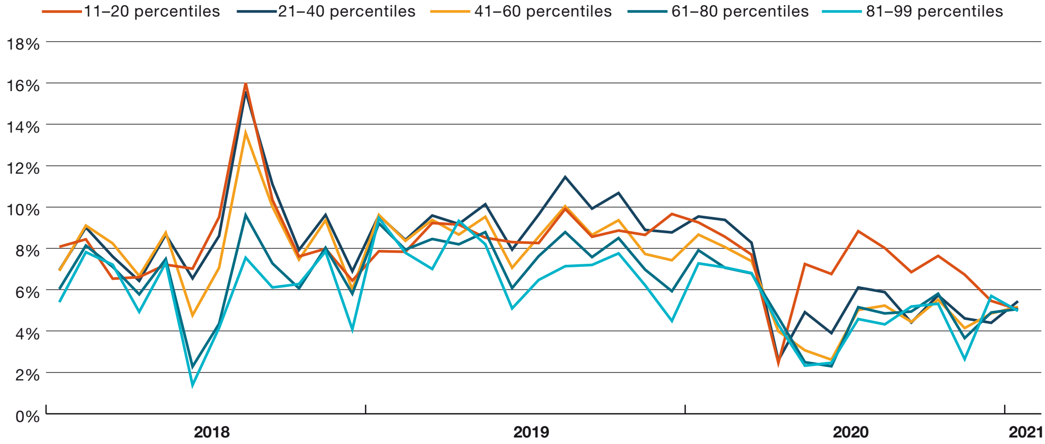
this is not confirmed by the data from the Tax and Customs Board on declared wages paid out, and so it is probable that there was a structural change. Although the crisis was considered to have hit particularly hard in the service sector, wages in the sector actually grew quite quickly if accommodation and food service and retail are excluded. Wage growth accelerated in information and communications, finance and insurance activities, and professional, scientific and technical activities. Wages rose slowly though in administrative and support activities and in arts, entertainment and leisure, which were affected more than the average by the measures taken against the coronavirus.

As the data on the ownership of employers showed already, the average wage rose more slowly in the public sector too, including in education and public administration, and particularly so in healthcare.

Manufacturing suffered during the crisis from restrictions on movement and problems in the operation of supply chains, while the reduction in demand for labour in construction in 2020 is illustrated by the statistics on wages paid out, the fall in the number of foreign workers, and the weak expectations that companies have for employment. Wage growth slowed notably in both sectors during the year, and the average wage in construction was at the same level as a year earlier in the second half of the year.

Statistics on the distribution of wages paid out taken from the declarations submitted to the Tax and Customs Board show that wages in the lower part of the distribution fell at the start of the crisis (see Figure 35). This was followed a month later though by a slowdown in the higher part of the distribution,

Figure 35. Yearly change in the average declared wage across the wage distribution

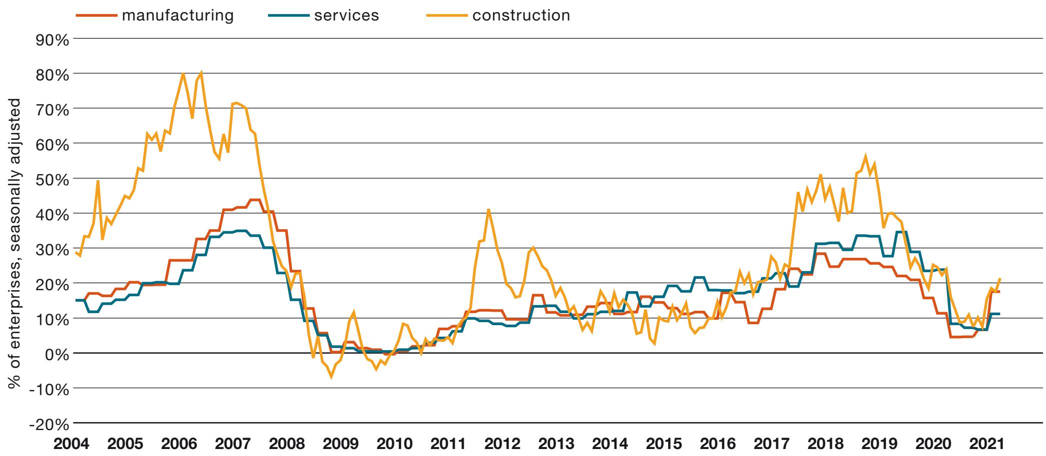


Sources: Tax and Customs Board, Eesti Pank calculations

while wage growth recovered in the lowest percentiles. This recovery occurred because the minimum wage falls between the 11th and 20th percentiles and rose by 8.1% over the year. The rise in the minimum wage in 2020 lifted the ratio of the minimum wage to the median wage paid out by 1.5 percentage points from 48.7% to 50.2%. Around 6-8% of those receiving wages in recent years have been paid within a band of 5% more or less than the minimum wage. This share declined slightly in 2019, but it increased a little in 2020.

Upwards pressure on wages is greater when employers feel more pressingly that labour shortages are restricting the expansion of output. Surveys by the Estonian Institute of Economic Research show that companies were already feeling labour shortages less in 2019. This was because activity was reduced in the industrial sector while labour shortages were eased by simpler rules for hiring short-term workers from outside the European Union. The increase in the amount of labour available in the labour market together with the lack of demand becoming a fundamental problem together eased wage pressures substantially. This does not mean though that there will not be shortages in some segments of labour with particular skills. There was a rise in the second half of 2020 in the share of employers citing labour shortages as a factor hindering output, but this share was still quite small compared to what it was before the crisis (see Figure 36).

Figure 36. Labour shortages as the main factor limiting production

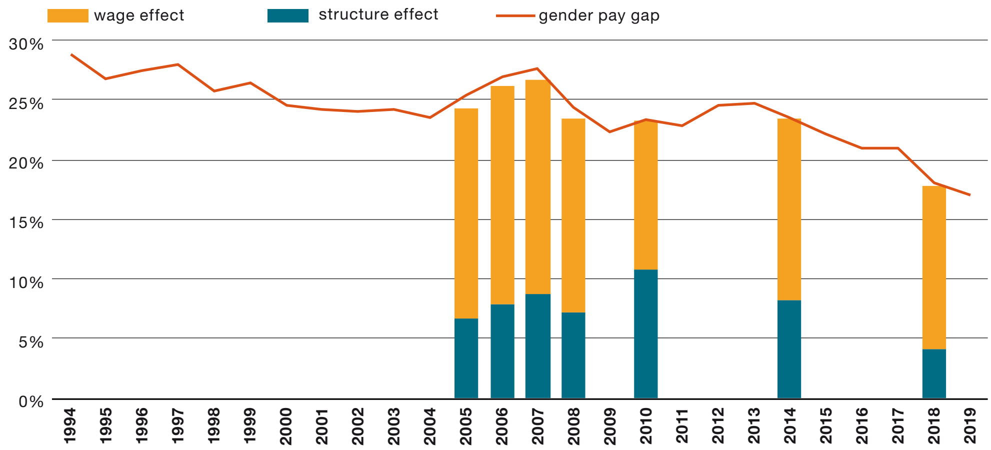


Source: European Commission

Box 3: Reasons for the gender wage gap narrowing

The gender wage gap in Estonia has narrowed over the years. The wage gap between men and women was around 20% of the wage for men during the real estate boom in 2007, but in 2019 it was 17% of the wage for men (see Figure B3.1). The average gender wage gap in the European Union is a little smaller[5]. Once every four years a detailed wage survey is published that allows for analysis of how much of the wage gap comes from people working in similar jobs being paid different wages, and how much comes from women working in jobs that are on average less well-paid. The most recent survey in 2018 showed that women earned on average 1.4 euros less per hour than men did. A little more than a euro of this came from differences in wages for jobs with the same identifying code, marked as the wage effect in Figure B3.1, and the rest came from men and women working in different jobs, marked as the structure effect. This structure effect has narrowed over the years.

Figure B3.1. The gender pay gap and sources of it



Sources: Statistics Estonia, Eesti Pank calculations

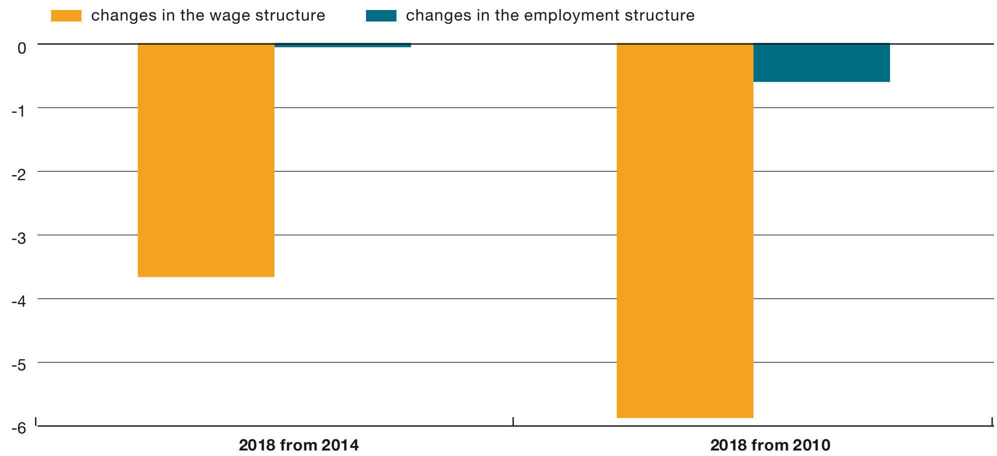
The decomposition of the wage gap uses the average of the Paasche and Laspeyres indexes to make the average estimate of the impact less dependent on the methodology chosen[6]. It should be noted with the calculations that wage differences within jobs with the same code depend on the level of aggregation of the data, and occupations are observed here using four-digit codes. Jobs having the same code does not necessarily mean that the work is the same. Wage differences within occupations do not directly show a gap between the wages paid for the same job, but show the wage difference which arises from men and women working in different jobs within the same occupation. Analysis at the level of aggregation observed here still allows general trends that affect the gender wage gap to be noted though.

The wage gap has narrowed primarily because wages have risen faster than the average in those jobs where more women work (see Figure B3.2). Changes in the structure of employment, reflecting the movement of men and women between different occupations, have however had relatively little impact on the gender pay gap. As changing occupation is difficult, then this result is to be expected.

5 The figure for the wage gap published by Eurostat shows a much larger wage gap in Estonia. The estimate by Eurostat is based on a different type of sample though and does not consider small companies, which are quite important in a small country like Estonia. The estimate of the wage gap used here covers the whole economy.

6 For more on the decomposition method see Labour Market Review 1/2014.

Figure B3.2. Sources of changes in the gender pay gap



Sources: Statistics Estonia, Eesti Pank calculations

Three factors can be identified in the change in the wage structure that have particularly affected the gender wage gap.

1) Wages in some areas have risen additionally because of political decisions.

2) Technological development has changed the wage structure and probably also the nature of the work in some occupations.

3) Economic development has been more stable than previously in the past decade.

The most obvious of the political factors is the rise in wages for people working in education. As a large share of teachers are women, faster rises in wages in education have narrowed the gender pay gap. The wages of carers among others have also grown faster than the average. The rise in the minimum wage also appears to have had a significant impact in narrowing the gender wage gap, as women work more than men in low-paid jobs. This could explain why the wages of shop assistants and cooks for example have risen faster than the average.

Developments in information technology have changed jobs in the financial sector, where women are mostly employed. There are now fewer accountants and bank clerks in consequence, but their wages have risen faster than the average and this has reduced the wage gap.

A large part of the wage gap in the past came from jobs in construction, and a large part of the wage gap caused by the real estate boom in 2007 was due to the construction industry. As the development in the economy has been more stable over the past decade, wages for jobs in construction where men mostly work have risen more slowly than the average.

Overall the gender wage gap has narrowed primarily because the jobs where women predominantly work have started to be better rewarded financially.

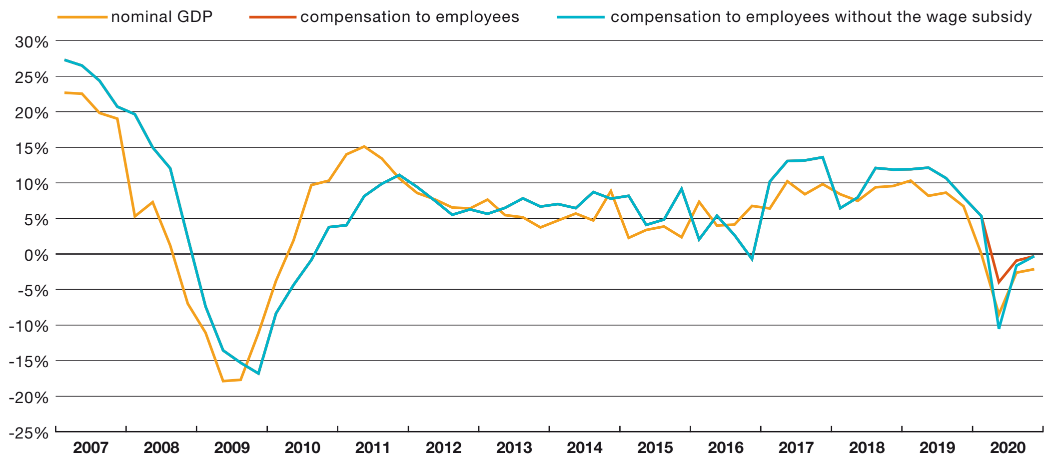
PRODUCTIVITY AND UNIT LABOUR COSTS

There are two reasons why labour productivity and labour costs as a share of value added fluctuate over the economic cycle. The first is that it takes companies time to adjust the number of employees to match reduced production volumes. Secondly they may see a fall in production as temporary and as it is expensive to hire and train employees, it is frequently wiser to hang onto employees even during a recession.

Demand for the output of businesses falls at the start of an economic crisis, but the number of employees is the same as during better times, meaning that their productivity measured as value-added per employee falls. This does not mean that production technology has become less efficient, but that labour is being exploited less fruitfully. Growth in the Estonian economy was slowing before the coronavirus crisis started, and it turned negative in the first quarter of 2020. The pandemic hit the economic results for March, though the main impact of it fell in the second quarter. Labour productivity fell cyclically by 2.6% in the first quarter of the year and by 3.6% in the second quarter. The temporal shift in the recession and the fall in employment were quite short, which may be because of the nature of the crisis. Economic activity revived in the second half of the year, but without any equivalent growth in employment, meaning that value added per employee was higher in the second half of the year than a year earlier.

Companies faced with falling demand can claw back labour costs from the number of employees and from wage rates. Nominal wages are considered to be fairly sticky, as they can only be cut unilaterally in exceptional circumstances and for a limited time. Growth slowed in the payroll of the whole economy in the first quarter of 2020 and went into reverse in the second quarter. This was mainly because employment fell and the payroll per employee also fell by 0.7% in the second quarter (see Figure 37). The payroll includes the wage subsidies, meaning that labour costs for the employer fell by more than profits did.

Figure 37. Compensation to employees and nominal GDP growth

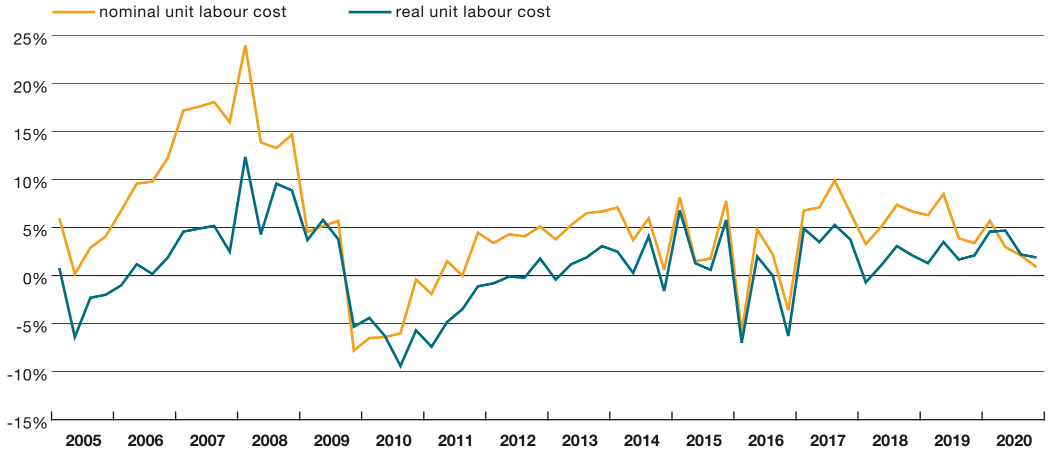


Source: Statistics Estonia

Comparing labour costs to productivity gives unit labour costs, or the cost of labour per unit of value added produced. Unit labour costs rise at the start of a crisis, as labour costs cannot be cut but labour productivity falls. Real unit labour costs rose in the first half of 2020, but the rise was moderate in historical terms, and in the second half of the year the rise slowed (see Figure 38).

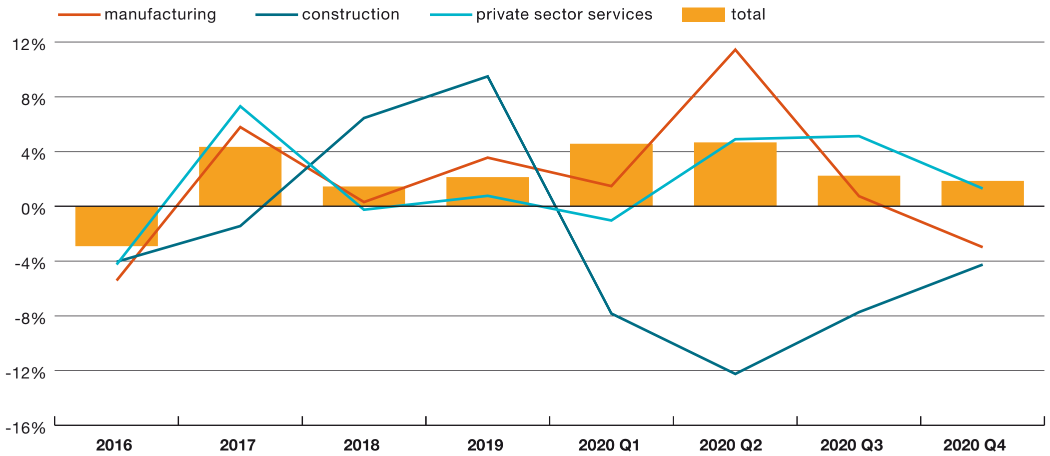
Manufacturing was the sector that saw real unit labour costs rise most during the coronavirus crisis (see Figure 39). This is reasonable given that manufacturing employs more workers with company-specific skills that it is expensive to re-hire later after a temporary fall in demand. Unit labour costs in construction had risen strongly before the crisis and the halting of construction projects led to a sharp reduction in wage growth and a fall in employment.

Figure 38. Growth in unit labour costs



Source: Statistics Estonia

Figure 39. Growth in real unit labour costs by sector



Sources: Statistics Estonia, Eesti Pank calculations