



EUROSÜSTEEM

LABOUR MARKET REVIEW

2
2020

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.

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SUMMARY

After a steep drop in employment and a sharp rise in unemployment in the second quarter of 2020, the labour market remained stable during the summer. It is now known that the contraction in the Estonian economy in the first wave of the coronavirus pandemic was smaller than those in the majority of European countries, and the labour market performed as in the more optimistic scenarios. Some indicators of economic activity showed signs of recovery after the measures taken to stop the spread of the coronavirus were lifted in the summer, with the fall in employment and the rise in unemployment slowing.

Given the extent of the economic contraction though, the rate at which employment fell in the second quarter in Estonia was one of the highest in the countries of the European Union at between 2.3% and 3.6% depending on which source of data is used. The labour market reaction was strong despite the dampening effect of the swiftly introduced wide-ranging wage compensation scheme to preserve jobs. Data from the Tax and Customs Board showed that the turnover at companies that used the wage compensation fell by much more than at those that did not use it. The larger fall in turnover was not followed in the third quarter by substantially larger job cuts.

All the data sources indicate that the service sector suffered more from the coronavirus crisis than the industrial sector did, especially areas connected to tourism like accommodation and catering. Registry data show though that employment fell in the industrial sector over the year by about as much as it did in the service sector. This was because the industrial sector had started cooling in the second half of 2019 and early 2020, before the virus crisis erupted.

That companies cut jobs to a much lesser extent than their output declined is shown by the substantial fall in the number of hours worked per employee. Working time was reduced by as much as it was at the start of the financial crisis in 2007-2008, which probably reflects the impact of the wage compensation measure.

The coronavirus crisis is unusual because there is not a direct one-to-one relationship between the reduction in jobs and the rise in unemployment. Labour force participation decreased in Estonia and many other European countries. This may be partly a consequence of the restrictions brought in to stop the spread of the virus and of fear of infection, which can hinder participation in the labour market. Equally, a large share of the seasonal jobs in the service sector were not created this spring, and these are the jobs where young students usually work.

The labour force survey showed that unemployment increased during the crisis to 7.1% in the second quarter of 2020 from 5% in the previous quarter. The monthly unemployment data published by Eurostat, which are based on the same labour force survey, indicate a further rise in unemployment to 7.7% in the third quarter. Registered unemployment rose to a similar extent and remained relatively stable from June to October at 7.6-7.8%. This is because the flows into and out of registered unemployment were in balance even though they were much larger than before. Hiring picked up in the third quarter, which is confirmed by the rise in the number of job advertisements in the Töötukassa database and the improved expectations of employers for employment.

Weaker demand for labour and an increased amount of available labour caused wage growth to slow in the second and third quarters. The growth in the average full-time equivalent wage calculated from the wage survey slowed more sharply though than that in the average monthly wage declared in the data of the Tax and Customs Board. These data showed that the growth in wages recovered somewhat in the third quarter, but remained slower than before the crisis. The wage subsidy measure made up 11% of the total compensation to employees in the non-financial private sector in the second quarter, but estimating the actual impact of the measure will require a lot of research work in future.

As demand for labour depends on the performance of businesses, which in turn depends on the further costs of the coronavirus pandemic and the measures taken to stop its spread, it is hard to forecast the future development of the labour market. The recovery in the summer may have been affected by the seasonal peaks of many parts of the service sector, when many companies usually earn most of their revenues for the year. Less profit was earned this summer than usual, which may lead companies facing

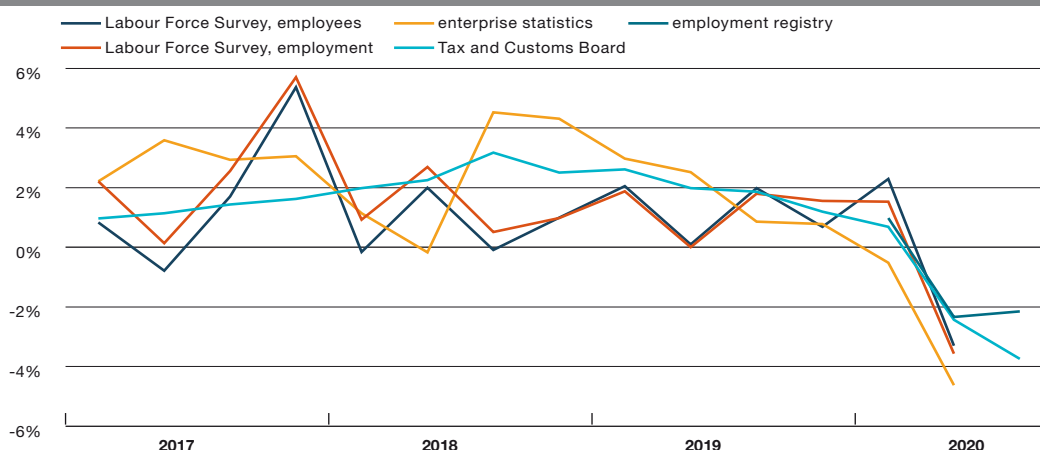
the off-season and possible further restrictions with smaller buffers to cut their staff numbers further. The government has decided not to continue paying the wage subsidy, so efficient social insurance measures will become more important as they can help those who lost their jobs to update their skills and knowledge and find new work.

DEMAND FOR LABOUR

EMPLOYMENT

Employment of permanent residents at companies located in Estonia was down in the data of the labour force survey by 3.6% over the year as a consequence of the coronavirus crisis, despite the wide-ranging package of assistance. Data from the Tax and Customs Board showed the number receiving a declared wage was 2.4% lower in the second quarter than a year earlier. The number of employment contracts registered in the employment register showed a similar fall of 2.3% (see Figure 1).

Figure1. Change in the number of employees by different data sources

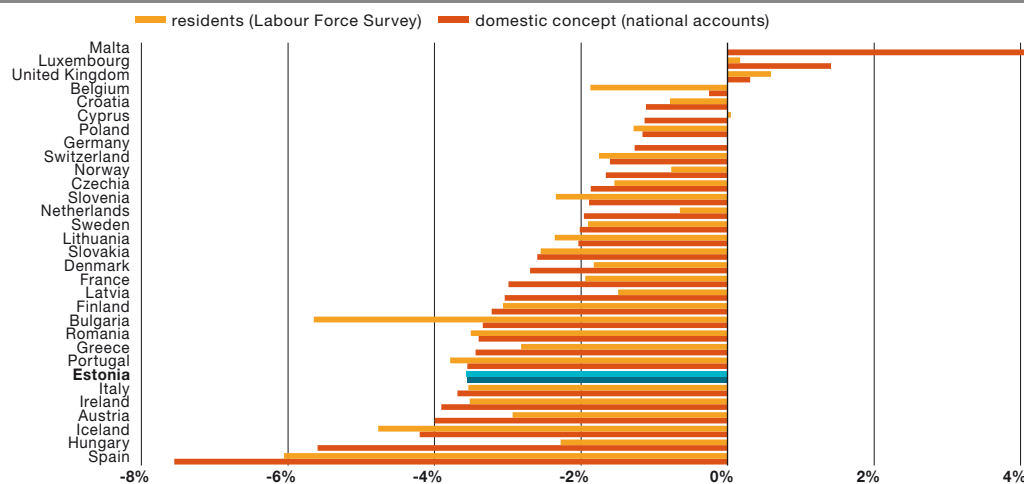


Sources: Statistics Estonia, Tax and Customs Board, Eesti Pank calculations

The Tax and Customs Board data show that the number receiving a wage fell further in the third quarter and was 3.7% lower than a year earlier, while the employment register shows that employment stopped falling quarter on quarter. As the number of permanent residents in employment fell, so did the number of short-term workers hired from outside the European Union, as 16% fewer were working in the second quarter of 2020 than a year earlier, and 25% fewer in the third quarter.

Employment in Estonia fell a little more than the average in European countries. Figure 2 shows the change in employment in the second quarter of 2020 in European countries from the harmonised labour force survey, which shows employment of residents, and the change in domestic concept employment, which covers companies and institutions based within the given country.

Figure 2. Yearly change in employment in European countries in Q2 2020



Sources: Eurostat, Eesti Pank calculations

The coronavirus crisis is already deeper in several European countries than the 2007–2008 financial crisis was in terms of the fall in the economy and the reduction in employment. Even though the fall in employment has been softened in many countries by the extraordinary measures that have been taken, the drop in employment in one quarter during this crisis has been larger than that from peak to trough in the financial crisis in some countries like Germany, Austria, the Netherlands and Belgium, while in many countries it has been similar in size (see Figure 2). Even if the economic crisis eases in the coming quarters, several sources indicate the danger that the end of the emergency measures will be followed by a new wave of redundancies.

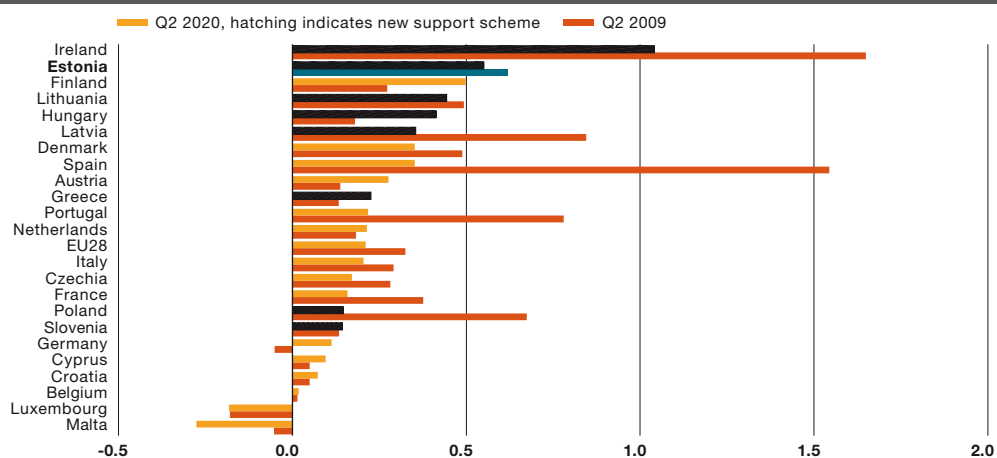
Box 1: The relative reaction of employment to the crisis in different countries

Different countries used various job retention schemes at the peak of the crisis caused by the pandemic and in subsequent months to avoid major rises in unemployment and to support domestic demand. Temporary measures taken in countries of the Organisation for Economic Co-operation and Development (OECD) have covered more than 50 million jobs, or 10 times as many as during the global financial crisis¹.

The job retention schemes have varied between countries as some have allowed adjustments to working time or provided temporary compensation for the incomes of non-working employees through wage subsidy or redundancy schemes. This box looks at how strongly employment has reacted to the economic declines caused in European countries by the coronavirus crisis, and compares that reaction to the impact of the 2007-2008 financial crisis. As the labour market reacts to changes in economic activity with a lag, the current data show only the very short-term impact of the crisis.

The change in employment alone does not sufficiently illustrate how strongly the labour market reacted to the crisis, as economies contracted by quite different amounts in different countries. The amount depended on the extent of the healthcare crisis and the restrictions introduced, but also on the structure of the economy and the share in the economy of sectors like tourism that were hit hardest. In consequence it is not just the change in employment that needs to be observed, but also the relative extent of the adjustment in employment compared to the change in GDP, or short-term elasticity (see Figure B1.1).

Figure B1.1. The ratio of the yearly change in employment to the change in real GDP in European Union countries in Q2 2009 and Q2 2020



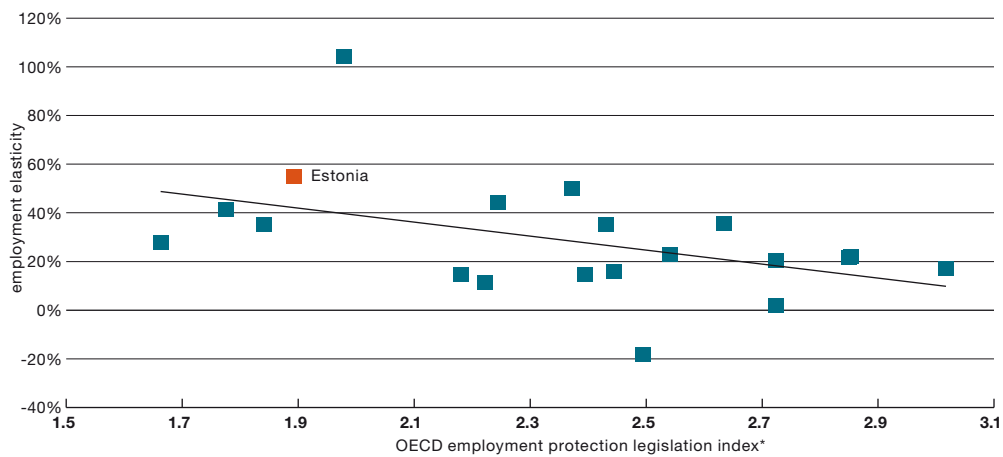
Sources: Eurostat, Eesti Pank calculations

1 Source: OECD, Job retention schemes during the Covid-19 lockdown and beyond, 3 August 2020 www.oecd.org/coronavirus/policy-responses/job-retention-schemes-during-the-covid-19-lockdown-and-beyond-0853ba1d

The short-term elasticity of employment to the change in GDP during the coronavirus crisis was shown by the Estonian data for the second quarter of 2020 to be 0.5, which means that employment fell by 0.5% for every fall of 1% in the economy. The reaction of employment in Estonia was stronger than in other countries of the European Union and was exceeded only by the reaction in Ireland. Similar reactions to that in Estonia were also found in Finland and Lithuania, and slightly smaller reactions in Latvia and Hungary. Calculations of the same indicator for the second quarter of 2009, which was close to the lowest point of the global financial crisis, show the elasticity of employment to GDP in Estonia was relatively similar to its current position. It also appears that countries like Ireland, Lithuania, Denmark and Holland, where the current crisis has been reflected more strongly in the employment figures, saw a similar effect during the financial crisis. Equally there are countries like Spain, Portugal and Poland, where the hit to the labour market has been notably smaller than that delivered during the financial crisis. The average reaction of the labour market in Europe has been slightly weaker than that during the financial crisis, which is probably because the labour market measures that have been taken have had a positive impact.

The elasticity of employment can depend on many factors, including the cost of making employees redundant and the flexibility of wages. The OECD Employment Protection Legislation indicate from data from 2019 that labour market protection is least regulated in Hungary, Denmark, Estonia and Ireland among the countries of the European Union. Regulations are relatively strict in Czechia, Portugal, the Netherlands, Belgium, Italy, Latvia and Greece². Comparing the two indicators shows that countries where the labour market is less strictly regulated generally have a higher elasticity of employment, meaning that employment reacts more strongly to a crisis (see Figure B1.2).

Figure B1.2. The elasticity of employment to real GDP from the yearly change in Q2 2020, and to labour market regulation in EU countries



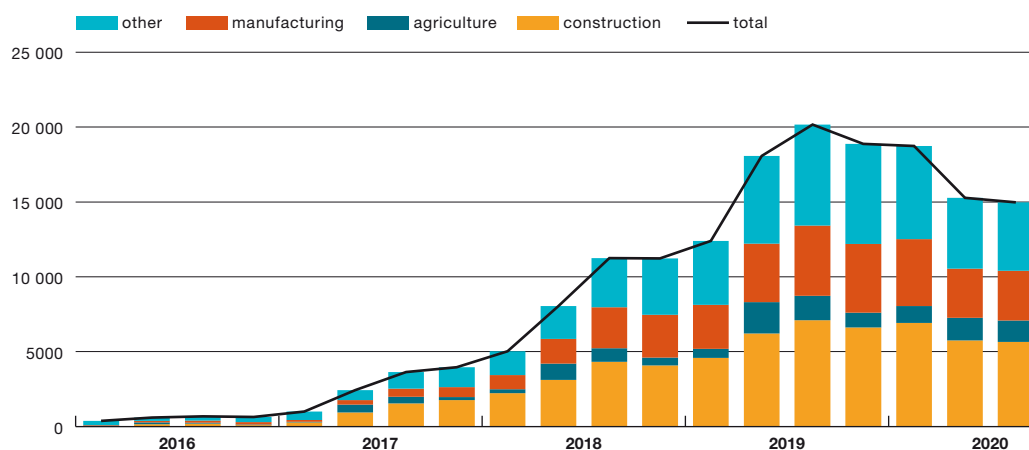
* The index runs from 0 to 6 where 6 is strict regulation and 0 is lax regulation.
Sources: Eurostat, OECD, Eesti Pank calculations

The reaction of the labour market may equally have arisen because different countries introduced measures differently. There are countries where the labour market measures needed were already in place, so that access to them was improved during the crisis and the amount paid in support was increased. There were other countries though where entirely new support schemes had to be introduced. Figure B1.1 uses hatched colouring to indicate the elasticity of employment in countries where new support schemes were introduced. It shows that the elasticity of employment was larger in countries that introduced new labour market measures, and as labour markets in those countries were generally less protected, the measures did not necessarily entirely alleviate the reaction to the crisis in several labour markets.

2 Source: OECD Employment Outlook 2020: Worker Security and the Covid-19 Crisis, www.oecd-ilibrary.org/sites/af9c7d85-en/index.html?itemId=/content/component/af9c7d85-en.

The number of short-term workers from outside the European Union working in Estonia has risen rapidly in recent years, but it fell during the coronavirus crisis. Data from the Police and Customs Board show that the number of current short-term registrations for work was down over the year by 15.5% in the second quarter of 2020 and by 25.8% in the third quarter (see Figure 3). The main cause of the fall was the restrictions on the cross-border movement of people, which were introduced to stop the spread of the virus, while businesses may also have reduced short-term employment to cope with the crisis. Estonia stopped issuing long-term visas while the restrictions on movement were in place.

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



Source: Police and Border Guard Board

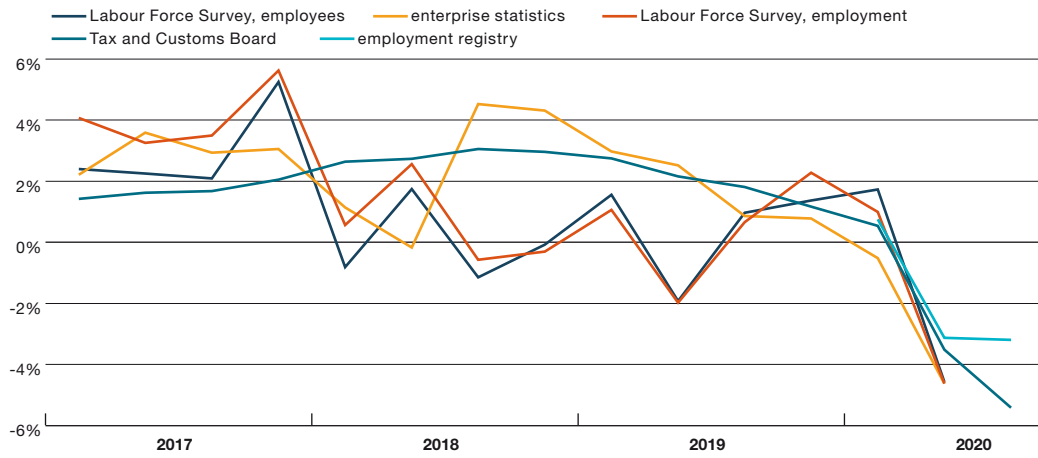
A lot of media attention during the crisis was focused on seasonal hiring in agriculture, where almost 2100 short-term workers were employed at the peak of the 2019 season. The number of short-term workers in agriculture was higher during the crisis than in the first quarter, as employees from other sectors moved to work in agriculture. This was driven by a temporary change to the rules that permitted short-term workers in agriculture to remain in Estonia to work until the end of August. The number of short-term workers in agriculture was still 27% fewer than a year earlier though, which means that it is probable that fewer foreign workers were hired than had been planned. There were 25% fewer current registrations in the third quarter than a year earlier, though the removal of restrictions on movement allowed new workers to be hired again.

As might be expected, employment has been hit harder in the private sector than in the public sector (see Figures 4 and 5). Private sector employment has been shown by estimates in various surveys to have fallen by between 3.1% and 4.6%. Employment has increased a little in the public sector, which covers healthcare, education and public administration, increasing by 0.3-1.6% over the year. Given that the workload in the healthcare and social insurance system increased because of the crisis in healthcare and the economy, the rise in employment in the public sector is not surprising.

Data from the employment register show that the number of contracts under the law of obligations has fallen relatively more since the start of the emergency situation to around 8-9% of all contracts. As the register records contracts, and people working under multiple contracts can be counted several times, a fall in the number of contracts does not necessarily mean a fall of the same amount in the number of people employed. The number of civil servants has risen a little in 2020 while the number of employment contracts has fallen by around 2% since the start of the emergency situation. The large fall in the number of agency and indirect contracts probably occurred because they are generally fixed-term contracts and the wage subsidies intended to preserve jobs did not cover such contracts (see Figure 6).

The narrower the sector, the larger the range of employment estimates obtained from different surveys. There can be various reasons for this including statistical error, differences in sampling, and differences in the definition of employment. The assessment of employment from the labour survey, which

Figure 4. Change in the number of private sector employees by different data sources



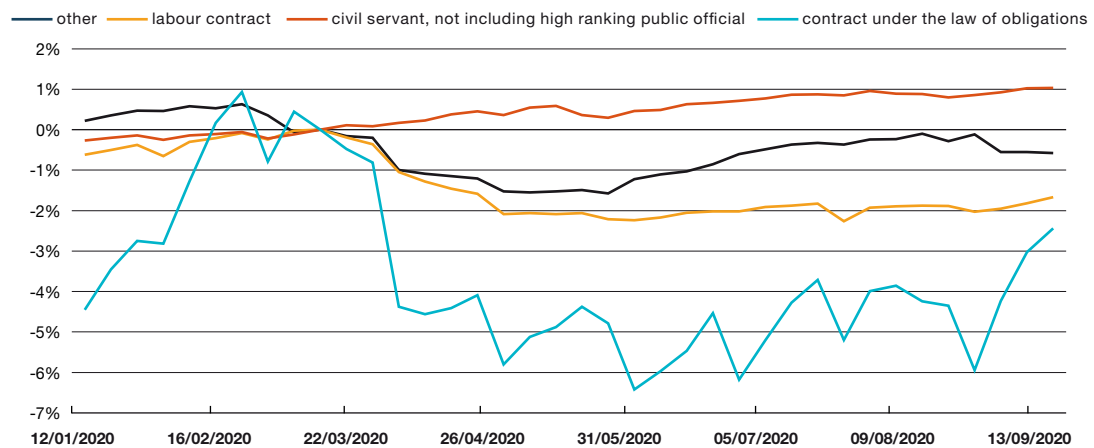
Sources: Statistics Estonia, Tax and Customs Board, Eesti Pank calculations

Figure 5. Change in the number of public sector employees by different data sources



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

Figure 6. Change in the number of contracts by contract type, difference from 15 March 2020

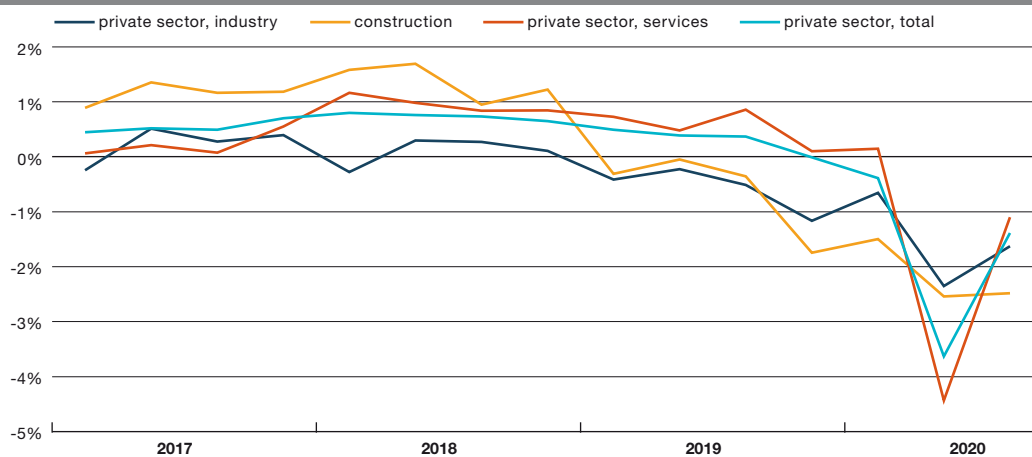


Sources: Statistics Estonia, Eesti Pank calculations

is the most used at the macroeconomic level and has been harmonised across European countries, is based on a sample and is calculated quarterly and by sector with wide confidence bounds³. This makes it more reasonable to analyse changes in employment by sector using business surveys and registry data.

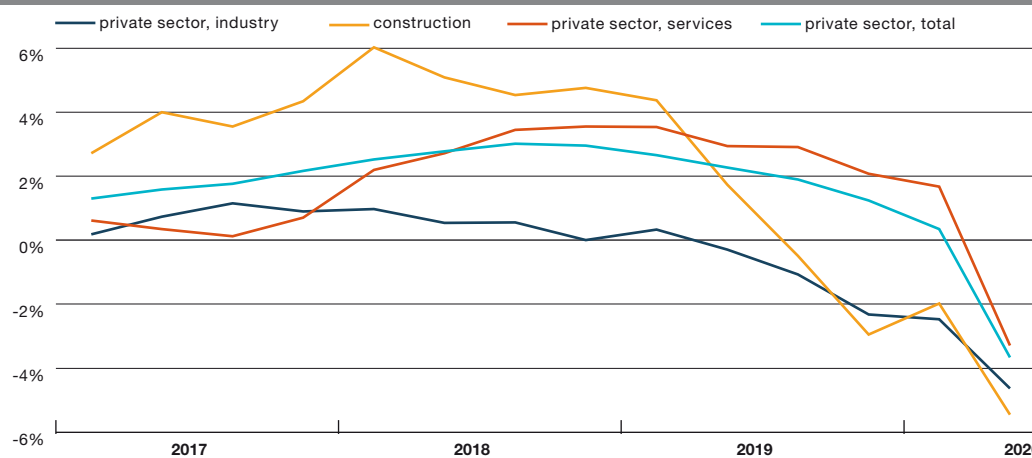
The coronavirus crisis has hurt employment more in the service sector than in the industrial sector, as the limits imposed to stop the spread of the virus have restricted economic activity more in the service sector. The starting positions of the two sectors before the crisis were equally very different. Economic activity was already weakening in industry and construction in 2019 because of competitiveness problems in the oil shale sector and a cooling of the external environment, which meant that demand for labour in those sectors was also falling. Employment was growing in the service sector meanwhile, as demand was kept high by rapidly growing household incomes and confidence. Data from the Tax and Customs Board on wages paid out show the number receiving a declared wage in the second quarter of 2020 fell by more in the service sector than in industry (see Figure 7), but employment in the industrial sector had fallen over the year by about the same amount that it had in services (see Figure 8).

Figure 7. Quarterly change in the number declared as receiving a wage



Sources: Tax and Customs Board, Eesti Pank calculations

Figure 8. Yearly change in the number declared as receiving a wage

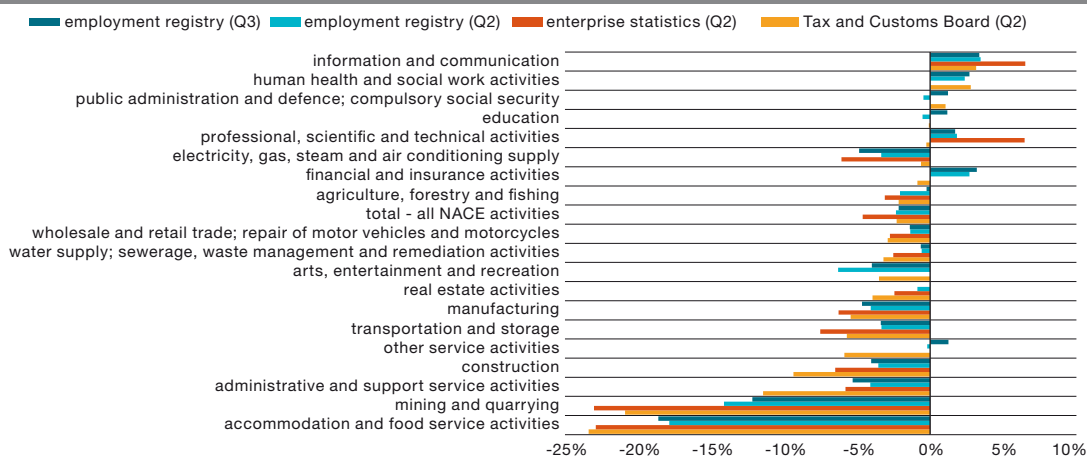


Sources: Tax and Customs Board, Eesti Pank calculations

The companies in the service sector that were hit hardest by the measures taken to stop the spread of the coronavirus were those in accommodation and food service (see Figure 9). Data from various

³ The confidence bounds are the upper and lower 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.

Figure 9. Change in the number of contracts in the employment registry in Q2 and Q3 2020

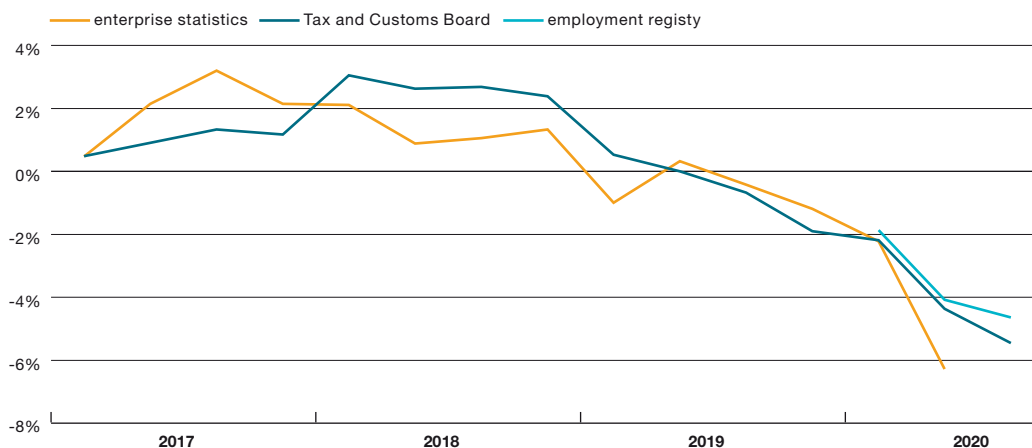


Sources: Statistics Estonia, Tax and Customs Board, Eesti Pank calculations

surveys show the number employed in this sector was 17–23% lower in the second quarter of 2020 than a year earlier. There was a similar fall in the number of jobs over the year in mining, but that trend had started before the coronavirus crisis erupted. Employment also fell broadly in administrative and support activities, which covers travel agencies, travel bookings and various rental services among others, which suffered from the restrictions on travel. The restrictions on movement reduced employment in transport and storage by more than the average. Information and communication services, financial services, insurance services, and professional, scientific and technical activities in the private sector were affected relatively little by the virus crisis. Jobs in these areas have in common that they permit remote working, and value added in information and communication services and financial services actually grew during the crisis.

Restrictions on economic activity did not directly impact manufacturing during the emergency situation, but the abrupt weakening in the external environment, interruptions to supply chains, and restrictions on personal travel caused a drop of 18.9% from a year earlier in value added in manufacturing in the second quarter. Estimates of the fall in employment in manufacturing in the data from the Tax and Customs Board, the employment register, and the enterprise statistics range between 4% and 6% (see Figure 10). Employment continued to fall in the third quarter. The data in the surveys cover not only local residents, but also short-term workers hired from abroad, and the number of such workers in manufacturing was 16% lower in the second quarter than a year earlier, and 29% lower in the third quarter (see Figure 3). The fall in the numbers of short-term workers accounted for 9–14% of the reduction in employment, which is much more than their 3–4% share of employment in the sector.

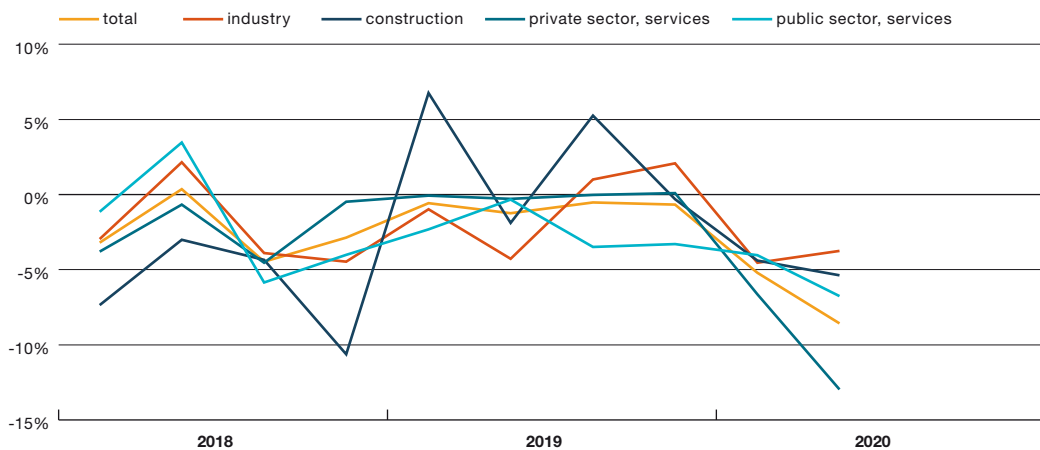
Figure 10. Change in the number of employees in manufacturing by different data sources



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

On top of the fall in employment, the contribution of labour during the coronavirus crisis was also reduced by a fall in the number of hours worked per employee, which was 5.2% lower in the first quarter of 2020 than a year earlier, and 8.6% lower in the second quarter. The reduction was broadly based across sectors, but it was again deepest in private sector services (see Figure 11). The wage survey also shows a reduction in hours worked, though not as deep, putting it at 0.9% over the year in the first quarter and 5.1% in the second. As expected, the largest fall in hours worked was of 23% in accommodation and catering. The reduction in working time did not arise because of permanent cuts in workloads, since the number of part-time workers was unchanged in the second quarter.

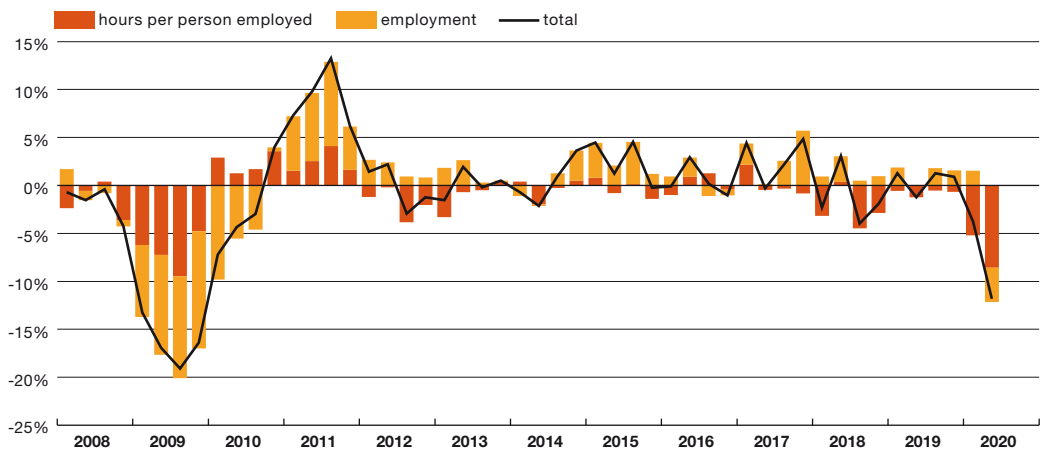
Figure 11. Change in the number of hours worked per person employed



Sources: Statistics Estonia, Eesti Pank calculations

It is best to estimate the contribution of labour to value added created by looking at total hours worked. This indicator is affected by the change in employment and by the number of hours worked per employee. The number of hours worked was reduced during the coronavirus crisis by both factors, but the number of hours worked per employee had a notably larger impact on total hours worked than employment did (see Figure 12). It is particularly noticeable from this that the reduction in hours worked per employee was deeper than that during the financial crisis, which is probably because of the rapid introduction of the wage subsidy measure.

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



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

Changes in employment during the coronavirus crisis differed across regions. The labour force survey shows that employment fell the most over the year in Tallinn, where it was down 6.6%. Employment fell

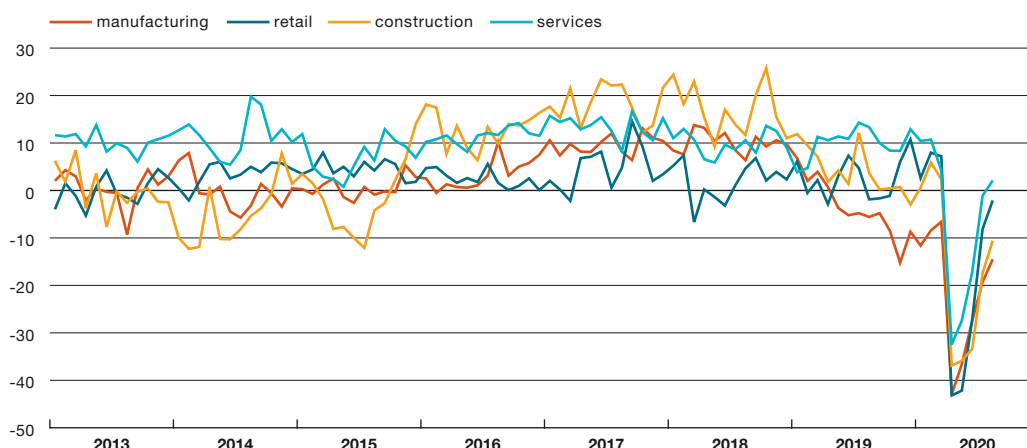
over the year to the same degree in Ida-Virumaa, but this mainly came from the oil shale sector in 2019, and the fall in employment over the year there in the second quarter of 2020 was similar to the Estonian average.

Data from the labour force survey allow employment to be researched by personal characteristics such as age and gender. This shows that unemployment fell more in the second quarter for women than it did for men, and more for younger workers than for older ones. The relative fall in unemployment among the young was particularly sharp, as fewer young people are in employment than middle-aged people. The fall in unemployment among the young raised their unemployment rate, while the labour force participation rate fell. The employment rates for Estonians and people of other nationality fell over the year in the second quarter to an equal extent. The employment rate fell by more from the first quarter of 2020 to the second quarter among Estonians, which can be a consequence of the cooling in the industrial sector before the coronavirus crisis erupted. The industrial sector is a large part of the economy in Ida-Virumaa, where people of other nationalities are a large part of the population.

VACANCIES AND LABOUR MOBILITY

Expectations of companies for developments in employment in 2019 reflected the differences in the industrial sector and the service sector, as expectations for employment in manufacturing and construction declined, while those in services remained stable and even increased at the end of the year in retail (see Figure 13). The sentiment survey of the Estonian Institute of Economic Affairs showed corporate confidence fell and employment expectations fell sharply with it when the coronavirus crisis started, in all sectors across the board. Expectations for employment recovered in the third quarter, but remain below where they were prior to the crisis. The negative value for the index of employment expectations indicates that the share of companies expecting employment to fall is larger than the share expecting it to increase.

Figure 13. Employment expectations*

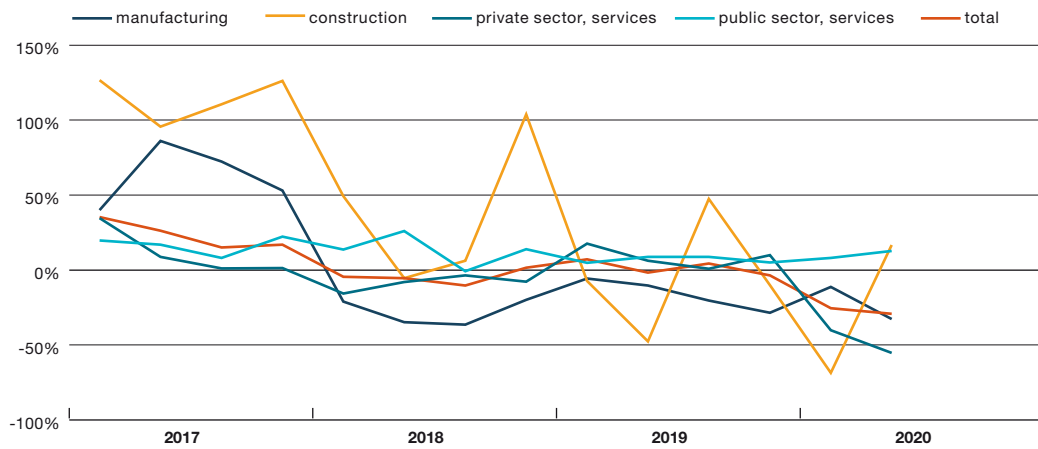


* The index shows the net balance of companies expecting employment to increase or decrease
Sources: European Commission, Eesti Pank calculations

Data from the labour mobility survey show the number of vacancies in the industrial sector fell in 2019, while the number in services rose. The hiring plans of companies were disrupted in the second quarter of 2020 by the coronavirus crisis, as might be expected, and the number of vacancies in the service sector dropped sharply (see Figure 14). In 2019, 1.8% of all positions went unfilled, but in the first half of 2020 it was only 1.4%.

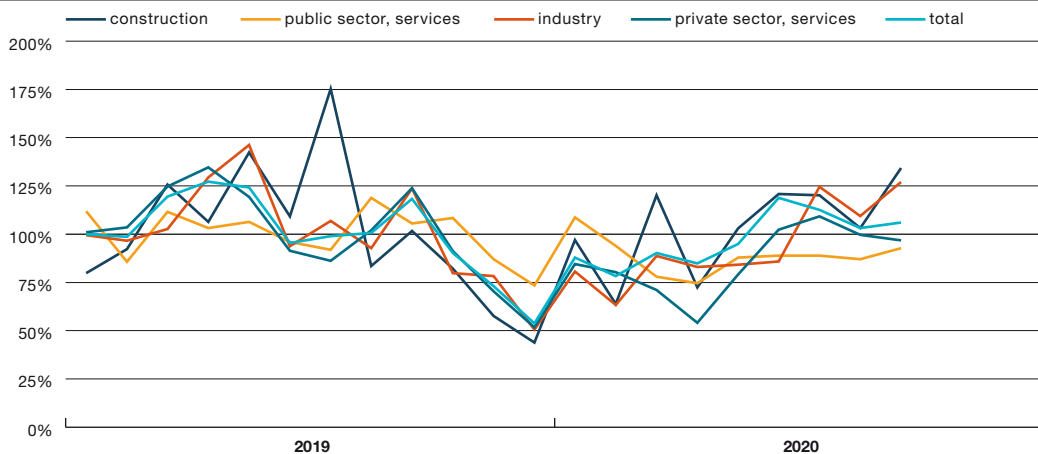
Changes in the number of vacancies can be estimated from Töötukassa data on the number of unfilled positions, as well as from the labour mobility survey. The Töötukassa data show the number of vacancies falling in the second half of 2019 throughout the private sector, and the coronavirus crisis causing a further sharp fall in the number of vacancies from March 2020 (see Figure 15). The number of

Figure 14. Change in the number of vacancies



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

Figure 15. The number of new vacancies advertised by Töötukassa, 2019 average = 100%



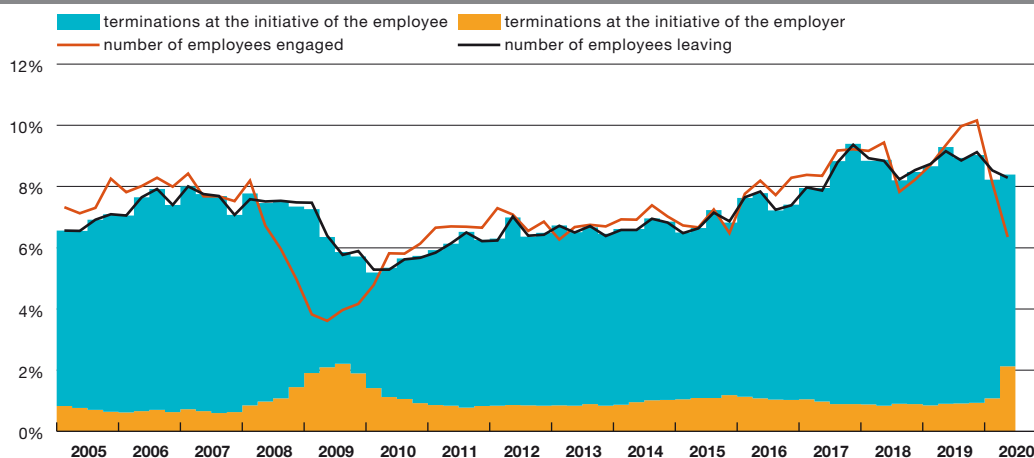
Sources: Töötukassa, Eesti Pank calculations

vacancies started to recover relatively rapidly after the restrictions were removed though, and there were more vacancies added in August in the service sector, which had suffered particularly, than a year earlier. Also notable were the vacancies added in agriculture during the emergency situation, when the closure of the borders meant it was no longer possible to hire short-term workers from abroad. An average of 330 vacancies a month were added in agriculture in Töötukassa from March to June 2019, but an average of 1491 vacancies a month were added in the same months of 2020.

The data from Töötukassa also show a slight fall in the number of positions unfilled. There were fewer positions offered through Töötukassa in the second half of 2019 for top specialists, service and sales staff, and unskilled workers than a year earlier. There was more demand than earlier though to hire equipment and machine operators.

Data from the labour mobility survey show that the labour market was very active in 2019, as the rates for engagements and terminations were extremely high in historical terms (see Figure 16). Both the financial crisis of 2007-2008 and the coronavirus crisis of 2020 were reflected immediately in the labour market flows. The rate of hiring fell first as companies tried to adjust their number of employees by not replacing those who left. Then the number of job changes fell, which meant that fewer workers needed to be replaced. At the same time the rate of terminations at the initiative of the employer rose, and it reached the same height in the second quarter of 2020 that it had at the peak of the financial crisis.

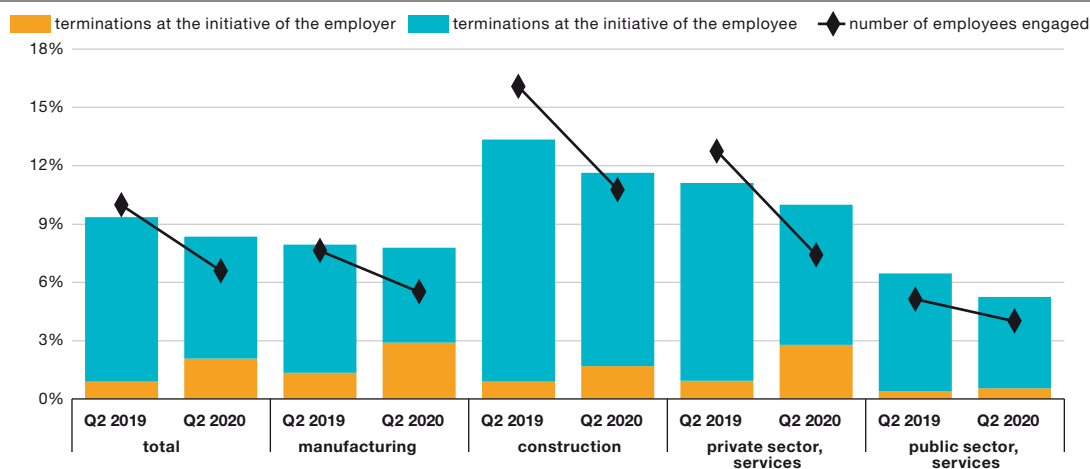
Figure 16. Labour mobility, seasonally adjusted



Sources: Statistics Estonia, Eesti Pank calculations

The difference between the rate of terminations at the initiative of the employer and the rate in the same quarter of 2019 was widest in private sector services, and also in manufacturing. The fall in the hiring rate was also largest in the service sector and in construction (see Figure 17).

Figure 17. Labour flows in Q2 2019 and Q2 2020



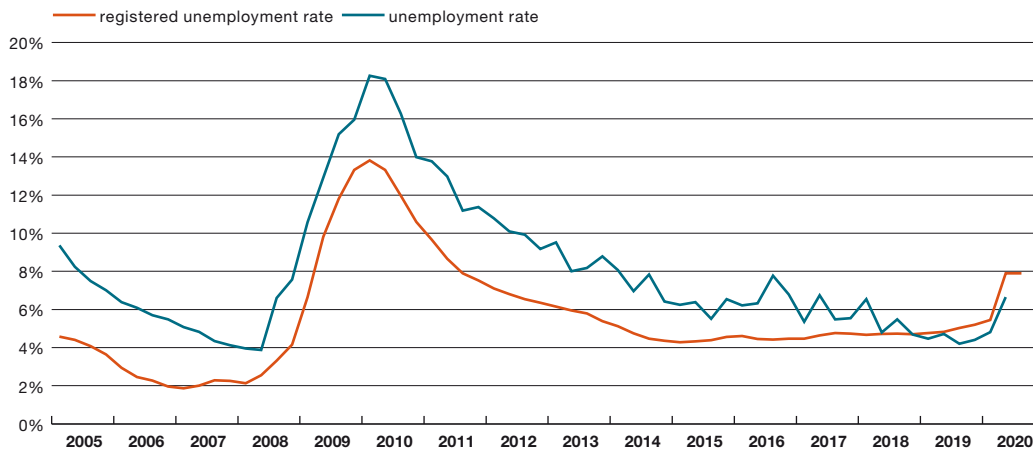
Sources: Statistics Estonia, Eesti Pank calculations

UNEMPLOYMENT

The outbreak of the coronavirus and the restrictions introduced to counter it caused sharp drops in the second quarter in the economies of Estonia and the other countries in Europe, and the demand for labour fell substantially. Unemployment leapt up in consequence according to the labour force survey and the data from Töötukassa (see Figure 18). The unemployment rate rose from 5.1% a year earlier to 7.1% in the second quarter of 2020. The number registered as unemployed was a little over 50,700 at the end of the second quarter, and the registered unemployment rate averaged 7.1%.

The registered unemployment rate and the unemployment rate estimated by the labour force survey are not always exactly the same because they use different definitions of unemployment. The labour force survey works from the definition of the International Labour Organisation (ILO), in which 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. Not everybody who has no work signs on with Töötukassa, and the registered unemployed are not necessarily all ready to start work so quickly, for example if they are participating in training.

Figure 18. Unemployment, seasonally adjusted

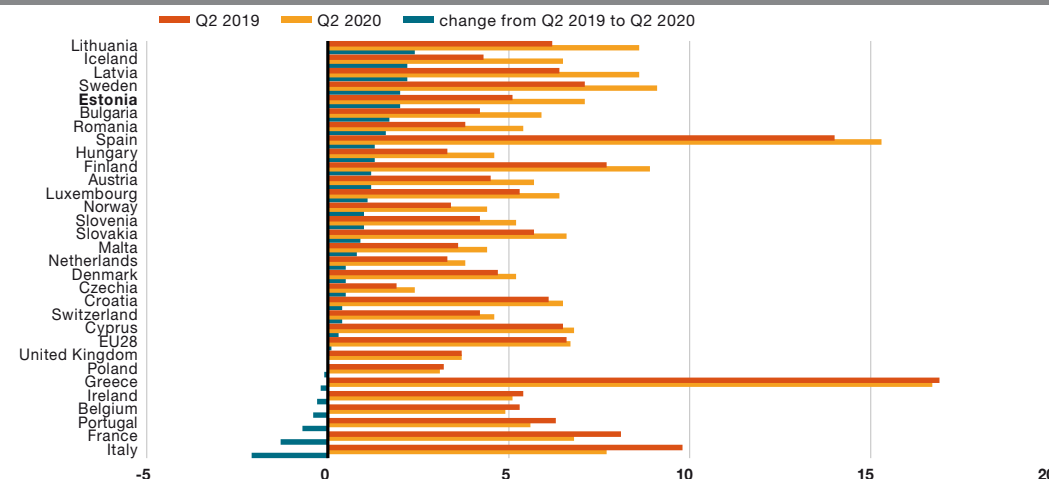


Sources: Statistics Estonia, Töötukassa, Eesti Pank calculations

As various restrictions on activity eased in the summer, the number registered as unemployed fell a little, and at the end of September it stood at 49,000. The number newly registered as unemployed fell steadily during the summer, primarily because the number of redundancies fell. More registered unemployed were added in September than in August though, including those made redundant. Data from Eurostat show the three-month moving average unemployment rate rose in the summer and the average unemployment rate from June to August reached 7.6%.

Unemployment rose more in Estonia than it did on average in the European countries (see Figure 19). The unemployment rate also rose a long way in Latvia, Lithuania, the Nordic countries and the newer member states of the European Union. The rise in unemployment was slower in several countries, including those where the falls in the economy and in employment caused by the coronavirus crisis were relatively large, and the unemployment rate even fell over the year in some places. This was because active participation in the labour force declined.

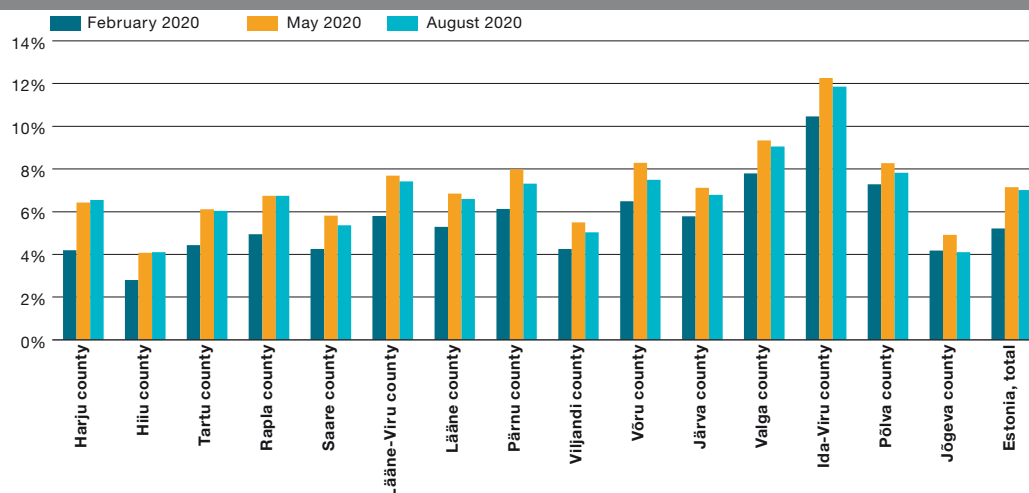
Figure 19. Unemployment rate and yearly change in it in European countries



Sources: Eurostat, Eesti Pank calculations

Unemployment in Estonia has risen particularly rapidly in areas where employment had been high and unemployment very low, notably the northern Estonian counties of Harjumaa and Raplmaa, and Tartumaa in the south (see Figure 20). The registered unemployment rate in Harjumaa rose to 6.5% at the end of August, from only 4.2% at the end of February. Those same counties stand out because the registered unemployment rate at the end of August was no lower than it was in the middle of the second quarter.

Figure 20. Registered unemployment rate by county

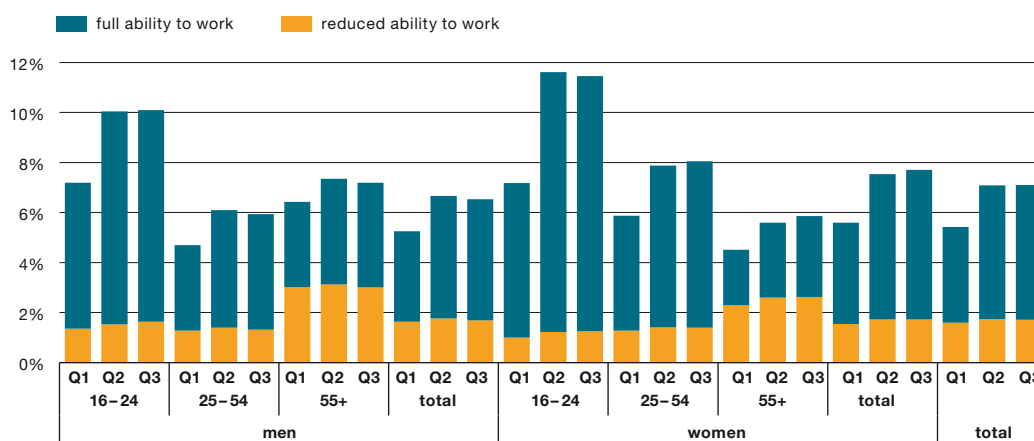


Sources: Töötukassa, Statistics Estonia, Eesti Pank calculations

The rise in unemployment in Harjumaa, especially in Tallinn, was driven largely by accommodation and food service activities, a large part of which depends on foreign tourism and saw no improvement over the summer because tourists were so scarce.

The financial crisis a decade ago struck hardest in the industrial sector, where a large proportion of those employed are men, but the crisis caused by the spread of the coronavirus hit the service sector most, where women dominate in employment. In consequence the unemployment rate for women rose more sharply and averaged around 8% in July and August (see Figure 21).

Figure 21. Registered unemployed rate by age and gender in Q1 to Q3 2020*



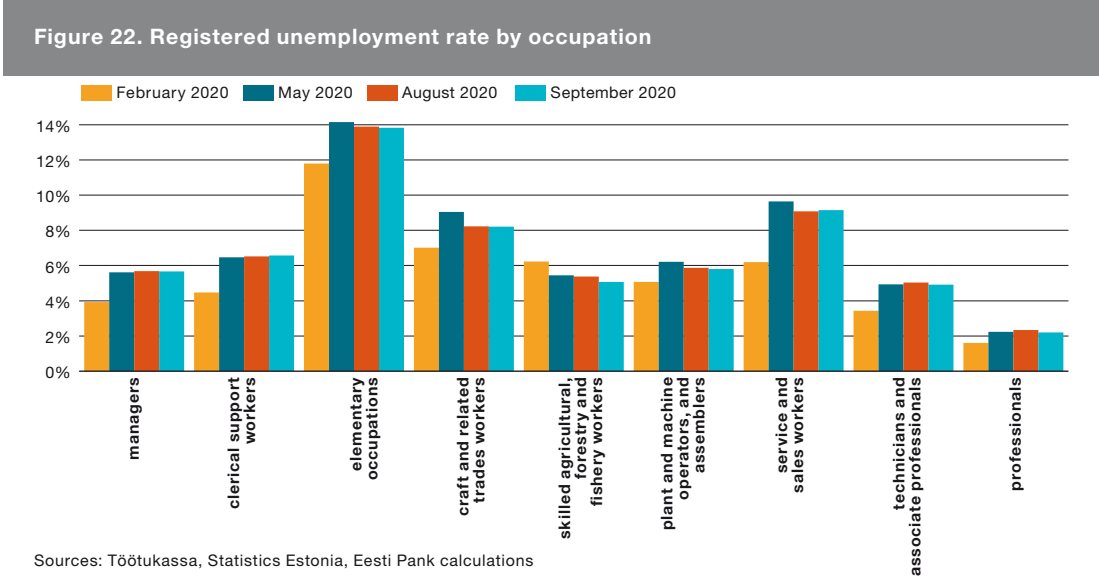
* Q3 is only July and August
Sources: Töötukassa, Statistics Estonia, Eesti Pank calculations

The age group most affected by the current crisis has been younger workers. Of those aged 15–24 who were in work in 2019, 18.9% were employed in retail and 14.4% in accommodation and catering, where the largest reorganisation of activities has been needed. On top of the sharp rise in registered youth unemployment has been an increase in youth inactivity (see the section on the labour supply), which means employment has fallen substantially among the young.

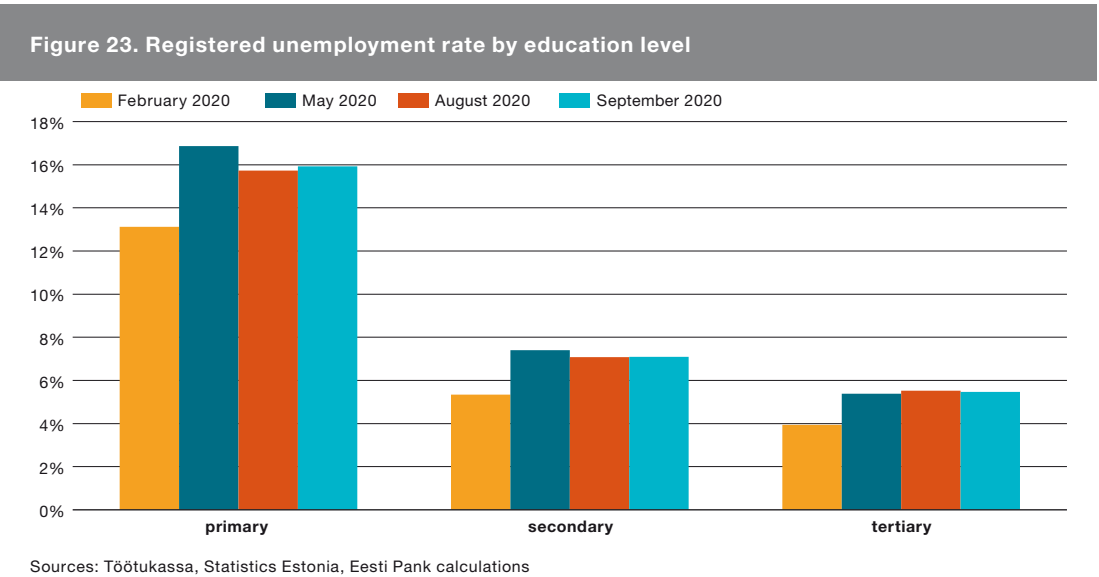
The rise in the registered unemployment rate for older people has been more modest. This may be because some older people who lost their job have stopped looking for work, and inactivity has increased in this age group (see also the labour supply).

With some reservations it is possible to find the unemployment rates in different occupations 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 job is not covered by the data. People may also be applying for jobs that are different from their previous work experience and previous occupations. This means that the unemployment rates for particular occupations do not perfectly reflect the degree of competition for that type of job. The most jobs have been lost in the service sector and so the number of registered unemployed has increased for service and sales staff, office workers and client service staff (see Figure 22). The crisis has had least impact on skilled agricultural workers, and equipment and machine operators.

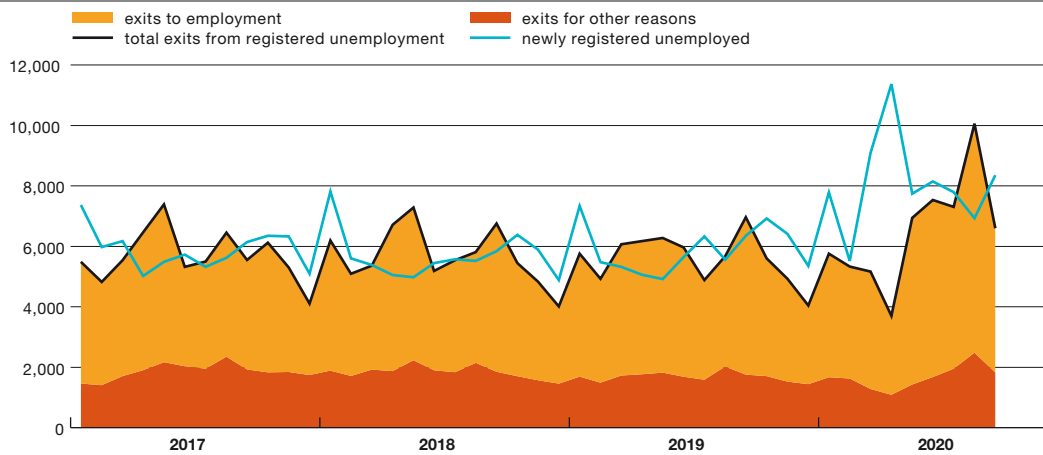


There are very few former professionals registered as unemployed as a ratio to professionals in employment, and the unemployment rate is also low for people with higher education (see Figure 23). Although the coronavirus crisis has caused the registered unemployment rate to rise more for those without secondary education than for those with higher levels of education, it should be noted that people with only basic education are a relatively small part of the labour force, at 8% in 2019. Comparing the numbers for registered unemployment in September and February shows that around half of the increase came from workers with secondary education and a third came from people with tertiary education, 43% of them white-collar workers and 57% blue-collar workers. This shows that the rise in unemployment caused by the coronavirus crisis affected the whole of society.



The number newly registering as unemployed has fallen from month to month, but the number registering in August 2020 was still one quarter more than a year earlier, and in September it was almost a third more (see Figure 24). The total number registered as unemployed in the summer fell, which means that many of the unemployed had found new work. In recent months the share of such people has been notably higher than the average of recent years, which indicates some recovery in the economy after the restrictions were removed in summer.

Figure 24. Registered unemployment flows

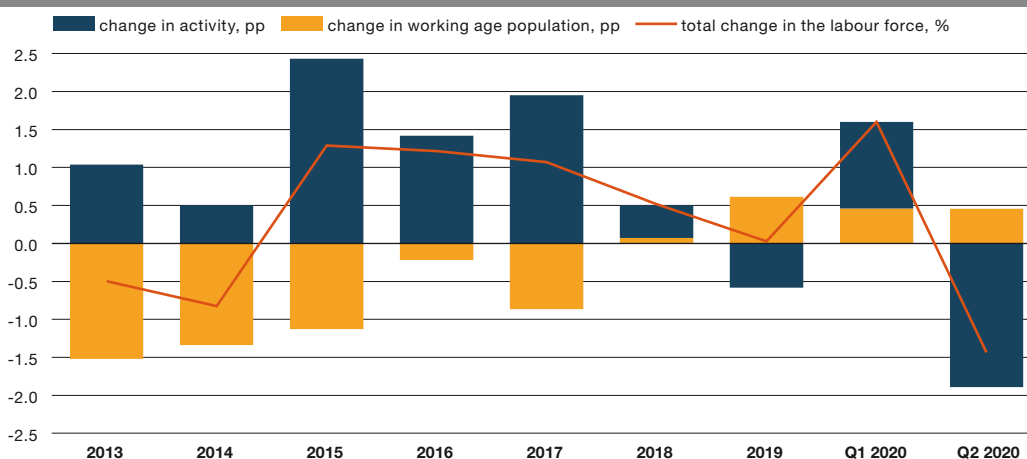


Sources: Töötukassa, Eesti Pank calculations

LABOUR SUPPLY

The Estonian domestic labour supply, which is the number of people permanently resident in Estonia and wanting to work, depends partly on changes in the size of the working age population, and partly on their desire or readiness to participate in the labour market. The population aged 15–74 continued to grow in 2020 because of immigration (see Figure 25), but the readiness of those of working age to participate in the labour market was lower on average over the first half of the year than previously. On average 71.1% of working-age residents were working or looking for work in the first half of 2020, which was 0.2 percentage point less than in the first half of 2018.

Figure 25. Yearly change in the labour force



Sources: Statistics Estonia, Eesti Pank calculations

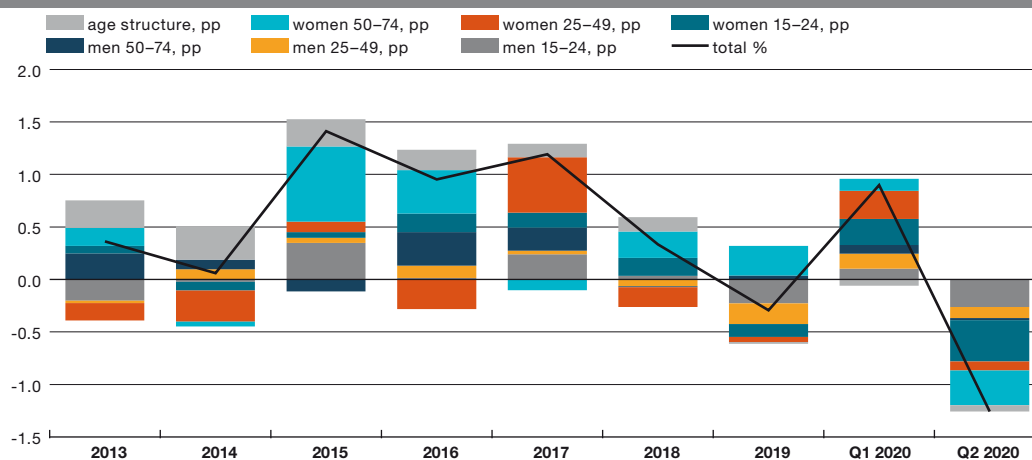
The labour supply shrank sharply in the second quarter because of the restrictions introduced to stop the spread of the coronavirus. Although there were 3200 more permanent residents of working age living in Estonia than a year earlier, the domestic labour supply fell, since the number of inactive residents of working age was 13,300, or 4.8%, more in the second quarter than a year earlier. Those considered inactive in the labour market are residents aged 15–74 who are not engaged in work or looking for work, meaning they do not want to work or are not capable of doing so.

The labour force participation rate fell from 71.1% in the first quarter to 70.4% in the second quarter. This was probably partly because fewer seasonal jobs were created than usual, meaning the seasonal rise in active labour force participation from the first quarter to the second did not happen. Labour market participation was probably also reduced by fear of infection and the increased need caused by school closures for people to care for family members.

The labour force participation rate was 1.3 percentage points lower in the second quarter than a year earlier (see Figure 26). This fall did not happen evenly across Estonia, as inactivity increased most in Tallinn, where the labour force participation rate of 75% in the second quarter was four percentage points lower than the 79% a year earlier, while the participation rate in central Estonia and western Estonia actually rose a little. Northern Estonia, which includes Tallinn, is the area where the labour force participation rate has been higher than anywhere else in Estonia, partly because of the age structure of the local population, which has a large proportion of the middle-aged.

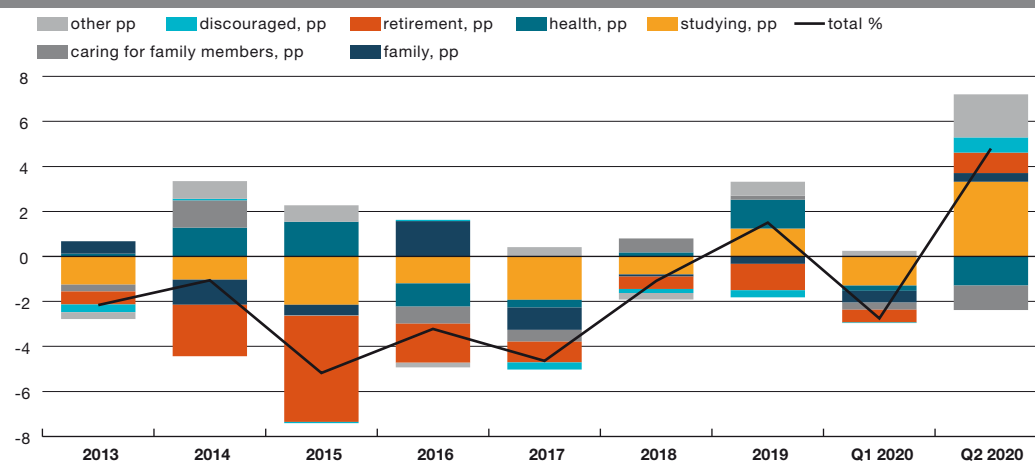
About half of the fall over the year in the labour force participation rate and the rise in the number of inactive residents was caused by a fall in the second quarter in labour market participation among the young. Those aged 15–24 often have seasonal jobs in the tourism industry, which was hit hardest by the restrictions introduced to stop the spread of the coronavirus. 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 27).

Figure 26. Contributions to the yearly change in the participation rate by age and gender



Sources: Statistics Estonia, Eesti Pank calculations

Figure 27. Yearly change in the number of non-participants



Sources: Statistics Estonia, Eesti Pank calculations

There was also a notable fall in the labour market participation rate for older women, which had risen in previous years and so substantially reduced the total number inactive. The fall in the labour market participation rate indicates that those who had lost jobs did not start to look for new ones, but gave up working altogether, some by retiring, at least for the duration of the crisis.

Like it did in Estonia, the share of the working age population that was inactive increased in the second quarter in most other countries of the European Union (see Figure 28), and the labour force participation rate in Estonia remained one of the highest in the European Union. The labour force participation rate fell most notably in the older European Union members of the EU-15. Exceptions among the European Union countries were Estonia's neighbours Latvia, Lithuania and Sweden, where the labour force participation rate in the first half of 2020 remained on average at the same level as a year earlier. Latvia and Lithuania were affected relatively little by the first outbreak of the coronavirus in the spring, and so illness did not affect the labour markets in those countries nearly as much. The participation rate in Sweden may in contrast have been held at its previous level because the restrictions on economic activity introduced there were less strict than those in other countries.

Like labour force participation, the number of residents of Estonia has changed in very different ways in different regions (see Figure 29). Although the total population figure increased over the year, it only rose in 2019 in Harjumaa, Pärnumaa and Tartumaa, while it remained more or less unchanged in Saaremaa and Raplambia. Net foreign migration was positive last year in most counties, meaning that

Figure 28. Labour force participation rate, age 15–74

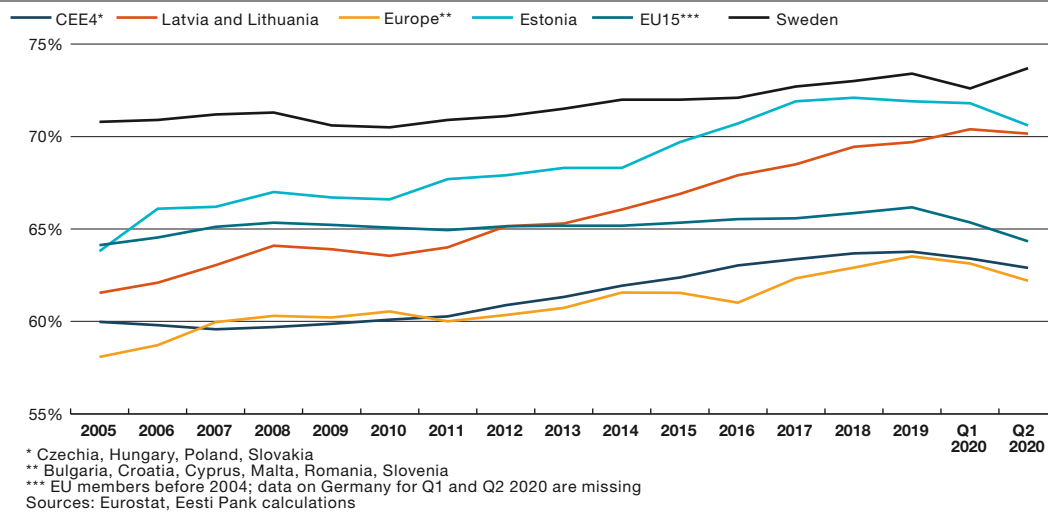
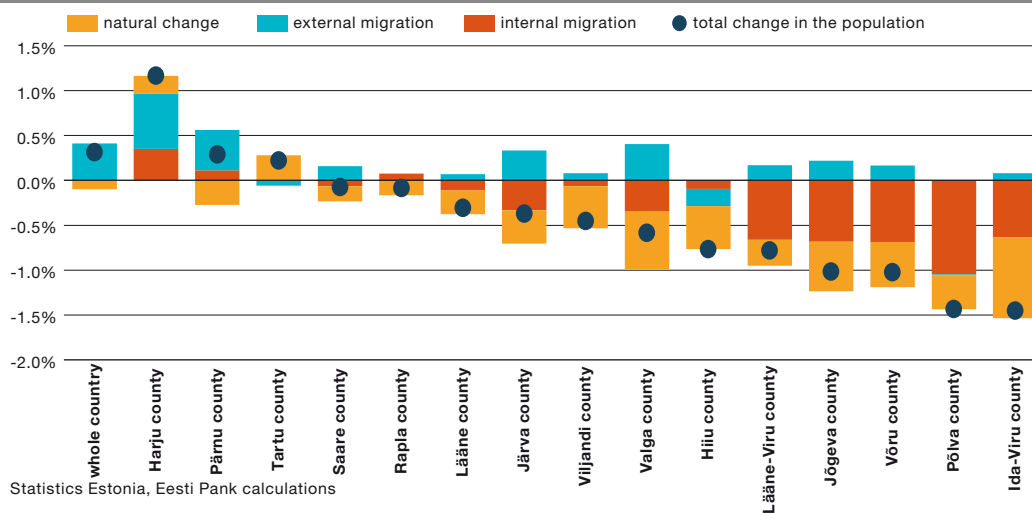


Figure 29. Change in the population in 2019 by county



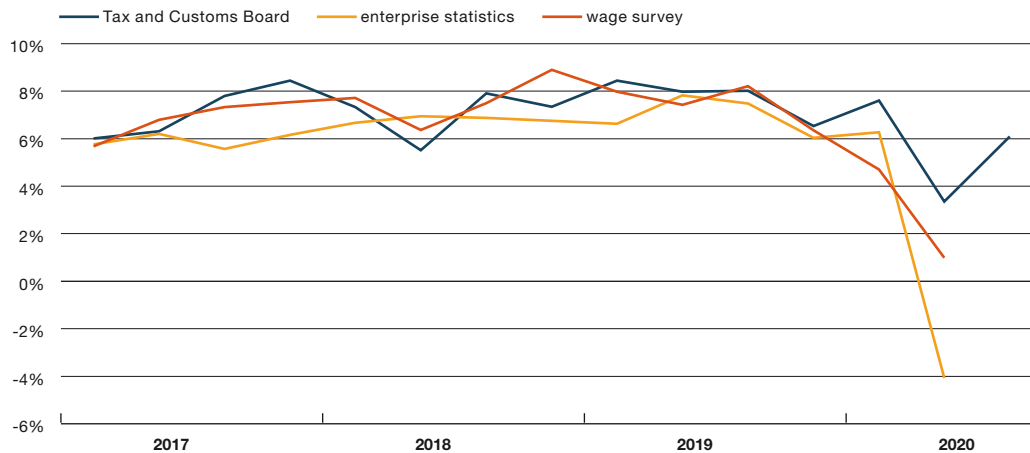
more residents arrived than left, but half of Estonia's counties lost residents last year because of internal migration. The centre of gravity for internal migration in Estonia is Harjumaa, and the county that lost most residents to it was Põlvamaa.

AVERAGE WAGES

The sharp fall in the economy caused by the coronavirus crisis slammed the brakes heavily on wage growth in the second quarter of 2020 (see Figure 30). Statistics for the average wage include the wage subsidies paid by Töötukassa. Having been 7.5% in 2019, the rise in the full-time equivalent gross monthly wage estimated from the wage survey had already slowed to 4.7% in the first quarter of 2020 and then fell to 1% in the second quarter. The growth in the declared wage not adjusted for full-time work actually increased in the first quarter before slowing sharply under the impact of the crisis in the second quarter to 3.4% over the year.

The difference between the two sources of data comes largely from wholesale and retail, where the wage survey found a fall in the average wage of 8.7% over the year in the first quarter, while the data from the Tax and Customs Board found an increase of 7.2%. The fall in wages in retail knocked almost 2 percentage points off the rise in the average wage in the first quarter. The seasonally adjusted average

Figure 30. Yearly change in the average wage

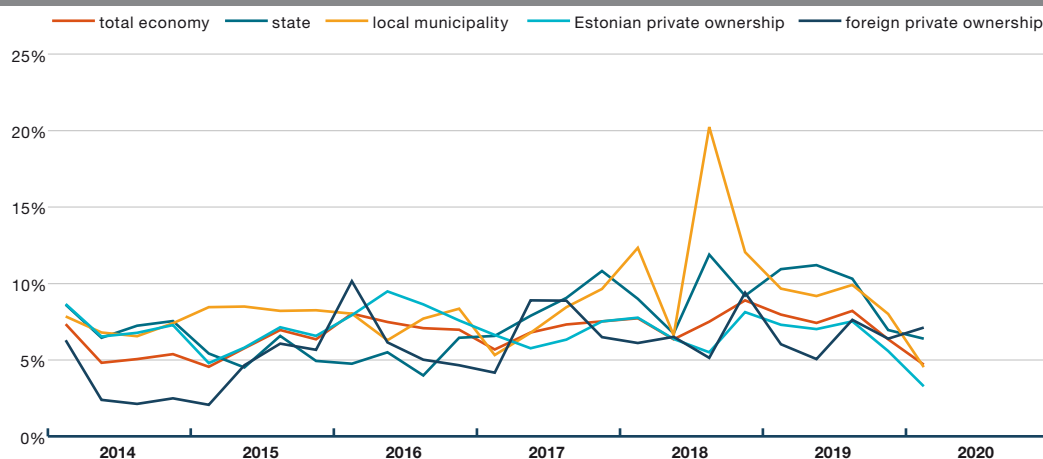


Sources: Statistics Estonia, Tax and Customs Board, Eesti Pank calculations

wage in the second quarter of 2020 was 2.1% lower than in the first quarter according to the wage survey, and 2.5% lower according to the Tax and Customs Board. The Tax and Customs Board data show that wage growth returned in the third quarter, coming in at 5.3%. For comparison, the average wage in the final quarter of 2008, at the start of the financial crisis, was 1.3% lower than in the previous quarter, and over five quarters wages fell by 7.7%.

Local and central government-owned employers, where wages had been rising faster than in the private sector since 2018, saw wage growth slow in late 2019 and the first quarter of 2020 (see Figure 31). Wage growth also slowed at companies in private Estonian ownership in the first quarter of 2020, which was largely caused by the fall in wages in retail companies. Wage growth slowed elsewhere in the second quarter, with the wage survey showing the average wage in Estonian privately-owned companies fell by 2.2%.

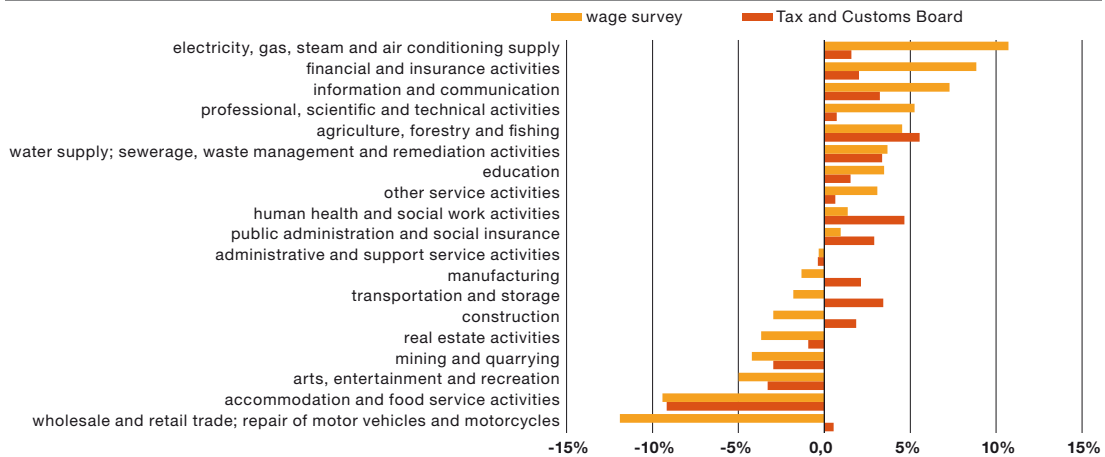
Figure 31. Wage growth by type of ownership



Sources: Statistics Estonia, Eesti Pank calculations

Wage growth slowed in many different sectors, but the coronavirus crisis hit hardest in accommodation and catering, where both sources showed wages down by 9% over the year, and in arts, entertainment and recreation, where the wage survey showed wages were down by 5%. Wage setting was certainly affected a lot by the wage subsidies for companies that had fallen into difficulties because of the coronavirus crisis. Without the subsidy, companies in difficulties would have used their legal right to cut wages, which would have brought the average wage down by even more. The numbers of redundancies and of those taking unpaid leave would also have been higher.

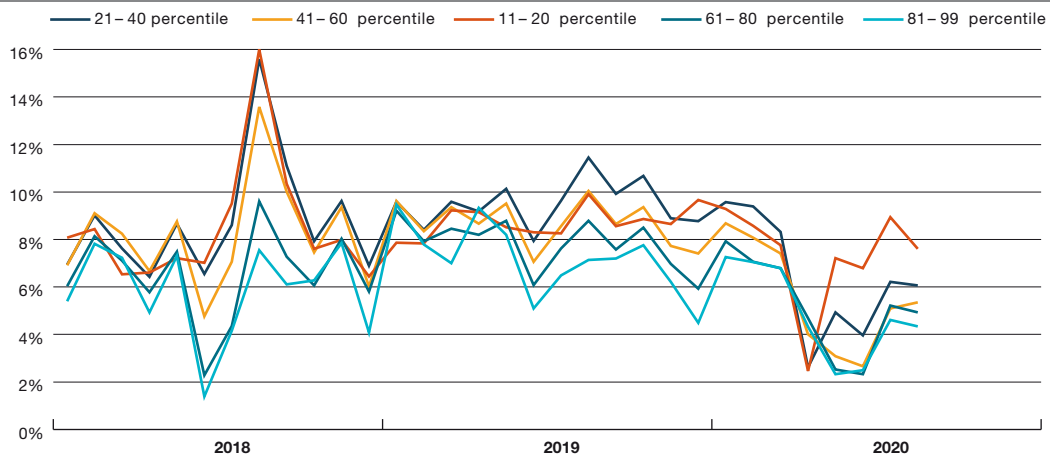
Figure 32. Yearly change in the average wage by sector in Q2 2020



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

Statistics from the Tax and Customs Board on the distribution of wages paid out show that wages in the lower part of the distribution fell at the start of the crisis (see Figure 33). Individuals cannot be tracked using these data, but it is probable that people who usually earned a higher wage moved into this part of the distribution. Equally the income of people earning a low wage may have fallen sharply, as it was sectors where wages are below the average that were hit disproportionately hard by the coronavirus. Wage growth recovered in the summer in the lower part of the wage distribution because of the rise in the minimum wage, while the growth in wages in the higher part of the distribution was notably slower than in previous years.

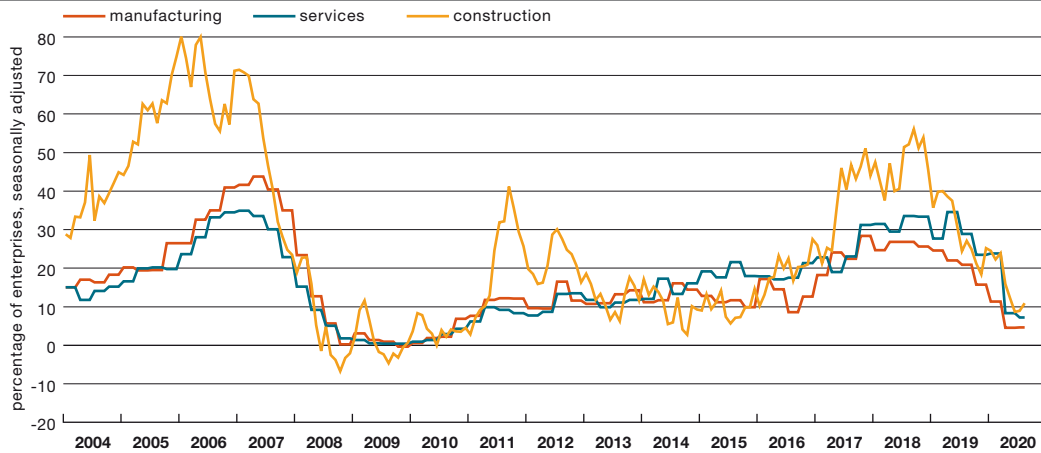
Figure 33. Yearly change in the average declared wage across the wage distribution



Sources: Tax and Customs Board, Eesti Pank calculations

Although the data from the Tax and Customs Board showed that wages generally recovered in the third quarter, it is clear that the coronavirus crisis will affect the position of employees in wage negotiations in future. Whereas the unemployment rate was previously below the long-term average in Estonia and employers faced serious labour shortages, there is now a lot more labour available in the economy. The share of companies that consider labour to be a factor restricting production fell in construction and manufacturing throughout 2019, and it fell particularly sharply in the service sector during the crisis (see Figure 34).

Figure 34. Labour shortages as a factor limiting production



Source: European Commission

Box 2: Changes in turnover and employment at businesses receiving wage subsidies

To ease the impact of the coronavirus crisis on employment, Estonia, like many other European Union countries, introduced a wage subsidy measure. This box considers how the turnover and number of employees have changed at companies that used the wage subsidy and at those that did not in accommodation and food service, manufacturing, and other sectors.

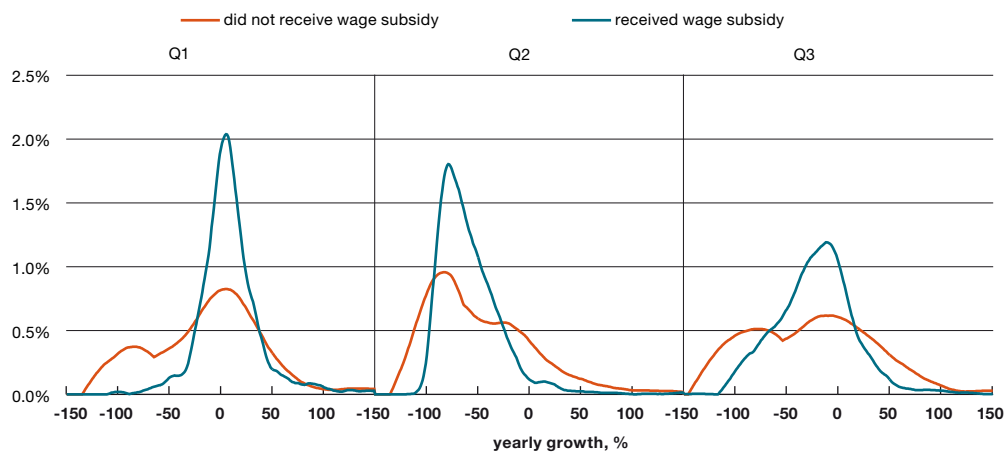
Accommodation and food service was selected because it was the sector that was affected most by the coronavirus crisis, and more than 60% of employees in the sector received wage subsidies in April. In contrast, one quarter of total funds was paid out to manufacturing companies. In the analysis only companies that had five or more employees and declared a positive turnover in 2019 are considered. It should be remembered that differences in the turnover and employment of companies that did or did not receive the subsidy cannot be entirely attributed to the subsidy, as there may be other factors in play. For this reason the performance of companies that received the subsidy is described without any inference of causality in the difference between them and companies that did not receive the subsidy.

The wage subsidy measure allowed companies to apply for the subsidy for two months from March to May, and then for an additional subsidy in June. Three conditions had to be fulfilled for the subsidy to be received from March to May. These were firstly that turnover had fallen by 30% from the previous year, secondly that there was no work to give to at least 30% of employees, and thirdly that at least 30% of employees had had their pay cut by at least 30% or to the minimum wage because there was insufficient work for them. An additional condition was that employers had to repay the subsidy if they made the employee who had received it redundant within two months of the month they received the subsidy. The conditions for the additional subsidy in June were a little stricter. A total of 256.5 million euros was paid out, including social tax, and the subsidies were received by 17,563 companies and 137,683 employees.

Data from the Tax and Customs Board show that 32% of the companies in accommodation and food service that did not receive the subsidy had already lost at least 30% of their turnover in the first quarter of 2020, while only 5% of those that later received the subsidy were similarly affected. Although March is within the first quarter, it can be considered that companies where turnover fell deeply in the first quarter were already in trouble before the crisis. The share of such companies that received the subsidy was about half that of those that suffered a smaller loss in turnover in the first quarter.

Turnover fell sharply at both types of company at the peak of the crisis in the second quarter, but a little more often at companies that received the subsidy, of which 86% lost at least 30% of turnover, while 68% of the other companies did. The situation improved in the third quarter, as is shown in Figure B2.1 by the shift of the peak of the curve to the right. In the third quarter, 46% of those companies that had not received the wage subsidy and 40% of those that had still saw their turnover down by over 30%. Figure B2.1 shows that a larger share of those companies that did not receive the wage subsidy managed to improve their turnover over the year, as 37% of them did so while only 26% of those who received the subsidy did, though this is probably due to the different profiles of the companies. Figures B2.1 to B2.6 represent the density distribution of the year on year growth rates of turnover and employment smoothed out with a filter in order to detect better the differences between the groups.

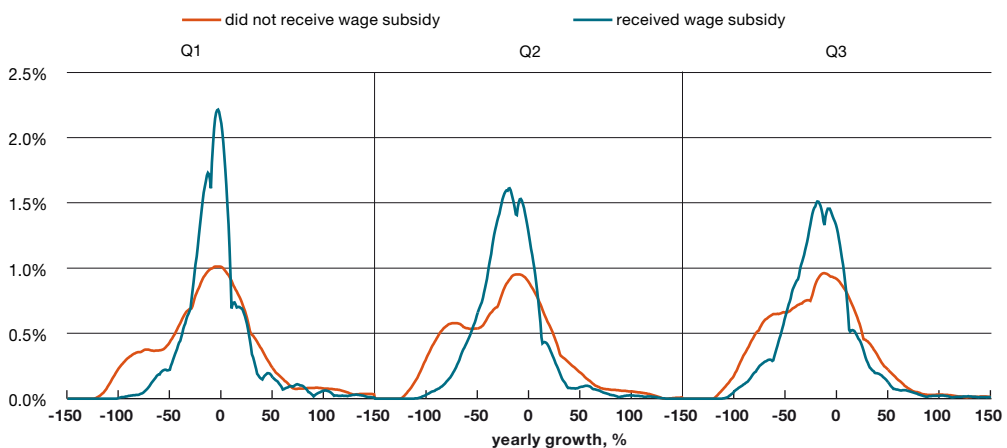
Figure B2.1. Density distribution of yearly growth in turnover of companies in accommodation and food service in 2020



Sources: Tax and Customs Board, Töötukassa, Eesti Pank calculations

A similar change in turnover can be observed from the change in the number of paid employees. The number of employees fell by at least 30% in the first quarter at 29% of companies that did not use the subsidy and at 13% of those that did. The fall in employment was steeper during the crisis, as it was down by over 30% at 39% of companies that did not use the subsidy and at 30% of those that did. The fall in employment slowed in the third quarter and the share of companies where it was down by more than 30% over the year was similar in both groups (see Figure B2.2).

Figure B2.2. Density distribution of yearly growth in number of employees at companies in accommodation and food service in 2020

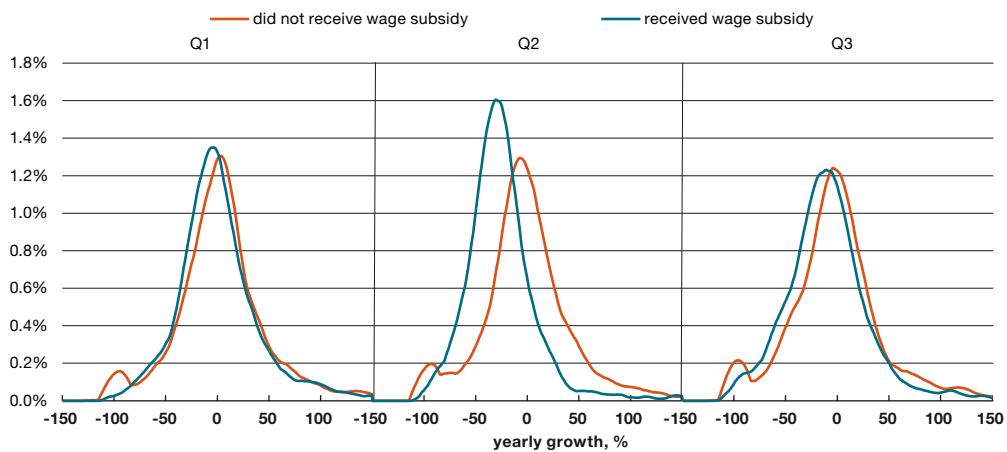


Sources: Tax and Customs Board, Töötukassa, Eesti Pank calculations

Microdata from companies suggest that there were two different groups of companies that did not apply for the subsidy. There were some where business operations collapsed almost entirely and that were already having problems in the first quarter, and some where the fall in turnover was not large enough to qualify for the subsidy, meaning they did relatively well compared to other companies and recovered more quickly in the third quarter.

The share of companies in manufacturing that lost at least 30% of turnover and unemployment was smaller than that in accommodation and food service, and the distribution of yearly growth in turnover in the quarter before the crisis between companies that did and did not receive the subsidy was very similar (see Figure B2.3). The companies that used the wage subsidy measure were clearly those that were hit hardest by the crisis, as 47% of them saw turnover fall by at least 30%, while only 19% of those that did not use the measure saw the same fall. The distribution of the change in turnover across companies of both types in the third quarter was again similar, as turnover fell by at least 30% at 28% of companies that had used the subsidy and at 22% of those that did not.

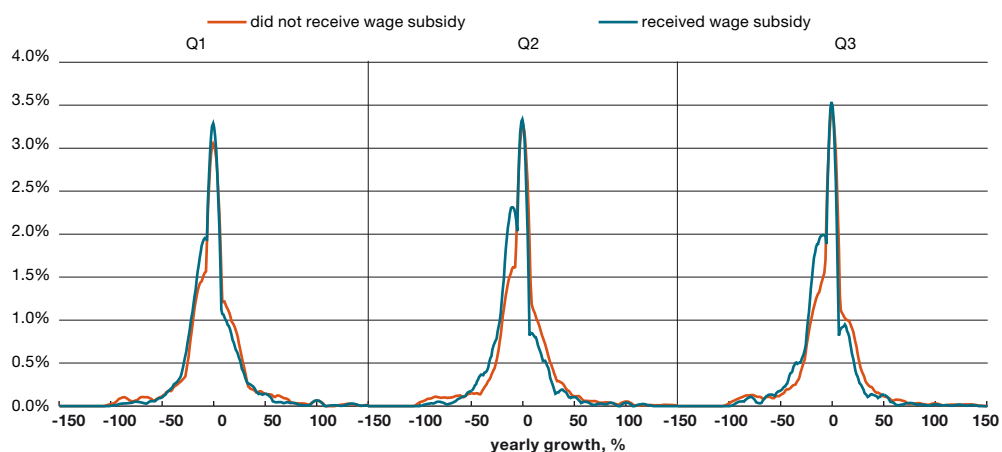
Figure B2.3. Density distribution of yearly growth in turnover of manufacturing companies in 2020



Sources: Tax and Customs Board, Töötukassa, Eesti Pank calculations

The difference in the distribution of the change in the number of employees between companies that did or did not use the subsidy was smaller than that in turnover (see Figure B2.4). The number of employees fell by at least 30% in the first quarter at 8% of companies that did not use the subsidy and at 6% of those that did. This rose to 9–11% in the second and third quarters.

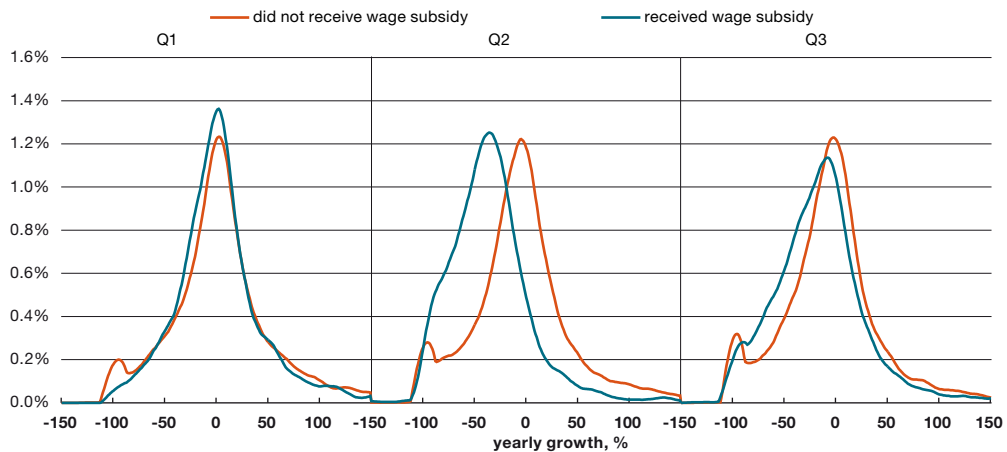
Figure B2.4. Density distribution of yearly growth in number of employees at manufacturing companies in 2020



Sources: Tax and Customs Board, Töötukassa, Eesti Pank calculations

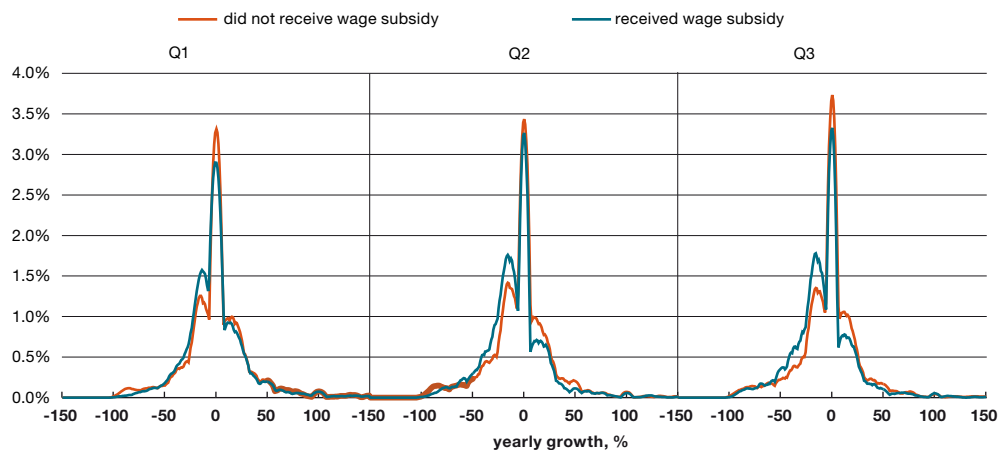
The distribution of changes in employment and turnover in the rest of the economy between companies that did and did not receive the subsidy was similar before the crisis, in the same way as in manufacturing. A large fall of at least 30% in turnover, which was one of the conditions for receiving the subsidy, was more common at companies that used the subsidy, of which 59% experienced it while 24% of other companies did. Employment was down by over 30% in the second and third quarters at 12% of companies that did not use the subsidy and at 16% of those that did. Employment increased or remained unchanged over the year in the third quarter at 47% of companies that received the subsidy and at 59% of those that did not.

Figure B2.5. Density distribution of yearly growth in turnover at all companies in 2020*



* whole economy not including manufacturing, accommodation and food service, public administration and social insurance
Sources: Tax and Customs Board, Töötukassa, Eesti Pank calculations

Figure B2.6. Density distribution of yearly growth in number of employees at all companies in 2020*



* whole economy not including manufacturing, accommodation and food service, public administration and social insurance
Sources: Tax and Customs Board, Töötukassa, Eesti Pank calculations

This analysis is based on a first look at the data and does not measure the causal impact of the wage subsidy scheme. It can be concluded from the data though that the turnover of companies that received the wage subsidy fell by more during the crisis than that of those that did not receive the subsidy. The differences in how employment changed at the two groups in the quarter after the crisis were relatively small though. Although cuts in the numbers of employees were restricted by the terms of the wage subsidy discouraging redundancies, companies still cut jobs regardless. They could do this by not taking the subsidy for some employees, or by reaching agreement with the employee. The

substantial fall in turnover suggests that there should have been a larger fall in employment too, but the data do not show this, which indicates the subsidy had a positive impact. It can be seen from the companies in accommodation and food service that those where turnover was already falling before the crisis were less likely to receive the subsidy than those that were doing better.