

LABOUR MARKET REVIEW

The labour market review by experts from Eesti Pank covers developments in the supply, demand and prices of labour in Estonia. 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. Given the orientation of the euro area monetary policy towards price stability, and the openness of the Estonian economy, the economy can adjust 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.

This review compares developments in Estonia with those in other European countries. There are two sorts of graphics for international comparison. In the long-term view, countries are grouped by region and an unweighted average is taken. The exception is the EU15, which is a weighted average as published by Eurostat. Newer European Union member states among the southern European countries are Croatia, Romania, Bulgaria, Malta, Cyprus and Slovenia. The southern European countries Italy, Greece, Spain and Portugal are in the EU15. The CEE4 are Hungary, the Czech Republic, Poland and Slovakia. Figures covering one year colour the countries by the group they are a member of.

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THE ESTONIAN LABOUR MARKET IN THE FIRST HALF OF 2018

Changes in economic activity usually reach the labour market with a certain delay, but some labour market indicators already showed an imprint of the cooling of the economy in the first half of 2018. The number of vacancies remained high, but it was a little lower than a year earlier, while the employment expectations of employers have not increased. The rise in the number in employment was more restrained than a year earlier and in the second quarter the growth in wages slowed. Not all the signs necessarily point in the same direction though, and there are some contradictory indicators, as labour flows continue to increase and employers became firmer in their conviction that labour is limiting their ability to expand production. Equally, some signs that appear to indicate cooling may actually be the consequence of reforms. The income tax reform for example, may have affected the rise in wages, and the decline in unemployment was probably affected by the Work Ability Reform.

Updated GDP data show that the Estonian economy started growing faster from the second half of 2016, while the payroll started to grow in 2017. The alignment between labour productivity and wage growth improved as economic activity increased, though labour costs did not decline as a share of value added in 2017. At the same time, wage growth has started to exceed growth in productivity in several European Union members in Central and Eastern Europe, and so Estonia's competitiveness as a location for production is not deteriorating at the same rate as earlier. Estonia has managed to catch up to the majority of those countries in its wage level though and the average wage in manufacturing is catching up to wages in the same sector in the Czech Republic and Portugal. Unfortunately the growth in labour productivity slowed in 2017 in Estonia, while in other countries its rate of growth generally increased.

As already mentioned, the growth in wages decelerated in the second quarter of 2018. The income tax reform probably contributed to this slowdown, but it is too early to tell whether its effect will be longer-lasting or short lived. The sharp reduction in the tax burden on those earning up to about the average wage may have slowed the growth in labour costs, as employers were able to raise wages by less by citing the lower tax rates. It is also possible though that the slowdown happened because the income tax reform affected the seasonal nature of wages, which is a temporary effect. The slower wage growth was also affected by the rise in the tax-free minimum threshold in previous years.

As growth in the economy slowed in the first half of 2018, so did growth in employment. It remained faster than the average in the industrial sector, mainly because of the construction industry, though it was slower in services. The increase in part-time employment contributed to the rise in employment in the past half year, which is logical given that the employment rate rose for young people and those aged over 50. The employment expectations of employers for the years ahead did not continue their upward trend of last year, except in construction.

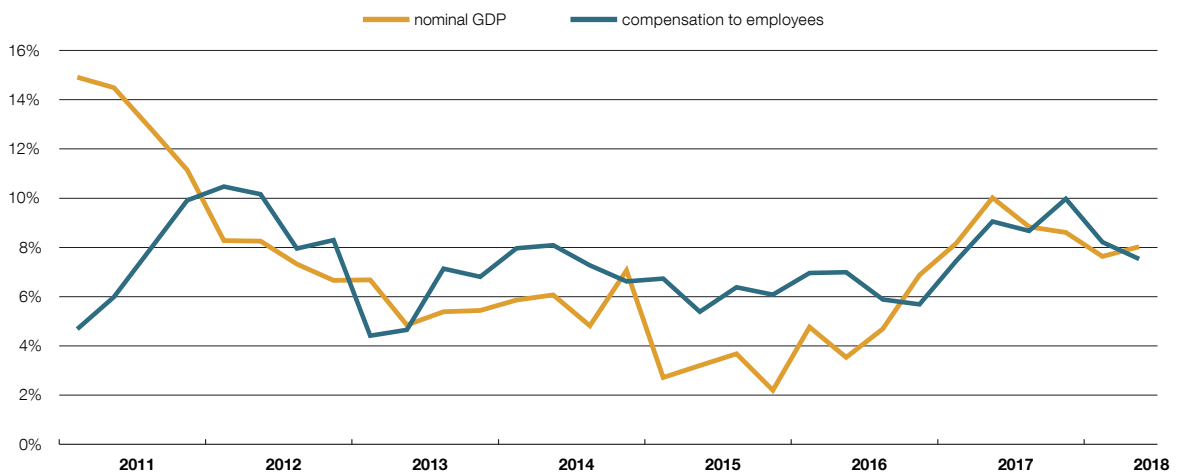
Labour market stresses were reduced by the large supply of labour as the number of people of working age increased in 2017 for the first time because migration was sufficient to offset the natural decline in population. The migration statistics probably do not cover short-term labour, which grew in 2018. On top of this, labour force participation increased.

THE COST OF LABOUR AND PRODUCTIVITY

Unit labour costs

Growth of 3.5% in the Estonian economy in the first half of 2018 was slower than the 4.4% of the second half of 2017. Despite slowing, the growth rate is still above the Eesti Pank estimate of the long-term sustainable capacity. Growth was slower both in labour productivity and in labour costs, but as the growth in labour costs outpaced that in productivity, unit labour costs were up. The rise in labour costs and the growth in productivity have been notably better aligned since 2017 than they were earlier. The improvement has come from the faster growth in the economy and higher inflation resulting from the long-awaited recovery in foreign demand after 2016 (see Figure 1). This allowed companies to operate at higher capacity and to sell their products abroad for a higher price. The faster growth in the economy was followed with a slight lag by faster growth in labour costs, as it became less possible to increase production with the same amount of labour. Employers had to take on new staff to increase output and the lack of available labour resources meant that increased demand for labour boosted wage growth. Labour costs rose more quickly, but overall by less than the growth in productivity.

Figure 1. Compensation to employees and nominal GDP growth



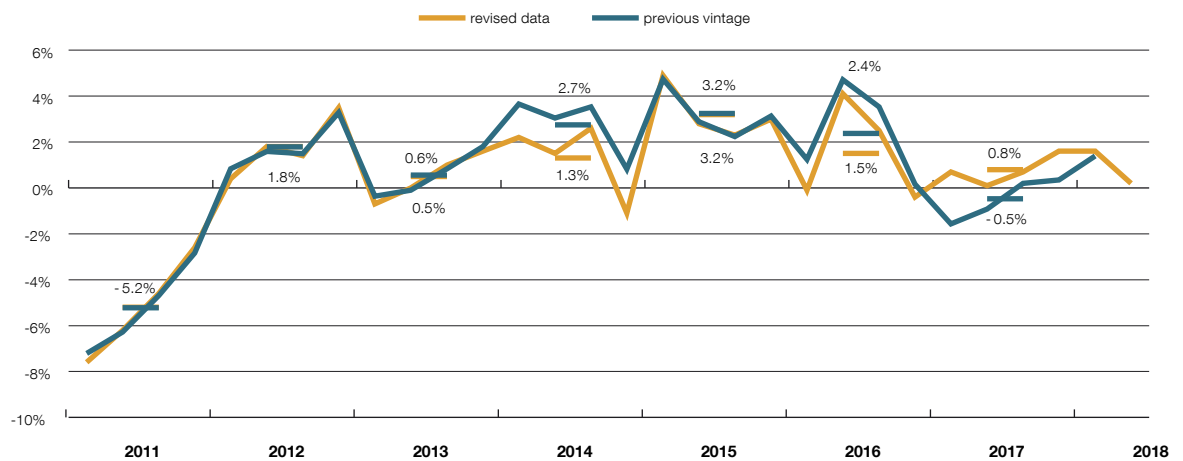
Source: Statistics Estonia

When Statistics Estonia releases the data for GDP for the second quarter each year, it revises the estimates for the GDP of earlier years at the same time. The revisions are affected most by the yearly business sector statistics that replace the quarterly estimates based on sampling, and the release of the Supply and Use Tables¹. The statistical corrections also affect the estimate of the rise in unit labour costs, as both profits and labour costs are usually revised. Since the second half of 2011 the estimates for GDP, and so equally for growth in productivity, have mainly been corrected upwards. Labour costs were corrected upwards for 2017 by more than GDP was, and so the corrected estimate showed that unit labour costs did not fall in 2017 but actually rose by 0.8% (see Figure 2).

The relation between wages and productivity did not change equally across all sectors. Labour costs per unit of output fell by most in the first half of 2018 in the construction sector. The value added created in construction has been increasing in current prices by

¹ Supply and Use tables describe production processes individually and the flows of goods and services. The tables are used in compiling GDP statistics.

Figure 2. Real unit labour cost growth



Source: Statistics Estonia

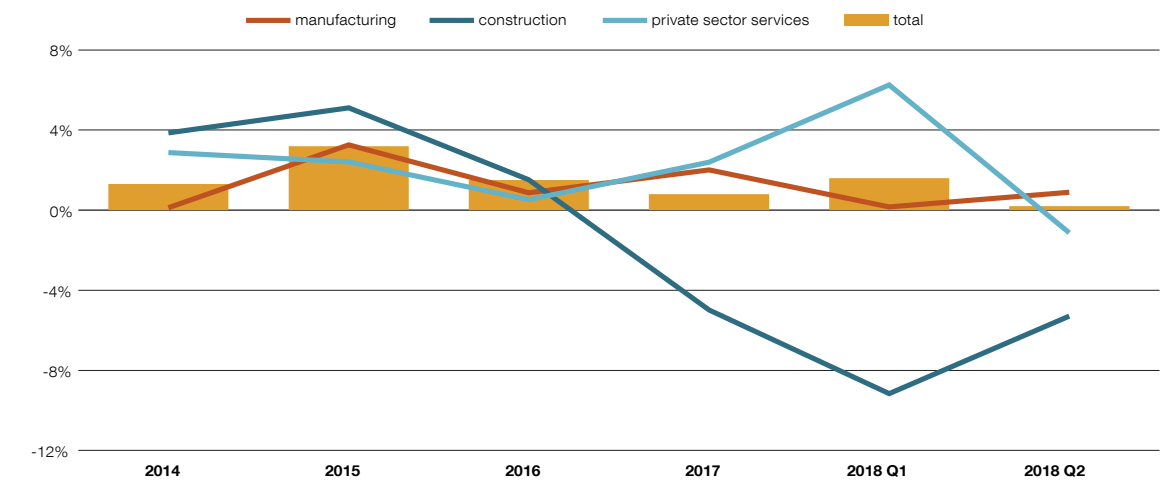
some 20% in yearly terms since 2017, while the growth in labour costs has risen to 10%. The speed at which labour costs have grown has been raised by faster growth in employment and in wages. Rapid growth in value added and increasing worries about labour shortages give reason to believe that wages will continue to rise fast. The number of builders from third countries working on short-term work permits rose notably in 2018, and this has probably helped ease wage pressures in construction. It is not impossible though that labour costs will be retrospectively revised upwards, as the surging recovery may lead to more new companies being created, for which data are currently lacking.

In the service sector though, and to a lesser extent in manufacturing, labour costs have been rising constantly as a share of value added in recent years. Wage growth in the service sector has been driven upwards by the sharp rise in the minimum wage and by the deepening problem of labour shortages. Although there is less competition with imported products in the sector, companies have not been able in the past few years to pass on all of the rise in labour costs into product prices, and the data indicate that profit margins have narrowed (see Figure 3).

If labour productivity increases more slowly than labour costs per unit of output, then the share of labour costs in GDP increases. As GDP can be divided between labour income and capital income, this means that profit has declined as a share of GDP. If real unit labour costs rise and so the share of capital income falls further than in competing countries where production is located, it could threaten the attractiveness of the country and make it more likely that foreign investors and companies will move production to countries with lower unit labour costs. It can be assumed that within Europe, Estonia competes as a base for production with other countries in Central and Eastern Europe. Labour costs rose faster than productivity in Latvia and Lithuania in 2014–2016, but the opposite has happened in other countries in Central and Eastern Europe. Since the end of 2016 however, the growth in real unit labour costs in all three Baltic states has slowed, while labour shortages in most other CEE countries caused wages there to grow faster than productivity (see Figure 4).

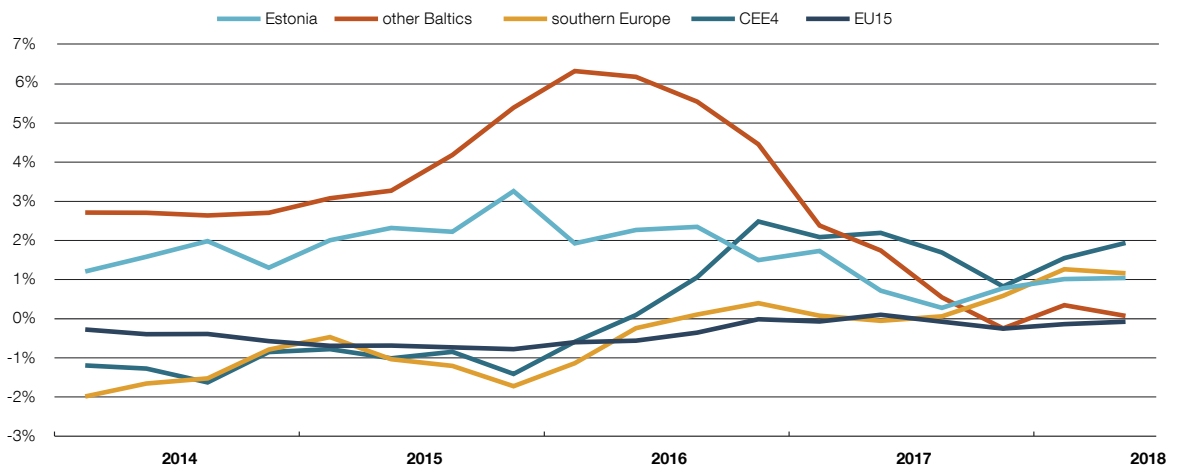
From the point of view of competitiveness, the change in unit labour costs for the exporting sector over time is more important than the figure for the whole economy. Manufacturing

Figure 3. Real unit labour cost growth by sector of activity



Sources: Statistics Estonia, Eesti Pank calculations

Figure 4. Real unit labour costs, four-quarter average yearly growth

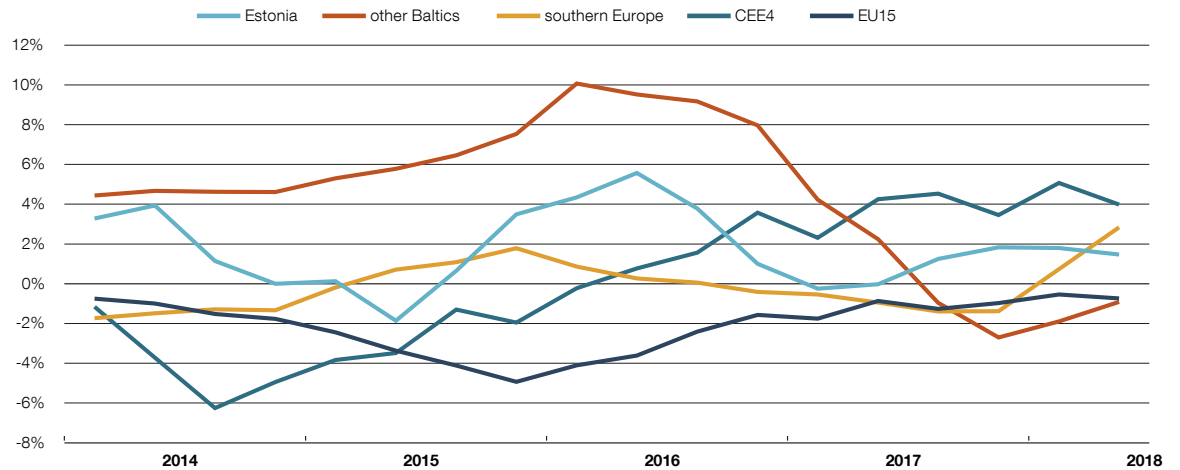


Sources: Eurostat, Eesti Pank calculations

is often used as a proxy for the exporting sector as it is the sector with the largest share of exports. In the past year the earlier rise in unit labour costs in Latvia and Lithuania has been replaced by a fall, and the widest gap in Europe between growth rates for wages and productivity has been in the large countries in Central and Eastern Europe. Real unit labour costs in the whole economy and in manufacturing have risen faster in Central and Eastern Europe than in Western Europe, and Estonia, Latvia and Lithuania have been at the forefront among the countries of Central and Eastern Europe (see Figure 5).

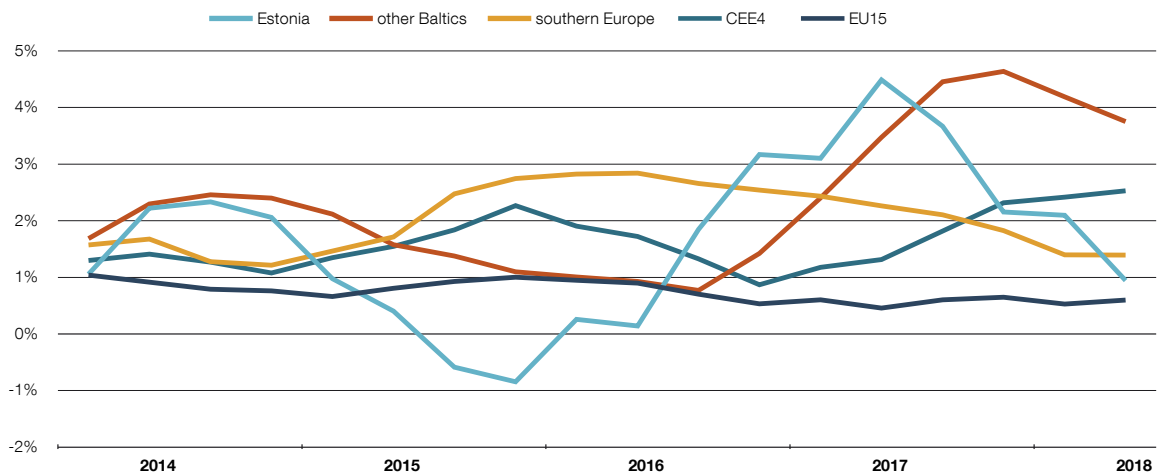
Examining the components of the rise in unit labour costs reveals that the faster rise in those in the Baltic states has mainly been caused by weak growth in productivity in 2015–2016, which was followed by a stronger recovery than in other areas of Europe (see Figure 6). The growth in labour productivity slowed in Estonia in the second half of 2017 and early 2018, but in Latvia and Lithuania it did not.

Figure 5. Real unit labour costs, four-quarter average yearly growth in euros



Sources: Eurostat, Eesti Pank calculations

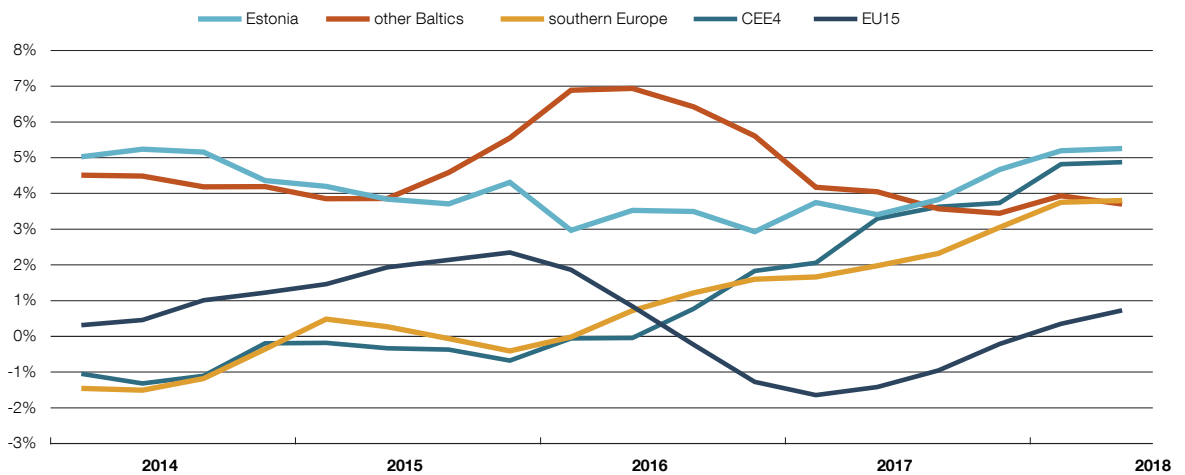
Figure 6. Real labour productivity, four-quarter average yearly growth



Sources: Eurostat, Eesti Pank calculations

Nominal unit labour costs measure the cost of labour needed to produce one unit of value added in the economy. If labour costs rise, companies will sooner or later have to raise their product prices, and this will then hit their ability to take on their competitors on price. The corrected GDP data show that the rise in nominal unit labour costs in Estonia did not slow in 2017, but in fact accelerated to reach 5.9% in the first quarter of 2018, before declining in the second quarter. Both inflation and the rate of growth in nominal unit labour costs have been higher in most regions of Europe (see Figure 7). As relative inflation matters more for competitiveness, the smaller gap in growth rates than in other parts of the European Union has been a beneficial change for the Estonian exporting sector.

Figure 7. Real labour productivity, four-quarter average yearly growth



Sources: Eurostat, Eesti Pank calculations

Average wages

The rate of wage growth in the Estonian economy slowed in the first half of 2018 to 7% from 7.4% in the second half of 2017. Yearly wage growth was higher in the first quarter at 7.7%, but in the second quarter it dropped to 6.3%. The position of the economic cycle is still having an accelerating effect on the rate of wage growth given there remains a shortage of labour in the labour market and employers estimate that labour shortages have got worse. At the same time a fall in the number of vacancies and a decline in the employment expectations of employers indicate that tensions have not become worse than earlier in the labour market. The rise in the minimum wage also helped keep the overall rise in wages slower, as it was smaller at 6.4% than in previous years when it was closer to 10%. The higher the minimum wage is as a ratio to the average wage, the larger is the share of workers who earn the minimum wage, and the more significant the role that rises in the minimum wage play in defining labour costs in general. Box 1 considers how the share of employees earning the minimum wage has changed over time, and how likely it is that different characteristics will be associated with earning the minimum wage.

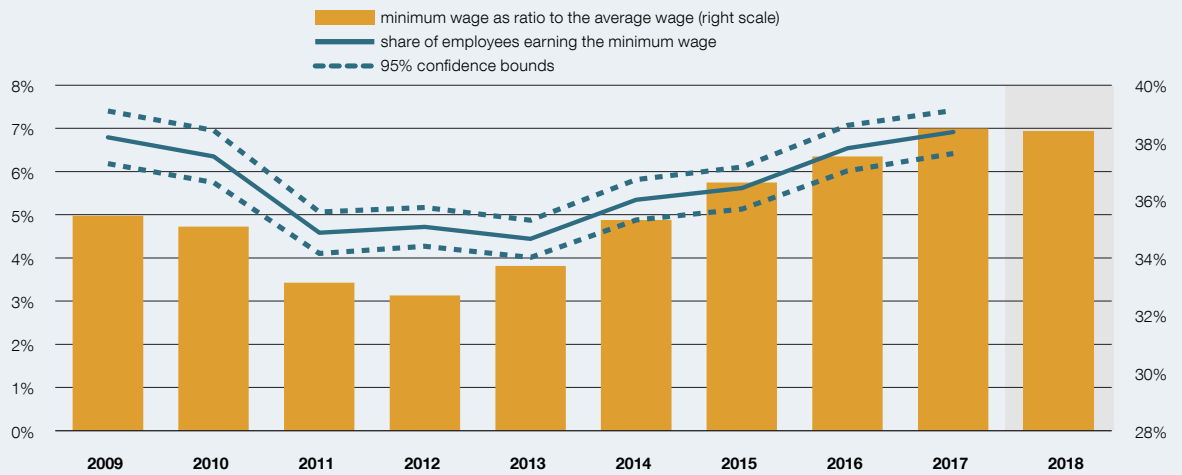
Box 1. Employees earning the minimum wage²

As the average wage has risen rapidly, so the minimum wage has also risen. It is forbidden under the Employment Contracts Act to pay full-time waged employees less than the minimum wage. In 2013–2017 the minimum wage was raised by an average of 10% a year. As the average wage has risen more slowly, the minimum wage has increased sharply as a ratio to the average wage since 2012 (see Figure B1.1). The minimum wage rose a little more slowly in 2018 than it had in previous years, partly because of the sharp rise in the tax-free minimum income threshold. Eesti Pank forecasts that the minimum wage will remain at the same ratio to the average wage this year that it was in 2017.

The higher the minimum wage as a ratio to the average wage, the larger the role it plays in setting wages for the economy in general. A rapid rise in the minimum wage may also cause the share of all those in employment earning the minimum wage or close to it to increase. There are unfortunately no precise data on the share of all full-time employees earning the minimum wage. Statistics from the Tax and Customs Board on wages paid out show that an average of 2–4% of all the wages paid out each month were exactly the minimum wage in 2009–2017. The share of those paid up to or at the minimum wage fluctuated between 15% and 18% though. It is

² This box uses microdata from the Estonian Labour Force Survey.

Figure B1.1. Share of full-time employees earning the minimum wage among full-time employees



Sources: Statistics Estonia, Eesti Pank calculations
Note: 2018 is forecast

not evident from the Tax and Customs Board data on wages paid out whether those receiving the minimum wage were working full time or less than full time. The amount paid out is affected by variations in hours worked and by holiday pay and bonuses, and so the number of workers being paid the amount of the minimum wage is not the same as the number of workers who are earning the minimum wage under their employment contract.

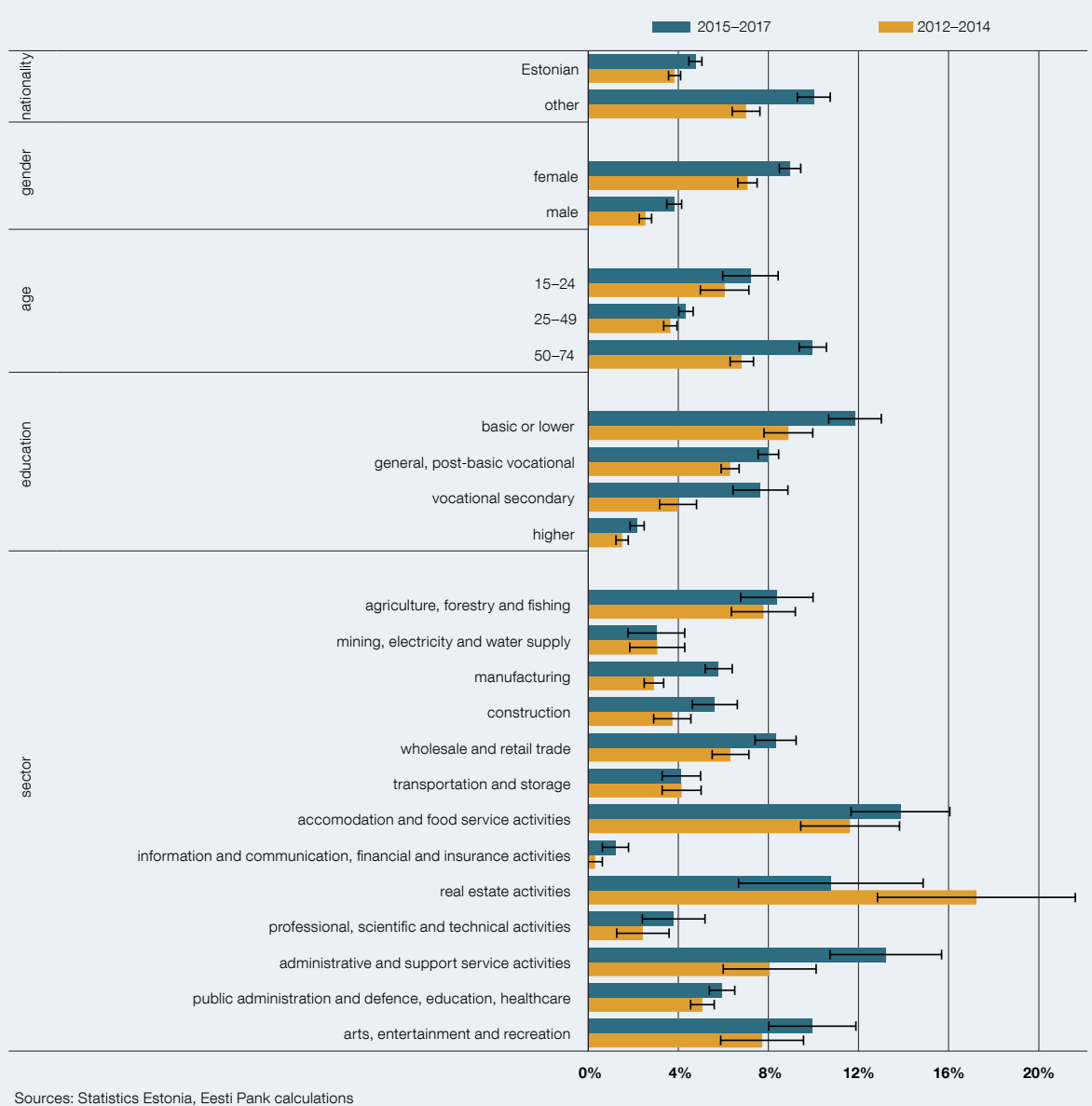
Another source giving some information on the number of employees earning the minimum wage for full-time work is the Labour Force Survey. The number of full-time workers earning the minimum wage or close to it³ as a share of all full-time employees fell after the economic crisis according to the data from the Labour Force Survey (see Figure B1.1). However, the rapid rise in the minimum wage was accompanied by an increase in the share of workers earning the minimum wage. In 2015–2017 there were one and a half percentage points more full-time workers earning the minimum wage or close to it than there were in 2012–2014⁴.

The age group which had the most employees earning the minimum wage in 2015–2017 was the 50–74 age group, and the share of those earning the minimum wage was about a third larger in this group than it was in 2012–2014 (see Figure B1.2). There continue to be more women and non-Estonians among residents of Estonia earning the minimum wage. The more education someone has, the less likely they are to earn the minimum wage. The probability of those working in manufacturing, retail, and administrative and support service activities receiving the minimum wage has increased notably since 2012–2014. The types of jobs with the largest share of those earning the minimum wage are unskilled jobs and service and retail jobs.

³ Respondents to the Labour Force Survey are asked to give their earned income of the previous month, but this may be affected by sick days, holidays and bonuses, and so the number given for full-time workers earning the minimum wage also includes workers who earn up to 5% more than the minimum wage or up to 10% less than the minimum wage.

⁴ As the Labour Force Survey is a voluntary survey that uses a sample of around 4500 people each quarter, the confidence bounds for the point estimate of the share of workers earning the minimum wage are quite wide. Confidence bounds of 95% mean there is a 95% probability that the actual share of those earning the minimum wage is within that range.

Figure B1.2. The share of full-time employees who earn a minimum wage and 95% confidence bounds

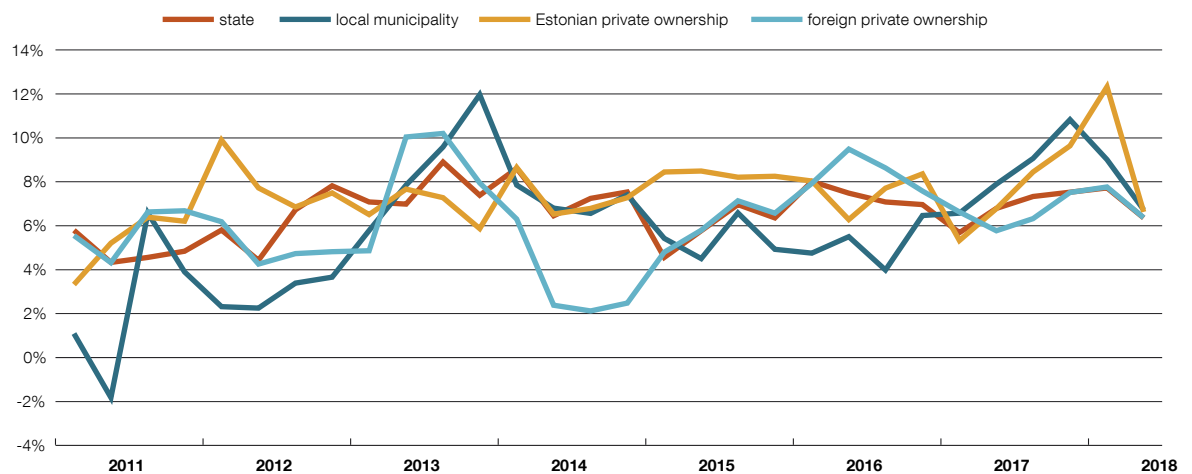


Sources: Statistics Estonia, Eesti Pank calculations

The growth in labour costs has been affected significantly in 2018 by the income tax reform. Firstly, the reform reduced the tax burden on those earning approximately up to the average wage and so increased their net wage. In negotiations over wage rises this could allow employers to raise the gross wage by less, and over time part of the tax cut will be passed on into slower growth in labour costs. Secondly, data from the Tax and Customs Board show that the tax reform affected the seasonal variation in wages. Summer holiday pay was earlier paid out before the holidays and the average amounts paid out in wages in the summer months varied a lot, but the tax reform has encouraged people to receive their wages in equal amounts. Although the statistics on the average wage are accrual-based, the seasonality of the average wage in, say, education indicates that the figures can be affected by how the wage is paid out.

The category of employer that took the lead in faster wage growth in 2017 and early 2018 was the public sector, where wage growth was driven by temporary factors such as compensation paid out under the reform of administration and bonuses paid at the end of the Estonian presidency of the Council of the European Union (see Figure 8). In the second quarter of 2018 the rate of wage growth fell most sharply in the public sector as these temporary factors faded away and the tax reform had an indirect impact.

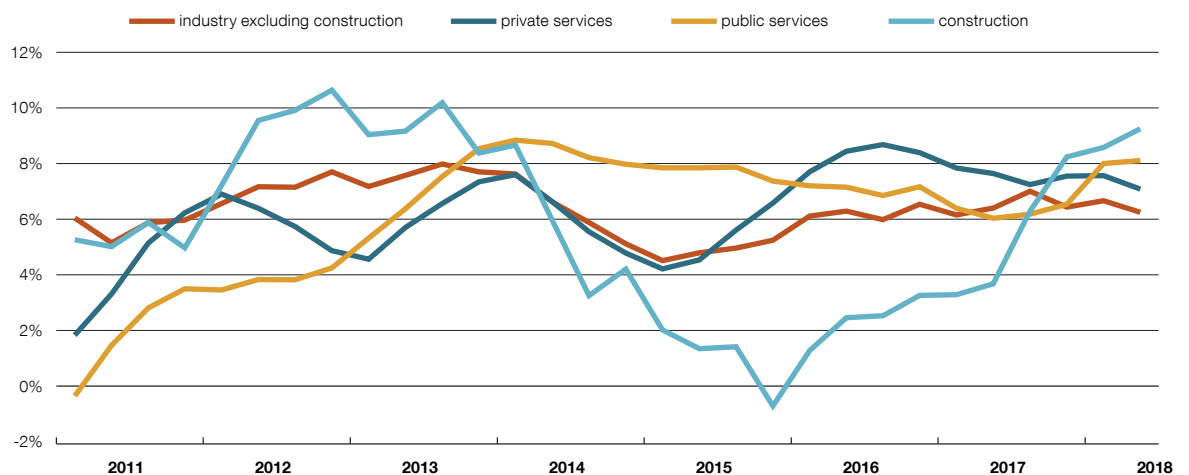
Figure 8. Growth in average monthly gross wages by type of employer ownership



Source: Statistics Estonia

The sector where wage growth has increased the most notably is construction (see Figure 9), as a sharp recovery in activity in construction increased the need of companies in the sector for labour. There was a notable increase in perceived labour shortages in construction during 2017 and the first half of 2018 and the vacancy rate also climbed. At the same time the labour shortages in construction were eased by an increased inflow of foreign labour. Data from the Police and Border Guard Board show that 13,410 temporary work permits were issued in the first 10 months of 2018⁵, almost 5000 of them for work in construction. The actual average number

Figure 9. Growth in average gross monthly wages by sector of activity, four-quarter average yearly growth



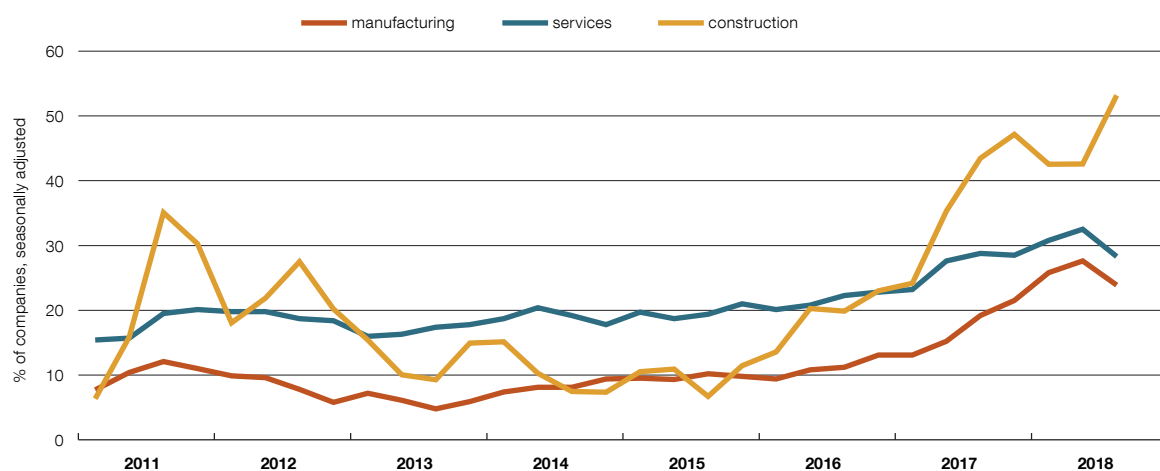
Source: Eesti Pank calculations

⁵ As reported by Estonian television in Estonian <https://www.err.ee/865574/alamisloa-ja-luhiajalise-tootamise-statistikas-domineerivad-ukraina-kodanikud>.

of foreign workers on short-term temporary work permits is lower than that, because workers are likely to stay for less than a full year. Without this the labour shortages in construction would have bitten even harder and wages would have risen faster.

Stronger foreign demand led to a rise in the demand for labour in manufacturing in the second half of 2016. The number of vacancies jumped, as did the employment expectations of employers, and the growth in employment accelerated after something of a lag. Although employers recognised an increase in labour shortages (see Figure 10), wages have not risen faster in manufacturing and in the first half of 2018 they did so by less than the average for the whole economy. Like those in construction, wage pressures in manufacturing may be eased by the employment of foreign labour. Wage growth may be being restrained in manufacturing because the wages are already quite high relative to those in most other Central and Eastern European countries. This is analysed in more detail in Box 2.

Figure 10. Labour as the main factor limiting production



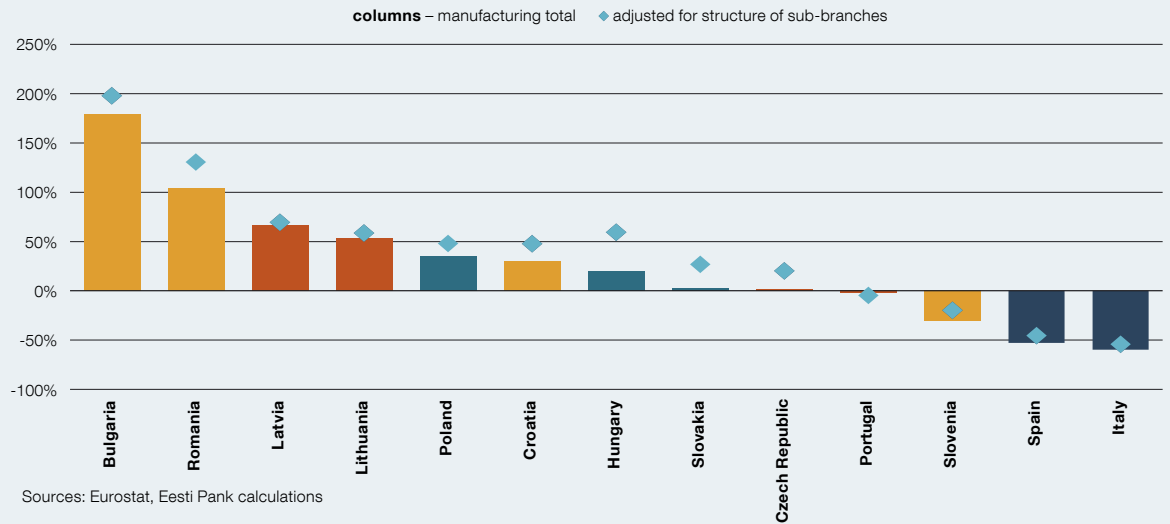
Source: European Commission

Box 2: The wage level in manufacturing in Central and Eastern European countries

Although wages in Estonia are noticeably below the levels in Northern and Western European countries, the wage level in Estonia is quite high next to those in Central and Eastern Europe and is approaching the level in Southern Europe. Higher wages mean more income for workers and increased ability to consume, and wages need to rise for Estonia to catch up with the countries in Europe with higher living standards. At the same time, higher labour costs mean that low productivity production has to move to countries with cheaper labour, and this increases uncertainty about the future. If several companies had to leave within a short time, employment could suffer. This box analyses differences in wage levels and changes in them using several sources of data. It focuses on manufacturing as this sector has the most internationally comparable data and it is a sector that is open to international competition.

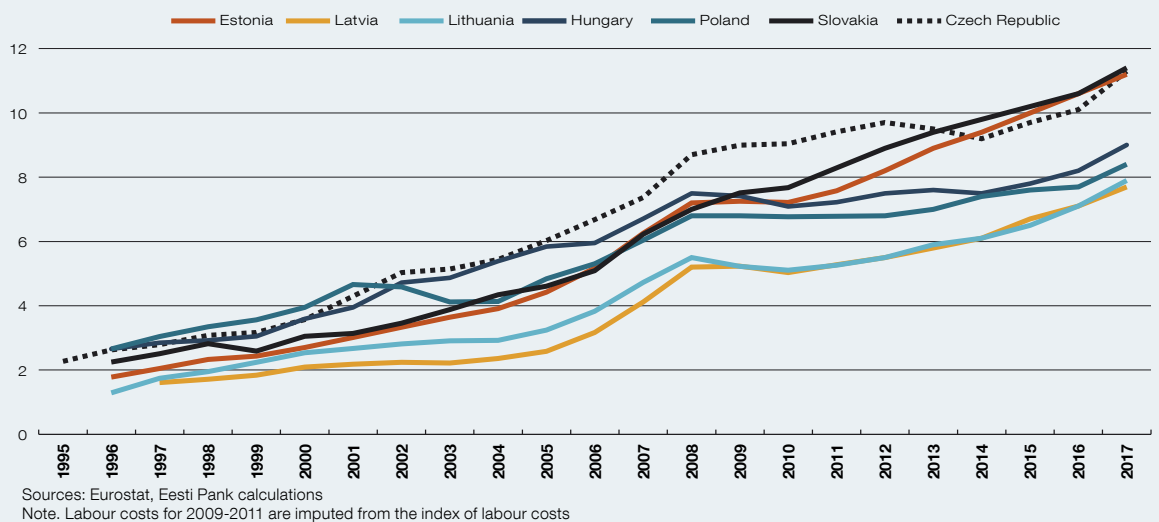
Pay in manufacturing in Estonia is around 50% higher than in Latvia or Lithuania, and Estonia is several times as expensive as Bulgaria or Romania. The differences to wage levels in other Central and Eastern European countries are smaller though. The gaps between wage levels are also affected by whether the arithmetic average for the whole sector is used or whether wages are compared using more granular information. Figure B2.1 shows the wage gaps for manufacturing as a whole and the wage gaps weighted for the structure of the Estonian manufacturing sector. The figure reveals that comparing each sector of activity more precisely puts the wage level in Estonia even higher than those in other Eastern European countries. Wages in individual sectors of Estonian manufacturing are around 50% higher than those in the same sector in Poland, Hungary, Latvia and Lithuania, and 20–25% higher than in the Czech Republic and Slovakia. This means that Estonia is more expensive as a base for production than other Eastern European countries at least in terms of labour costs.

Figure B2.1. Labour costs per worker in manufacturing in Estonia and in southern and eastern European countries in 2016



It is nothing new that the wage level in Estonia is different from those in Latvia and Lithuania. At the turn of the century the wage level in manufacturing in Estonia was about the same as that in Lithuania (see Figure B2.2), but over time wages in Estonia have risen faster and have now caught up with those in the Czech Republic and Slovakia. That the wage level has been higher in a given country than those in other countries does not mean though that it will remain so. In the 1990s the wage levels in industry in Poland and Hungary were similar to those in the Czech Republic, but over time wages have risen faster in other countries.

Figure B2.2. Hourly labour costs in manufacturing, euros

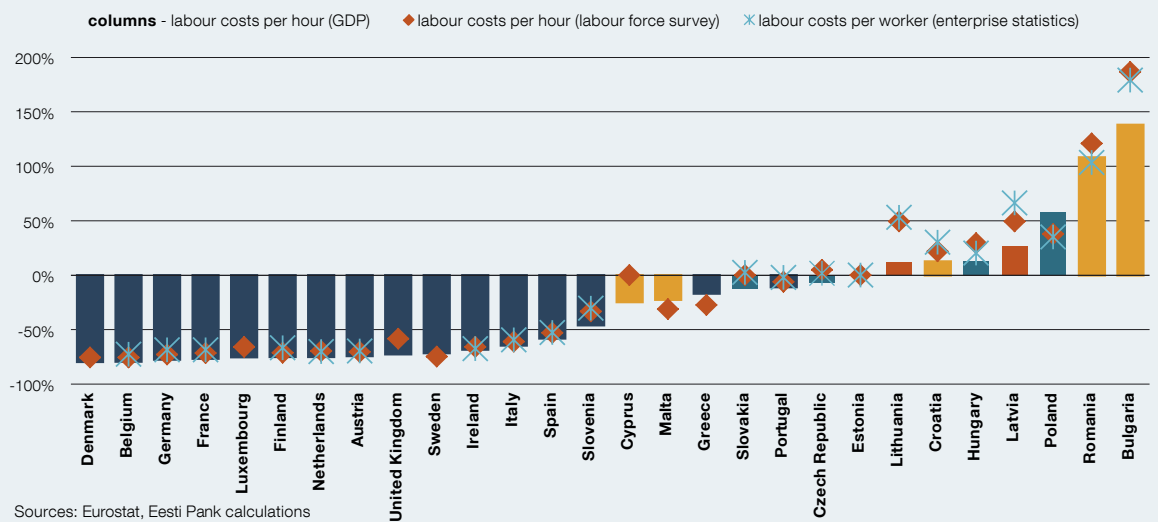


Although labour is cheaper in most other East European countries than it is in Estonia, moving production to those countries will not necessarily help companies much, as labour costs generally rise faster in countries with lower wage levels. If wages continue to rise in Latvia at the same rate as they have in the past six years, the wage levels in the Latvian manufacturing sector will be as high in six or seven years as they were last year in Estonia. This is not a long enough time horizon to move a large part of production from Estonia to Latvia, as it is not cheap to relocate production facilities. A greater fear is that any deterioration in the economy would lead production units in countries with higher labour costs to close their doors completely.

This analysis considered the wage to be the most general possible indicator for labour costs, which is wages together with all labour taxes. As labour taxes are different in each country, a comparison of gross and net wages may be misleading.

It must be remembered that data on wage levels are not the same in all data sources and estimates can differ sharply from one another. The differences in wage levels in manufacturing in the Baltic states are much smaller when calculated from GDP than they are from other methods (see Figure B2.3). It is evident that the differences in the wage levels in Estonia and Western European countries do not depend particularly on the choice of data source, but there certainly is a difference in comparisons with Eastern European countries. GDP data tend to show smaller differences in wage levels. Data from labour costs surveys and corporate financial statistics show larger differences between the wage levels of Latvia and Lithuania and that of Estonia than are found from GDP data. The detailed pay survey, which is carried out every four years, shows the pay differences in the Baltic states to be quite wide.

Figure B2.3. Labour costs per worker in manufacturing in Estonia and in other European Union countries in 2016

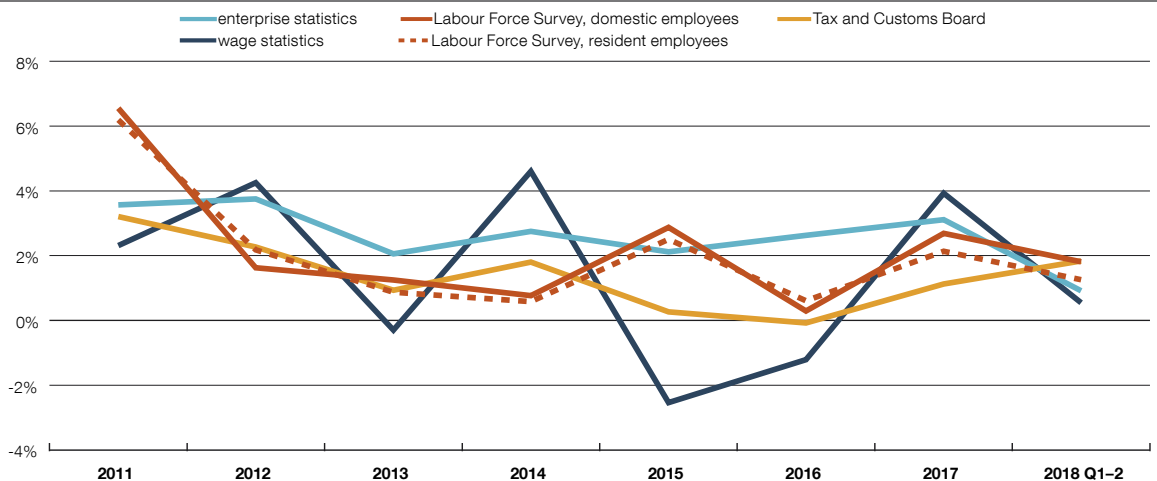


DEMAND AND SUPPLY FOR LABOUR

Employment

The Estonian economy grew a little more slowly in the first half of 2018 than in the previous year. As the growth slowed in the economy, so did the need for companies to hire new employees. The Labour Force Survey showed that 1.8%, or 11,450, more workers were employed at companies in Estonia in the first half of 2018 than a year earlier (see Figure 11). As in 2017, the growth in total employment, or the employment of Estonian residents, was a little slower at 1.3% or 8200 employees. The number of Estonian residents working abroad, especially at companies in Finland, has fallen and when those people come to work in Estonia the number of Estonian residents in employment does not change but the number employed by companies in Estonia rises.

Figure 11. Change in the number of employees indifferent data sources



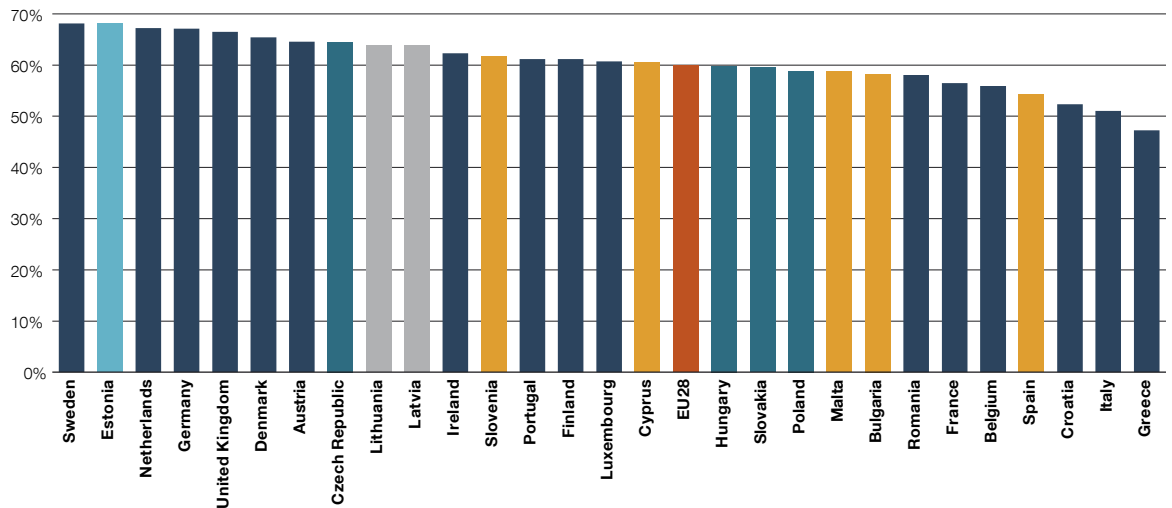
Sources: Statistics Estonia, Tax and Customs Board

The number in employment rose fastest in financial and insurance activities and in construction. Fewer were employed in information and communications, real estate activities and agriculture than in the first half of last year.

The employment share, which is the rate of employment for those of working age, taken as 15–74, was about one percentage point higher in the first half of 2018 than a year earlier at 67.4%. The biggest jump was in the employment rate for those aged 15–24, which climbed five percentage points to 42.8%. The employment rate in Estonia has been one of the highest in the European Union for several years now (see Figure 12), indicating there is less slack in the labour supply in Estonia than the average.

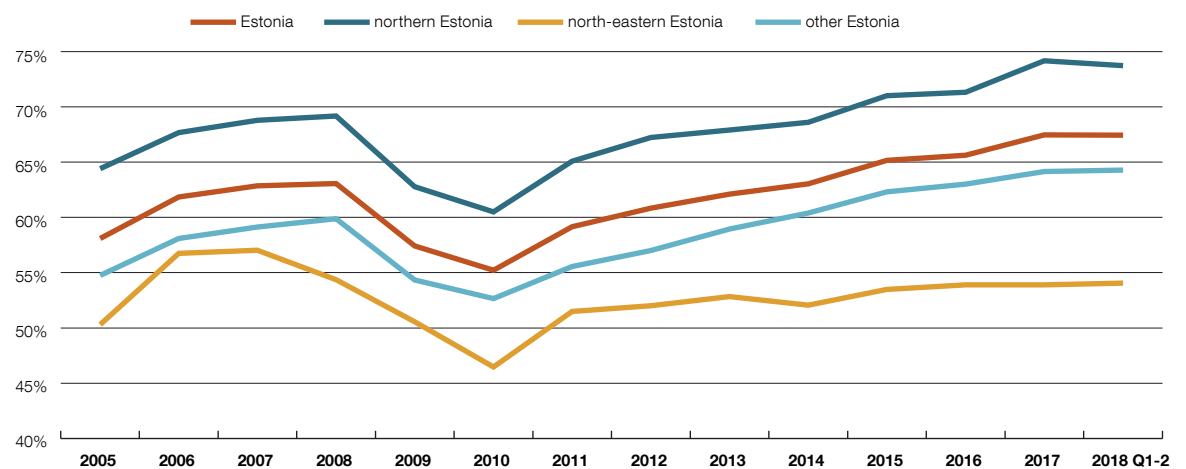
Though the employment rate is very high in Estonia on average, there are still differences between different regions (see Figure 13). Three quarters of residents of working age are in employment in northern Estonia and the employment rate in this region barely changed over the year. The employment rate climbed in north-east Estonia however from the first half of 2017, and a little over half of the working age population there is now in employment. The employment rate in north-east Estonia has so far remained lower than during the rapid economic growth of 2005–2008, while the employment rate elsewhere in Estonia has been higher for three years now than it was during the economic boom a decade ago.

Figure 12. Average employment rate, Q3 2017 – Q2 2018



Sources: Eurostat, Eesti Pank calculations

Figure 13. Employment rate



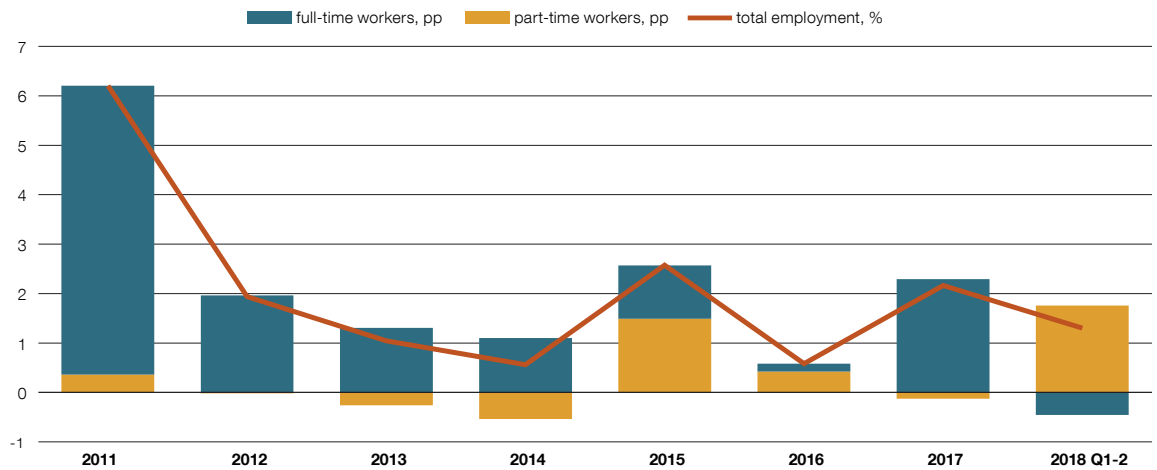
Source: Eesti Pank calculations

The Labour Force Survey is a voluntary survey and the figure it gives for employment in each quarter is based on a sample of around 4500, so the confidence bounds for the employment growth rates in it are quite wide. For this reason it is important to look at other data sources giving information on numbers of employees too.

Employment growth slowed not only in the labour force survey, but also in the wage survey and the corporate statistics. The wage survey gives the number of employees as full-time equivalent and it found the number of employees increased over the year by only 0.5% or 2900 workers. That the number of workers rose less as full-time equivalent⁶ is in line with the data in the Labour Force Survey on full-time and part-time employment, which show that in the first half of 2018 it was the rise in the number of part-time workers that helped employment to increase (see Figure 14). The growth in employment through the rise in the number

⁶ This means for example that the wage survey counts 10 part-time workers doing 20 hours a week instead of 40 as five full-time employees.

Figure 14. Change in the number of employees by full/part-time job



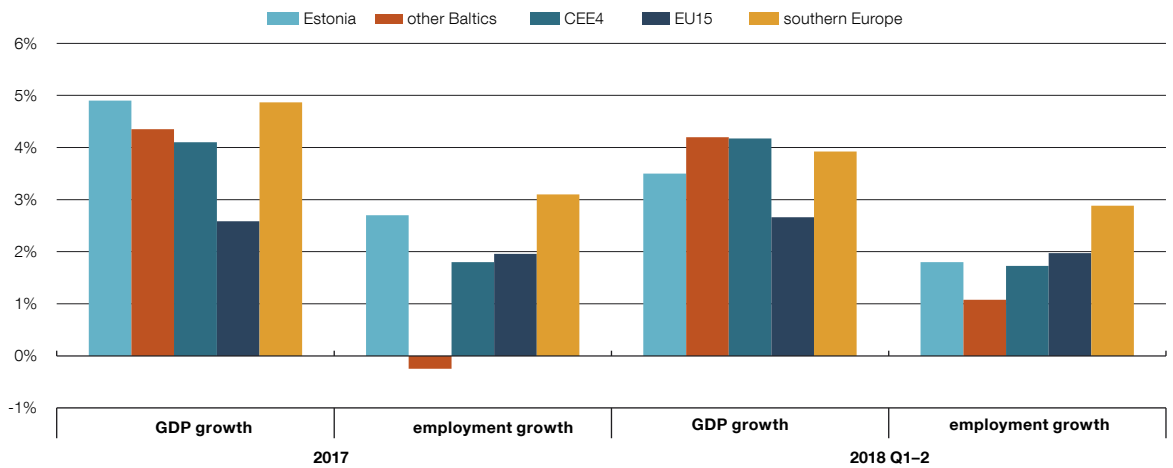
Sources: Statistics Estonia, Eesti Pank calculations

of employees working part-time can be taken to mean that the high rate of employment and shortage of labour have led the labour market to take in people who, for whatever reason, cannot or do not want to work full-time, such as students or the retired. The share of employees working part-time is markedly smaller in Estonia than in Western European countries (see Labour Market Review 1/2018). With the employment rate very high, encouraging part-time work may be one way of bringing into the labour market people who cannot or do not want to work full time.

The data from the Tax and Customs Board are registry data and they show employment up around 2%, like the Labour Force Survey. Unlike the other data sources however, registry data show the number in employment rising at an increasing rate (see Figure 11). One reason that employment grew faster in the Tax and Customs Board data could be that employees are more prepared to declare their wage officially as the tax-free minimum income threshold was raised substantially. Another is that the Tax and Customs Board data cover foreign workers temporarily in Estonia, if they are paid an official wage. Such workers do not normally come under the sampling of the Labour Force Survey. The third reason is that the point estimates for the growth rate in employment in the Labour Force Survey have quite wide confidence bounds, which means that the actual growth in employment may be within quite a wide range.

The region where employment grew fastest in the first half of 2018 was the countries in southern Europe. The growth in employment in Estonia slowed a little as the growth in the economy slowed, meaning the growth rate for employment in Estonia is now similar to those in other Central and Eastern European countries and in the EU-15 (see Figure 15).

Figure 15. Change in employment and GDP



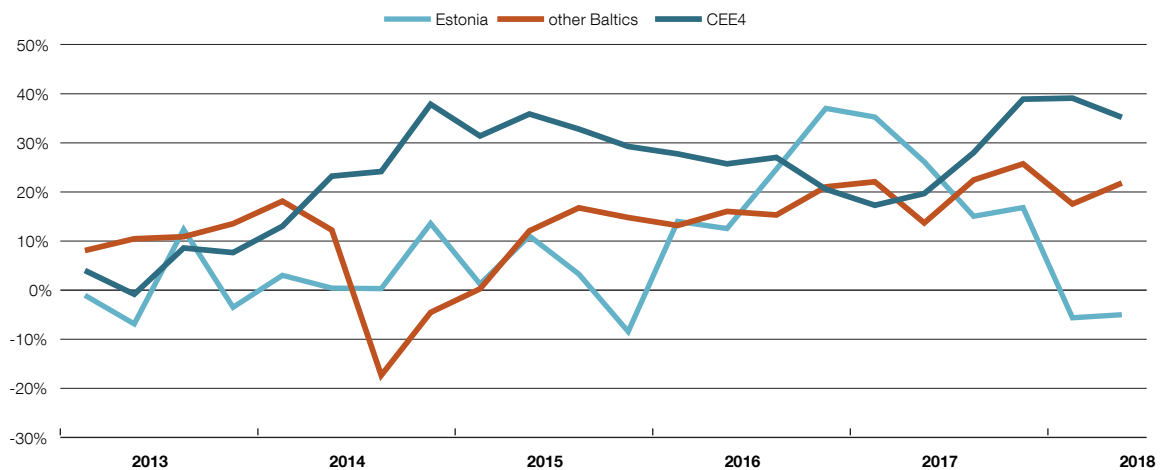
Sources: Eurostat, Eesti Pank calculations

Vacancies

That the need for additional labour is slightly lower than it was in the previous year stands out from the vacancies statistics as well. The labour mobility survey found there were on average 11,000 vacancies in the first half of the year, which is 600, or around 5%, fewer than in the first half of 2017 (see Figure 16). The largest falls in the number of vacancies were in manufacturing and in administrative and support service activities. There were more vacancies than in the first half of the previous year in healthcare and financial and insurance activities though.

The change in the number of vacancies also illustrates the cyclical differences in the growth in employment in Estonia and other Central and Eastern European countries, as demand for labour increased strongly in Estonia in the second half of 2016 and this was reflected in faster growth in employment in 2017. Growth in the demand for labour in Central and Eastern European countries only started to pick up a year later, in the second half of 2017.

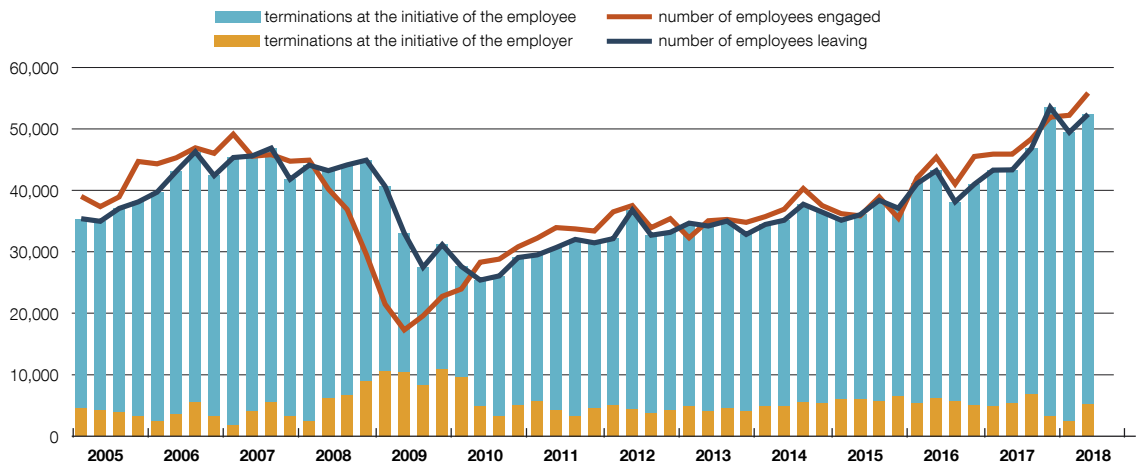
Figure 16. Yearly change in the number of job vacancies



Sources: Eurostat, Eesti Pank calculations.

Although there were slightly fewer vacancies in the first half of the year than a year previously, the Labour Mobility Survey found that the number of employees hired or leaving work at their own initiative continued to rise quickly (see Figure 17). This indirectly indicates that job changing has become very frequent, which is typical at a time when there is little available labour in the market.

Figure 17. Labour mobility, seasonally adjusted

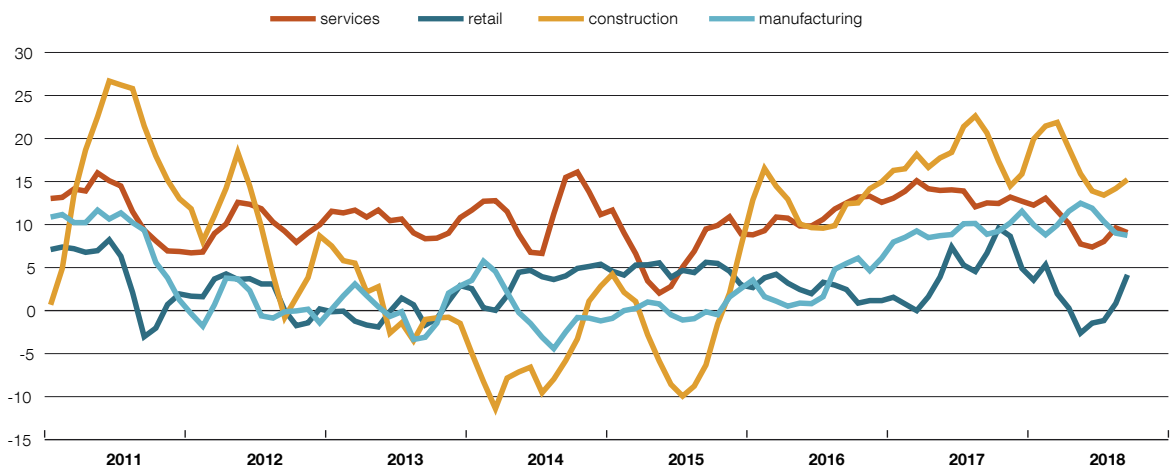


Sources: Statistics Estonia, Eesti Pank calculations

The employment expectations indexes in the survey by the Estonian Institute of Economic Research can help in assessing the future plans of companies to hire, which show future developments in demand for labour. The employment plans and expectations of Estonian employers were not substantially different at the end of summer 2018 to what they were a year previously (see Figure 18).

The share of companies in construction and services that expect employment to keep growing in their companies is slightly smaller. Although the number of vacancies in manufacturing fell sharply, employment expectations indicate that companies need to increase employment

Figure 18. Employment expectations, three-month moving average



Note. The index shows the net balance of companies expecting employment to rise or fall
Sources: European Commission, Eesti Pank calculations

in this sector too. There was no significant change in the number in employment in trade. Although construction companies see slightly less need for additional labour than they did at the start of the year, construction is still the sector that has the largest need for labour. While the demand for additional labour has been strong among construction companies in Estonia for almost three years, construction companies in the other Baltic states and other countries in Central and Eastern Europe started to expect an increase in employment in their sector only at the end of 2017.

Unemployment

The number of employees rose faster in the first half of 2018 than the number of residents participating in the labour market, and a natural consequence of this was that unemployment fell. In the first half of 2018 there were on average 41,600 people unemployed, which is 2100 fewer than a year earlier. The Labour Force Survey data show the unemployment rate fell from 6.3% in first half of 2017 to 5.9% in the first half of 2018.

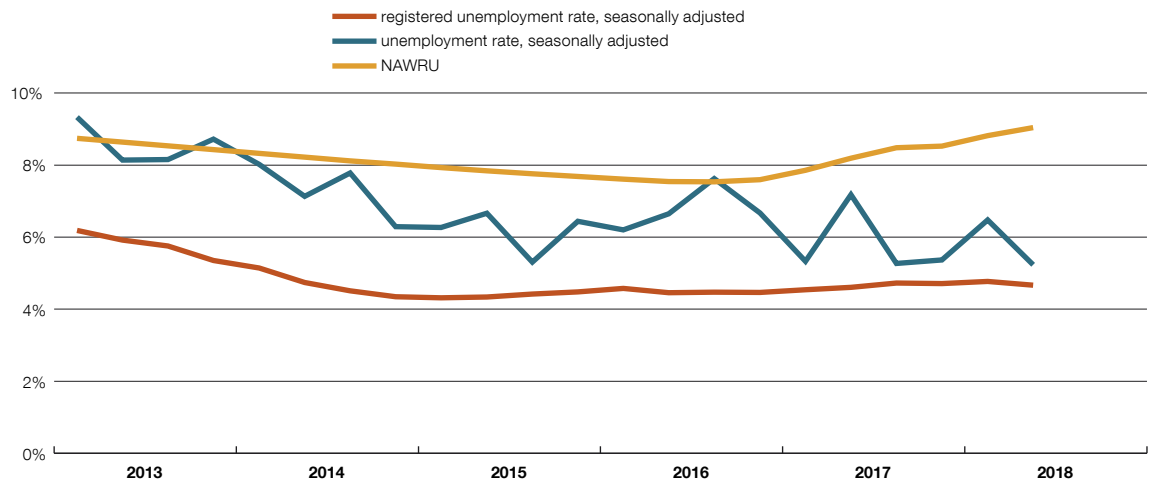
Unemployment fell fastest in Harjumaa, where the unemployment rate fell to 4.6%. The number of people unemployed also fell a little in the region with the highest unemployment, north-east Estonia, where the unemployment rate remains close to 13%. Unemployment increased in southern Estonia.

Unemployment fell fastest along those aged 15–24 in the first half of 2018 and also fell for the 25–49 age group. The number of unemployed rose for those aged 50–74 for both women and men. As labour market participation continued to increase in this age group (see the section on labour force participation and the working age population) this could point to the Work Ability Reform having an effect. The Work Ability Reform requires that for people to receive benefits they have to be actively participating in the labour market, meaning a large group of older residents who were earlier inactive have actively moved into the labour market but not yet found work.

It cannot be concluded from the level of unemployment alone whether there is tension in a country's labour market, meaning whether there is a lot of labour available in the market or whether labour shortages are causing wage pressures. Finding this can be done by looking at the unemployment gap, which is the difference between the current rate of unemployment and the non-accelerating wage rate of unemployment (NAWRU). The NAWRU is the estimated level of unemployment where there is no additional wage pressure in the economy and wage rises do not accelerate. It is high if a lot of the unemployed are structurally unemployed, meaning they do not compete for the employment positions available in the economy because they do not have the skills required or they are not, for example, prepared to change their place of residence in order to find a job. Eesti Pank estimates that the unemployment rate in Estonia has been below the NAWRU since 2014 (see Figure 19) and the fall in the NAWRU was halted in 2016 by the impact of the Work Ability Reform.

In contrast to the estimate of the Labour Force Survey, the number of people registered as unemployed with Töötukassa has risen for five consecutive quarters. The number registered as unemployed has increased throughout the past 18 months because of the Work Ability Reform, which requires those who are partly capable of work to participate actively in the labour market to receive their benefits. The number of registered unemployed who did not have reduced capacity for work fell further. In the second quarter, Töötukassa had an average of 11,430 people with reduced capacity for work registered and their numbers stopped rising during the summer months.

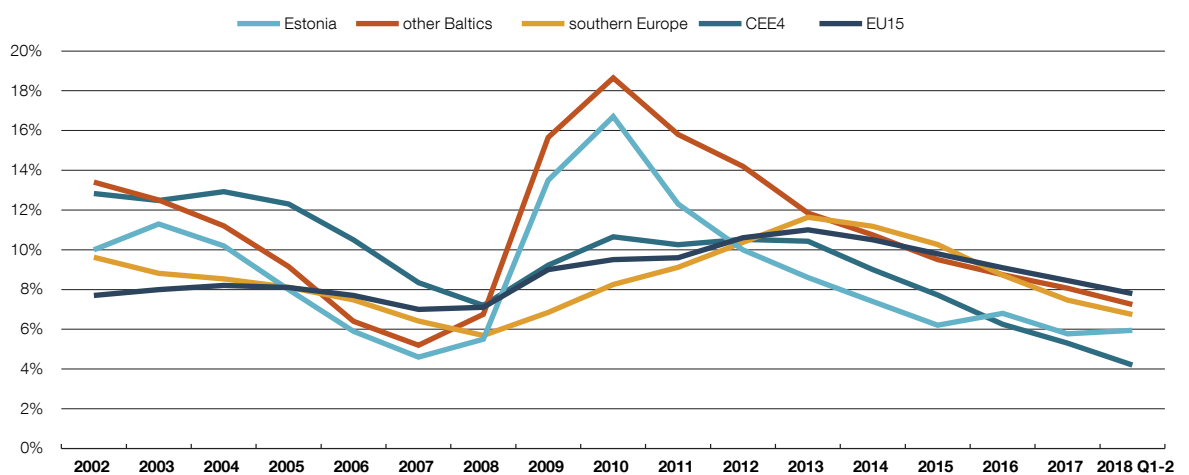
Figure 19. Unemployment



Sources: Statistics Estonia, Töötukassa, Eesti Pank

Unemployment fell at a very rapid rate in Estonia after its spike after the financial crisis in 2008 relative to changes in other European countries. The rapid recovery after the crisis was helped by the flexibility in the labour market, as nominal wages fell in Estonia, which is quite an unusual phenomenon. Unemployment has stopped falling in Estonia in the past couple of years, partly because of the Work Ability Reform, and the Estonian unemployment rate has closed in on those of other European countries (see Figure 20).

Figure 20. Unemployment rate, ages 15–74



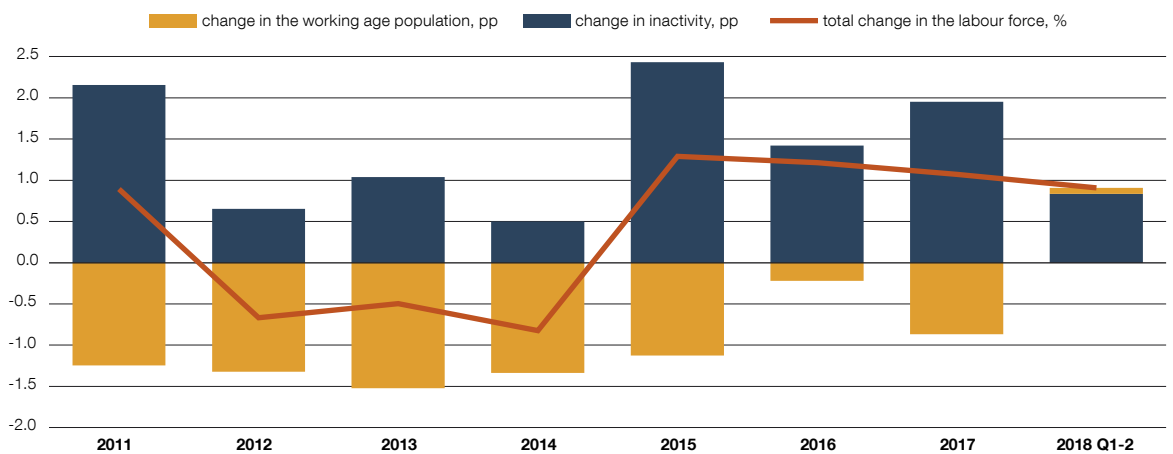
Sources: Eurostat, Eesti Pank calculations

Participation in the labour force and working age population

With unemployment below the NAWRU, the growth in the supply of labour has helped to ease labour shortages. The labour force, which is residents aged 15–74 who are either working or looking for work, was around 1%, or 6300 people, larger in the first half of 2018 than a year

earlier according to the Labour Force Survey (see Figure 21). The labour force has increased in the past three years because residents who were previously inactive in the labour market have become active and have either found work or started to look for it, but in the first half of 2018 the labour force also grew because the number of working age residents in Estonia increased for the first time since 2000 and was larger than a year earlier by around 550 people.

Figure 21. Yearly change in the labour force

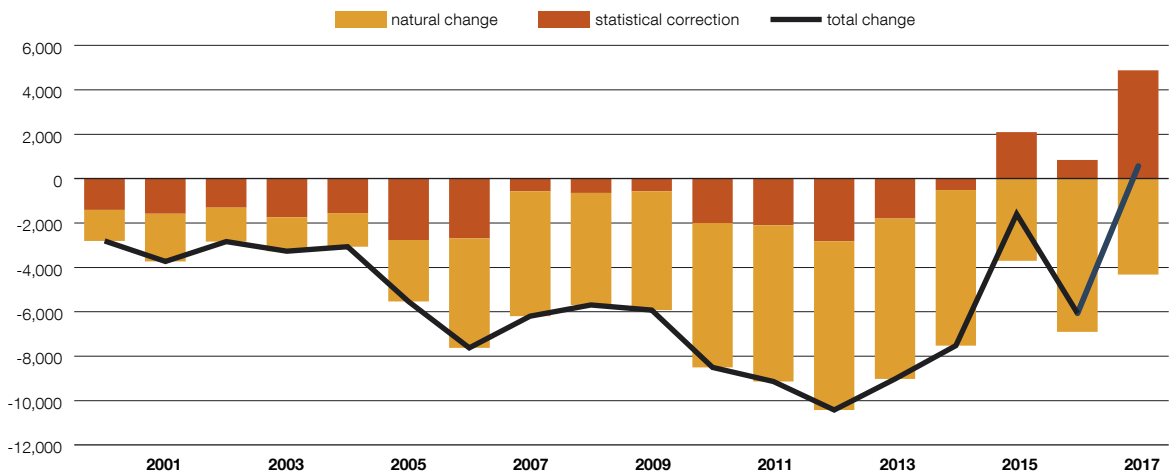


Sources: Statistics Estonia, Eesti Pank calculations

The number of working age residents rose in 2017 because of immigration (see Figure 22) as around 4900 more people of working age moved to live in Estonia than moved away. Although the migration balance in Estonia had been positive for several years, it was only in 2017 that it managed to counterbalance the decline in the working age population caused by natural demographic processes.

Immigration to Estonia reached 17,616 people in 2018, while 12,358 people left the country to live abroad. Both higher immigration and smaller emigration than in 2016 contributed most to

Figure 22. Change in working age population aged 15-74



Sources: Statistics Estonia, Eesti Pank calculations

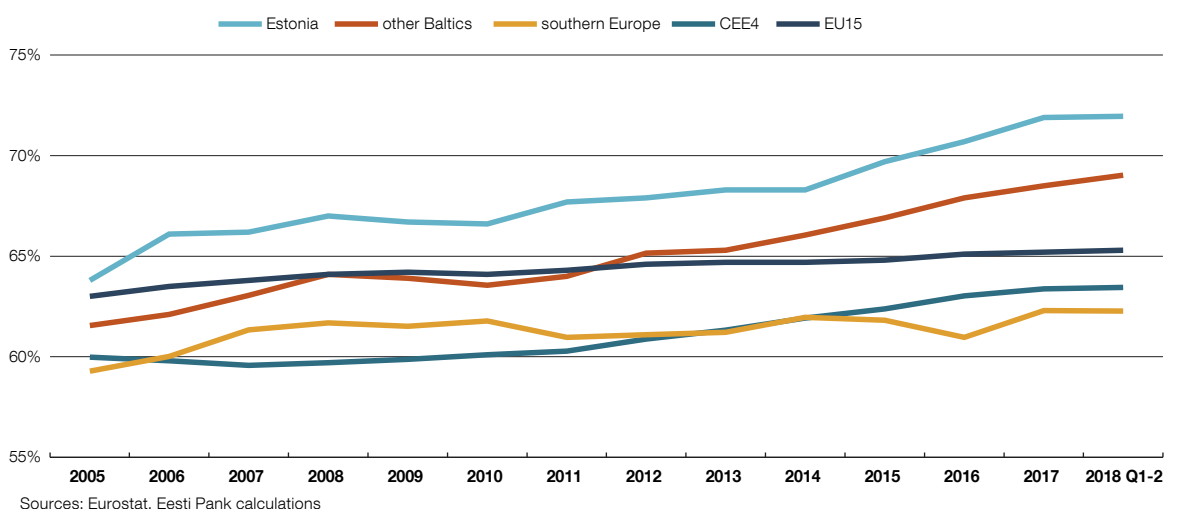
the increase of the migration balance. Registered migration made up 37% of the total migration flows, while the rest comprised the estimated unregistered migration based on the residency index of Statistics Estonia. Like in previous years, migration flows between Estonia and Finland are the largest, though it is worth noting that in 2017 Estonia's net migration balance was positive with regard to Finland. Immigration outweighed emigration for Russia and Ukraine as well. Return migration makes up a large share of the total migration flows. Estonian citizens comprised about 48% of immigrants and 65% of emigrants, and in 2017, for the first time about 500 more Estonian citizens came to the country than left.

These migration flows include long-term migration to work in Estonia. While people from other EU member states may come to live and work to Estonia freely, there is a quota set for work migration from third countries, and in 2018, the quota was set at 1315 people. In the past few years, the immigration rules from third countries have been relaxed, so from 2017, large scale investors, start-up entrepreneurs, and workers in the ICT sector were exempted from the quota. All those who come to Estonia to work as professionals have also been exempt since 15 July 2018. According to the Police and Border Guard Board, 284 people came to work in Estonia in 2017 under these exemptions, and 426 did so during the first three quarters of 2018.

Population statistics do not include short-term immigrants, who do not stay long enough in the country to become permanent residents. It is possible to come to work in Estonia for up to a year without a work permit if the employer registers this with the Police and Border Guard Board. In 2018, the maximum duration of this form of employment was increased from nine months to one year. In 2017, employers filed 7584 applications for such work and 13,410 in the first nine and a half months of 2018 alone. According to the forecast of the Ministry of Internal Affairs, the number is set to increase to 22,000 by the end of the year. Given the increase in the number of work permits that are outside the quota and the huge increase in short-term guest workers, migration increased the labour supply in 2018 by more than in previous years.

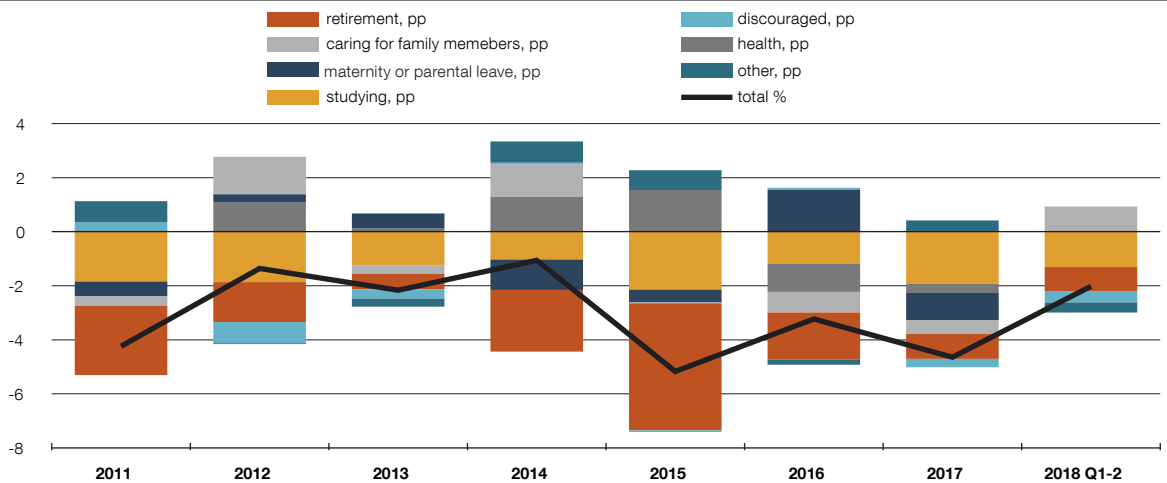
There were 5800, or 2.1%, fewer people of working age inactive in the labour market in the first half of 2018 than a year before, but the decline in the number of residents inactive in the labour market slowed. The labour force participation rate was 71.7% in the first half of 2018, which is one of the highest in the European Union (see Figure 23) and so it is to be expected that the rise in the number of residents of working age moving from inactivity to activity will be slower in future than it was in 2015–2017.

Figure 23. Labour force participation rate, ages 15–74



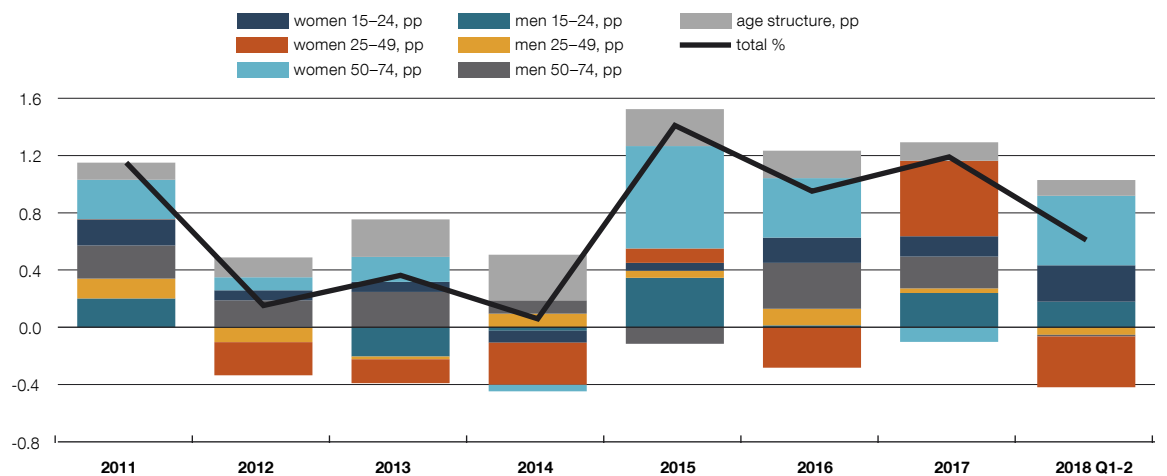
The Labour Force Survey found that the main cause of the reduction in the number of non-active residents was that fewer people were out of the labour market because of studying or retirement (see Figure 24). As a result the participation in the labour market of those aged 15–24 and of women aged 50–74 increased (see Figure 25). The growth in working alongside studies or in retirement may be one reason why there are now more people working part-time than there were earlier.

Figure 24. Yearly change in the number inactive by reason for inactivity



Sources: Statistics Estonia, Eesti Pank calculations

Figure 25. Yearly change in the participation rate by age and gender



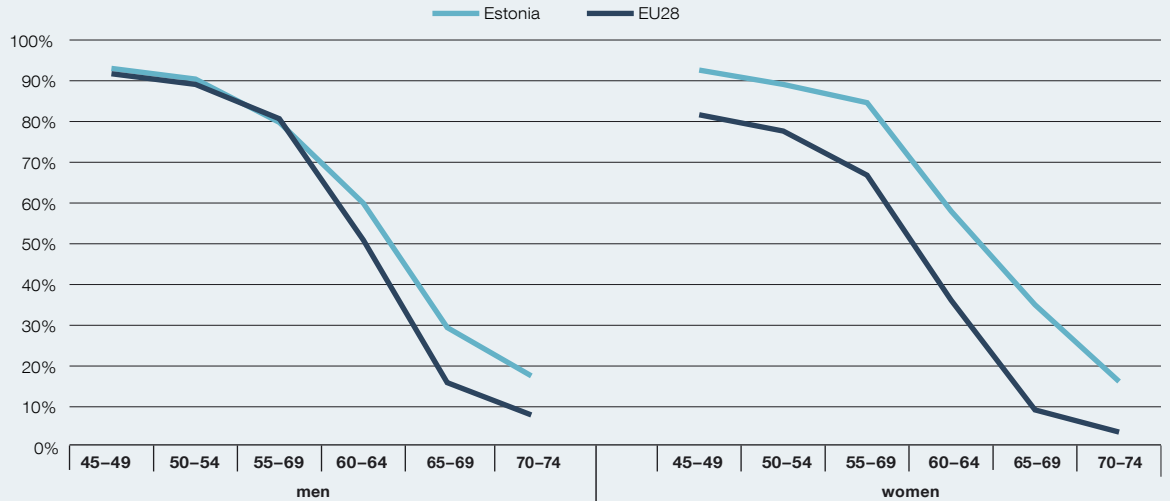
Sources: Statistics Estonia, Eesti Pank calculations

Box 3: Labour force participation at older ages

Estonia stands out from other European Union countries for its high labour force participation rate. The labour force participation rate is above the European Union average for both women and men aged over 50 (see Figure B3.1). As people age, they tend to participate in the labour market less because of personal preferences and health problems, but institutions like the pension system and other social insurance programmes also play a significant role. This box discusses the factors that can help explain differences in the labour force participation rates for older people in European countries⁷.

⁷ This box is based on the analysis by Jonathan Gruber and David A. Wise in the introduction to the collection *Social Security and Retirement around the World* (1999).

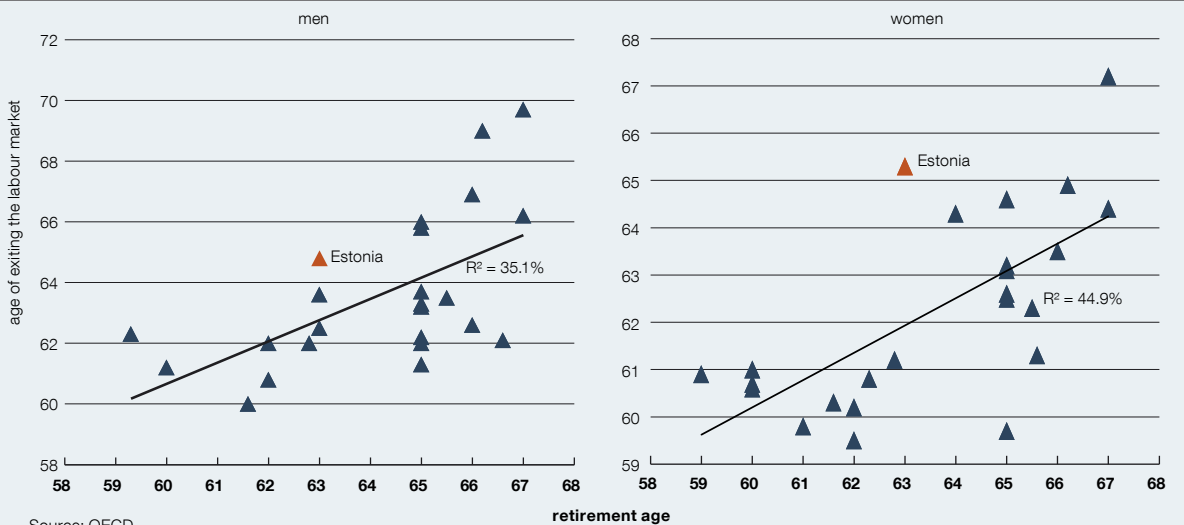
Figure B3.1. Labour force participation rate



Source: Eurostat

In countries where the retirement age is lower, people on average exit the labour market at a younger age. A major role in this is often made by the youngest possible age at which they have the right to claim a pension. The expected income from the state pension system can be seen as a special type of financial asset. An important difference between the state pension as an asset and private savings is the liquidity, because a private asset like a deposit can freely be used at any time, but state pension assets can only be withdrawn after retirement age. Unlike private assets, they can generally not be used as collateral for a loan. Without these rules, some people could exit the labour market before retirement age and start withdrawing their state pension assets earlier. Without other sources of income though, they would still have to work at least until early retirement age. As it is difficult to get comparative data on early retirement schemes, Figure B3.2 shows the relation between the average age for exiting the labour market and the normal retirement age in European countries in 2016. This relation is not entirely causal, as both the pension age and the average exit age may be higher in those countries where life expectancy is longer and public health is better.

Figure B3.2. Retirement age and age of exiting the labour market, European Union countries, 2016



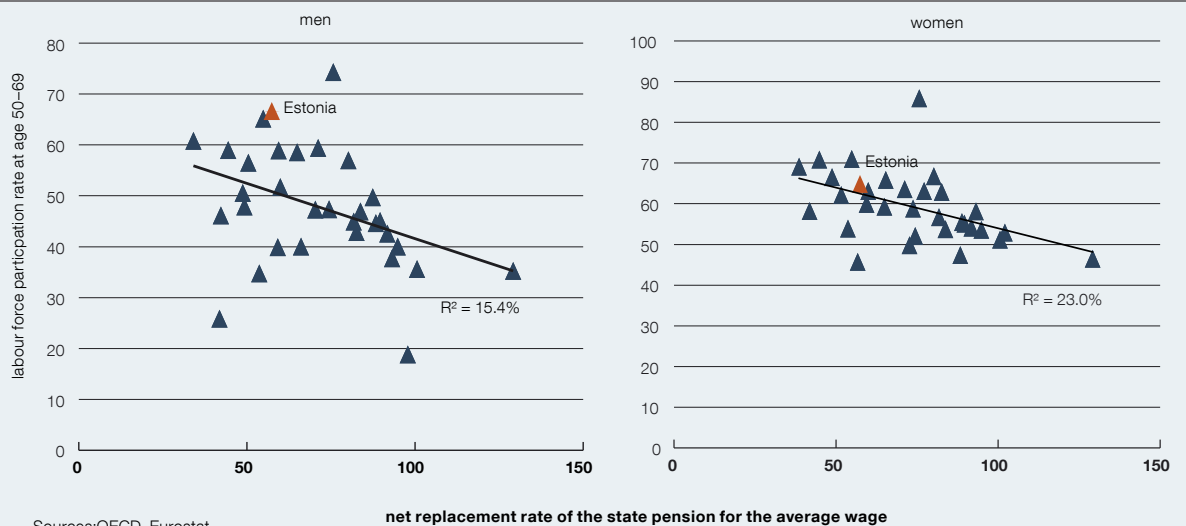
Source: OECD

The decision to participate in the labour market is also affected by the rules for calculating the size of pensions, depending on the time they are claimed. Without an adjustment, delaying retirement by, say, a year will result in a decrease in the net present value of state pension assets by the amount the pensioner did not receive during that year. To compensate for this, pensions in most countries are increased for people who delay claiming a pension, or are reduced for those who take early retirement. In Estonia for example it is possible to take early retirement three years before the official retirement age, but in this case the pension is reduced by 0.4% for each month in advance of retirement age. In many countries the adjustment does not fully cover the amount lost by delaying retirement, and so the total lifetime amount of pension received is smaller. Gruber and Wise consider this to be an extra tax on working and they show that it reduces motivation to participate in the labour market.

The decision to remain in work can also be affected by how the labour income of those on a pension is treated. In most countries it is freely possible to earn income from work after the normal retirement age, but there are restrictions if early retirement is taken. In Estonia, pensions taken early cease to be paid if the recipient is being paid a wage. In most countries the pension is reduced if the wage exceeds a certain minimum, like with the parental benefit rules in Estonia. This rule pulls in two directions, as it reduces the motivation to work, while at the same time it discourages people from taking early retirement as that would mean foregoing labour earnings, and this encourages them to remain in the labour market.

Finally, participation in the labour force is affected by the generosity of the pension system, because if the replacement rate for the pension is very high the motivation to work will be reduced. Although 80% of the pension index used in Estonia depends on social tax receipts, so approximately the sum total of the growth in the average wage and employment, changes in recent years in the wage distribution have lowered the average pension as a ratio to the median wage. This has increased the risk of non-working pensioners falling into poverty, especially those who live alone. In international comparison there is a weak link between the labour force participation rate for those in their 50s and the pension replacement rate at the average wage (see Figure B3.3).

Figure B3.3. Labour force participation and the pension replacement rate, European countries in 2016



In total there are several factors that are working currently to keep the labour force participation rate high in Estonia. It is possible to take early retirement in Estonia, but in that case the pension received is lower and it is not possible to supplement the pension with income from work. At the same time, rapid wage growth has reduced the average pension in relation to the median wage, and so there is greater risk of pensioners not earning income from work falling into relative poverty. In addition to the factors described in this box, the cyclically tight labour market allows those of retirement age to remain in work. Looking ahead, improving health and the social security reforms underway will support high participation, but improvement in the adequacy of pensions and worsening labour market conditions may work in the opposite direction.