



LABOUR MARKET REVIEW

2/2015

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.

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KEY DEVELOPMENTS IN THE FIRST HALF OF 2015

The working age population declined in the first half of 2015 as long-term demographic processes continued. Increasing labour shortages strengthened the hand of employees in wage negotiations, as was indicated by a rise in unit labour costs. Higher wages for work with the same productivity motivated people to participate in the labour market and the effect of increased labour force participation was stronger than the effect of the declining working age population in the first half of 2015, meaning that the total labour force increased.

Although unit labour costs have been rising for a long time and corporate profits have been falling, the demand for labour has grown as is indicated by the simultaneous growth in employment and in average wages. Employment probably did not increase as much in the first half of 2015 as the statistics would suggest however. Annual growth in employment climbed in July 2014 because of the new employment register, which brought a lot of employees out of the shadow economy and into official work. Employment growth also got a notable boost from a rise in the number of non-waged and part-time workers. Growth in total hours worked by paid employees has been substantially slower than that in total employment.

The unemployment rate fell to 6.5%, meaning unemployment is significantly lower than in neighbouring countries or in the European Union on average, and it is also lower than the long-term average in Estonia. Long-term and short-term unemployment have fallen at similar rates, and over the year, long-term unemployment has even fallen slightly faster. There was a rise in the seasonally adjusted unemployment rate in the second quarter, probably because the inactive had started to look actively for work, pushing the participation rate to a record high. Registered unemployment started to rise in June as more new unemployed were added while fewer exited unemployment. However, the number of newly-registered unemployed did not rise because of job losses but because the inactive had started looking for work.

Average gross monthly wages rose markedly more slowly in the first half of 2015 than in 2013, but slightly faster than in mid-2014. The past half year has been very good for employees as falling consumer prices and tax cuts raised real net wages at the fastest rate since the economic crisis. The rise of almost 10% in the minimum wage meant that the strongest wage growth was seen in the lowest part of the wage distribution.

Wages rose fastest in education and healthcare, which fall under local government employment, in the first half of 2015. Wage growth also picked up in foreign-owned companies. Wage growth has been moderate in private Estonian companies, but it might have been lowered by the introduction of the employment register, because the official wage of the additional employees is close to the minimum wage.

The autumn 2015 revision of data by Statistics Estonia saw notable changes to the estimates of unit labour costs and productivity growth for 2013 and 2014. The new data show that labour productivity increased by 2.1% last year, which is faster than earlier estimated. Growth in nominal unit labour costs slowed last year however, from 5.5% in 2013 to 3.7% and productivity fell in the first half of 2015 while unit labour costs grew faster.

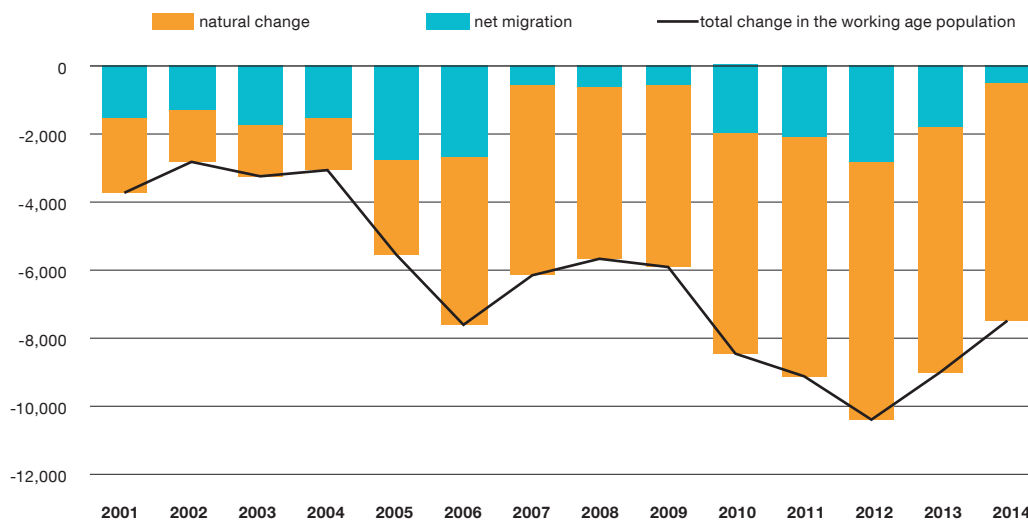
Unit labour costs were pushed up in the first half of 2015 not only by rapid rises in labour costs but also by external shocks, which resulted in profits falling for companies in several businesses. Low global energy prices reduced the profit margins in the energy sector, while very low milk prices and an outbreak of swine flu hurt agriculture, and transport suffered as Russian sanctions reduced the transit trade. As the tax system was changed and the employment register introduced, companies working partly or wholly in the shadow economy saw their real tax rate rise. Although some of the shocks will probably prove temporary, and corporate profits will recover as they pass, the profits built up earlier may not necessarily be enough to see companies through these difficult times. Rising unit labour costs increase the risk that employers will cut jobs and so unemployment will rise.

LABOUR SUPPLY AND DEMAND

The working age population

Data from Statistics Estonia show that there were 1,313,271 permanent residents living in Estonia at the start of 2015, of whom 983,826 were of working age. The working-age population was 0.76% smaller than at the start of 2014, as emigration reduced it by 0.05% and changes in the age structure of the population and mortality pushed it down by 0.71% (see Figure 1). This means that the decline in the working age population slowed in 2014, as it was 0.9% in 2013.

Figure 1. Change in the working age population (aged 15–74)



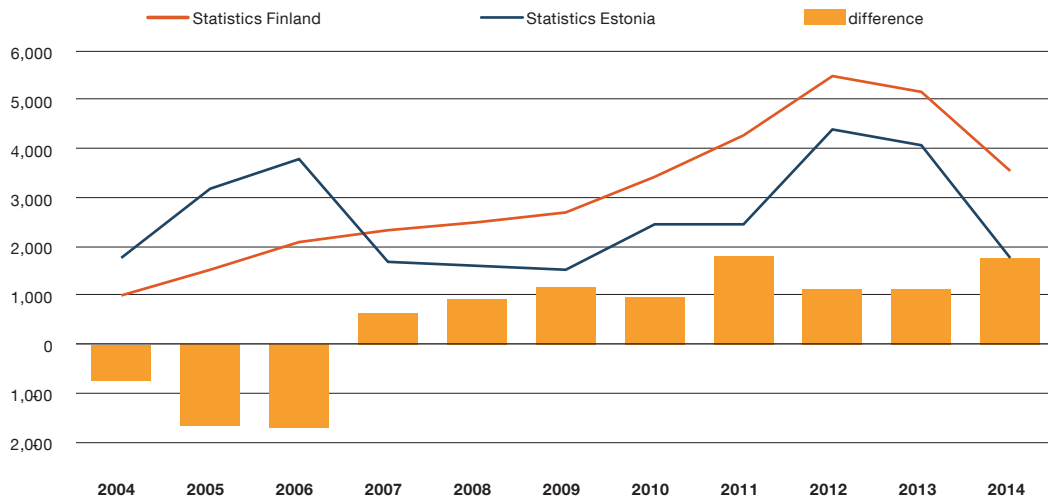
Source: Statistics Estonia

The migration balance has improved in recent years, as the Estonian population shrank by 3682 people in 2013 because of net emigration, but only by 733 in 2014. The main reason for the improvement is that emigration has fallen by around 30% from more than 6000 people in 2011–2013 to 4637 in 2014.

Migration is highest between Estonia and Finland by both destination and source country, and the main reason that Estonia's migration balance improved in 2014 was that emigration to Finland dropped by 40%. This was expected, because the economy has been weak in Finland for some time and unemployment has been rising. The Finnish statistical office puts the figure for migration from Estonia to Finland in 2014 at 5071 people however, which is some 2000 more than the estimate from the Estonian office. Estonian and Finnish estimates have differed in the past, but the difference widened in 2014 (see Figure 2). Statistics Estonia suggests the Estonian emigration statistics may have underestimated the level of migration because they are based on entries in the population register. The population register receives data from Finland on the registration of Estonian citizens, but not on people from Estonia without citizenship or on citizens of third countries. The transnational lifestyle that is widespread today is hard to account for in migration statistics, as people may frequently change their permanent place of residence. So an Estonian citizen who is counted as an immigrant by Finland but returns to Estonia within the same year does not get recorded in the Estonian emigration statistics, but Estonia and Finland do not exchange data on such returning migrants meaning that they lift the Finnish figures for immigration.

Like emigration, immigration was also down in 2014, by 4.7%. One third of immigrants were people moving from Finland to Estonia to live, mostly returning emigrants, and almost one fifth of immigrants

Figure 2. Net migration flows between Finland and Estonia



Sources: Statistics Finland, Statistics Estonia

came from Russia and 11% from Ukraine. Immigration from Finland increased as expected and was 21% up over the year, as the Estonian community in Finland has grown sharply over the years. Immigration from Ukraine rose by 26%, probably as a consequence of the economic difficulties there and the conflict in Eastern Ukraine. Fewer immigrants came from Russia, and the number was down 20% over the year, though that number has generally been rising for the past decade. There were 612 immigrants from outside the European Union, Ukraine and Russia, which was 29% fewer than in 2013. The Police and Border Guard Board received 157 requests for asylum in 2014, 58 of them from Ukrainian citizens. The applications were granted in 20 cases, Sudanese applicants being the largest group within this with seven successful asylum requests. The number of applicants for asylum was small in the context of total immigration. The migration balance was positive by 14 people for men, and negative by 747 for women.

Participation in the labour force and inactivity

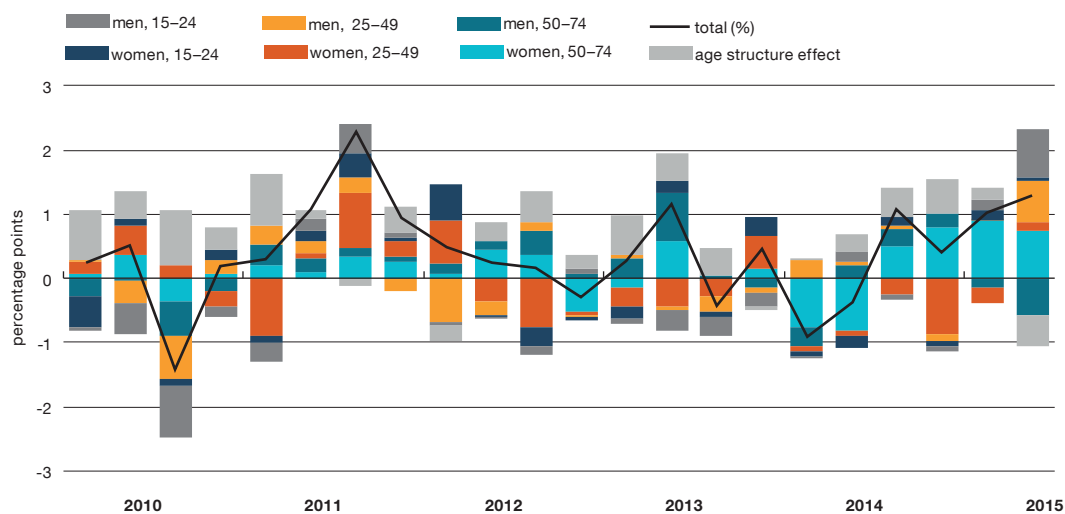
The labour force participation rate¹ was 1.1 percentage points higher in the first half of 2015 than a year earlier at 68.7%. In the first quarter, 67.8% of the working age population participated in the labour force, but in the second quarter this climbed to 69.6%, the highest rate since 1997. The increase in labour force activity was remarkable, because although the number of people of working age declined by around 7600 over the year, the labour force² grew by 6150 at the same time.

Figure 3 illustrates that the change in people's behaviour does not explain all of the change in the participation rate, as it has also been affected by the change in the population structure. The probability of an individual participating in the labour force depends a lot on age, as young people of school age or student age are less active in the labour market than people in their prime working years and the participation rate starts to slide after the age of 50. Changes in the population age structure have had a positive effect on the labour force in recent years, though labour force participation would have been even higher in the second quarter of this year without any changes in the population structure (see the grey columns in Figure 3).

¹ The labour participation rate is the weight of the employed and the unemployed in the working age population.

² The labour force consists of people who are active in the labour market, either working or looking for work.

Figure 3. Contributions to the change in participation rate by age and gender



Sources: Statistics Estonia, Eesti Pank calculations

Activity in the labour market by those of working age did not change in its balance in 2012–2014, as the participation rate rose for the older group and fell among the younger. As a result the participation rate has largely risen in the past four quarters because women aged 50–74 have been active in the labour market. The very high participation rate in the second quarter of this year was due to the extraordinarily high activity rate for young men.

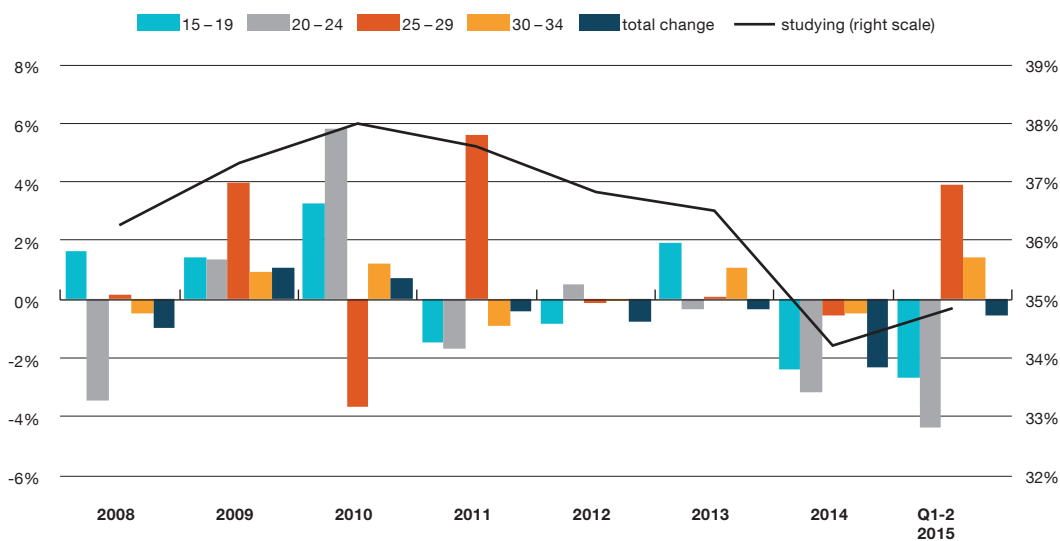
The participation rate for the young rose from 38.3% a year earlier to 41.3% in the first half of 2015. The main cause was the increased participation of young men in the second quarter, up from 40.8% a year earlier to 49.7%. Activity among young women in the labour market did not change during this time. The group aged 15–19, many of whom are still in school, has started to increase again as a share of the 15–24 age group since 2014. This means the effect of the change in the age structure on the participation rate for young people should be negative (see Figure 3).

The main reason that the young are not in the labour market is that they are studying. The number of young people aged 15–24 fell by 5.9% in 2014, and their participation in the labour force increased. The number of those inactive because they were studying fell in consequence by one tenth in the first half of 2015. Although this may seem like a large fall, the share of young people studying has not shrunk significantly, as between 51% and 63% of those aged 15–24 have been inactive because of studies during the past decade and the share in the first half of 2015 was well within these bounds. The probability of those aged 15–34 both working and inactive being in education increased during the economic crisis, but it has started to slide again in recent years (see Figure 4).

The participation rate for people in their prime working years of 25–49 was 87% in the first half of the year, which was the same as a year earlier. The participation rate for men was 93.1%, which was 12.5 percentage points higher than that for women. Participation by men was 0.2 percentage point higher than a year earlier, while the rate for women was down 0.3 percentage point. Men in this age group are more active mainly because the majority of those who are kept out of the labour market raising children or caring for families are women.

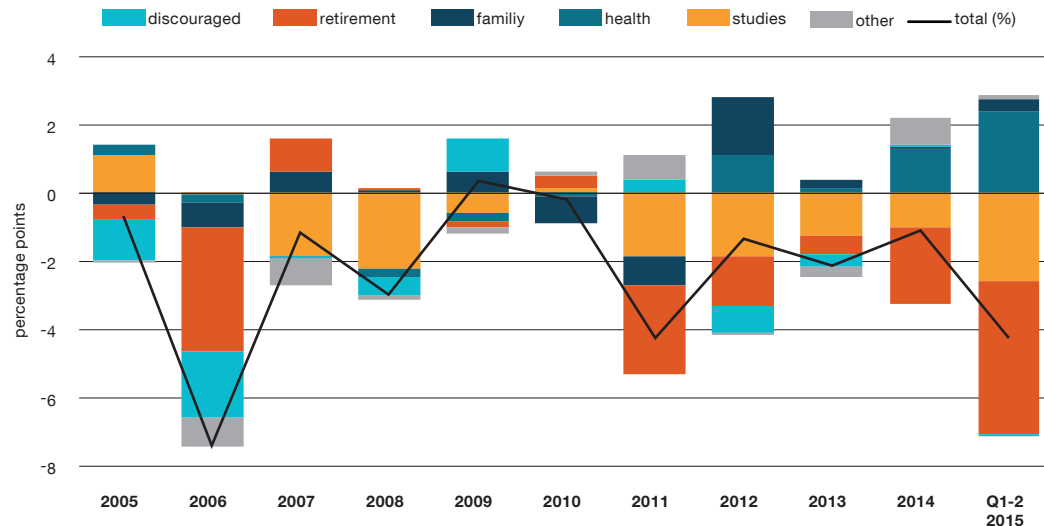
In the first half of the year, 44,500 people were out of the labour market because they were on maternity or paternity leave or were caring for other family members, and this was 5.8% more than a year earlier (see Figure 5). The desire and ability of parents of small children to participate actively

Figure 4. Change in the probability of studying in the age group 15-34



Sources: Statistics Estonia, Eesti Pank calculations

Figure 5. Change in the number of non-participants



Sources: Statistics Estonia, Eesti Pank calculations

in the labour market is affected a great deal by the conditions of maternity and paternity leave and the availability of childcare. The rules for parental benefits are that the benefits are reduced beyond a certain threshold, set at 355 euros in 2015, to 50 cents for every euro earned in the labour market. The reduction in benefits acts in the same way as an additional income tax of 50%. Facing such high marginal tax rates, many parents prefer to remain completely outside the labour market for the first year and a half after a child is born.

The availability of childcare for children under three has improved noticeably in recent years. Even so, significantly fewer than 33% of children under three on average go to a nursery, which was the

target set by the European Council in 2002 in Barcelona. Childcare coverage is low partly because demand for care for children aged 18 months or less is limited as the tax rate on income earned while parental benefits are being paid is high. Furthermore, local governments only have to ensure the supply of childcare from the age of one and a half. This duty is frequently interpreted to mean that a place should be provided for children who reach the age of one and a half before 1 September, so children who reach that age after 1 September can find it hard to get a place before the start of the next school year. As a result the parents of those children have to find alternative childcare arrangements such as private nurseries, or must be out of the labour market for significantly more than one and a half years.

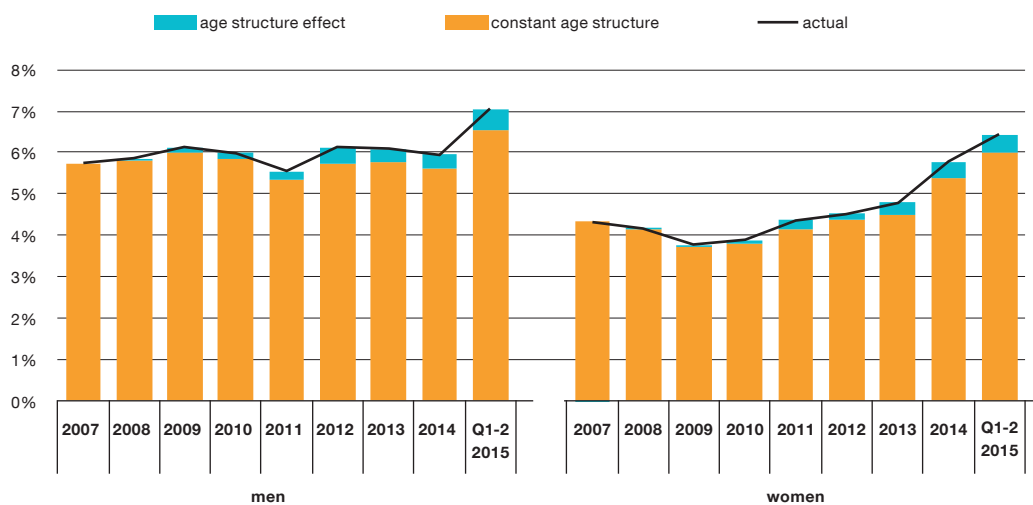
Activity in the labour market has increased among those in their later working years, as labour force participation by those aged 50–74 rose from 55.8% a year earlier to 57% in the first half of 2015. The participation rate for men was 2.3 percentage points lower, while the rate for women in this age group increased by 3.7 percentage points. Increased labour market participation by women is partly a consequence of the retirement age rising by six months a year. The retirement age for women will reach the men’s age of 63 in 2016, and then the retirement age for both men and women will rise through 2017-2021 to 65.

The main reason for the drop in the number who were inactive was that fewer people were out of the labour market because they were retired (see Figure 5). There were 12.5% more people inactive because of retirement in the first half of 2015 than a year earlier. The steady rise in the retirement age for women has meant that the number of women aged up to 74 who have the right to a pension has fallen by around 1.6% per year in recent years, which is a much smaller fall than that in the number who are inactive because of retirement.

Offsetting retirement, there has been an increase in the number who are not in the labour market for health reasons. There were some 67,000 people who did not participate in the labour market because of illness or injury in the first half of 2015, which is 13% more than a year earlier. The probability of being inactive for health reasons has increased among women since the economic crisis, and it is now the same as the probability for men (see Figure 6).

The changes in the labour force participation rate were in opposite directions for Estonians and non-Estonians, as the participation rate for Estonians increased by 1.8 percentage points to 70.4%, while

Figure 6. Non-participation in the labour market for health reasons



the rate for non-Estonians fell by 0.2 percentage point to 65.1%. Increased Estonian labour market participation has come from women, as the participation rate for Estonian women stands at 67.4%, which is a whole 8.8 percentage points higher than the rate for non-Estonian women. In contrast, the participation rate for non-Estonian men was 0.3 percentage point higher than that for Estonian men. This gap has closed considerably over a long time.

The discouraged are people who would like to work, but have given up looking for work because they have no hope of finding any. They are closer to the labour market than other inactive people, and in a wider sense they can be seen as a labour resource similar to the unemployed. In the first half of 2015 the discouraged numbered around 7000, which is 3% fewer than a year earlier.

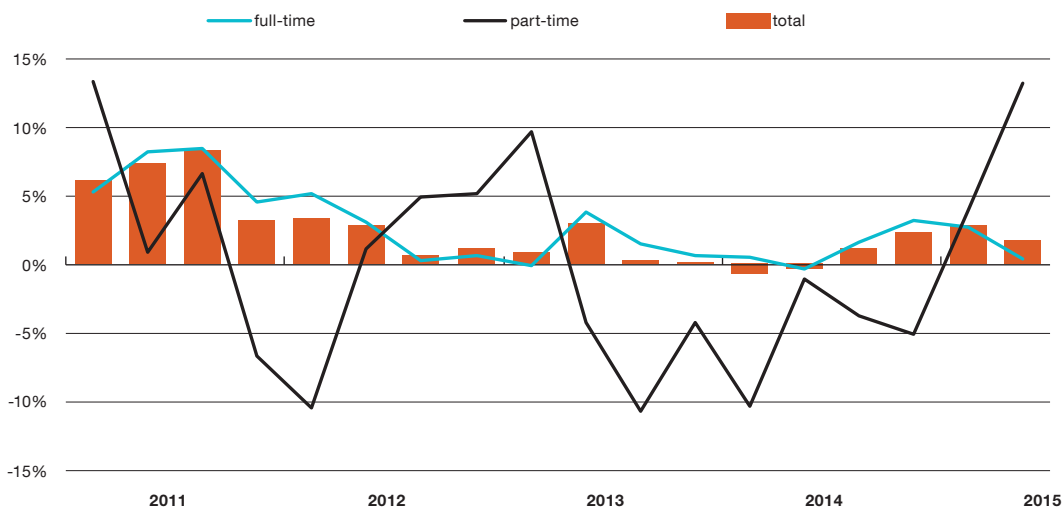
Employment

The labour force survey shows that employment fell by 0.5% in the first half of 2014, but then it increased again and was up 2.3% on a year earlier in the first half of 2015. Employment increased by 2.8% in resident production units, which are companies and institutions operating in Estonia, and this was faster than the growth in total employment. Most institutions failed to predict such a rapid recovery in growth in employment, because corporate profits have been declining for a long time. The number of waged employees increased by 1.3%, which was less than the increase in total employment. There was also a more modest increase in the total labour input, or the total number of hours worked by each waged employee, as the number working full-time increased by 1.3%, which was less than the number working part-time did (see Figure 7).

As the number of people of working age fell by 0.76%, the employment rate for people aged 15–74 rose by 1.9 percentage points to 64.2% in the first half of 2015. One of the goals of the European Commission's Europe 2020 growth strategy is for the employment rate for residents aged 20-64 to be at least 75%. The Estonian figure climbed to 74% in 2014 and in the first half of 2015 it hit the target of 75%.

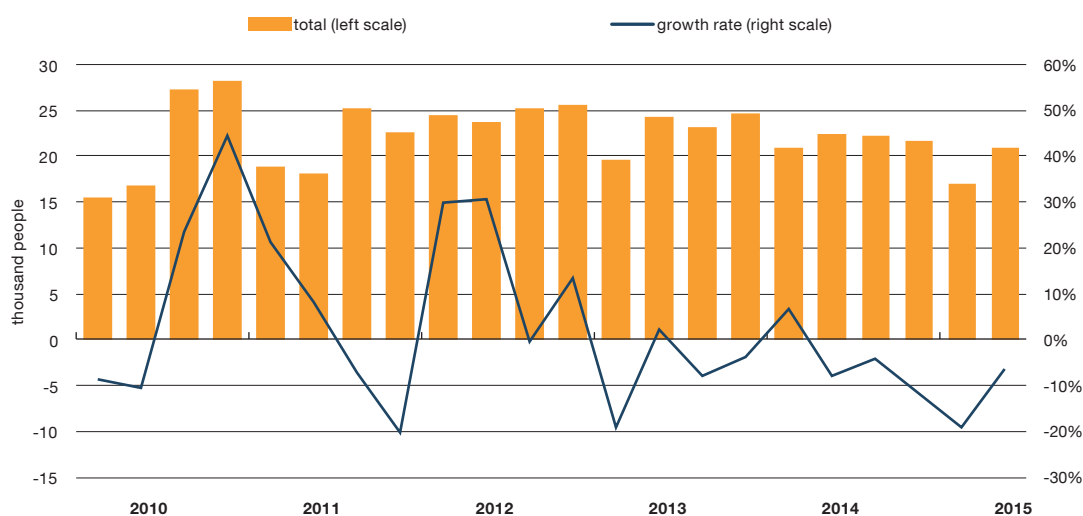
The number of Estonian residents working abroad fell in the first half of the year by 12% (see Figure 8). Unfortunately it is not possible to estimate more precisely whether those who had been working abroad returned to Estonia or took permanent residence abroad. Lower net emigration does indicate that it is rather that they returned to Estonia. Working abroad has become less popular partly because wages in

Figure 7. Employment growth full time and part time



Source: Statistics Estonia

Figure 8. Cross-border workers



Source: Statistics Estonia

Estonia have been rising rapidly and it has become easier to find a job, while Finland, the main destination for pendulum migrants travelling backwards and forwards between Estonia and the country of work, has been in recession. The labour force survey suggests there are already some 68,000 residents of Estonia who have experience of working abroad.

One of the main structural changes in the Estonian labour market in recent times has been the introduction of the employment register, which was brought in by the Tax and Customs Board in July 2014. For the past year Estonian employers have had to register everyone working for them from the very first day of work. Statistics from the Tax and Customs Board on wages paid out show that the result of the change has been a decline in the share of employees working unofficially or in the shadow economy. The reduction in the shadow economy has made it harder to analyse the labour market for the time being. When estimating the growth in employment across the whole economy, it can normally be assumed that official and unofficial employment are increasing at the same rate. Estimates arrived at from registry data or company surveys can thus be applied to the whole economy, even though they do not cover the shadow economy. After the introduction of the register however, employment estimated from corporate data has probably grown partly because employees have been moved from the shadow economy into official employment. If this estimate is then applied to the whole economy, it will show the growth in employment to have been larger than it actually was.

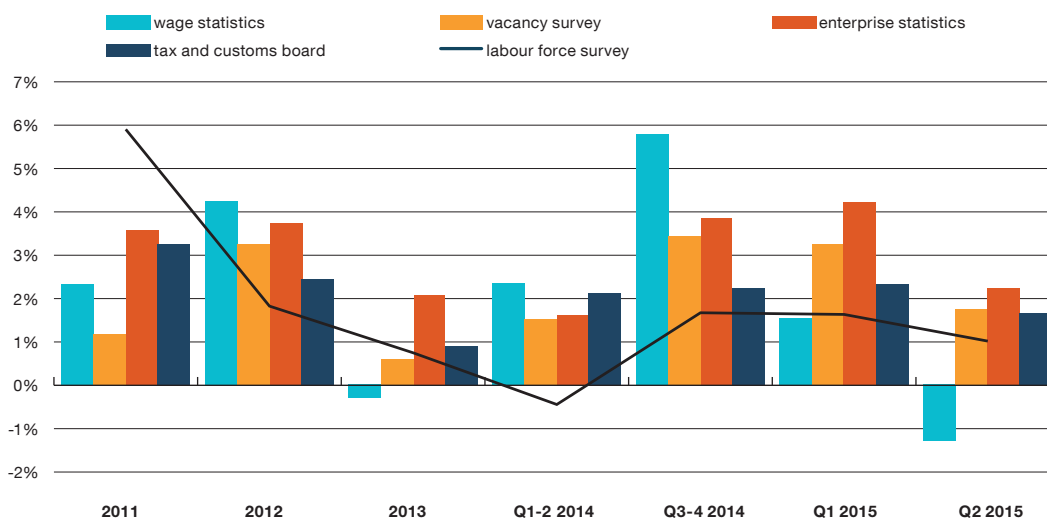
The Tax and Customs Board reported that some 8-9000 declared wage recipients had been added to the employment register by November 2014³. This estimate is based on people who were newly declared as receiving wage income and who had not been declared as receiving any in the twelve months prior to the change being introduced. School leavers were excluded from the calculation. This estimate suggests that without the effect of the employment register, the rise in the number of wage recipients in the first half of 2015 would have been 1.8 percentage points smaller at 0.4% rather than 2.2%.

The effect of the employment register should be smallest in the results of the labour force survey. This asks individuals rather than companies and covers employment relations of all sorts, even where there is no official contract. Of course not all respondents will reveal the details of their unofficial working relationships even in an anonymous survey, and so the growth in employment found by the

³ Tax and Customs Board press release: [A further 9000 new tax payers have been added to the employment register](#), 12.12.2014 (Estonian only)

labour force survey could still be larger than actual growth. Figure 9 shows that annual growth in the number of paid employees accelerated in the labour force survey estimate in the second half of 2014, but by less than it did in other data sources. If it is assumed that in the third quarter of 2014 around 8000 official employees were added who had earlier been listed as unemployed or inactive but had actually been working in the shadow economy, the growth in total employment in the first half of 2015 without the registry effect would have been 1.3% rather than 3%.

Figure 9. Annual growth rate of the number of employees



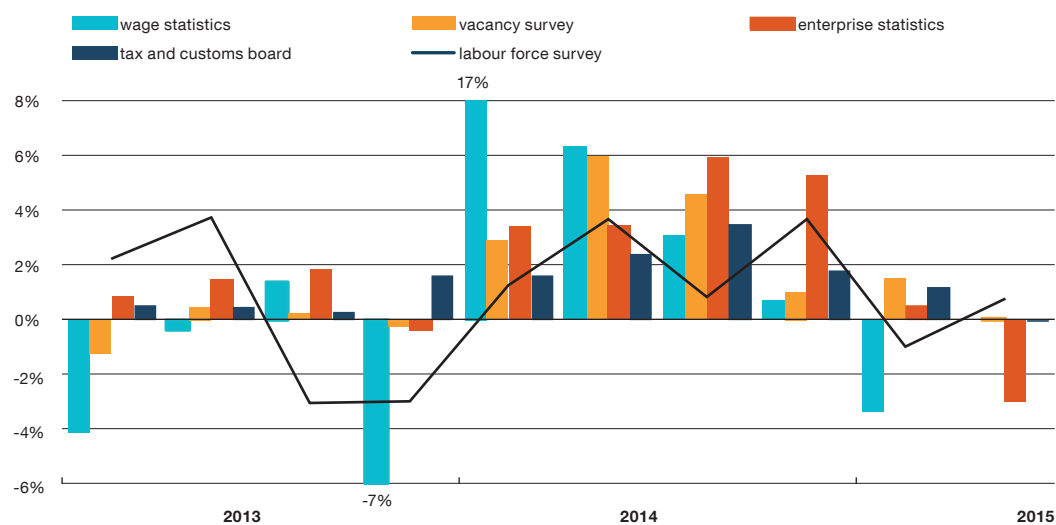
Sources: Statistics Estonia, Tax and Customs Board

The introduction of the employment register meant that annual growth in employment in the first half of 2015 was overestimated when compared to actual growth in employment. Employees probably moved relatively quickly from the shadow economy into declared employment, doing so within one or two quarters, and in that case the change no longer had an effect on quarterly growth figures in the first half of 2015. Figure 10 shows the quarterly growth in the seasonally adjusted number of waged employees calculated from various data sources. Corporate statistics and the wage survey find that employment dipped in the second quarter, while the Tax and Customs Board and the vacancy survey found no change in employment. This suggests that growth in employment probably braked at the start of 2015.

Annual employment growth in the secondary sector, where manufacturing predominates, accelerated in the first half of 2015. Manufacturing is the largest exporting sector, and some 119,000 people worked there in the first half of this year, accounting for 19.4% of total employment in resident production units. As micro companies provide only a small share of employment in manufacturing, it is probable that the introduction of the employment register did not have a large impact on this sector. Figure 11 shows that most surveys found that employment growth picked up slightly in the third quarter of 2014, and employment continued to increase in the first half of 2015. The rapid growth in labour costs will probably affect the competitiveness of manufacturing and if wage costs continue to rise, the number of jobs may start to fall.

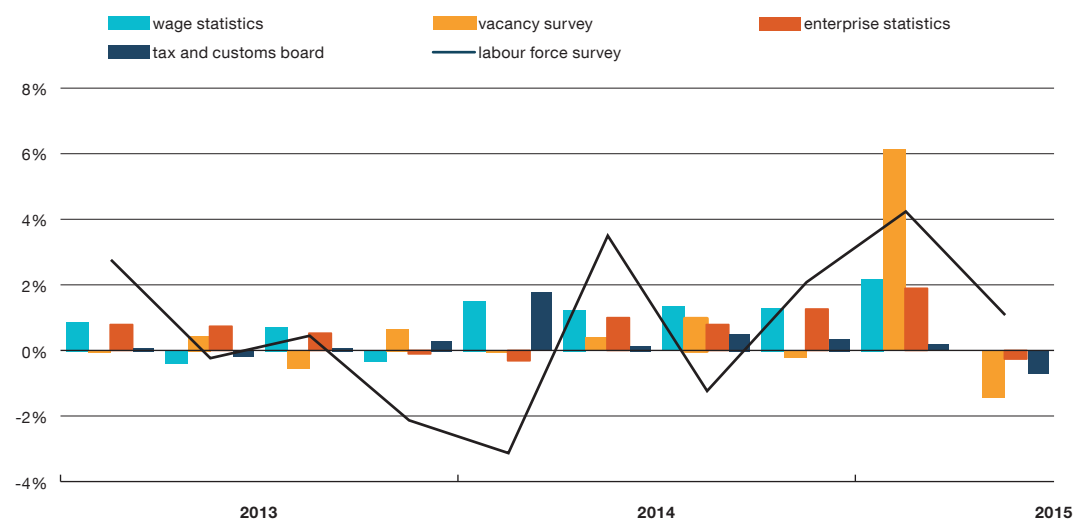
An average of around 59,000 people worked in construction in 2014, accounting for 9.3% of all employment. Of these, some 48,000 were working in Estonia and the others were working abroad. The construction sector depends a great deal on corporate investment activity and state infrastructure projects. Although value added in the construction sector has grown only modestly in recent years, the number employed in construction has remained close to 50,000 in Estonia since 2012. The figures

Figure 10. Quarterly growth rate of the number of employees



Sources: Statistics Estonia, Tax and Customs Board

Figure 11. Quarterly growth rate of the number of employees in manufacturing

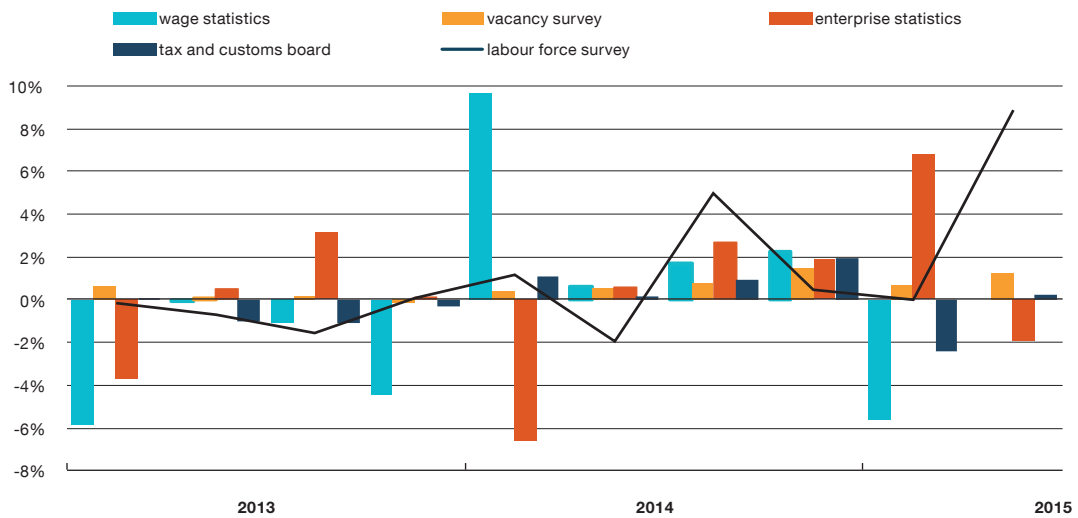


Sources: Statistics Estonia, Tax and Customs Board

for employment in construction were probably affected in the second half of 2014 by the introduction of the employment register and by more effective checks by the Tax and Customs Board. The labour force survey shows employment in construction leaping up in the second quarter of 2015, climbing 18% over the year and 9% over the quarter (see Figure 12). This may have been caused by a change in seasonality and by random error, because the sample for the labour force survey is small.

The largest employer in services is wholesale and retail trade, where some 151,000 employees worked in the first half of 2015, accounting for almost one quarter of total employment. The labour force

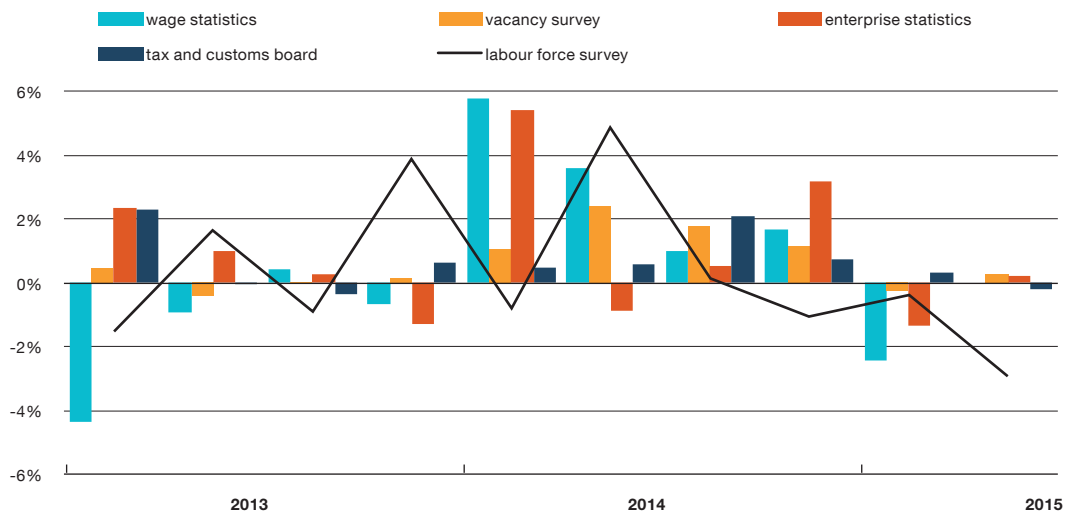
Figure 12. Quarterly growth rate of the number of employees in construction



Sources: Statistics Estonia, Tax and Customs Board

survey has found employment in trade to be mainly falling quarter on quarter over the past year, and found that in the second quarter of 2015 it was also down over the year, by 5.7% (see Figure 13).

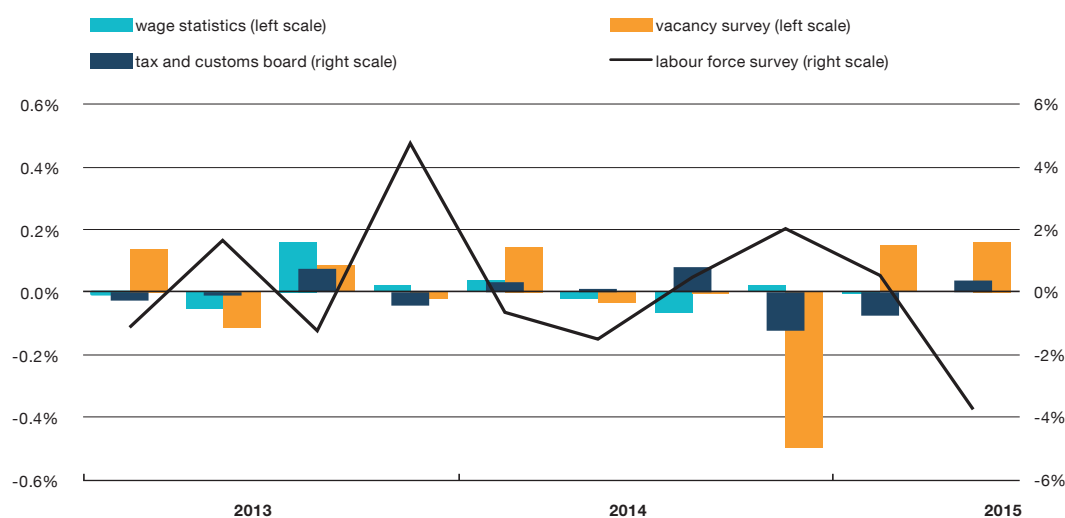
Figure 13. Quarterly growth rate of the number of employees in wholesale and retail



Sources: Statistics Estonia, Tax and Customs Board

Public sector employment in Figure 14 covers people working in public administration and social insurance, healthcare, and education. Around 142,000 people worked in these areas in the first half of 2015, accounting for 23% of total employment. Most of the surveys other than the labour force survey find that employment in the public sector has not changed very much in the past two years. Employment has declined in education in recent years however, because the number of children has fallen. Employment in public administration has also contracted, while it has increased slightly

Figure 14. Quarterly growth rate of the number of employees in public administration, education and healthcare



Sources: Statistics Estonia, Tax and Customs Board

in healthcare. As the government wants to move to keeping in structural fiscal balance, the growth in the general government payroll has been limited in the last few budgets. At the same time it has been necessary to raise wages in the state sector, so the result according to data from the Tax and Customs Board has been a gradual reduction in the number employed in government institutions. The central government is planning to cut 750 employees in 2016, which means that employment in the public sector, covering people working in public administration and social insurance, healthcare, and education, will contract by 0.53%.

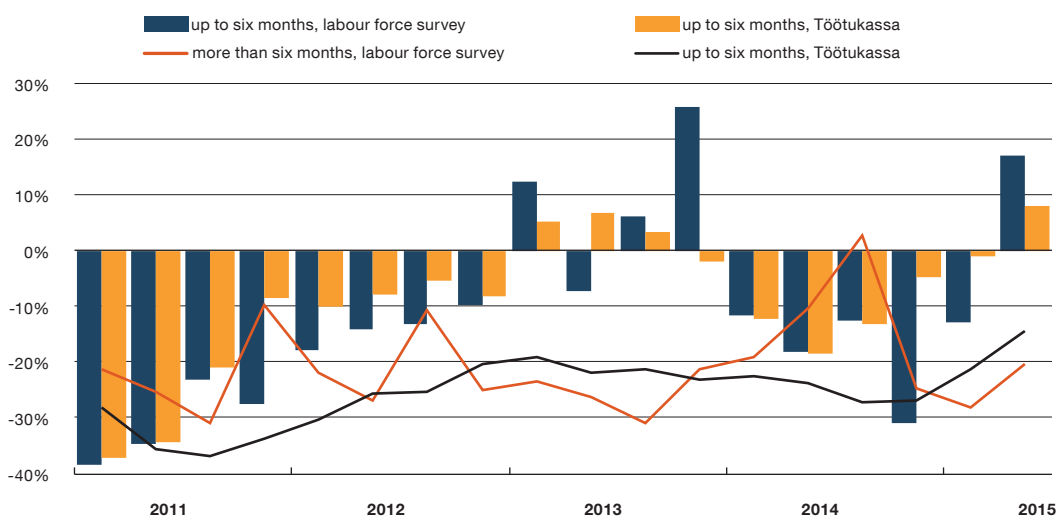
Unemployment

The unemployment rate in the first quarter of 2015 was 1.9 percentage points lower than a year earlier at 6.6%, and it was 0.5 percentage point lower in the second quarter at 6.5%. The labour force survey shows that in the first half of the year there were on average around 44,300 people unemployed, which is 15% fewer than a year earlier. Unemployment is quite seasonal and usually rises in the first quarter as a lot of employment contracts stop at the end of the calendar year, and there are fewer seasonal workers employed in agriculture and construction. Unemployment then starts to fall steadily in the second quarter as seasonal jobs return. The unemployment rate in the second quarter of 2015 was 0.1 percentage point lower than in the first quarter, but this fall was much smaller than usual and seasonally adjusted unemployment actually rose. The rise was not caused by lower employment however, but by greater participation in the labour force.

The long-term unemployed accounted for 42.8% of all the unemployed in the first half of 2015 according to the labour force survey, which is 4.5 percentage points fewer than a year earlier. This means the number of short-term unemployed fell more slowly than the number of long-term unemployed, and the number who have been out of work for less than six months started to rise in the second quarter of 2015 (see Figure 15). Statistics for registered unemployment with Töötukassa, the unemployment insurance fund, also show that the share of the long-term unemployed has fallen for over a year and the number looking for work for a very short time has risen.

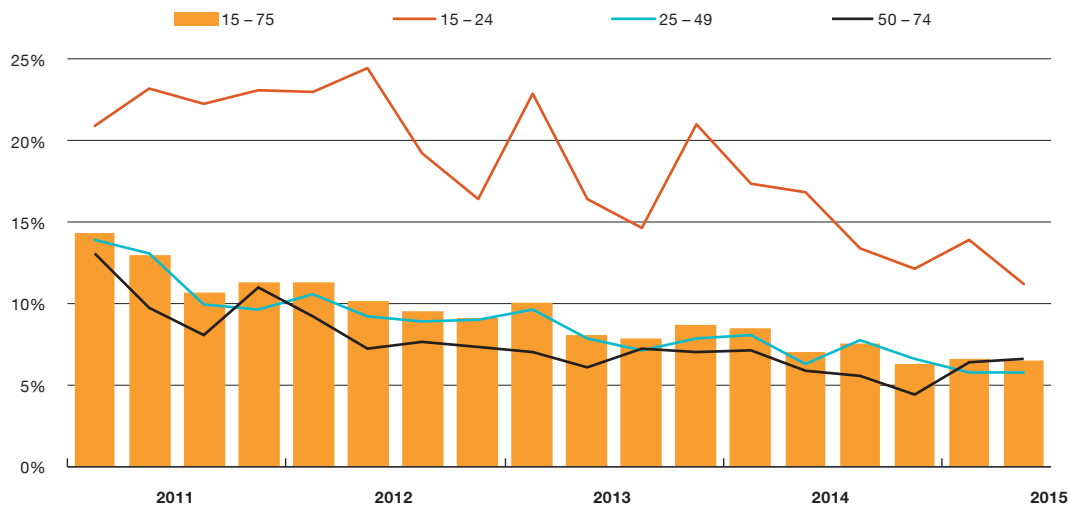
The unemployment rate for people aged 15–24 fell by 4.5 percentage points over the year in the first half of 2015 to 12.5% (see Figure 16). Youth unemployment is almost twice as high as unemployment

Figure 15. Unemployment by duration, annual change



Sources: Statistics Estonia, Töötukassa, Eesti Pank

Figure 16. Unemployment by age group



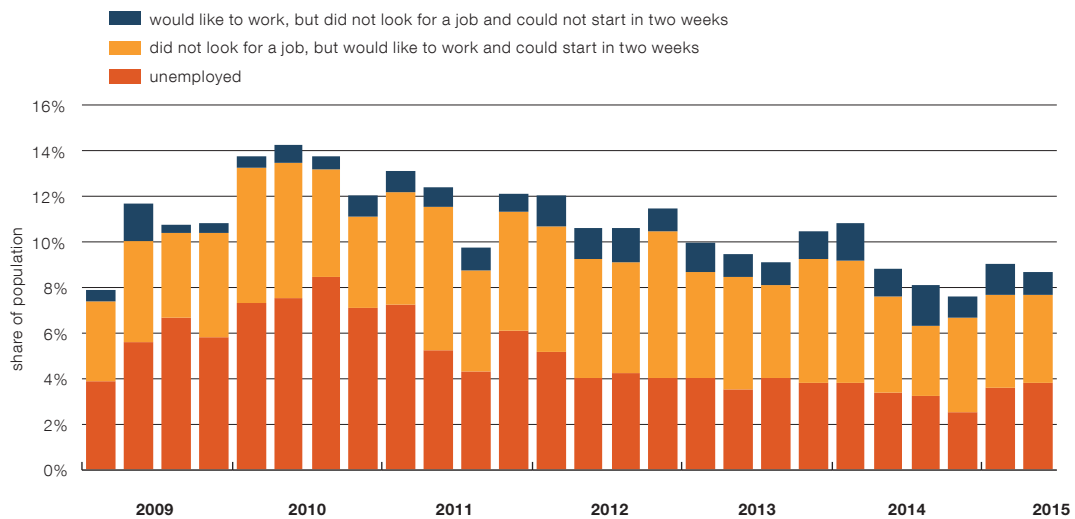
Source: Statistics Estonia

among residents in their middle working years, and is also more sensitive to changes in economic circumstances. The unemployed accounted for only 5.1% of all young people though, taking together those participating in the labour market and the inactive. In consequence, the survey encounters the young unemployed relatively rarely, and the youth unemployment rate is probably also more volatile because the sample for the labour force survey is quite small. A large part, around one third, of the unemployed young are in fact studying full time while looking for work. Those young people who are not in education or employment are considered a risk group because a low level of education and a lack of work experience make it difficult to find a first job.

The unemployment rate among those in the 25–49 age group was 1.4 percentage points lower in the first half of 2015 than a year earlier, at 5.6%. Unemployment for men was 6.3%, which was 0.8 percentage point higher than the rate for women. The fall of 2.5 percentage points in unemployment among women was noticeably larger than the fall of 0.5 percentage point for men.

The rate for older employees aged 50–74 was 6.5% in the first half of the year, the same as a year earlier. Alongside those in this age group who meet all the criteria for unemployment as they are actively looking for work and are ready for work, there are many people who would actually like to work but are not actively looking for a job. With support from labour market services, such people who are only loosely connected to the labour market could become part of the labour force. For this reason it is good that Töötukassa has started offering careers advice to those of retirement age since February 2015. This will certainly help such people move from wanting to work towards actively looking for work. Figure 17 shows more broadly defined figures for unemployment alongside the usual unemployment rate. The inactive who would like to work but are not actively looking for work actually outnumber those in the older age group who are unemployed. Their number has declined over time even so.

Figure 17. Additional unemployment indicators, age 50–74, % of population



Sources: Statistics Estonia, Eesti Pank calculations

The unemployment rate among Estonians was 5.6% in the first half of 2015, while the rate for non-Estonians was almost half as high again at 8.8%. The unemployment rate for non-Estonians fell over the year by a markedly faster 2.7 percentage points than the rate for Estonians, which was down 0.6 percentage point. The unemployment rate in largely Russian-speaking Ida-Virumaa fell at the same time by 6.5 percentage points to 10.1%, which is much more than the fall in any other Estonian region. Unemployment fell in Ida-Virumaa because employment increased, and also because the number inactive rose.

Registering as unemployed at Töötukassa is not obligatory in Estonia and about 60% of the total number of unemployed are registered on average. The fall in registered unemployment slowed in the first half of 2015, and the number registered as unemployed rose in monthly terms at the end of 2014 and in the summer months of 2015. In the first half of 2015 Töötukassa had an average of some 33,700 people registered at the end of each month, and at the end of the second quarter there were

around 25,900 registered, or 4.1% of the labour force. The counties where the registered unemployed made up the largest share of the labour force were Ida-Virumaa, where 8.5% of the labour force were registered as unemployed, and Valgamaa, where 7.6% were.

Registered unemployment has seen monthly rises as new registrations of the unemployed have increased and there have been fewer registrations that have ended. The main growth among the newly registered has come from those who were previously inactive and to a lesser extent from those who became unemployed when their working relations ended (see Figures 18 and 19). This change is in line with the figures from the labour force survey showing an increase in labour force participation.

Figure 18. Quarterly inflow into registered unemployment, seasonally adjusted



Sources: Töötukassa, Eesti Pank

Figure 19. Quarterly exit from registered unemployment, seasonally adjusted



Sources: Töötukassa, Eesti Pank

There has been no increase in the number of newly registered unemployed whose working relations ended because of dismissal or because their employer went bankrupt. Equally, redundancy benefits have not been paid out more than usually. The surveys of sentiment for the Estonian Institute of Economic Research show households to be ever more pessimistic through 2015 about developments in the labour market. Such expectations are probably affected by the fall in unemployment to a low level, and by newspaper articles about problems in various industries.

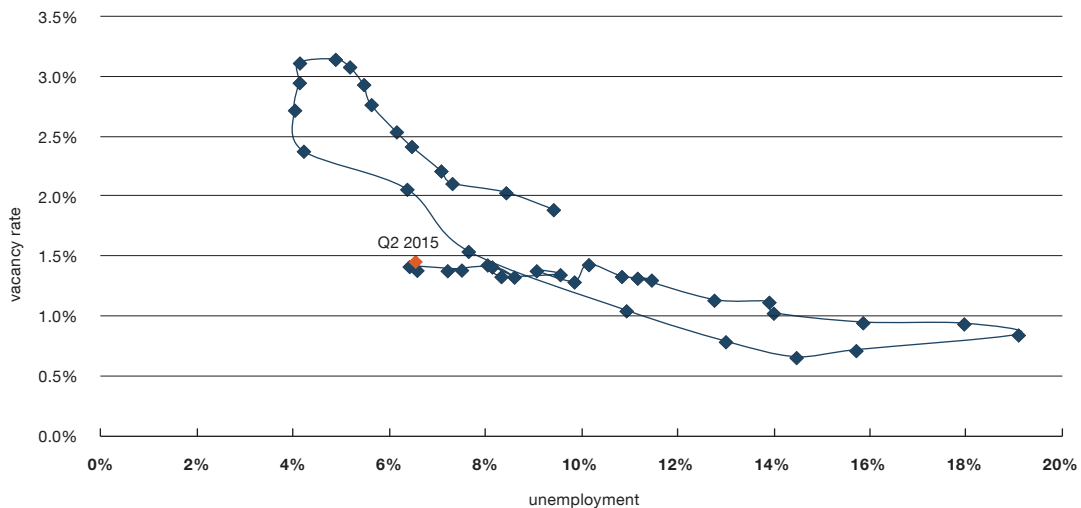
Vacancies

The survey of vacant positions and labour mobility indicates that the number of positions vacant increased by 6.3% in the first half of 2015 to 7870. The vacancy rate⁴ was 1.43% at the same time, which is 0.5 percentage point higher than a year earlier. The number of vacancies mainly grew in the public sector, rising in public administration, education and healthcare. The biggest growth in the number of vacancies in the private sector was in information and communication and the number fell in construction and accommodation and catering.

The largest number of vacancies was the 1457 in manufacturing and the 1351 in trade. The number of unfilled jobs in manufacturing did not change over the year and the vacancy rate fell slightly as the number of positions filled rose, but the vacancy rate in trade has been rising for a long time. The vacancy rate was only higher than the national average in the first half of 2015 in Harjumaa and Tallinn and in Pärnumaa.

The relationship between vacancies and unemployment is usually negative, so that when the unemployment rate is high, vacant positions are scarce, and when unemployment is low, there are a lot of vacancies. This match between jobs and available labour is illustrated by the Beveridge curve, which shows the vacancy rate relative to unemployment. Although unemployment has fallen rapidly in recent years, vacant positions have remained at 1.3–1.5% of all jobs (see Figure 20). This means that the match between jobs and available labour has improved slightly.

Figure 20. The Beveridge curve, seasonally adjusted



Sources: Statistics Estonia, Eesti Pank calculations

⁴ The vacancy rate is the number of vacancies as a ratio to the total number of filled and unfilled jobs.

Box 1: Barriers to recruitment of employees in Estonian companies

A survey of Estonian employers was carried out in spring 2014 by Eesti Pank and TNS Emor for the Wage Dynamics Network research network of the European Central Bank and the central banks of Europe. The survey collected information on how Estonia adjusts to economic changes in comparison to other countries, how flexible wage-setting is in Estonia, and what effect the major labour market reforms passed during the crisis had.

The survey also asked employers about barriers that they have found to the recruitment of new employees. They were asked what hindered them significantly from engaging employees on a permanent contract at the end of 2013. It appeared that the biggest barrier to recruitment was the shortage of qualified labour, which was considered serious by 90% of the employers who responded (see Table B1.1). More than 80% also gave high labour taxes and high wages as reasons, and more than half said that economic uncertainty was a significant hindrance to recruitment.

Table B1.1. Share of employers who consider each given factor to be a major obstacle to hiring

	Total	5–19 employees	20–49 employees	50–199 employees	Over 200 employees
Shortage of qualified labour	90.5	87.8	87.4	90.2	97.3
High wages	81.8	80.1	83.7	87.0	72.7
High labour taxes	81.4	80.6	81.9	85.0	75.5
Uncertainty about the economic climate	62.6	76.8	65.3	64.0	39.8
Cost of inputs other than labour	46.0	48.7	51.5	52.1	26.6
Access to funding	45.8	63.7	52.4	42.8	23.5
Possible changes to labour laws	38.5	41.9	46.1	47.8	10.9
Firing costs	36.0	44.2	39.2	37.0	21.1
Hiring costs	36.4	32.6	35.1	49.2	18.4

Source: 2014 Wage Dynamics Network Survey of Estonian companies

Only 36% of employers considered the costs of firing and hiring to be an obstacle, so most Estonian employers think that Estonian labour law is quite flexible and does not impede their ability to adjust their labour force as needed. OECD data also show Estonian labour protection to be more flexible than that in any other euro-area country, and this flexibility was increased further by the changes in 2009 to employment contracts law. Only around 38% of employers see changes to employment law as a disincentive for recruitment, and a majority of employers feel confident in Estonian labour legislation and see it as stable.

The larger the company, the more likely it was to give the shortage of qualified staff as a major obstacle to recruitment. Smaller companies gave more weight to all the other factors than big companies did, and for example 64% of companies with 5–19 employees considered access to funds to be an obstacle to recruitment, but only 23% of companies with over 200 employees thought the same.

WAGES AND LABOUR COSTS

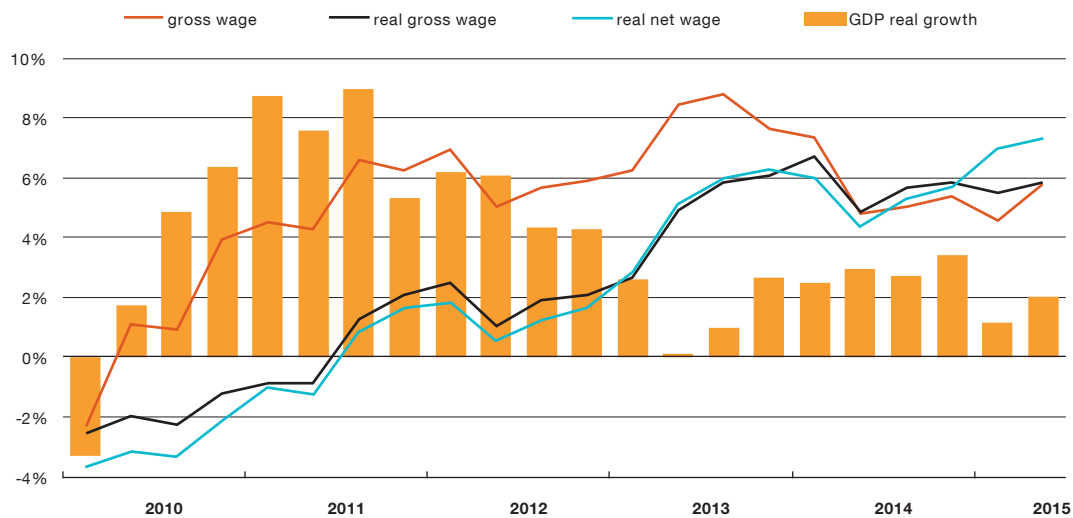
Average wages

Average gross monthly wages were 1010 euros in the first quarter of 2015, up 4.6% on a year earlier, and 1082 in the second quarter, up 5.8%. Although wage growth was slower than in 2013, it was faster in the first half of 2015 than it was in the middle of 2014. This means that seasonally adjusted quarterly growth in average wages accelerated in the second quarter of the year, so it was about the same in the first half of this year as in the second half of 2014, but faster than in the first half of 2014.

The average hourly wage rose by about the same as the average monthly wage, and the rise was faster in the second quarter of 2015 than a year earlier, while quarterly growth has mostly been over 2% since the second half of 2014. If this rate of quarterly growth were to continue throughout the year, it would bring annual growth back to 7–8%.

The fall in consumer prices in 2014 and the first half of 2015 meant that real wages rose faster than nominal wages. The incomes of waged workers have been boosted in 2015 not only by the rise in the real value of wages, but also by the cut in income tax of 1 percentage point, the rise in the basic exemption rate from 144 euros a month to 154 euros, and a cut in unemployment insurance from 2% to 1.6%. The effect of these changes is to raise the average net wage paid out to a worker after taxes by 1.4 percentage points more in the first quarter of 2015 than the rise in average gross wages. Tax cuts may help in slowing the rise in labour costs if the employer and the employee can negotiate about the net wage. The consumption capacity of employees receiving the average wage increased by 7.1% in the first half of 2015 (see Figure 21).

Figure 21. Annual growth in the reservation wage of the unemployed

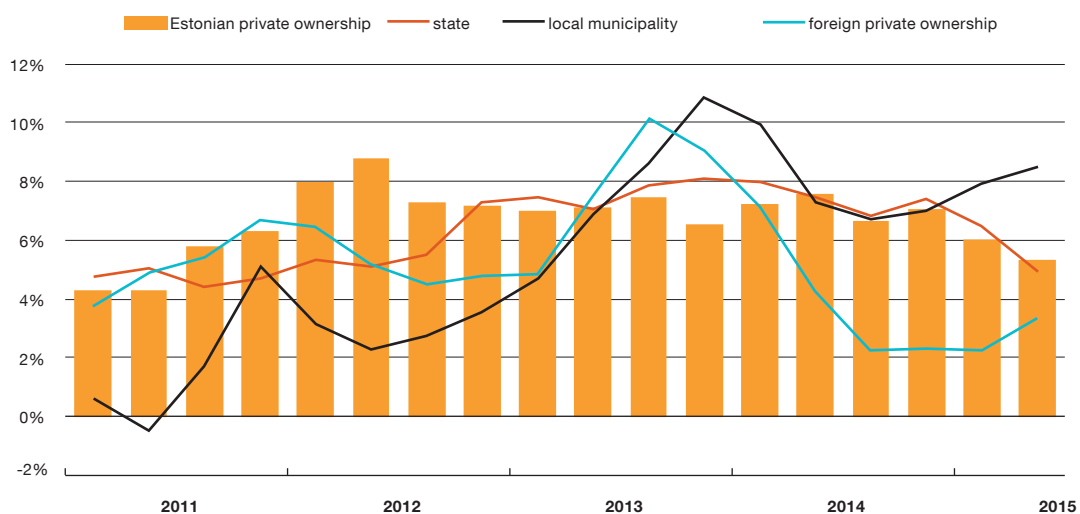


Source: Statistics Estonia

The employment register introduced in the middle of 2014 has also affected the figures for average wages. Data from the Tax and Customs Board put the average wage income of the new official wage recipients close to the minimum wage, which is much lower than the general average. However, if a lot of workers earning the minimum wage have been added, it will start to bring down the figure for the average wage. This means that the annual rise in wages will appear smaller than it would have been without the obligation to register employees. If the number of full-time equivalent employees was raised by some 8000 people earning the minimum wage after the employment register was introduced, then the wage rise in the first quarter of 2015 was 1 percentage point smaller than it would have been.

The employer type where the fastest wage growth was seen in the first half of 2015 was local government administration, where wages were up 8.5%. This includes a lot of jobs in education and in healthcare, where the average wage was up 8.4% over the year. At the same time, wage growth slowed in state administration to 4.9% and in public administration to 5.7%. Wage growth slowed in Estonian private companies to 5.3% in the first half of 2015, but it accelerated to 3.4% in foreign-owned companies (see Figure 22).

Figure 22. Wage growth by type of ownership



Source: Statistics Estonia

The private sector businesses that saw wages rise faster than average over the year were finance and insurance related to the real estate market, where they were up 7.1%, and real estate, where they were up 11.7%. The average wage in construction fell by 1.3% in contrast. At 5.6%, wages rose slightly faster in manufacturing than the national average.

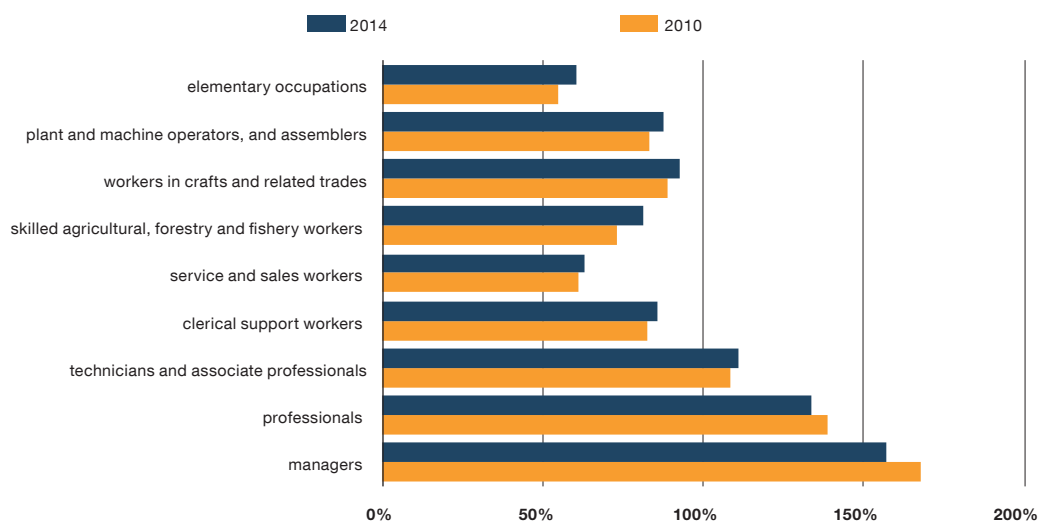
The average wage was highest in the first half of 2015 in finance and insurance, where it was 1859 euros or 173% of the national average, and in information and communication, where it was 1733 euros or 161% of the national average. It was lowest in accommodation and catering, where it was 63% of the national average. Average wages vary so much by sector partly because of differences in the structure of job types and of employment levels among staff.

Unfortunately the quarterly wage survey does not give any additional details on average wages, but the four-yearly Structure of Earnings Survey gives a picture of wages by sector, job and gender. The wage differences between jobs have contracted in the past four years and the ratio of the pay for managers and top specialists to the average has shrunk slightly, while that for all other jobs has widened (see Figure 23).

Table 1 shows occupations ranked by hourly wages and the columns give the average wage of job types as a ratio of the national average for that group. It can be seen from the data that when the average wage in a sector is above or below the national average, then the average wage for each occupation within the sector is also above or below the national average. Administrative and support activities stands out as an exception from the general picture, as unskilled workers such as cleaners have a notably lower wage but all the remaining occupations have a higher wage than the Estonian average for the same job types. The wages of managers in sectors that have a lot of micro companies, like agriculture and construction, may be low because the company managers are often the owners, who are receiving capital income. The wage of workers with low qualifications in public administration and healthcare is lower than that for similar job types in other sectors, but the wage for jobs that require higher qualifications is higher than the average.

The pay survey also gives information on the gender pay gap, and shows that the average wage for men in October 2014 was 23.3% higher than the average for women. How far the wage gap is

Figure 23. Gross hourly wage by occupational group, % of the average wage



Sources: Statistics Estonia, Eesti Pank

affected by the difference in the structure of employment for men and women was analysed in the Labour Market Review in 2014⁵, where it was found from data from 2010 that about half of the wage gap can be explained by the difference in the structure of employment. Initial data for 2014 show the smallest gender gap by occupation was in skilled agricultural work at 5.8% and management at 16.8%. The sector with the smallest gender wage gap was water supply, sanitation and waste management, where it was 1.4%, followed by public administration, where it was 11.1%. The gap was largest for skilled workers and workers in crafts, and in finance and insurance activities. The gender wage gap in finance and insurance activities is affected a lot by the different employment structure by occupation for men and women.

⁵ [Eesti Pank Labour Market Review 1/2014](#).

Table 1. Average wage by job type in different sectors as a percentage of the national average for the job type

	Occupations total	Managers	Professionals	Technicians and associate professionals	Clerical support workers	Service and sales workers	Workers in crafts and related trades	Plant and machine operators, and assemblers	Elementary occupations
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
Finance and insurance	168%	166%	156%	128%	112%				
Information and communication	156%	143%	138%	107%	114%				
Mining	129%	144%	104%	126%	120%		128%	149%	166%
Electrical energy, gas, steam and hot water supply	127%	141%	122%	93%	109%		100%	117%	88%
Public administration and defence; statutory social insurance	123%	126%	109%	96%	108%	147%	81%	85%	72%
Professional, scientific and technical activities	116%	104%	96%	89%	103%		97%		97%
Construction	104%	82%	113%	103%	93%		99%	117%	154%
Administrative and support service activities	99%	110%	128%	154%	113%	103%	109%	148%	84%
Water supply; sewerage, waste management and remediation activities	99%	125%	115%	91%	105%		91%	112%	103%
Manufacturing industry	98%	106%	107%	103%	110%	110%	101%	95%	119%
Human health and social work activities	96%	109%	108%	77%	76%	90%	74%	79%	74%
Transport and storage	96%	103%	111%	119%	98%	152%	91%	89%	140%
Agriculture, forestry and fishing	95%	72%	84%	110%	92%		92%	121%	117%
Wholesale and retail trade; repair of motor vehicles	94%	100%	102%	107%	98%	100%	98%	107%	105%
Education	84%	83%	79%	75%	91%	73%	64%	53%	67%
Other service activities	81%	87%	86%	82%	80%	81%	99%	70%	73%
Real estate activities	79%	79%	84%	86%	78%	80%	109%		81%
Arts, entertainment and recreation	77%	68%	67%	72%	85%	94%	85%		75%
Accommodation and food service activities	71%	60%	65%	94%	85%	106%	74%		89%

Source: Statistics Estonia

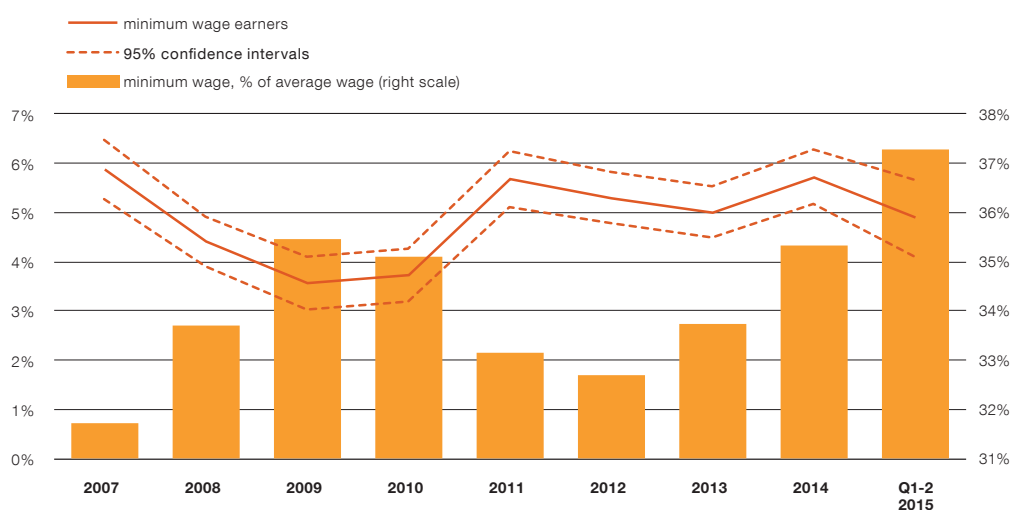
Box 2: Employees earning the minimum wage

Negotiations over the minimum wage are held by the Estonian Trade Union Confederation and the Estonian Employers' Confederation. The minimum wage that is agreed is set by a government decree and applies across the whole economy. The agreement for 2016–2017 will see the minimum wage rise to 470 euros by 2017, making the fifth consecutive annual rise of around 10%. In the first half of 2015 the minimum wage was 37.3% of the average wage and the Eesti Pank June Forecast 2015 sees the minimum wage climbing to 39.9% of the average wage in 2017.

There are unfortunately no precise data on the share of all employees earning the minimum wage. Statistics from the Tax and Customs Board on wages paid out show that an average of 3–4% of all the wages paid out each month were exactly the minimum wage, but an average of 14% of wages paid out were for less than the minimum wage. The amount paid out is affected by variations in hours worked, so the number of employees who have a contract set at the minimum wage is probably not the same as the number receiving a payout of that amount. The Labour Force Survey puts the share of the full-time employed earning the minimum wage or less at 3.5–6% in recent years (see Figure B2.1). Wages of up to 105% of the minimum wage were earned by 5.8–7.8% of employees in those years, while 7.7–10.8% of all employees earned up to 110% of the minimum wage.

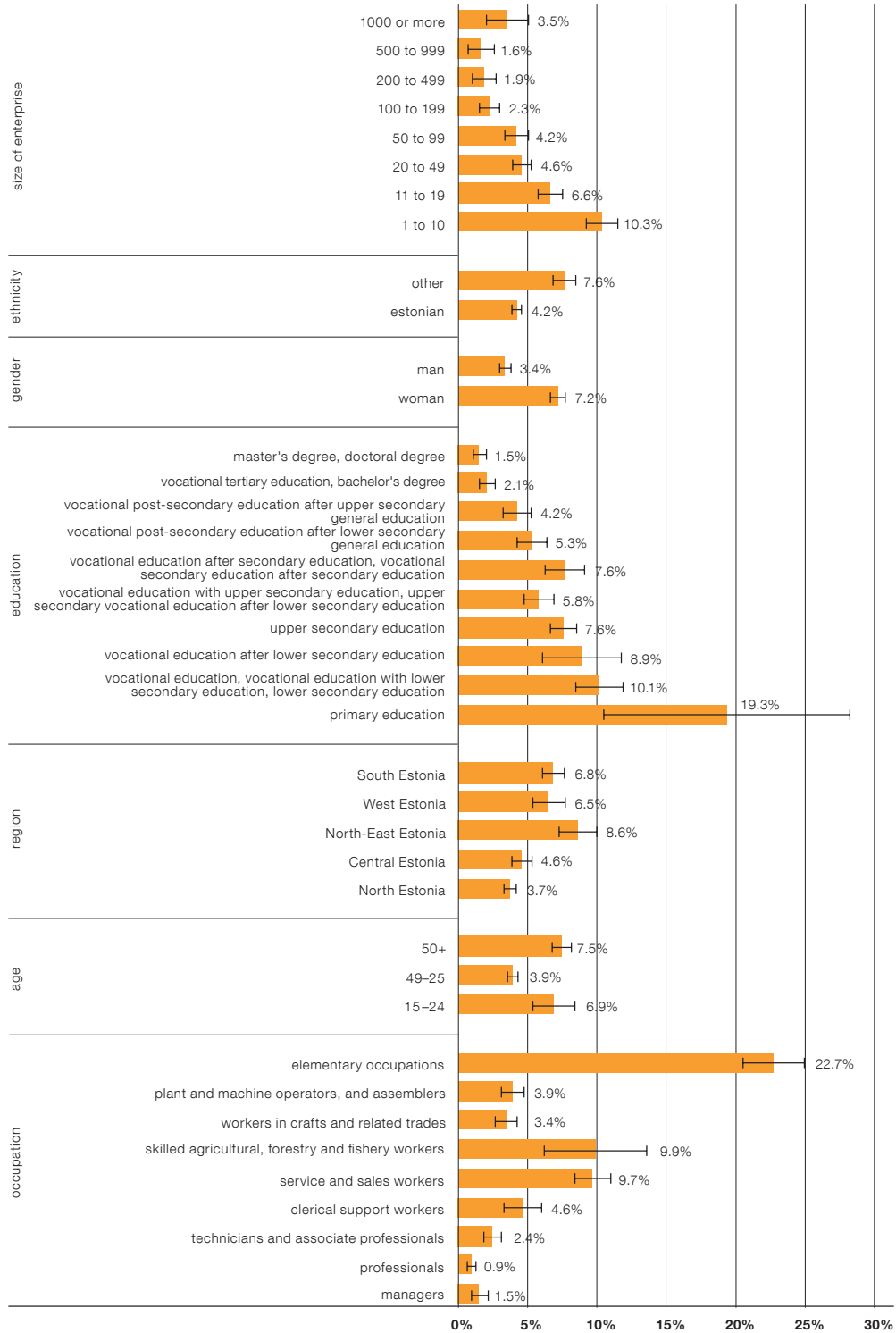
Around one fifth of unskilled workers earned the minimum wage or less in 2012–2015 (see Figure B2.2), of whom more than 10% were in accommodation and catering, and almost 20% were in real estate activities. Women are more likely to receive the minimum wage than men, other nationalities are more likely to receive it than Estonians, and the young and the over-50s are more likely to receive it than those in their middle working years. The more education someone has, the less likely they are to earn the minimum wage. The share of employees earning the minimum wage is higher in relatively small companies.

Figure B2.1. Minimum wage earners, % of full time employment



Sources: Statistics Estonia, Eesti Pank calculations

Figure B2.2. The share of the full time employed who earn up to a minimum wage, 2012-Q2 2015 (confidence intervals at 95%)

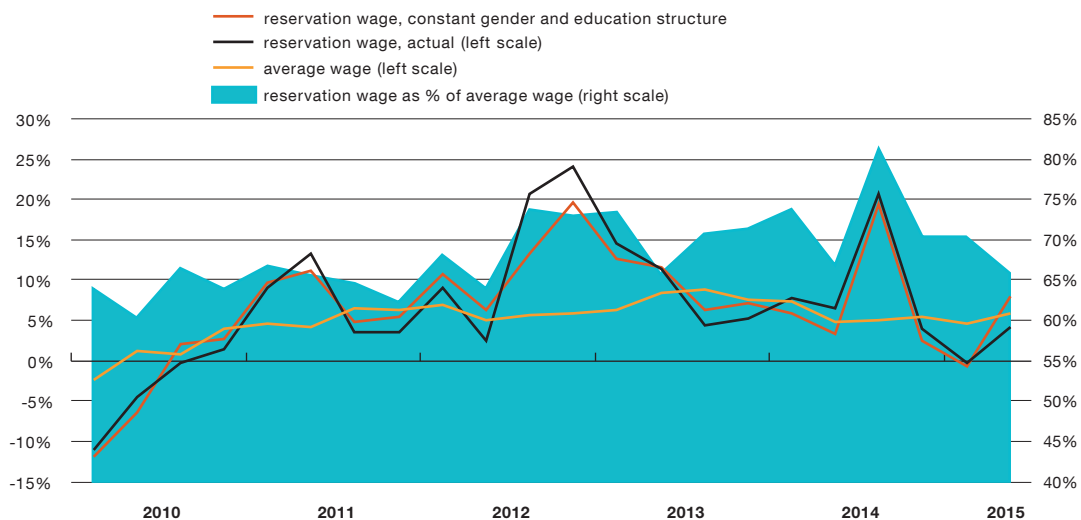


Sources: Statistics Estonia, Eesti Pank calculations

Reservation wage of the unemployed

The reservation wage is the minimum amount for which an unemployed person is prepared to accept a job offer. The wage expectations of unemployed people looking for full-time work increased by 2% in the first half of this year to reach 68% of the average wage. The reservation wage has generally increased slightly faster than the average wage over recent years. The unemployed are a lot less numerous than wage earners and unemployment does not last for as long as working relationships. Many people enter and exit unemployment, so the change in the average reservation wage could be due to structural changes in the education, age or other characteristics that affect the wage expectations of the unemployed (see Figure 24). The reservation wage of women with secondary education was 25% lower than that of men with the same education, and the reservation wage for women with higher education was 35% lower than that of equivalent men. It was however 28% higher than that of women with secondary education, while men with higher education had a reservation wage that was 50% higher than that of men with secondary education.

Figure 24. Annual growth in the reservation wage of the unemployed



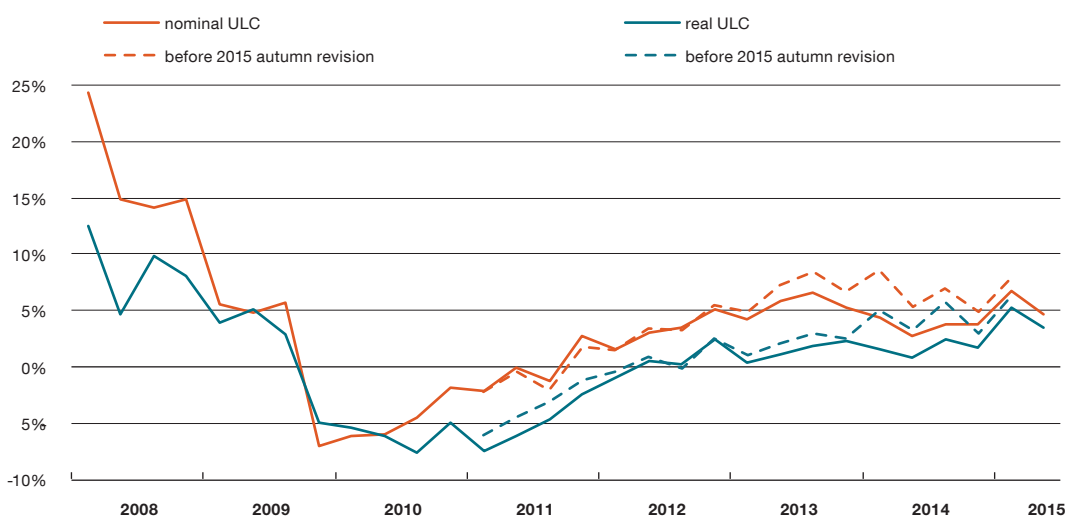
Sources: Statistics Estonia, Eesti Pank calculations

Unit Labour Cost

The autumn 2015 revision of data by Statistics Estonia saw notable changes to the growth in unit labour costs for 2013 and 2014. Partly this was because the estimate of GDP was revised upwards and partly because the payroll was revised downwards for both years. This meant that the growth in nominal unit labour costs for 2013 fell from 6.8% to 5.5% and for 2014 it fell from 6.5% to 3.7% (see Figure 25). Although the imbalance in those two years has improved retrospectively, the three-year growth in unit labour costs was 13% at the end of 2013, which is higher than the 9% boundary set for euro-area countries that triggers the macroeconomic imbalance alert mechanism of the European Commission. In the first half of 2015 growth picked up in unit labour costs and the three-year average climbed to 13.6%.

Real unit labour costs show the payroll as a share of value added; if labour costs per employee rise faster than nominal value added per employee, unit labour costs rise. The remainder of value added produced can broadly be put down as capital income from depreciation, amortisation and profits,

Figure 25. Unit labour cost growth



Source: Statistics Estonia

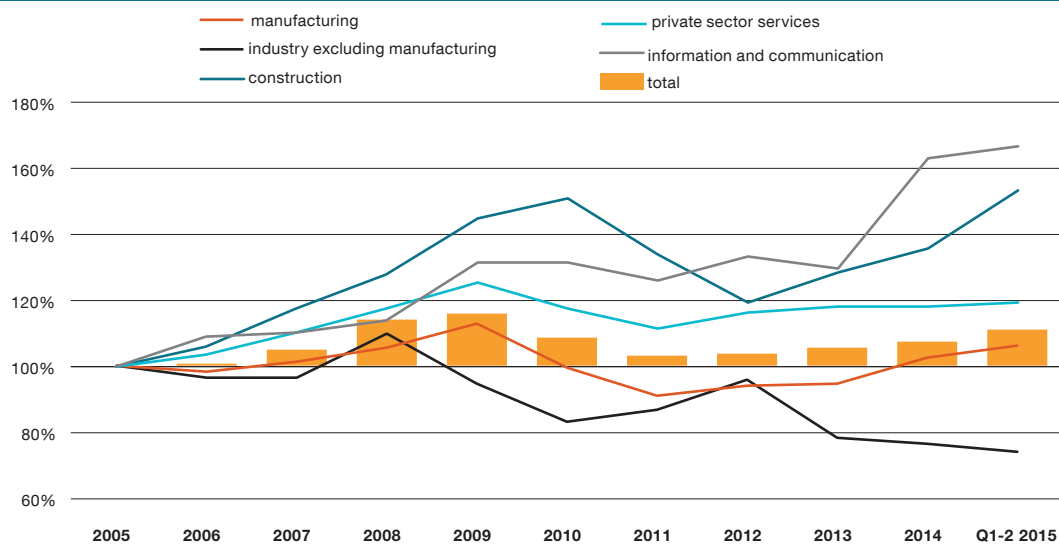
and net production taxes, mainly VAT and excises. If the tax wedge does not change, the share of profits is reduced when unit labour costs rise. In recent years, the rise in unit labour costs has reduced profits both as a share of income and as a total amount. GDP statistics show that the profit of non-financial companies was 5.4% smaller in the first half of 2015 than a year earlier.

Real unit labour costs increased in most sectors in the first half of 2015. Labour income increased its share in the main exporting sector of manufacturing, and also in private sector services. Although the share of labour costs had earlier fallen in non-manufacturing industry, including the energy industry and mining, because of increased use of technology, it has started to rise again, probably because of low energy prices.

Over the longer term, real unit labour costs have increased most in construction and have fallen in non-manufacturing industry. Unit labour costs in manufacturing were 6.4% higher in the first half of 2015 than they were in 2005 (see Figure 26).

Despite the reduction in profits, data from Töötukassa for the first half of 2015 do not show any rise in redundancy benefits, nor in the number of unemployed who were made redundant from their previous job. There are however some sectors that have announced forthcoming redundancies in response to negative shocks. Low energy prices have put pressure on the marginal costs of companies in mining and energy production, extraordinarily low milk prices have caused difficulties for a lot of dairy producers, and the outbreak of swine flu is having damaging consequences for pig farms. Russian sanctions have reduced the Estonian transit business, and this has had a negative effect on transport and storage. In the long term Estonia is competing with other countries for investment and labour costs rising faster than productivity will reduce its attractiveness as a destination. Over the short term, rapidly rising unit labour costs reduce the export competitiveness of a country.

Figure 26. Real unit labour costs, 2005=100%



Source: Statistics Estonia, Eesti Pank calculations