

Eesti Pank



LABOUR MARKET REVIEW

2/2014

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 translation uses updated data that became available after the publication of the Estonian text on 14.10.2014. For this reason the text is not an exact equivalent of the Estonian original.

Prepared by:
Orsolya Soosaar
Natalja Viilmann
Liina Malk (Box 2)

ISSN 2346-6936

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KEY DEVELOPMENTS IN THE FIRST HALF OF 2014

Labour costs accounted for 49% of GDP in the first half of 2014, which was 2 percentage points more than a year earlier and 4 percentage points more than during the years of relatively stable economic growth in 2002–2006. Taking a short-term view, the recent rapid rise in labour costs has been worrying, as corporate profits have been declining at the same time. However, the first signs appeared in the first half of this year that labour costs may have begun to adapt to the weakness in economic activity that has reigned for a long time. Data from the Labour Force Survey show that employment and hours worked per employee both fell slightly, while the Wage Survey shows that wage growth slowed significantly in the second quarter. The adjustment has still been modest in scope though.

The reason companies have not reduced labour costs more sharply is presumably that they expect that demand will soon recover, letting them use their labour resources more intensively again. Although economic activity around the globe continued to pick up in the first half of the year, the long-awaited recovery in the euro area that had started less than a year earlier became bogged down in the second quarter. The manufacturing sector in Finland and Sweden, Estonia's main trading partners, has not yet started to improve steadily. The chance of growing out from higher labour costs lies therefore in whether companies are able to increase their export orders or their market share in growing markets. Although economic growth accelerated in the second quarter, downside risks to its continuation increased as a result of economic sanctions placed on each other by the European Union and Russia, mainly through their effect on the confidence of both consumers and businesses.

Companies may also be restricted in their ability to reduce labour costs by shortages of labour. This is pushing companies to compete for labour much more than before with both local and foreign employers. The shrinking supply of labour and the ease with which workers can go abroad to find a job have made recruitment ever more difficult. Current employees may thus be retained to hedge against staffing risks, though if this continues for a longer time and at the expense of profits it will increase the vulnerability of companies.

The decline in the working age population will affect the labour supply over the longer term. The number of people of working age fell last year by 0.9%, mainly because of natural demographic processes like the fall in the number of young people. If it is assumed that those who complete higher education will become active in the labour market from the age of 23–24, then the smaller birth cohorts of the 1990s will not yet have started to reduce the flow of newly qualified labour, but their impact will start to be felt in the coming years. Although it is hard to increase the number of people entering the labour market, the fall in that number can be offset by investments in human capital. This will require great efforts to stop young people with professional or higher education from dropping out of school, and efforts to strengthen the connections between schools and the future employers.

The quality of labour is not determined only by the level of education of the young people entering the labour market. Rapidly developing technology means that further education and training for adults is essential for both those with jobs and those without. The share of employees who do further training is much smaller in Estonia than elsewhere in Europe. Only half of the people looking for work who have registered as unemployed can take training courses through Töötukassa, the unemployment insurance fund, but there are many others who would like to work but are not actively seeking a job. This means there are still many ways that potential economic growth could be raised through human capital, but this requires efforts from the state, companies and households.

LABOUR SUPPLY AND DEMAND

The working age population

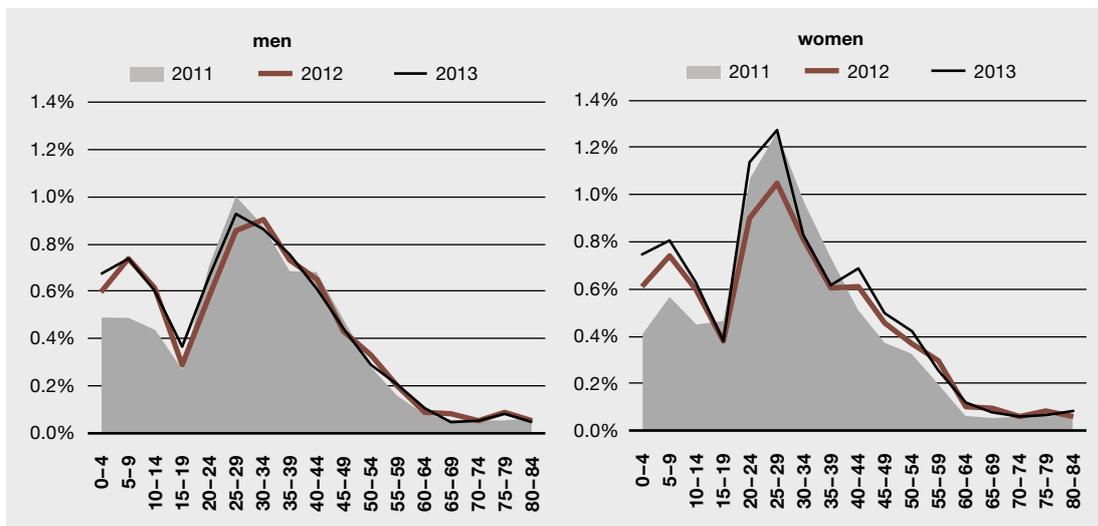
The corrected estimate by Statistics Estonia put the permanent population of Estonia on 1 January 2014 at 1,315,819, which is 3949 more than the initial estimate released in January expected. The population had fallen by 4355 people, or 0.33%, over the year. The working age population aged 15–74 shrank by some 9000 people or 0.9% at the same time, which is much faster than the population as a whole, but slightly slower than in 2013, when it fell by 1%.

The population of Estonia is being reduced both by emigration and by the natural rate of change. The negative migration balance of 2642 in 2013 was around 1000 people smaller than in 2012, and 68% of those people were of working age. This means that the negative migration balance accounted for one fifth of the reduction in the working age population. While 6740 people, or 6.6% more than in 2012 emigrated, immigration increased by more than half to 4098 people.

The main destination for emigration in 2013 was Finland, where more than 5000 people, or 76% of emigrants went to live. Only 7% of emigrants left the European Union. Women accounted for 53.7% of emigrants, and they have also outnumbered men among emigrants in the past. The destination countries where women were a higher than average share of emigrants were Germany and the United Kingdom, where they made up over 60%, while in contrast 77% of the emigrants heading to Ukraine were men. The age group most likely to emigrate were those aged 25–29, and about 0.9% of all the men and 1.3% of all the women who left Estonia to live elsewhere were in that age group. The likelihood of young men emigrating has not changed much since 2012, but young women have become more likely to do so (see Figure 1).

Estonian citizens made up 60% of immigrants, most of them return-migrants, while Russian citizens accounted for 13%, and citizens of other countries 27%. Immigration was higher than in 2012 mainly because of the increased immigration of Estonian citizens. The country that supplied

Figure 1. Emigrants by gender and age



Source: Statistics Estonia

the largest share of immigrants was Finland, from where 26% came – probably mostly Estonian citizens returning – followed by Russia with 23%. Among the immigrants, 54% were men and the share of men has been slowly and steadily falling since 2007, helping to offset the negative migration balance of women, which has so far been much larger than that of men. The probability of immigration increased most for the 20–29 age group, which is the same group that is already most likely to emigrate. Immigration increased markedly among men aged 30–35, but there was no such change for women of that age.

The change in population beyond that caused by net migration comes from natural negative population dynamics, as 1703 more people died last year than were born, and so the natural reduction was slightly larger than in 2012. The working age population is shrinking faster than the total population mainly because of changes in the age structure. Under the widest definition, working age can be taken to start at 15, and the people who will reach that age this year are one of the smallest cohorts born in the first decade after independence was regained. In reality young people enter the labour market somewhat later than that, either when they finish secondary school at 18–19, or after they complete further education at 23–24. As this older group was born at the end of the baby-boom in the 1980s, the fall in the birth rate in the 1990s has yet to start restricting the supply of qualified labour. The declining number of young people is offset by longer life expectancy, and the effect of this in the labour market is amplified by the higher labour force participation of older age groups.

The regional distribution of population is affected by three processes: emigration, internal migration between regions, and the natural population changes of the region. Emigration caused a fall of 0.1–0.5% in the population of most counties last year. Exceptions to this were Ida-Virumaa and Põlvamaa, where net external migration was in balance, while internal migration led to population increases in Harjumaa, Saaremaa, Hiiumaa and Põlvamaa. The population of Tallinn increased last year by 1.1% because of internal migration and the county that lost most to other counties was Ida-Virumaa, which saw 0.9% of its population migrate internally.

Together with the new population statistics, Statistics Estonia published a population forecast prepared jointly with Tartu University that stretches to 2040. The new forecast expects emigration to make the population fall faster than was predicted in the previous longer-term forecast. As the forecast starts in 2014, it can already be compared to the population statistics from 1 January 2014, and this shows the actual population figure to be 0.3% smaller than the pessimistic scenario in the forecast. The biggest discrepancy is in children under the age of one, which is the hardest to predict as it is based on forecasts of the birth rate. On 1 January 2014 there were 13,851 children less than one year old, which is 5.7% fewer than the pessimistic scenario of the forecast predicted.

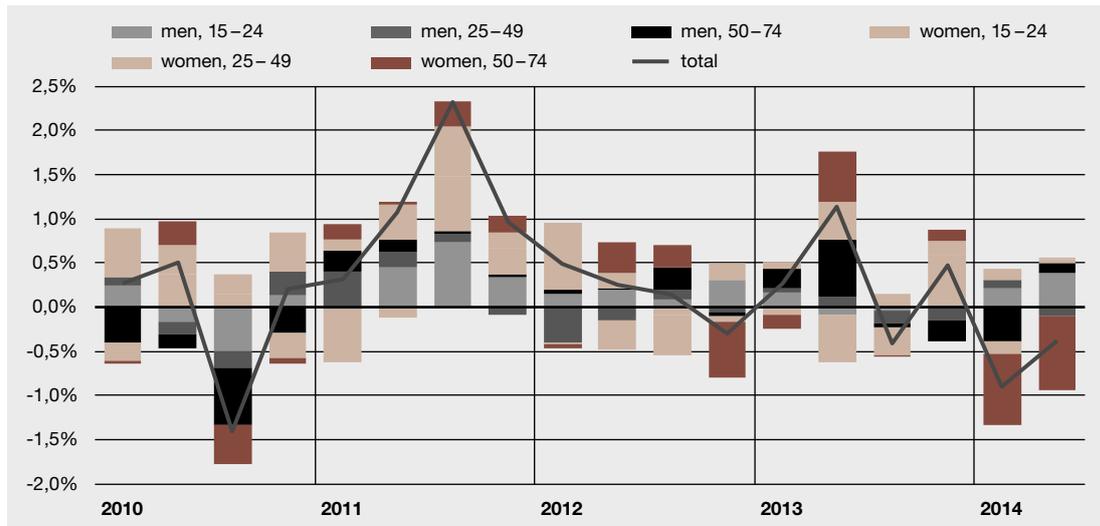
Participation in the labour force and inactivity

In the first half of 2014, 67.6% of the population aged 15–74 participated in the labour force, or 0.6 percentage point less than in the first half of the previous year. This rate is higher than the average for the European Union, which was 63.8% in the first quarter of the year. It is also still higher than it was in the first half of the 2000s, which is helped by the large presence of the 25–49 age group in the working age population. In some years time the ageing of society will mean that the structure of society has a negative impact on the rate.

The labour force participation rate was brought down somewhat surprisingly only by a decline in activity among non-Estonians, while the participation rate for Estonians rose. The largest fall was

among non-Estonian women, whose participation rate declined by 6.5 percentage points to 58%, a markedly lower rate than the 64.9% seen among Estonian women. The fall in the participation rate for non-Estonian women led to a fall in the overall participation rate for women, which was down 1.7 percentage points over the year at 62.6% in the first half of the year. The labour force participation rate for men rose at the same time by 1.2 percentage points to 73.8% (see Figure 2).

Figure 2. Contributions of different age groups to annual growth in labour force participation



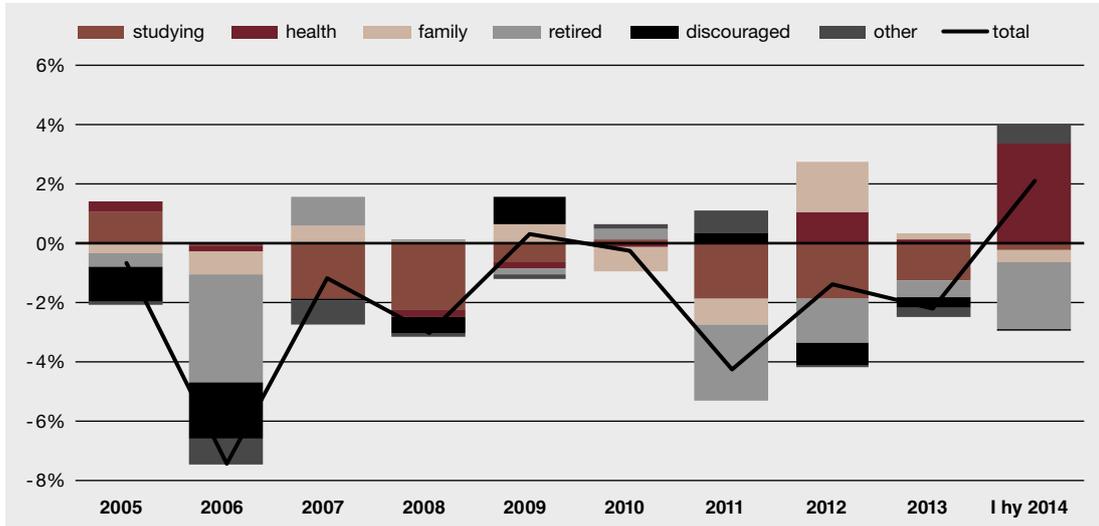
Source: Statistics Estonia

The participation rate for the 15–24 age group in the first half of the year was 38.4%, which is 0.7 percentage point lower than at the same time in the previous year. The participation of the young in the labour force is affected a lot by the share of 15–19-year-olds in the age group who are still studying. This share fell constantly until last year, when this age range took in the small birth cohorts from the 1990s. The decline has gone into reverse this year though, and the change in the age structure of the young will start to reduce the participation rate of the young for some time. The higher education reform of last autumn should also depress the labour force participation rate of the young, as more young people focus full time on their studies. It is visible in the reasons for inactivity that the number who were inactive because of studying decreased by 0.8% in the first half of the year, even as the population aged 15–24 shrank by 5.9%.

The participation rate for people in their prime working years of 25–49 was 87% in the first half of the year, which was exactly the same as a year earlier. The participation rate for women fell slightly, while that for men stayed the same. Labour force participation declined for both men and women because of an increase in the number who were out of the labour market because of their own illness or injury.

The participation rate for the older members of the working age population, aged 50–74, fell by 2.1 percentage points from its exceptionally high level in the second half of last year to 55.9%. The rate for men remained about the same, while the rate for women in this age group fell by 3.5 percentage points. The fall in the participation rate was apparently mostly driven by the large increase of 22.3% in the numbers inactive because of illness or injury and by the reduction in the numbers inactive due to retirement (see Figure 3).

Figure 3. Contribution of different reasons for inactivity to annual growth in the number inactive



Source: Statistics Estonia

The number of discouraged people who have given up hope of finding a job was 2.8% smaller in the first half of this year than a year earlier at 6900. The number of discouraged has fallen rapidly from 9900 in 2011 and the reduction has probably been aided by the improved chances of finding a job in Estonia and abroad, the health insurance that now also covers the registered unemployed, and better labour market services.

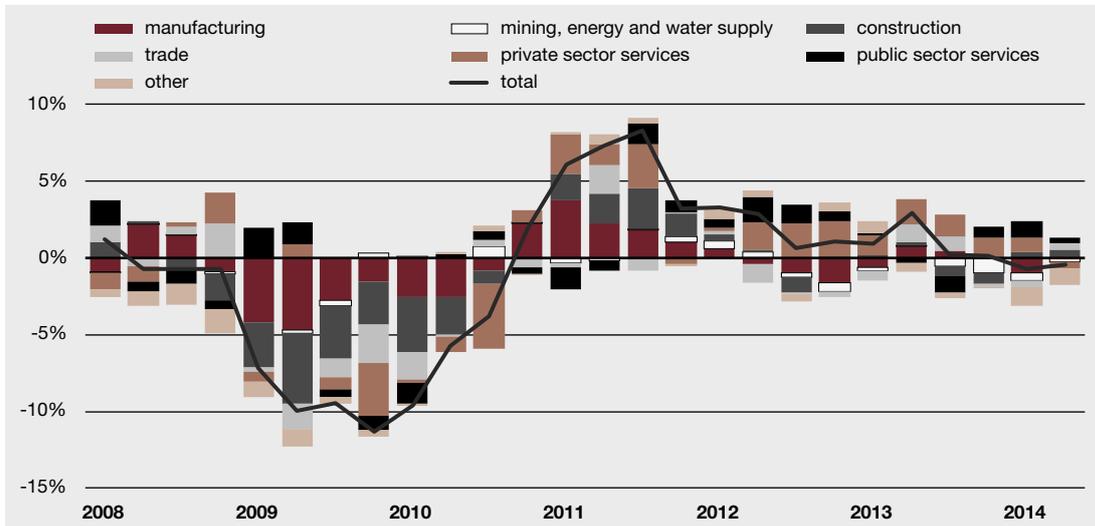
Employment

The number of employed fell by 0.6% in the first half of 2014, but as the working age population fell by 0.9%, the employment rate was slightly higher over the year at 62.3%. The fall in employment slowed slightly from quarter to quarter, as it declined by 0.7% in the first quarter and 0.4% in the second quarter. The fall in employment was in line with the forecast and reflects the adjustment of companies to faltering economic growth and weak demand for Estonian exports in Estonia's main trading partners.

The number of Estonian residents working abroad decreased in the first half of the year by 1.3% and was in the region of 23,000 people. The main destination was still Finland, which hosted 70% of those working abroad, and the main employer was the construction industry, which took 50% of them. As the Finnish economy has been in difficulties for several years, it is likely to inhibit any further growth in pendulum migration, or commuting between the two countries. At a time of slower growth however, companies may be keener to save on labour costs as their clients become more price-sensitive, and the wage demands of Estonians in the Finnish labour market are probably lower than those of Finns. As the number of people working abroad decreased slightly more, employment in resident production units fell slightly less than total employment and declined by 0.6% in the first half of the year (see Figure 4).

Information about employment can be obtained from the Labour Force Survey, which interviews private Estonian residents, but it also comes from surveys of companies and data from reports. As corporate data generally cover a larger share of people employed in Estonia than surveys of people, the estimates based on them have smaller error margins. Unfortunately these data do not give any information on unofficial employees, and changes in the size of the shadow economy affect

Figure 4. Contribution of sectors to growth in total employment according to the labour force survey

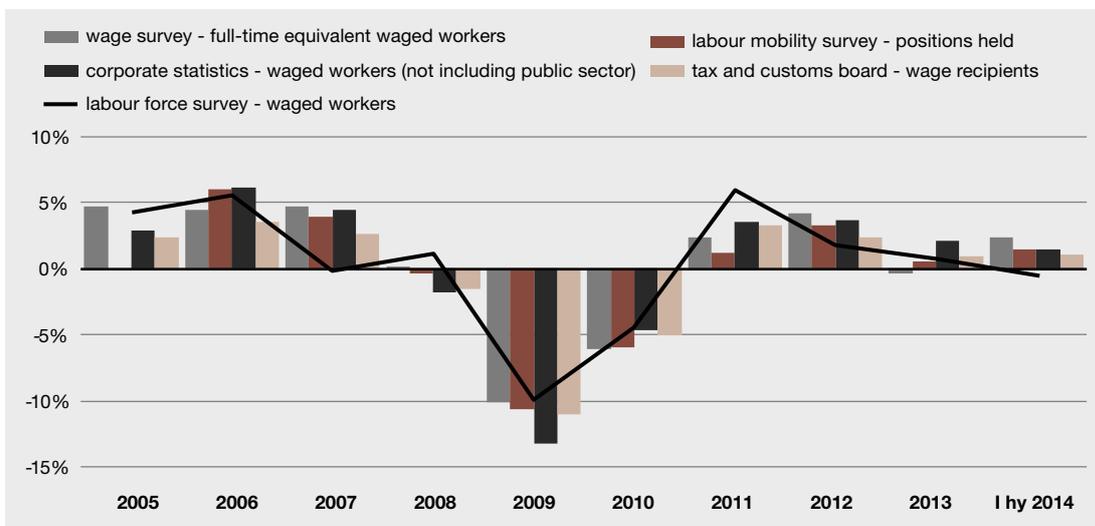


Source: Statistics Estonia

the estimates of employment growth based on enterprise level surveys. The requirement from July this year for registration of employees may have put employment growth higher in corporate data than it really was, as some people who were previously working unofficially have been officially registered as employed. There are also discrepancies in the precise definition of employment, which makes it preferable to compare the trends in the employment figures rather than the exact growth rates.

The financial data of the enterprises' statistics survey, which does not cover the public sector, indicates that there was a rise of 1.5% in the number of waged employees in the first half of this year (see Figure 5). Thus this data source also shows employment growth slowing in recent years.

Figure 5. Annual growth in the number of waged workers from various data sources



Sources: Statistics Estonia, Tax and Customs Board

The estimate of full-time equivalent employment growth given by the Wage Survey was 2.3% in the first quarter of 2014 after falling for three quarters. Using the same survey, Statistics Estonia put the growth in numbers of waged employees at 4.7% at the end of June. The average growth in the second quarter was probably smaller in fact, because the employment growth in June was probably heavily influenced by the introduction of the requirement to register employees. This assumption is backed up by the annual growth of over 10% in the number of waged employees in agriculture and in hotels and restaurants, where unofficial work is more common. Surveys of vacant positions and the movement of labour indicate that there were 0.8% more filled positions in the first quarter than a year earlier. The main contribution to this growth came from transport and storage; professional, scientific and technical activities; and health care and social work activities.

Data from the Tax and Customs Board on all the wage-earners of Estonia show that the number of people receiving a wage increased by 1.1% in the first half of the year. This growth is slow, but it is still slightly quicker than a year earlier. The number of people receiving wages was affected by a 1.4% increase in companies listed in the commercial register, and by a reduction of 0.8% in government institutions. At the time of writing, the data for July and August are available, and they show growth in the number receiving wages to be faster at 2.2%. The data of the Tax and Customs Board may also have been affected by the requirement to register employees.

Hours worked per employee in resident production units have started to decline, and did so by as much as 1.9% in the second quarter of this year. This helped employers save on costs while economic activity is subdued, and it avoided the need to cut employment (see Figure 6).

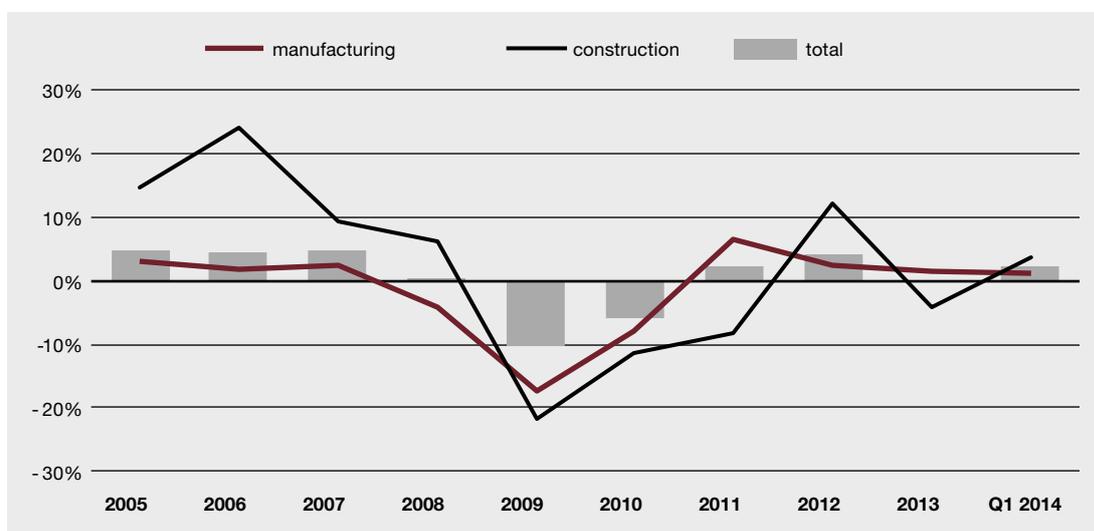
Figure 6. Annual growth in number employed, hours worked, and hours worked per employed person in residential production units



Source: Statistics Estonia

Employment fell in manufacturing industry in the first half of the year according to the labour force survey, which estimated the fall to have been 2.3%. Other data sources confirm the slower growth, and the wage survey shows that full-time equivalent employment in manufacturing grew by 1.1% in the first quarter (see Figure 7), while statistics for vacant positions and labour mobility put the growth at 0.3% and corporate statistics show growth of 0.8% over the first half year. As labour costs have increased rapidly as a share of value added over the past year and profits have

Figure 7. Annual growth in full-time equivalent waged workers from the wage survey



Source: Statistics Estonia

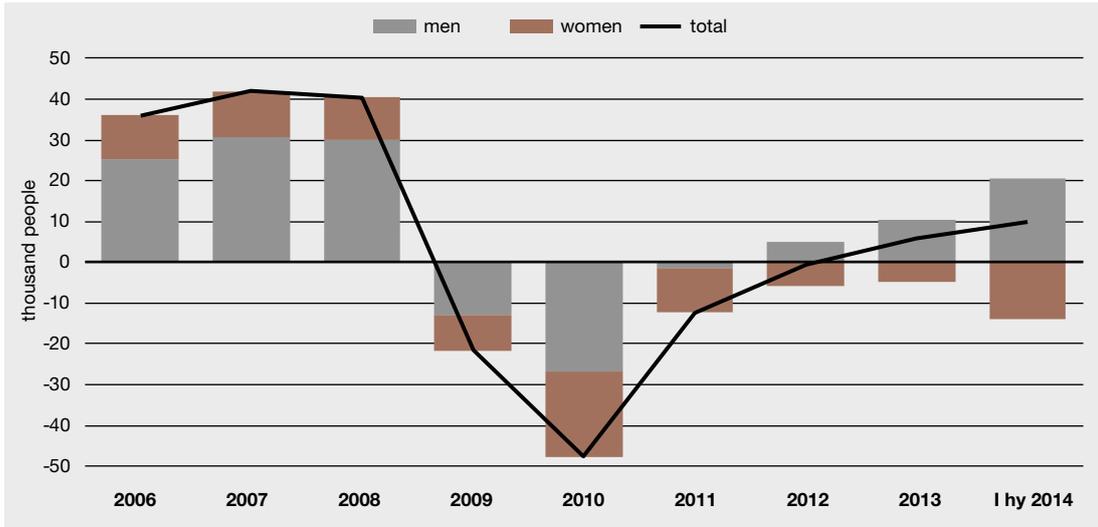
fallen, the slower growth in employment in manufacturing is to be expected. Surveys of sentiment by the Estonian Institute of Economic Research show that corporate expectations for employment have become more pessimistic, though the figures for August probably do not yet reflect fully the increased uncertainty due to the worsening of the Ukraine crisis.

The economic indicators of the construction industry were again disappointing in the first half of the year. Investment in infrastructure from the public sector continued to decline, and the real value added of the construction sector fell by 4.9% over the year. Estimates for employment in construction by different surveys have been contradictory. The labour force survey shows domestic employment in construction increasing by 3.5% in the first half year, but this is mainly because of the exceptionally low reference base. Corporate statistics show employment falling in construction in the first half of the year by an average of 3.2%, while the wage survey shows full-time equivalent employment up by 3.6% in the first quarter. The survey of vacant positions and the movement of labour indicates that there were 3.6% fewer filled positions in construction in the first quarter than a year earlier. The Tax and Customs Board has stepped up its checks on workers on construction sites more than ever, and from 1 July the Tax and Customs Board needs to be informed about new employees from their first day of work. These measures may inflate estimates of employment growth that draw on company accounts, as these data also reflect the legalisation of employment. The surveys of sentiment by the Estonian Institute of Economic Research show construction firms to be ever more pessimistic about the change in outlook for employment.

There were about the same number of people employed in the first half of this year as there were in 2005 before the economic boom and 2005 can be taken as a comparison base to see how the structure of employment has changed. There were around 15,000 more women in employment than men in 2005. The number of men in employment has fluctuated much more over the business cycle than the number of women has, with male employment increasing during the boom and falling during the recession by more than female employment. This difference is mainly explained by the construction industry, where over 90% of those working are men. The number of men working in construction was 63% higher in 2007 than in 2005, meaning some 29,000 extra men, and a large part of the fall in male employment in the crisis was also due to the construction industry. Female employment increased in the boom in both

trade and construction. There were close to 7000 more people employed in the first half of this year than at the same time in 2005, with over 21,000 more men in employment and some 14,000 fewer women (see Figure 8). However, the employment rates for both men and women have risen since 2005, meaning the number of women in work has fallen because the number of working age women has fallen, not because patterns of behaviour have changed.

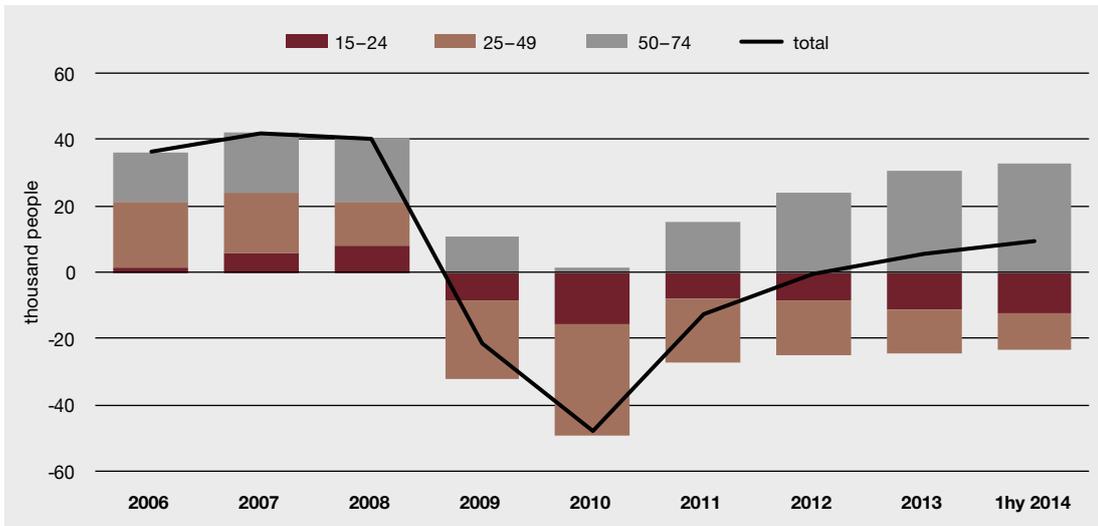
Figure 8. Cumulative change in number employed by gender (2005 = 0)



Source: Statistics Estonia; Eesti Pank calculations

Changes in the age structure of the employed are affected by the ageing of the population and so the average age of people in employment has risen markedly. There are now almost 15,000 fewer people aged 24 or lower in employment than there were in 2006, and almost 13,000 fewer aged 25–49, but the number of employed people aged 50 or more has increased by around 35,000 over the same time (see Figure 9). An OECD analysis of the relations between younger and older workers in several

Figure 9. Cumulative change in number employed by age (2005 = 0)

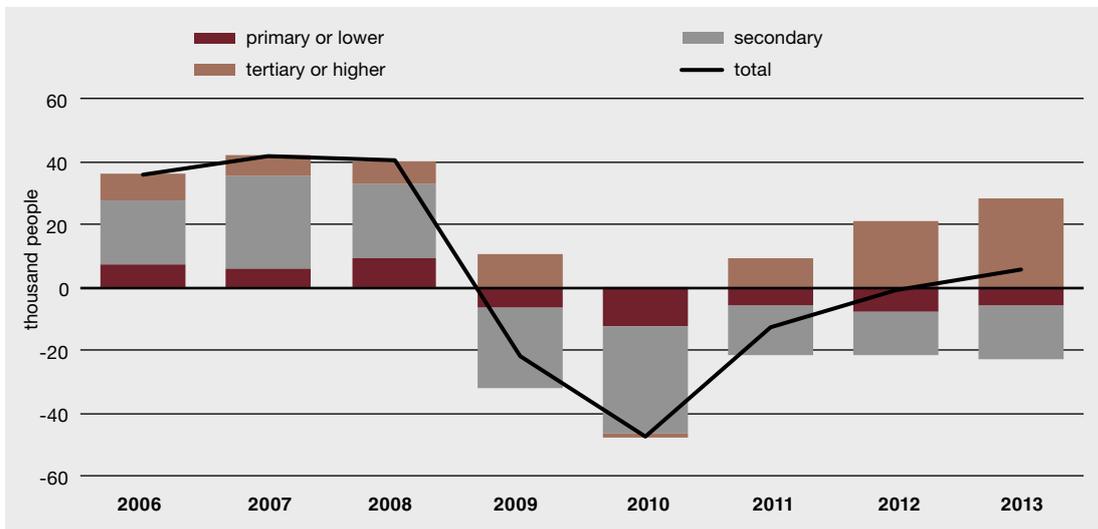


Source: Statistics Estonia

countries found that a higher employment rate for older workers does not come at the expense of the young. It also found that the measures taken when the crisis erupted to help young people enter the labour market and encourage older workers to retire earlier were costly policy mistakes¹. Sustaining the economy over the longer term in countries with a shrinking and ageing population requires that older people should be encouraged even more to remain in the labour market longer rather than retiring.

The structure of the employed by level of education has changed significantly in recent years. The number of employed people with primary education or less fell by some 6000 between 2005 and 2013, and the number with secondary education fell by around 17,000, while the number of employed people who have completed tertiary education increased by some 28,000 so that they accounted for 40% of all the employed, which is 4.2 percentage points more over those years (see Figure 10).

Figure 10. Cumulative change in number employed by education (2005 = 0)



Source: Statistics Estonia

Box 1: Differences in male and female employment

The fall in the working age population makes it relevant to investigate in more detail how people who are inactive for whatever reason can be brought into the labour market. As the labour force participation rate is lower for women than for men across the whole of the European Union and varies widely between countries, one way to increase participation is to increase female employment. Higher female employment would also raise the potential for growth in the economy. The OECD estimates that if the male and female labour force participation rates were absolutely equal, it would raise GDP per capita across the European Union as a whole by 12.4% by 2030².

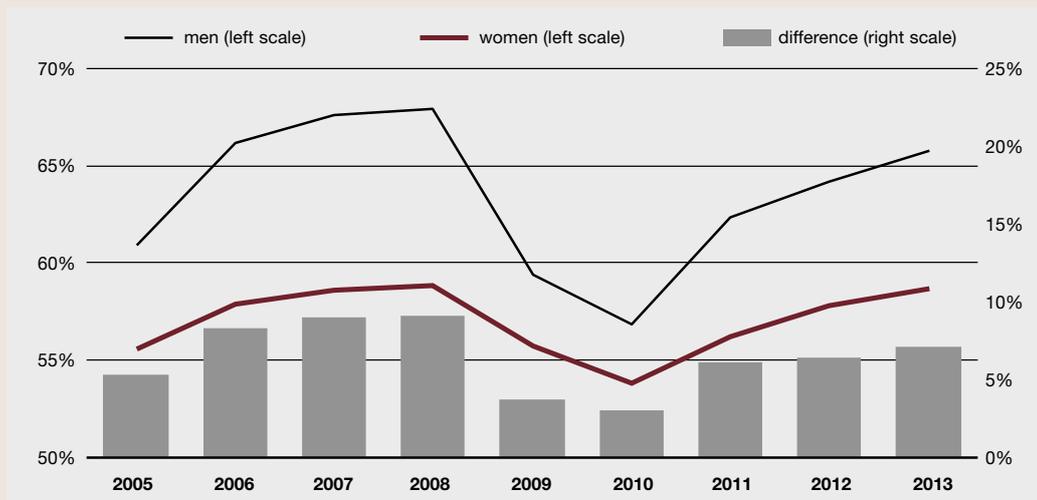
The employment rates for men and women vary significantly across different countries of the European Union, but the employment rate for women is much lower than that for men in all countries. The average employment rate for men aged 20–64 in the 28 countries of the European Union last year was 12 percentage points higher than that for women of the same age. The dif-

¹ OECD Employment Outlook 2013

² Closing the Gender Gap: Act Now. OECD, 2012

ference was smaller than the average in the Nordic countries, but larger in southern Europe. The difference between men and women in this age group was relatively small at 6.2 percentage points (see Figure 1B.1), but it is bigger in full-time equivalent employment as 14% of women were working part-time, either voluntarily or through underemployment, and only 6% of men were.

Figure 1B.1. Employment rate for men and women aged 15–74



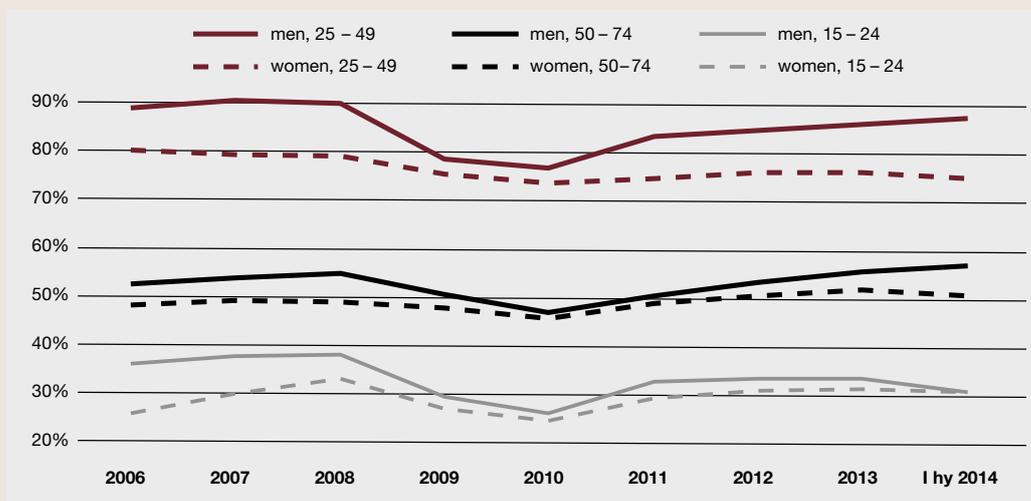
Source: Statistics Estonia

One of the main factors in the difference in employment rates is that women bear a lot more of the consequences of childcare than men do, even beyond maternity leave³. Eurostat data show that in most EU member states the employment rate for women with minor children is lower and the average number of hours worked smaller than is the case for women without children. This applies for Estonia too, where the employment rate for 20–49-year-old women without children was 82.9% last year, the rate for women with one child was 71%, and the rate for women with three or more children was 21 percentage points below that for women with no children. The age of the children obviously matters here too. Employment was affected most by caring for children under the age of six, but once the youngest child passes the age of twelve the difference in employment rates between women with and without children disappears.

The longer that women remain out of the labour market in order to be with their children, or the longer they are unemployed, the harder it is for them to find a good job in the longer term. Interruptions lasting several years mean that on average a career offers fewer opportunities to a woman. On top of this, women tend to retire earlier than men, even though they receive a lower pension (see Figure 1B.2). The length of time a woman spends on maternity leave is affected by state benefits and by access to childcare. The European Union has set a strategic goal for childcare of having childcare services cover 33% of children under three, and 90% of older pre-school children. Childcare coverage for children older than three is slightly higher than 90% in Estonia, but it is about half the level of the strategic goal for younger children.

³ [Female labour market participation. European Commission. 2013](#)

Figure 1B.2. Employment rate for men and women aged 15–74 by age group



Source: Statistics Estonia

Parental benefits are paid for a long time, during which the effective tax rate on income earned from labour is markedly higher⁴, and this encourages women to take longer maternity leave. Praxis recently published research⁵ into how benefits could be made more flexible using experience from other countries and how fathers could be persuaded to be more involved in childcare. The recommendations in the report for how the benefits system should be changed to reconcile work and family better were that the effect of the benefit system in discouraging work should be lessened. It was first recommended that it should be possible to take the same number of days of parental leave over a longer period than the first eighteen months after the birth of the child, and that part-time leave should be permitted so that parents could still work part time.

Increasing the involvement of female labour is a difficult and many-sided challenge for policy-makers. As the working-age population is rapidly shrinking and ageing, the more efficient use of female labour is a good way to dampen the consequences of those processes. The female employment rate could be raised by offering more flexible options for childcare and for care for other family members, and by a system of parental benefits that is more conducive to work.

Unemployment

Despite the fall in employment, the unemployment rate fell to 8.5% in the first quarter of 2014 and 7% in the second quarter. The fall in the unemployment rate compared to a year earlier was caused by the decline in labour force participation. The labour force survey estimates that the number of unemployed fell by 14.9% on average during the first half of the year, and 52,200 people were without work. The unemployment rate in the euro area fell by 0.5 percentage point over the year in the second quarter of this year to stand at 11.6%.

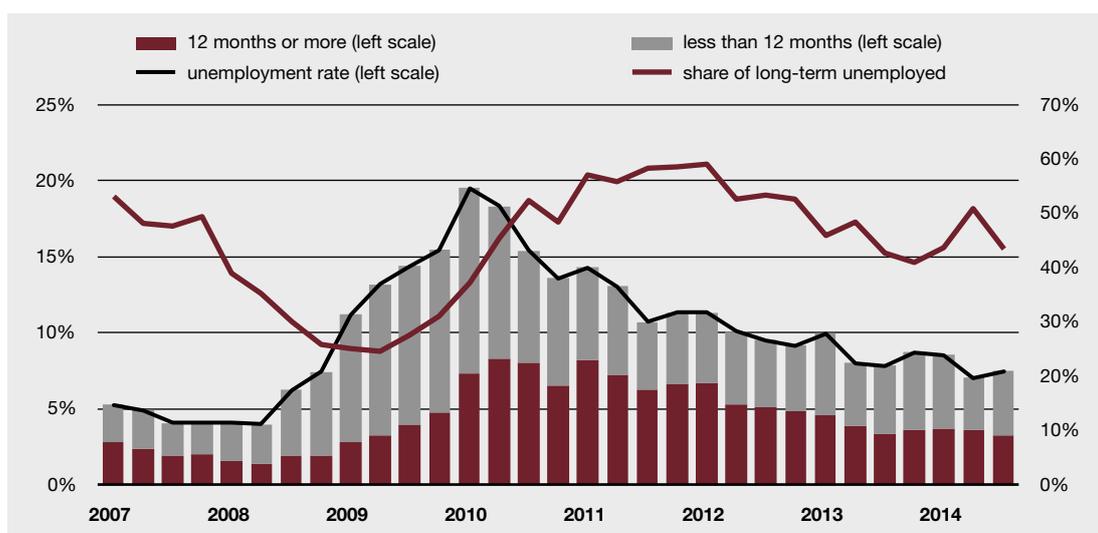
The duration of unemployment, which had been falling for two years, started to rise in the first half of this year. The share of long-term unemployed increased from 41% in the last quarter of last

⁴ Parental benefits were reduced in 2014 for those with higher incomes to 50 cents in benefits for each euro earned.

⁵ [Analysis of the Estonian system of parental benefits. Praxis, 2013. \(only in Estonian\)](#)

year to 47% in the first half of this year. There was a slightly faster fall in the number who had been out of work for less than a year than in the number of those who had been looking for work for over a year (see Figure 11). The number of long-term unemployed is 2.4 times what it was in 2008, which indicates that structural unemployment has increased. Unemployment statistics from Töötukassa, the unemployment insurance fund, show that the duration of unemployment has not increased. The share of those without work for more than 12 months has shrunk steadily in terms of time spent registered with Töötukassa and of time since the last period of employment.

Figure 11. Unemployment rate and duration



Source: Statistics Estonia

The unemployment rate for young people aged 15–24 fell by 1.8 percentage points in the first half of the year to 17.1%. Unemployment is 2.5 times higher among the young than among people of average working age. This is partly because many in this age group are entering the labour market for the first time and are unemployed while they look for work, and partly because it is harder for people without previous work experience to find a good job. There is also a significant group of students among the unemployed young.

The unemployment rate for those in the middle age group of 25–49 stood at 7.2% in the first half of the year, and it fell by 1.6 percentage points over the year. Male unemployment fell slightly more slowly than female unemployment, and the unemployment rate for men stood higher at 8.6% than the rate of 7.0% for women. The gender difference in unemployment arises mainly because there is generally not an even division between men and women by industry, so for example over 90% of those employed in construction are men, but less than 10% of those working in health care and social care are. The business cycle affects demand for labour in different industries to widely varying extents, having a great impact in construction, but only a small impact in health care.

The unemployment rate for non-Estonians of 11.3% was almost double the 6.2% recorded for Estonians in the first half of the year, but both rates fell by a similar 1.3 and 1.1 percentage points respectively over the year. The differences in unemployment by nationality are partly due to the problems of the Ida-Virumaa region, where a majority of residents are non-Estonians and the unemployment rate is as high as 16.2%. Non-Estonians also have a higher risk of unemployment than Estonians in Harjumaa and Tallinn.

During the first eight months of the year there were 20.5% fewer registered unemployed than a year earlier and the registered unemployment rate was 4.9%. Töötukassa had an average of around 36,000 people each month in its registers and the number registered as unemployed has fallen even faster during this year. Among those registered as unemployed, 42% did not have any specialised professional training, while 7.8% of the registered unemployed were from manufacturing and processing, making it the industry with the largest share of the registered unemployed, and 5.1% were specialists in architecture and construction. The counties where the registered unemployed made up the largest share of the labour force were Ida-Virumaa, where 9.2% of the labour force were registered as unemployed, and Valgamaa, where 9.1% were. East and South Estonia stand out for high registered unemployment, with the exception of Tartumaa, where registered unemployment was the lowest in Estonia at 3.6%. The number registered as unemployed in Lääne-Virumaa fell by 27%, faster than anywhere else, and registered unemployment fell slightly more in Ida-Virumaa and Valgamaa, where it started higher, than in other counties.

The labour force survey shows that 49% of those out of work registered as unemployed during the year, which is slightly less than the 50% that did so in the same period last year. The likelihood of people registering with Töötukassa remains highest in Ida-Virumaa. Töötukassa data show that 28% of the newly unemployed qualified for unemployment benefit and 30% for unemployment insurance, as did 21% and 27% respectively of all the unemployed. The labour force survey reports that the main reason the unemployed did not contact Töötukassa was that they did not have the right to receive benefits.

The consumer sentiment survey of the Estonian Institute of Economic Research indicates that households were optimistic about the future prospects for unemployment during the first eight months of this year. On average there were only 4 percentage points more respondents who expected unemployment to rise than who expected it to fall. The difference increased sharply to 13 percentage points in September, most likely because of bad economic news and increased uncertainty.

The number of part-time workers fell in the first half of the year by 6% and there were 9% fewer underemployed than during the first half of the previous year. This meant that additional reserves of labour made up of those already working continued to decline. The lack of orders and other problems on the part of employers meant that 0.9% of the employed were working less than usual, and this may also be considered an additional reserve of labour.

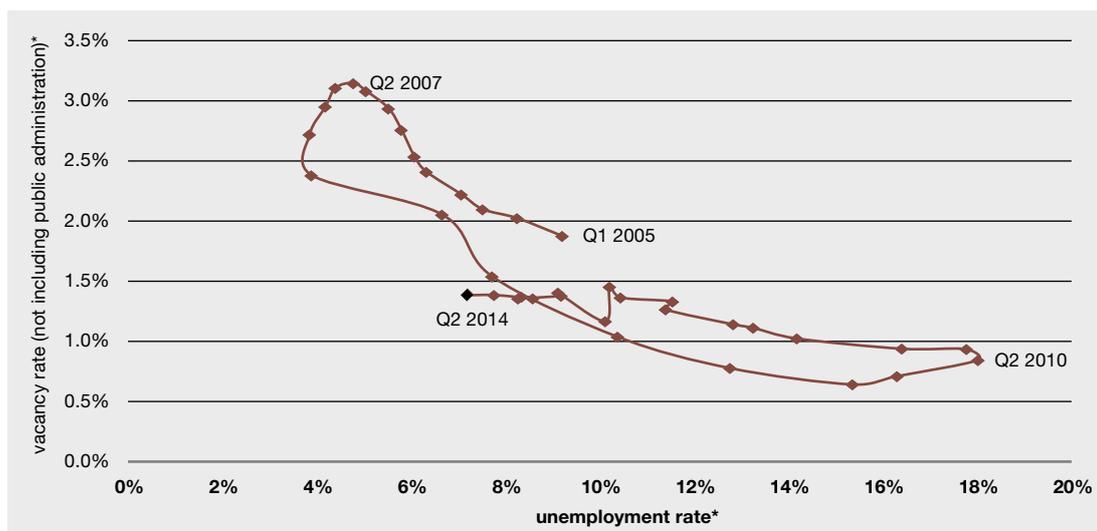
Vacancies

The survey of vacant positions and the movement of labour indicate that there were around 7400 vacant positions in the first half of 2014, accounting for 1.4% of all positions, or about as many as in the first half of last year. Sectors where the vacancy rate has been rising for some time are manufacturing and trade, and it also started rising in construction, where it had fallen last year. There were more vacancies than the average in Harjumaa and Pärnumaa, but fewer in Hiiumaa, Võrumaa and Jõgevamaa. The largest number of vacant positions were in companies with foreign ownership, where over 1.9% of the posts were unfilled, and the smallest number was in local government, where 1% of positions were vacant.

The match between jobs and available labour is shown by the Beveridge curve, which shows the vacancy rate relative to the unemployment rate. The curve shifted to the left in the second quarter

of the year as the unemployment rate fell. The unemployment rate was last so low at the end of 2005, but the vacancy rate was then around half a percentage point higher. Not every shift in the Beveridge curve can be directly linked to changes in structural problems in the labour market, particularly when it is not clear whether those shifts are temporary or will last for a longer time⁶ (see Figure 12).

Figure 12. Beveridge curve (Q1 2005–Q2 2014)



* seasonally adjusted

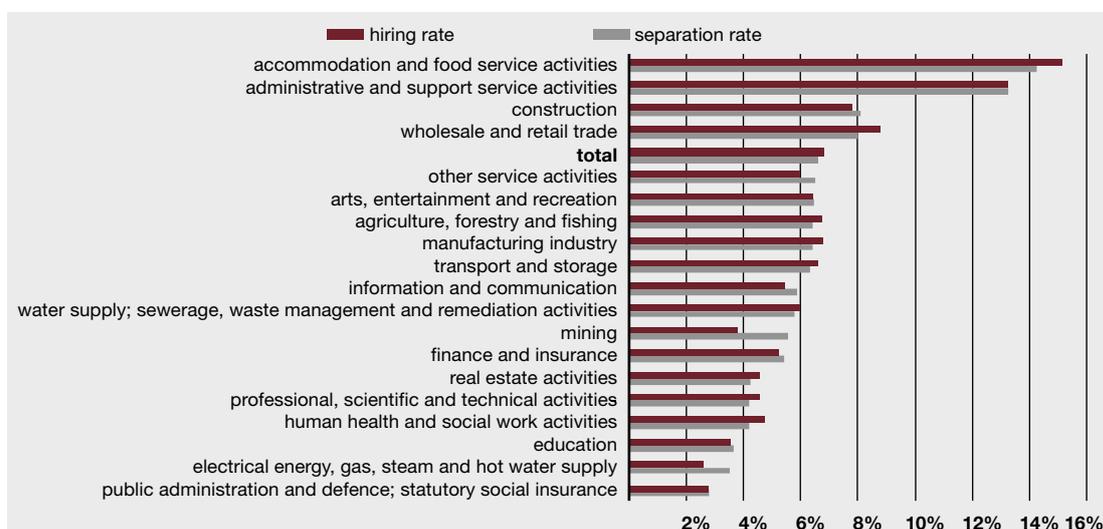
Source: Statistics Estonia

The survey of vacant positions and the movement of labour illustrates the quarterly employee turnover by area of activity. It indicates that 5.3% of waged employees separated from their job in the first quarter of this year, and the average rate for the last four quarters was 6.3%. Around 80% of those separating did so at their own initiative, and 20% at the initiative of the employer. Employee turnover is notably above average in accommodation and food service activities, where the average for the past four quarters was 14.2%; administrative and support service activities, where it was 13.3%; and construction, where it was 8.1%. The job separation rate was lower in the public sector than elsewhere, at 2.8% in public administration and 3.7% in education, and it was also low in electricity, gas, steam and air conditioning supply at 3.5%. The hiring rate was 6% in the first quarter of 2014 and the average rate for the last four quarters was 6.8% (see Figure 13).

Labour mobility is lower than it was before the crisis and the rates for both separations and hiring were 1–1.5 percentage points higher from 2005 to the first half of 2008 than they were in 2014. During the crisis the rate of separations initiated by the employee fell significantly, and as this meant that employers had less need to replace employees, the hiring rate fell at the same time (see Figure 14). However, the hiring rate fell below the rate for separations initiated by the employee, meaning that employers reduced their labour resources partly by not replacing those employees who had left voluntarily. The rate for separations initiated by employers rose markedly at the same time, reflecting a reduction in labour resources through redundancies and the loss of positions caused by bankruptcies.

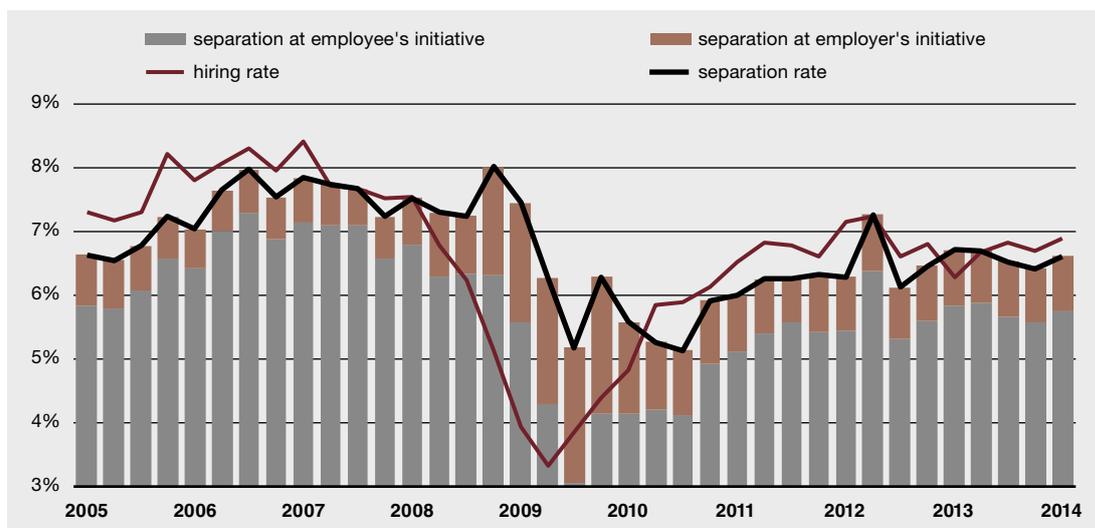
⁶ Arpaia, A., Kiss, A., Turrini, A. Is unemployment structural or cyclical? Main features of job matching in the EU after the crisis. European Commission. Economic Papers 527, September 2014.

Figure 13. Hiring and separation rates by field of activity (Q2 2013 – Q1 2014, average)



Source: Statistics Estonia

Figure 14. Hiring and separation rates



Source: Statistics Estonia

WAGES AND LABOUR COSTS

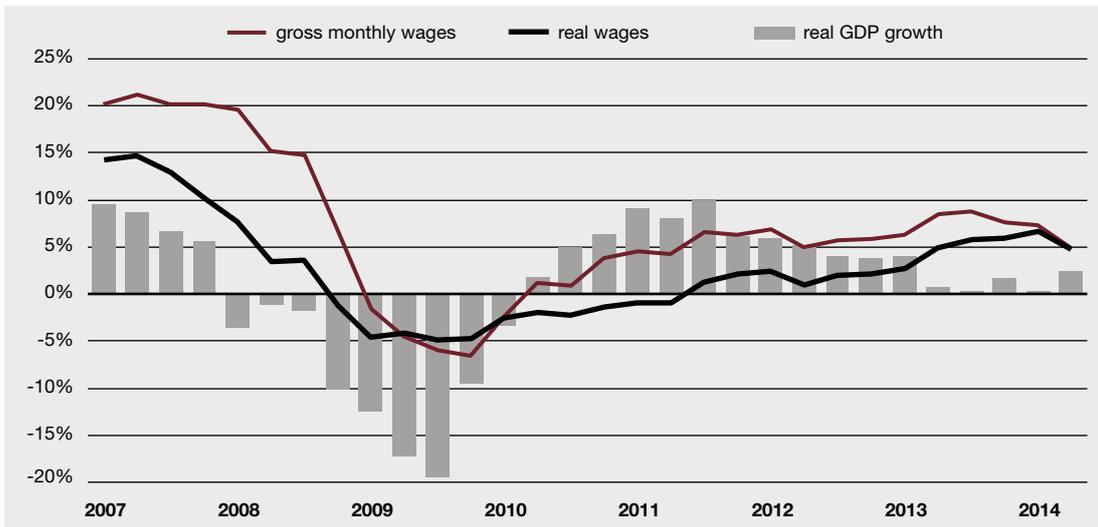
Average wages

Average gross monthly wages were 966 euros in the first quarter of 2014 and 1023 euros in the second. Average gross wages started to rise more slowly in the last quarter of last year after accelerating for a year and a half, and this slowdown continued throughout the first half of this year. Slower wage growth was also predicted in macroeconomic forecasts, as the rapid wage growth last year was not in line with slowing economic activity. Increases in labour costs at the expense of

profits contains the risk for the economy that companies may be forced out of the market and unemployment may increase. Although the slower growth in labour costs was a step in the direction of more balanced development, it was not enough to stop the erosion of profits. The payroll grew by an average of 8.5% in the first half of the year and corporate profit from value added, which is mixed income and depreciation, fell by 3.8%.

The annual growth in average gross wages first slowed in the last quarter of 2013, declining from the 8.8% of the third quarter to 7.6%. The average wage then rose by 7.3% in the first quarter of 2014 and by a much slower 4.8% in the second (see Figure 15). In contrast to the monthly wage, the gross hourly wage has seen growth slow much less smoothly, as it grew by 6.9% in the first quarter and then accelerated to 8.8% in the second. This means that the growth in the monthly wage slowed because of reductions in bonuses and payment for non-working time.

Figure 15. Annual growth in average gross monthly wages, real wages and GDP at constant prices



Source: Statistics Estonia

The sharp slowing of wage growth in the second quarter may have been amplified by the requirement that came in from 1 July for companies to register their employees. By legalising unofficial employees, this may have increased the number of workers receiving lower than average wages. This is also suggested by the statistics in the wage survey for full-time equivalent employment, which revealed a rise of more than 10% at the end of the second quarter in the number of workers in hotels, restaurants and agriculture, where there has been a larger share of unofficial employment.

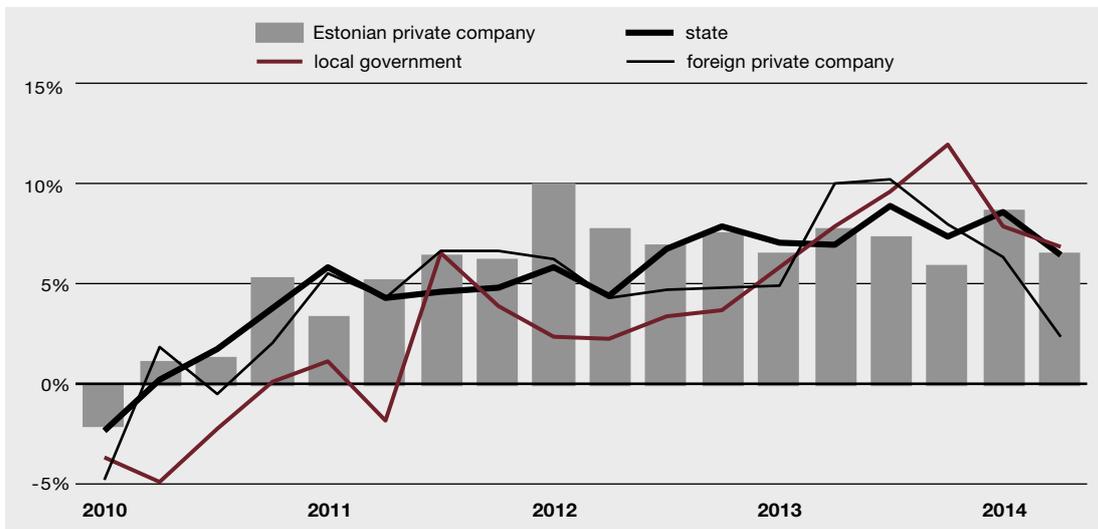
Very low inflation in the first quarter of the year and deflation in the second helped to limit the decline in the growth in purchasing power of average wages, so that whereas last year, real wages grew by 4.9%, in the first half of this year they were up 5.7% (see Figure 15). Real wages were 3.5% higher in the second quarter of this year than at their previous peak in 2008. They have now risen for twelve consecutive quarters and despite the deceleration, average real wages again grew faster than labour productivity.

Average net wages, which is the money actually paid to the employee, stood at 769 euros in the first quarter of the year, and grew 0.7 percentage point more slowly than average gross wages. Net wages

grew more slowly because there were no reductions in labour taxes this year that would have offset the rise in the effective income tax rate brought about by higher wages. This means that net wages will grow more slowly than gross wages throughout this year. However, next year income tax will be cut from 21% to 20%, the tax-free minimum income will be raised from 144 euros to 154 euros, and unemployment insurance contributions from employers will be lowered from 2% to 1.6%. For somebody earning the average salary, these changes will increase the wages actually received by around 2% as the tax wedge shrinks.

The slowing of wage growth was fairly broad-based across employers with different types of ownership, and was seen in companies in both the public and private sectors. There was rapid wage growth in areas administered by local governments last year, which is probably largely because of the new wage agreements for health and education that came into force during the year. Once their effect shifted out of the reference base, wage growth slowed to close to the national average pace. Looking forward it is probable that wages in local government jobs will start to rise more quickly again, because the Minister of Finance has said that it is a priority for the state budget for 2015 to raise the wages of teachers, and wage negotiations are also under way in the health sector. Wage growth in private companies with foreign owners was temporarily faster last year than in Estonian-owned companies, but the situation was reversed in the first half of this year and wage growth slowed most in foreign-owned private companies. This change was partly due to the high reference base. In contrast, the speed of wage growth has not changed much in Estonian private companies (see Figure 16).

Figure 16. Growth in average gross monthly wages by ownership type of employer

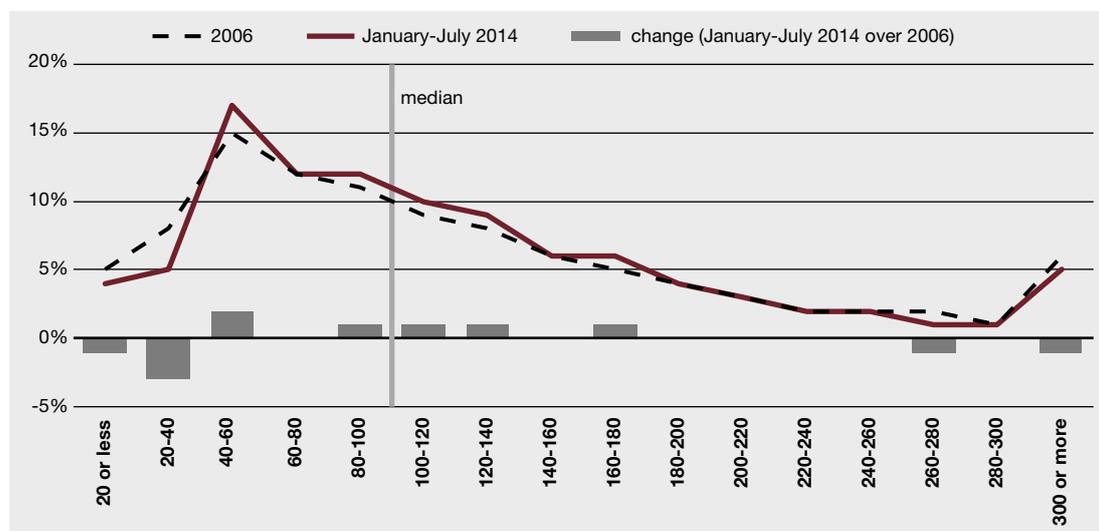


Source: Statistics Estonia

The area of employment where the average wage was furthest above the overall average for the last four quarters was finance and insurance, where it was 1605 euros. Next came information and communication, where it was only 0.5% lower. The fastest rises in the average wage were the 8.4% seen in healthcare and finance and insurance, and the 8.2% in agriculture, while the slowest were the 2.6% rise in information and communication, and the 4.6% in real estate activities and in construction. The slowdown in wage growth was more broadly based across industries than it was last year. Growth slowed significantly in information and communication, where the major increase in information technology specialists as a share of those employed in the sector has probably ended.

Unlike in 2012, wage growth in 2013 and 2014 was faster at the lower end of the pay scale. This was affected by the agreement to raise the minimum wage, under which the minimum monthly wage rose by 10.9% in 2014 to 355 euros and will rise next year by a further 9.9% to 390 euros. The Tax and Customs Board reports that the average taxed wage income in the three lowest deciles has grown fastest for the past two years. The wage distribution illustrates a decline in the share of people whose monthly income from work is below 40% of the median, which averaged 760 euros in the first seven months of this year, and the share earning 40–140% of the median wage has increased at the same time (see Figure 17).

Figure 17. Distribution and growth of wages paid, % of median wage



Source: Tax and Customs Board

The median payout to employees⁷ rose in the second quarter by 7% over the year to 753 euros. The median payout was 79% of the arithmetic average in the first half of the year, and that figure has risen by ten percentage points since 2002. In the first seven months of the year, 14% of wages paid out were below the minimum wage of 355 euros per month. This includes payments for part-time work. Tax and Customs Board statistics on taxed wage income cover wages and also other income on which income tax is paid, but not redundancy payments, and they are not adjusted to be full-time equivalent.

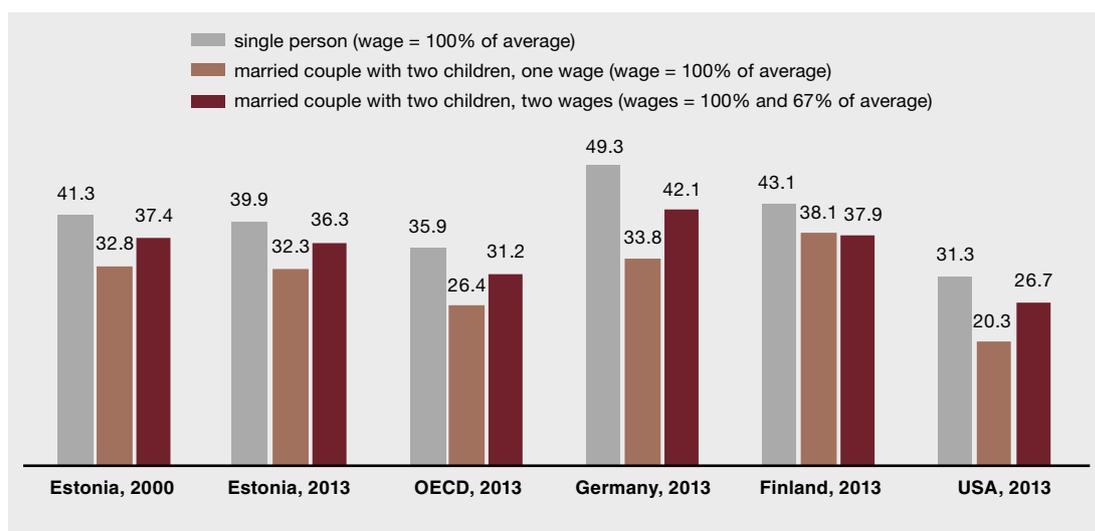
The labour tax wedge

With taxes on labour, the tax wedge is the difference between the labour costs to the employer and the amount the employee receives as a net wage. The tax wedge is affected by both taxes and other contributions, such as unemployment insurance premiums, income tax and social tax, and also by tax exemptions, such as the tax-free minimum income, or other differences. Although Estonia has a single rate for income tax, the tax wedge increases as wages increase, because the tax free minimum income allowance represents a smaller share of higher wages. The tax wedge is highest for workers earning less than the minimum wage to whom the compulsory minimum social tax payment still applies.

⁷ The median payout is the amount where there are exactly the same number of payments above and below.

Last year, Estonia was ranked fifteenth among the 34 countries of the OECD for the labour tax burden. The labour tax burden in Estonia is lower than in Germany or Finland, but higher than that in the USA (see Figure 18). Comparisons between countries are complicated by differences in the design of social insurance systems. Health insurance may be funded from taxes on labour, as in most European Union countries, or through private insurance, as is the case for a large proportion of employees in the USA. As health insurance is essentially a compulsory payment, it should not be ignored in any comparison of tax wedges in Europe and the USA.

Figure 18. Household tax wedge in selected OECD countries



Source: OECD

As there are tax exemptions available for married couples in many countries and tax breaks often depend on the presence of children, a distinction needs to be made between different types of household and the wages of household members in any comparison of tax wedges across countries. The tax wedge for an employee earning the average wage in Estonia who is single and lives alone was 39.9% last year. This was above the OECD average of 35.9%, but it was 1.4 percentage points lower than in 2000 and 0.5 point lower than in 2012. Joint income tax declarations for married couples and variations in income tax free allowances for different numbers of children mean the average tax wedge for an Estonian household with two adults and two children where only one adult is working fell by 0.5 percentage point from 32.8% in 2000 to 32.3% in 2013.

Reservation wage of the unemployed

The reservation wage is the minimum amount for which an unemployed person is prepared to go to work. If there are two otherwise very similar job-seekers, the one with the higher reservation wage will be less likely to find a job because there are probably more job offers that are unsuitable as the wages on offer are too low. The wage expectations of unemployed people looking for full-time work increased by 7.7% in the first half of this year, which is slightly more than the average gross wage increased by. The growth in the wage expectations of the unemployed has slowed somewhat. The reservation wage for women is lower than that for men and rises, as expected, with the level of education. The factors that affect the reservation wage are described in more detail in Box 2.

Box 2: Factors affecting the reservation wage of the unemployed and the relation to duration of unemployment

During a job search, the probability of the job-seeker finding a job and thus the probable duration of unemployment are determined by how probable it is that a job offer will be received and whether the job-seeker will accept the offer. Whether the offer will be accepted depends on the reservation wage, which is the lowest wage for which the unemployed person would be prepared to go to work: they will accept the job offer if the wage offered is at least as high as the reservation wage.

The size of the reservation wage depends on other sources of income, the probability of a job offer being received and assumptions about the wages on offer. The higher the alternative income is, from unemployment benefits, other household members, or wherever else, the higher the reservation wage is. The probability of a job offer being received depends on the general state of the labour market; the individual characteristics like age, education and qualifications of the unemployed person; and how intensive the search for a job is. The higher the probability that a job will be found and the higher the expected wage offer, the higher the reservation wage of the unemployed person. A higher reservation wage when all else is equal means that finding a job may be harder and the duration of unemployment may be longer.

The reservation wage may change during a period of unemployment, for various reasons. Firstly, the probability of a job offer being received and the expected wage being offered both depend on the general state of the labour market, and so changes in the labour market may have an effect on the wage expectations of the unemployed. Secondly, knowledge and skills may deteriorate the longer unemployment lasts, and employers may doubt the qualifications of the unemployed, and so the reservation wage can be expected to fall as the duration of unemployment lengthens. A longer duration of unemployment may, however, mean that the unemployed person gets to know the situation with the labour market and wages better, and so can adjust salary expectations appropriately. Thirdly, the reservation wage is affected by changes in alternative income. This may happen if an end to unemployment benefits makes looking for a job relatively more expensive, which may in turn lower the reservation wages of the unemployed. A direct two-way relationship may be seen from this between the reservation wage of the unemployed and the duration of unemployment: although a higher reservation wage will lengthen the search for a job, it may also be assumed that the lengthening of the job search will lead the unemployed to adjust their wage expectations.

Analysis conducted on data from the Estonian labour force survey 2011–2013 (see Table 2B.1) shows that the reservation wage of the unemployed in Estonia increases with age. It also reveals that the reservation wage of women is on average 24% lower than that of men. The reservation wage of men may be higher because men generally earn more, and so their wage expectations are also higher.

As expected, there is a positive relationship between education and the reservation wage, so that the higher the level of education, the higher the expected wage. The analysis indicates however that there is no statistically significant difference between the wage expectations of those with primary education and those of people with secondary education. It also becomes

Table 2B.1. Regression analysis results

Dependent variable	Reservation wage	Standard deviation
Age	0.035***	0.005
Woman	-0.240***	0.017
Secondary education (secondary or vocational education)	0.008	0.019
Tertiary education (secondary vocational or higher education)	0.072***	0.028
Non-Estonian	-0.001	0.020
Married or living with partner	-0.002	0.019
Number of children	0.010	0.010
Involuntary unemployment	-0.059***	0.017
Household income level	0.039***	0.008
Duration of unemployment	-0.005***	0.001
Average monthly wage in the region	0.119	0.110
Regional unemployment rate	-0.013***	0.004

Sources: Labour Force Survey, Eesti Pank calculations

Note: The model is estimated using the two-stage least squares method

*** indicates significance at the one per cent level

The analysis covers 2895 responses

apparent that effect of the level of education on the reservation wage is not significant for men or for unemployed people aged over 25.

From the analysis it can be explained that unemployed people who did not leave their previous job voluntarily because they were fired or made redundant have a much lower reservation wage. This is also to be expected, as those who have decided of their own free will to leave their job can probably permit themselves a period of unemployment, and their job search costs are smaller, meaning their wage expectations are higher. As lower job search costs may result from the household being economically better off, the positive relationship between household income and the reservation wage is also to be expected.

A negative relationship appears between the reservation wage and the regional unemployment rate, which indicates that the wage expectations of the unemployed looking for work in regions with higher unemployment are lower. The average wage in the region does not, however, have a significant effect on the reservation wage.

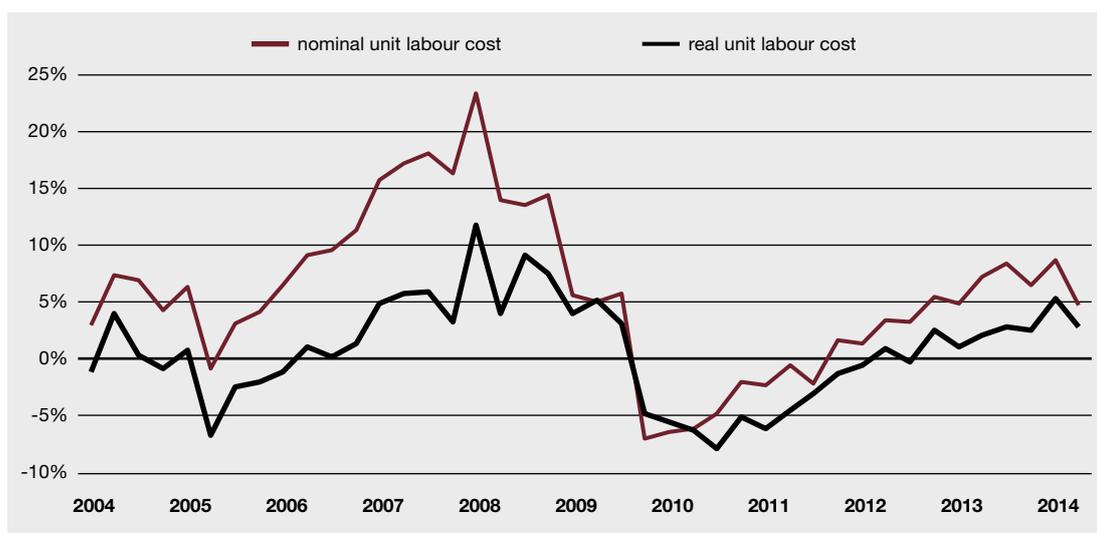
From the effect of the duration of unemployment in the reservation wage, it can be seen that there is a significant negative relationship. This means that the unemployed reduce their reservation wage the longer their unemployment lasts. The results indicate that one extra month of unemployment leads to a fall of 0.5% in wage expectations. If the equation for the reservation wage is estimated separately by gender and by age group, it appears that this fall affects men and older unemployed people more.

Unit Labour Costs

If an employee's wage rises a lot faster than production output, labour costs increase as a share of the total value added produced, meaning unit labour costs rise. Nominal unit labour costs are calculated as a ratio of the payroll costs per employee to the real production per person employed.

Faster growth in nominal unit labour costs generally means that domestic inflation pressures from the labour market are strengthening. Unit labour costs increased notably in the first quarter of this year because economic growth slowed and wage growth remained strong, but some correction could be perceived in the second quarter (see Figure 19). Unit labour costs still grew significantly faster than GDP during that period and there was a fall in annual terms in both profit as a whole and in operating surplus and mixed income.

Figure 19. Annual growth in unit labour costs

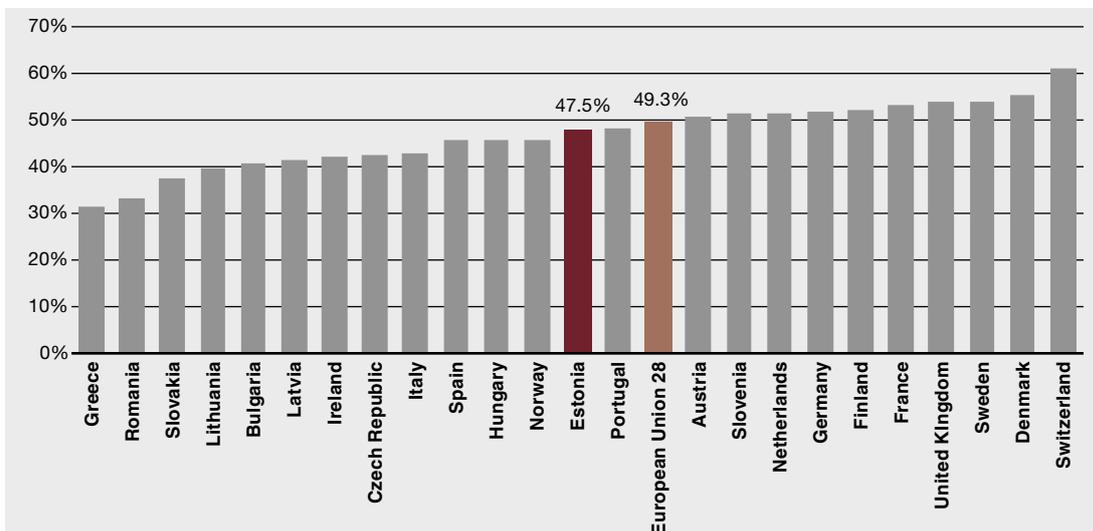


Source: Statistics Estonia

The growth in real unit labour costs shows the relationship between the growth in the payroll and that in total nominal production. Over the longer term, labour costs as a share of GDP may vary a great deal by country and by level of economic development. Labour costs together with taxes were 47.5% of GDP in Estonia last year, which was slightly below the European Union average (see Figure 20). Labour costs took the highest share of GDP in Switzerland among European countries, which reflects the large presence of the financial services sector in total production there. The main production input for companies in the financial sector is highly qualified and paid people. A smaller figure than the Estonian one could be found in Norway, where well developed industry uses a lot of capital in its production, which increases the share of invested owners' profit in value added.

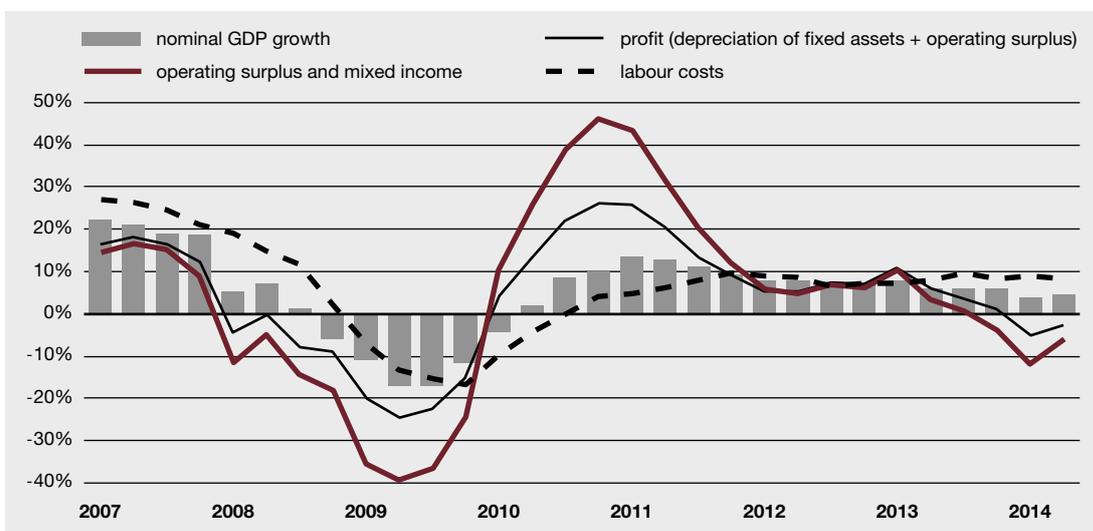
If unit labour costs rise rapidly over a short period of time, it could reduce the export competitiveness of a country. Labour costs have increased relatively quickly as a share of GDP in Estonia in recent quarters, and this has mainly come at the expense of corporate profits (see Figure 21). The correction in labour costs that began in the second quarter reduced the resulting imbalance somewhat, but more balanced development will need the correction to go even further.

Figure 20. Labour costs as a share of GDP in European Union countries, Norway and Switzerland in 2013



Source: Eurostat

Figure 21. Annual growth in GDP at current prices, labour costs, and profit and its components



Source: Statistics Estonia