

Eesti Pank



# **LABOUR MARKET REVIEW**

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*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, which means that 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 adjusts to changes principally through the prices and volumes of production inputs. For this reason it is important for the labour market to be flexible and for wage rises to correspond to productivity growth, as otherwise the increase in production costs could lead to excessive inflation.*

## **KEY DEVELOPMENTS IN THE SECOND HALF OF 2012**

In the second half of 2012 the labour market was driven by moderate growth that was based much more than before on domestic demand as the slow resolution of the financial crisis and the painful consolidation of state budgets meant that the external environment remained uncertain. Corporate and consumer confidence fell in the euro area and Sweden, Estonia's main foreign trade partners, and the economy of the euro area tipped into recession in 2012. However, domestic demand kept growth in Estonia positive, and this also had an impact on the labour market, as employment increased, unemployment fell, and wage growth continued at a fairly rapid 6%.

Demographic developments have a serious effect on the labour supply, and data from the census of 2011<sup>1</sup> give a lot of new information on them. The population of Estonia fell by less than those of Lithuania and Latvia, probably due to the proximity of Finland, which allowed people to work abroad while remaining resident in Estonia. However, the fall in the working age population of 35,876 from earlier estimates and the significant negative net migration balance for 2012 indicate a need to reassess the contribution of the Estonian labour force to potential growth. Although Statistics Estonia is now preparing a new population forecast, this review has used the preliminary data from the first version of the census to update the statistical office's population forecast on the old data.

The second important component of the labour supply is how active the working age population is, which is shown by the labour force participation rate. This remained at the high level of recent years in the second half of 2012, though it was no higher than in the same period of 2011. Thus in contrast to 2011, the growth in the participation rate did not compensate for the fall in the working age population, and the total labour force in the economy shrank as a result. As the population shrinks, it becomes ever more important for as many people as possible to be brought into the labour market. However, this requires the Estonian Unemployment Insurance Fund and other social policy institutions to work together effectively.

The demand for labour was shaped by a weak external environment, which mainly affected manufacturing as a major exporting sector. Manufacturing adjusted to weaker demand by reducing employment slightly and through lower profits. This indicates labour hoarding in anticipation of a recovery in demand. Employment increased in the second half of 2012, mainly in the public sector and the private service sector. This can partly be explained by employment growth in the public sector recovering later than that in the private sector due to the policy of strict budget consolidation in 2011.

The growth in unit labour costs accelerated in the first half of 2012 and slowed temporarily in the third quarter. In the last quarter of the year, compensation per employee increased by 9% while nominal GDP per employee increased by only 4.5%, meaning the gap between wages and productivity widened again. This trend is not sustainable in the long term, and if the recovery in external demand is further delayed, a downward adjustment in labour costs is to be expected in the future.

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<sup>1</sup> The Population and Housing Census 2011.

## **LABOUR DEMAND AND SUPPLY**

### **Participation in the labour force and inactivity**

Initial data from Statistics Estonia show that the Estonian population dropped during 2012 by 1460 due to natural population changes, and by a further 6455 due to negative net migration, making a total fall of 0.6%. In January 2013 the number of permanent residents in Estonia was 1,286,540. The age distribution of the population has not yet been published, but Eesti Pank's calculations put the fall in the working age population through mortality and changes in the population structure at 7390 and through emigration at around 5300, making a total decline of around 12,700 people. Precise data on the age distribution of the population as at 1 January 2013 will be published by Statistics Estonia in May 2013.

Accurate data on the population total and age distribution will not only help in the mapping of the current situation but also in reassessment of the long-term population forecast. Long-term forecasts of the size of the labour force are important in economic forecasting as labour is an important production input. Box 1 gives a forecast scenario based on the new 2011 census data, using the main assumptions of the first, more pessimistic, scenario from the statistical office's long-term population forecast. The box looks at the impact of the changed population structure on the working age population and seeks to predict changes in the size of the labour force, using simple assumptions about participation rates for different age groups.

#### **Box 1: An updated population forecast and the impact of the age structure on labour force participation 2013–2050**

The main assumptions behind the pessimistic version of the long-term population forecast published in 2006 by Statistics Estonia and updated in 2010 are that the fertility rate will reach two by 2050, average life expectancy will be 80.4 years for women and 78.4 for men, and net migration will be in balance over the whole period.

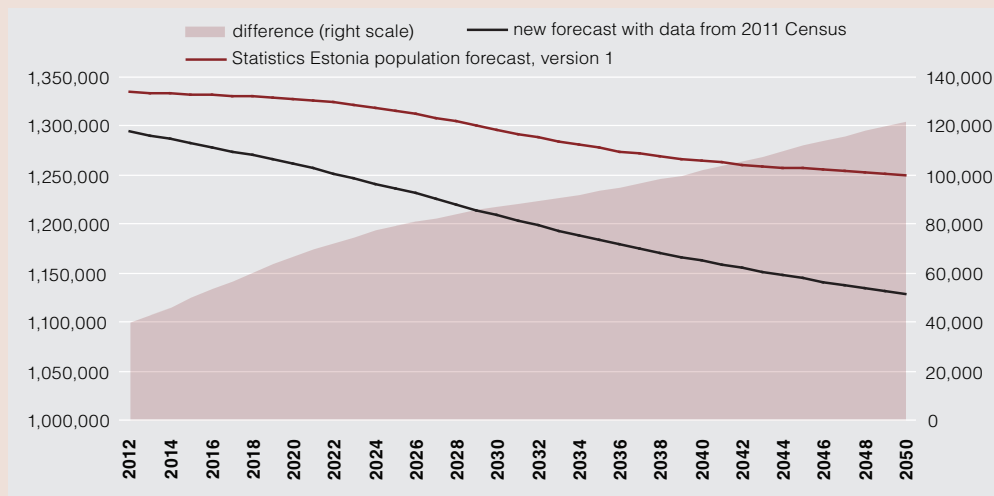
Using new data for the forecasting exercise meant that some additional assumptions were required that were not included in the statistical office's explanations. Specifically, the total fertility rate does not give enough information for the number of births per year to be calculated, so the fertility rate trend of the last decade was extended over five-year age groups so that the total fertility rate would reach two in 2050. A rise in the fertility rate can probably be expected as postponed births happen and family policy favours childbearing, but the current evidence from developed European countries and Scandinavia suggests that a return to the replacement rate is optimistic. Under the new scenario, the number of births will fall from 14,000 in 2012 to around 11,500 in 2030 and then rise after that to almost 13,000.

Given the increase in net emigration in 2012, it seems optimistic to assume that migration will remain in balance. At least while Estonian living standards remain significantly below those in neighbouring countries during the beginning of the forecast period, it is reasonable to assume that net migration will be negative. Data from the 2011 census show that young people in particular are emigrating, and women more than men, which in turn will affect the future number of births. As incomes rise over time, the push factors driving emigration will weaken and the pull factors

encouraging the return of emigrants will strengthen, meaning the overall balance of migration will start to improve. The precise dynamics of migration are hard to predict.

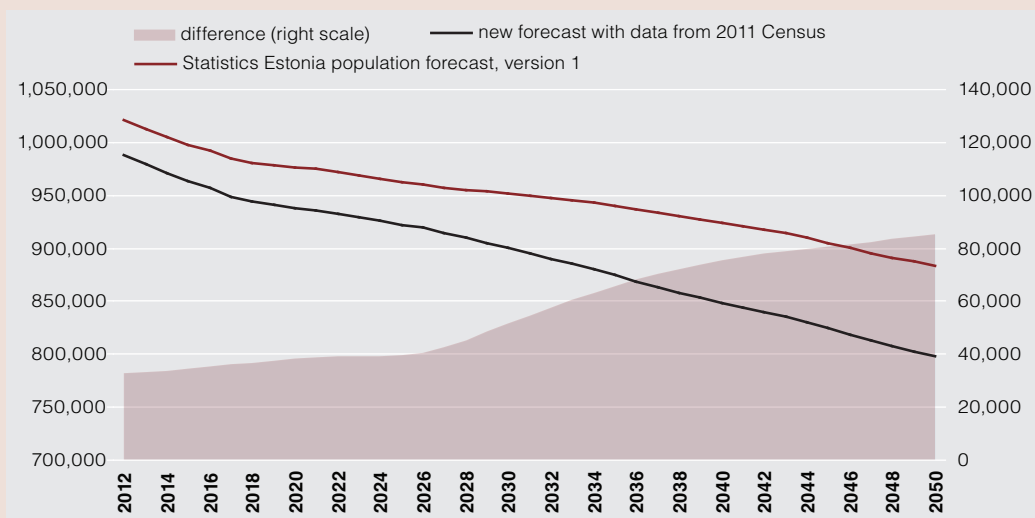
Figure a compares the population forecasts. The increase in the difference comes directly from the number of births, which is itself a consequence of the fall in the number of women of child-bearing age.

**Figure a. Estonian population 2012–2050 under the first version of the population forecast of Statistics Estonia, and the forecast from the data of the 2011 census**



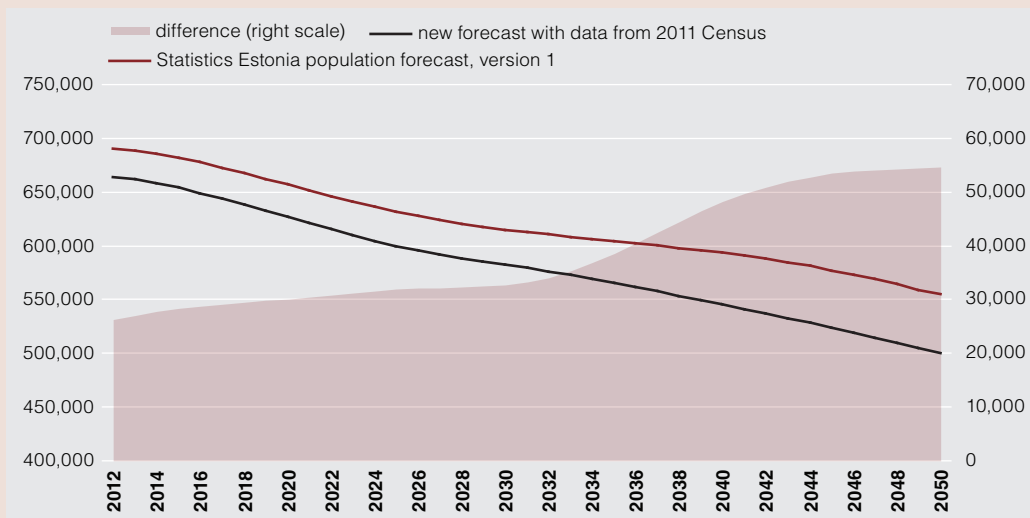
The working age population given by the census is smaller than the estimates currently in use. The assumption of balanced net migration means that the difference between the forecasts remains essentially unchanged until 2027, when the smaller birth cohorts reach working age.

**Figure b. Estonian working age population (15–74) under the first version of the population forecast of Statistics Estonia, and the forecast from the data of the 2011 census**



If it is assumed that the participation rates for age groups will remain the same after 2012, the impact of the structure of the working age population on the future changes in the size of the labour force can be observed. In reality the labour force participation rates may be affected by policy changes and the economic cycle, but this is very hard to forecast over the long term. In the nearer future both scenarios see that the fall in the working age population will be compensated for by increased labour force participation, and the labour force will shrink more slowly than the working age population. From 2017, however, the labour force participation rate will fall as the population ages, and by 2050 it will reach 62–63%. At the same time the labour force will shrink to 500,000, which is 24.7% smaller than in 2012, and the difference between the two forecasts will reach about 10%.

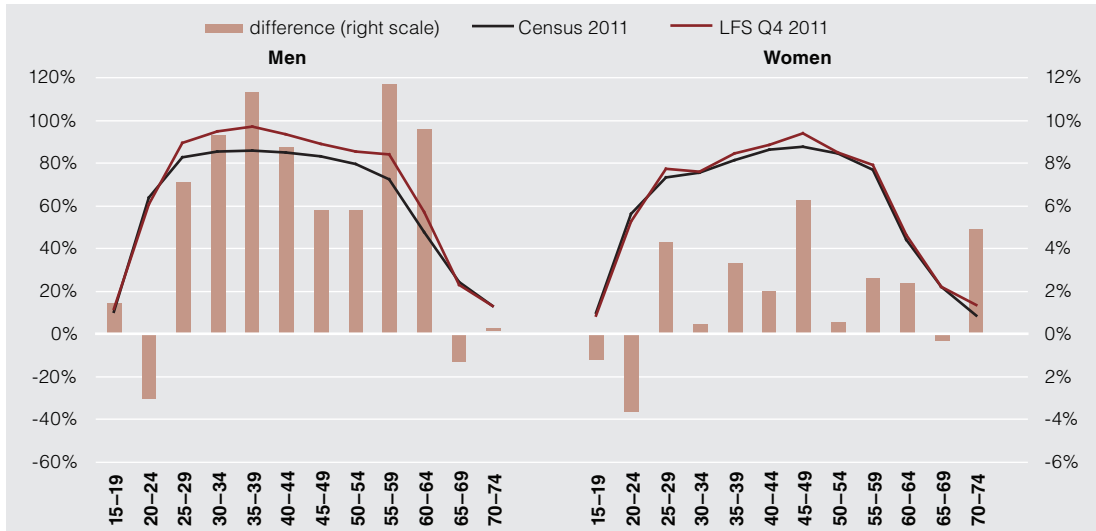
**Figure c. Estonian labour force 2012–2050 assuming unchanging participation rates, under the first version of the population forecast of Statistics Estonia, and the forecast from the data of the 2011 census**



The labour force participation rate is defined as the percentage of the employed and the unemployed in the working age population. In the second half of 2012 this figure remained at the same high level of 67.9% as in the previous year, but the lack of increase in the rate as the working age population fell means that the labour force lost 5000 people. These estimates are based on population figures not adjusted for migration. The migration data suggest that the labour force actually shrank by twice as much as the estimate from the Estonian Labour Force Survey, LFS, shows. Statistics Estonia will publish labour market statistics adjusted for the census data in the first quarter of 2014.

The census results on the economic activity of the population have also been published now. It is interesting to compare the estimate of the labour force participation in the LFS with the census data for the whole population, although some of the difference may come from the level of detail in the questions, the particular time which the questions referred to, and the respondents' perception of the anonymity of the survey. The census data show that participation in the labour force between 19.12.2011 and 25.12.2011 was 64%, while the LFS figure for the fourth quarter was 67%. The difference lay mainly in responses from men aged 25–64 (see Figure 1). It can be assumed that people working in the informal economy were more honest when answering the anonymous LFS, while for the census, which is not anonymous, they would have chosen the response "Not working for other reasons". On the other hand, the LFS estimate of participation in the labour force may be higher than the real figure, as the people who

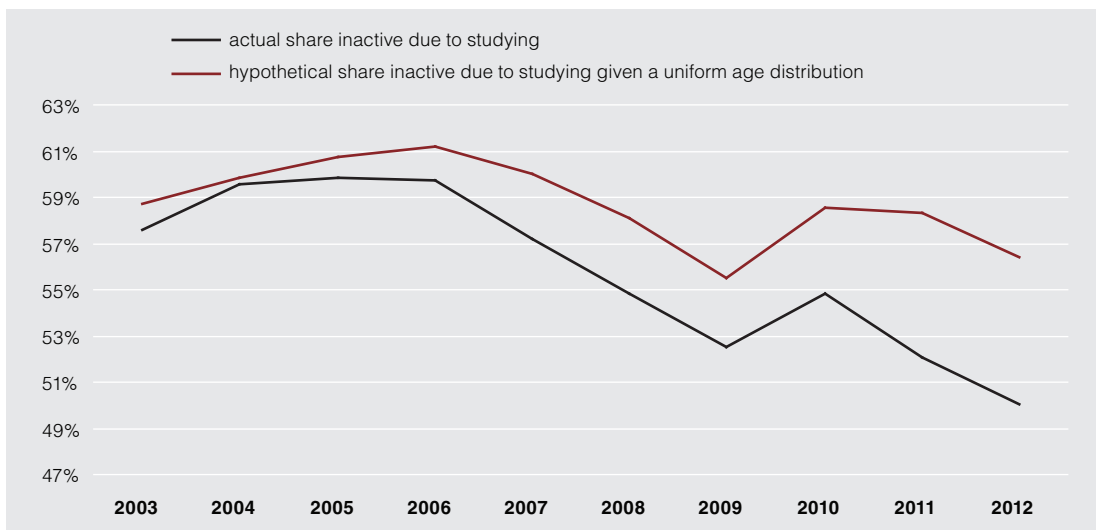
**Figure 1. Labour force participation by age and sex using data from the 2011 census and the fourth quarter LFS**



emigrated are probably exactly those who are highly likely to participate in the labour force. The timing may also have made a difference as there is probably less seasonal work available in the middle of December than the average for the fourth quarter.

The participation rate for young people aged 15–24 in the second half of 2012 was 0.7 percentage points lower than a year earlier, which is not a major difference. In the longer term, the participation of this group in the labour force will be affected strongly by changes in its age structure. Studies mean that 95% of school age young people aged 15-19 are inactive, but their share in the 15-24 age group has fallen from 40.1% in 2005 to 30.8% in 2012. The reason for this structural change is that the large birth cohort from the time of the singing revolution and the following small cohorts of the 1990s are reaching those age groups (see Figure 2). The second main driver is the economic cycle, as youth participation in the labour force increased during the boom as it became easier to find a job, but then declined

**Figure 2. Share of young people aged 15–24 who are inactive because of studies, actually and hypothetically given a uniform age distribution**



again during the crisis. The share of young people in education has not changed in narrower age groups, and although working during studies became more common during the boom, those students who lost their jobs during the crisis decided not to search actively for more work afterwards. During the recovery from the crisis in 2011 and 2012, young people became more active, mainly by moving from inactivity to employment.

The labour force participation of Estonian residents is marked by lower activity among the young than the average in the European Union and than the level in a majority of the EU27 states taken individually. Youth participation in the labour force is strongly affected by how common part-time and flexible work is in the country, so that in the Netherlands, where over 60% of young people participate in the labour market, 75% of those who are working are working part-time. In Estonia, 18.6% of employed 15–24-year-olds were working part time in 2012, while in the 25–49 age group only 8.2% were. The activity of the young can also be increased by the chance to get professional training at work, in which case it is often hard to draw a clear line between studies and work. The dominant form of professional training in Estonia, however, is training in the classroom.

Following the higher education reform, which allows for free education for full-time study on courses taught in Estonian, it may be that from the fourth quarter of 2013 there will be a fall in the labour force participation of the 20–24 age group. A requirement for free study is that 75% of the curriculum must be completed each semester, which makes it much harder for students to work alongside their studies. In some cases the reason why students were working was in order to pay for their studies, so the new system will also lessen the motivation for students to work while studying. In 2012, 58% of students under 25 and 44% of students under 35 were inactive due to studying while 39% of the younger students and 52% of the under-35s participated in the labour market.

The number of people inactive due to illness or injury rose, particularly among older men. In 2011, 12.8% of men aged 55–65 were inactive for this reason, but in 2012 this figure had increased to 16.6%. The experience of various countries has shown that a disability pension scheme is particularly popular as a way of exiting the labour market during times of high unemployment. The Estonian disability pension system is unusual because the pension does not limit the right of the recipient to work. In 2012, 38% of those receiving the disability pension also worked.

## **Employment**

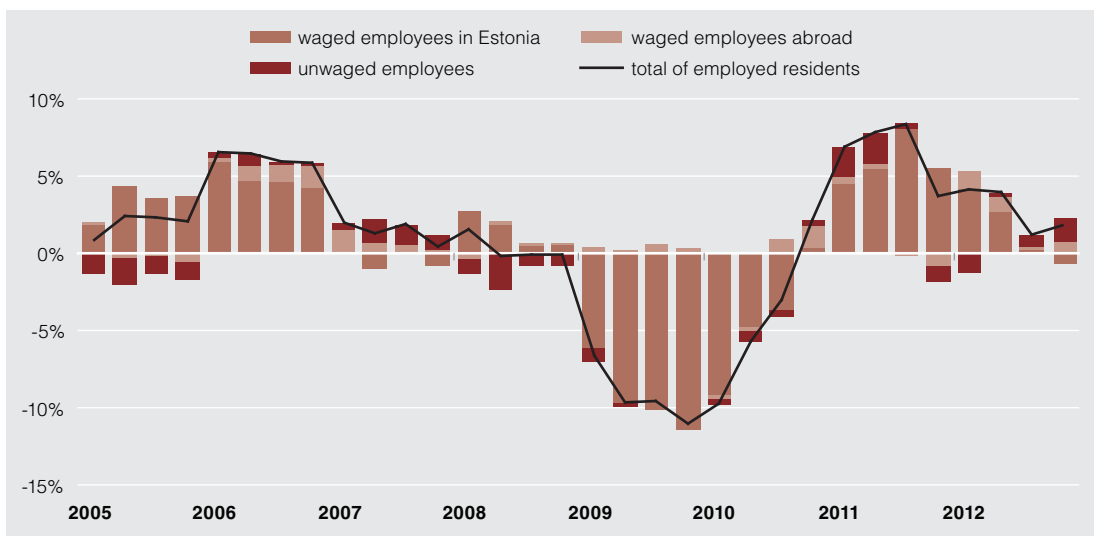
Employment increased by 1.2% in the third quarter of 2012 and by 1.7% in the fourth, and by 2.8% during the year as a whole. The rapid recovery from the crisis ended as expected and employment growth will continue at a much slower pace in future. However, the developments in Estonian employment were significantly more favourable than those in most countries of the European Union, where employment was falling.

The widest measure of employment covers Estonian residents working in Estonia and abroad. Over the year the number of Estonian residents working abroad increased faster than the number employed in Estonia. Domestic employment or employment in resident production units increased during the year by 2.2%, which was 0.6 percentage points slower than the rise in total employment. It was encouraging that the LFS and census estimates for the number working abroad were fairly similar, with the LFS showing 23,118 in the fourth quarter of 2011 and the census showing 24,900. The number of pendulum workers is quite large compared to the number of permanent emigrants over the last decade. It is probable that the geographical proximity of Finland and Sweden and the cheaper prices for ferries than for flying have restricted the sort of permanent emigration that was experienced by Lithuania.



The working status of the employed can be divided between employees and the unwaged, with the unwaged mostly being self-employed. In the second half of 2012 the growth in the number of waged employees working in Estonian slowed sharply and in the last quarter of the year it fell year on year. The fall in the number of waged employees was balanced by rises of 10.9% in the number of unwaged workers in the third quarter and of 23.8% in the fourth (see Figure 3). The number of self-employed fell sharply during the crisis and started to recover in 2011. The share of Estonian workers who are self-employed is relatively small in comparison to the figures for other European Union countries, at 8.6% in 2012, which is barely half of the 16.5% that the EU27 averaged in 2011.

**Figure 3. Structure of annual growth in employment of Estonian residents by employment status and location of employment**

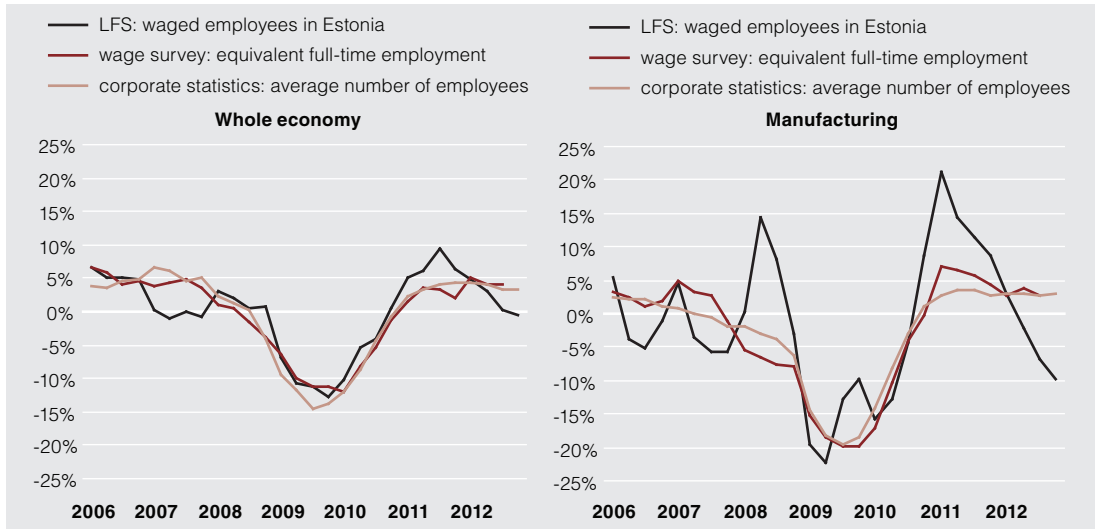


Most of the growth in employment in 2011 was in the private sector, while in 2012 it slowed from 8.9% to 2.1%. The largest part of the fall was in Estonian companies. However, employment growth in the public sector accelerated from 1% in 2011 to 3.8% in 2012. Employment in the private sector in 2012 was 7.7% lower than in 2007 before the crisis, and 10.5% lower in Estonian companies. In the public sector, where employment fell less during the crisis, there were 4.5% more employees than in 2007. The public sector accounted for 26% of total employment in 2012, which is near to the level before the boom.

Employment in manufacturing fell by 2.9% over the year, and in production facilities in Estonia it fell by 3.6% or 5000 people. The number employed in the fourth quarter was smaller by 8.9% or 11,300 people than the number for the same period of the previous year. This represents an adjustment caused by the fall in demand due to the uncertainty in the external environment in the second half of 2011, which led to a fall in the real value added of manufacturing of 3.5% in 2012 and in profits of 17.6%, according to GDP statistics. Alternative data sources, like the number of full time employees from the wage survey or the number of employees from corporate statistics, do not, however, back up the fall in employment derived from the LFS (see Figure 4).

The number of Estonian residents employed in construction in Estonia and abroad fell by a total of 0.5% in 2012. The number employed abroad fell while the construction sector in Estonia employed 2.4% more than in 2011. The number employed in construction in Estonia only increased year on year in the first and second quarters, while it fell in the second half of the year. Employment in the construction sector

**Figure 4. Annual growth in the number of waged employees in the whole economy and in manufacturing, based on wage statistics, LFS and corporate statistics**



will probably be affected in future by the ending of projects financed by the sale of emissions quotas and by the slack caused by the change in the EU budget period, though the scale of the impact of this is hard to predict. The fall in demand will be compensated for to an extent by reinvigorated building of both houses and apartment buildings and offices and retail space, which will be encouraged by stronger consumer confidence and low interest rates.

During the crisis in 2008–2009 the number of hours worked per employee declined by 8.2%, and then it recovered by 5% in 2010–2011. In 2012 the number of hours worked per employee fell again by a total of 1.8%, which left them 6% off their peak of 2005. The fall in working hours was broadly based and happened across the board. Since the crisis only construction and retail have continuously shown positive trends, while this figure fell for all other industries in 2012. The reason for the fall in working hours was the increase in the share of employees working part-time. This was mostly voluntary, unlike during the crisis, as the number of underemployed was 16.7% less than a year before. The share of part-time workers was highest among the young and the over-50s.

The regions that saw the largest impact from the fall in employment in manufacturing in 2012 were Tallinn and south Estonia, where the fall was slightly over 5%. West Estonia was the only region where employment in the secondary sector increased. In almost all regions the fall in employment in manufacturing was balanced by a rise in employment in the service sector, and over the year only south Estonia saw a total loss. The employment rate, or the share of the employed in the working age population, increased by around 4 percentage points in central Estonia and by 2.2 points in north Estonia. However the growth was slowing down, and in Tallinn in the last quarter the employment rate fell.

The results of the census also give some additional information about the employment rate. The census questionnaire contained questions about the labour market status of individuals in the week before the census of 19–25.12.2011. Table 1 shows the comparison with the LFS data for the fourth quarter of 2011. According to the census, 55,600 fewer people were employed than the LFS estimated, of whom around 32,000 were men and 22,000 were women. The employment rate for men was 4.9 percentage points lower and the rate for women 1.5 points lower, with the rate for men in the prime working age of 25–49 some

7.9 points lower. There could be many reasons for this, as it was the week before Christmas, which can be different from other times, or perhaps workers in the informal economy responded that they were inactive because the questionnaire was not anonymous. Those who worked had to give the exact name of their place of work, and this could be problematic for workers in the informal economy.

**Table 1. Economic activity of residents in the fourth quarter of 2011 using LFS and census data**

		Employment rate, %		
		Census 2011	LFS	difference, pp
<b>Men</b>	15–24	32.5	31.1	1.4
	25–49	74.9	82.8	-7.9
	50–74	48	52.8	-4.8
	15–74	58	63	-5
<b>Women</b>	15–24	29	26.9	2.1
	25–49	73.3	76.6	-3.3
	50–74	46.2	47.2	-1
	15–74	55.2	56.7	-1.5

## Unemployment

Data from Statistics Estonia put the unemployment rate in Estonia for 2012 at 10.2%. In the third quarter of 2012 it was 9.7% and in the fourth it was 9.3%. The share of the long-term unemployed, those who have been without a job for over 12 months, fell from 57% at the start of the year to 52.3% in the second half of the year and it fell in total by 6.7 percentage points from its peak in the first quarter. The long-term unemployment rate, showing the long-term unemployed in relation to the labour force, stood at 4.8% in the fourth quarter, which is lower than the levels for the EU27 or the euro area. It can be seen from the LFS that 47% of those who moved from unemployment to employment in 2012 had lost their jobs in 2010 or earlier, as had 65% of those who moved from unemployment to inactivity. Of this latter group, 20% left the labour market because they reached retirement age.

As employment grew in the service sector in 2012 and fell in manufacturing, the unemployment rate for women fell by slightly more, at 2.5 percentage points, than did the rate for men, which fell by 2.1 points. The unemployment rate for men was 11%, which was 1.7 points higher than the rate for women, and the difference increased somewhat during the fourth quarter.

The situation for young people in the labour market improved markedly in 2012, with average unemployment among the young falling from 22.3% in 2011 to 20% during the year and the fall accelerating in the second half of the year to leave unemployment at 16.9% in the fourth quarter. Those young people not in employment, education or training (NEETs) are often considered to be a risk group. In January 2013 a study by Praxis and Tartu University<sup>2</sup> was published, which looked at the situation of those young people in Estonia who have been excluded from the labour market. The study narrowed the definition of the risk group by excluding those who were doing military service or who were on maternity leave and who had not previously worked. The number of such people in the 15–29 age group in 2011 was 40,000, or 14.1% of the group, according to the study, but in 2012 it had fallen to 37,300 or 13.5%.

Unemployment among those with higher education was 6.3% in 2012, among those with secondary education it was 12% and among those with only elementary education it was 30%. During the cri-

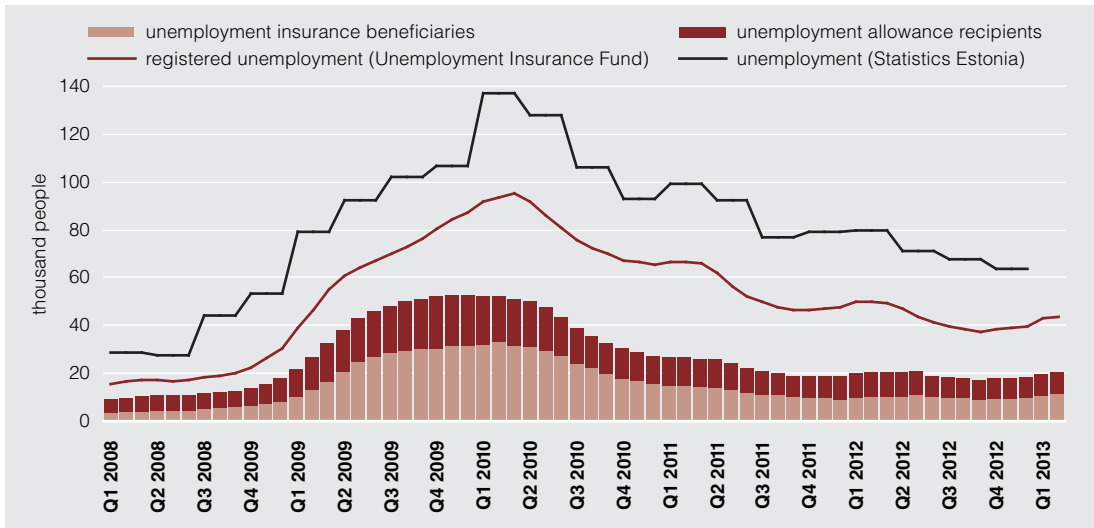
<sup>2</sup> [http://www.praxis.ee/fileadmin/tarmo/Projektid/Too-ja\\_Sotsiaalpoliitika/08\\_46\\_56\\_300\\_Poliitikaylevaade\\_5\\_veeb.pdf](http://www.praxis.ee/fileadmin/tarmo/Projektid/Too-ja_Sotsiaalpoliitika/08_46_56_300_Poliitikaylevaade_5_veeb.pdf).

sis, unemployment grew most among those with secondary education and least among those with higher education, because the crisis had the greatest impact on jobs and industries where the share of those with secondary education or below is higher, such as construction and manufacturing. The fall in unemployment was also faster among those with secondary education.

The unemployment rate among Estonians was 7.3% in 2012 and among non-Estonians it was 15.8%. Among non-Estonians, unemployment was higher among those with undetermined citizenship. One factor in this is the low level of knowledge of the Estonian language, and another is residence in the Ida-Virumaa region in eastern Estonia, where job creation rates are lower than the Estonian average. However, these factors are not enough in themselves to explain all of the difference in the unemployment rates. In the final quarter of 2012 the unemployment rate for Estonians was 7.2%, which was 0.1 percentage points higher than in the third quarter. The rate for non-Estonians was lower in the fourth quarter than in the third by 1.6 points at 13.5%. The difference between different nationalities remains quite large, although it is shrinking.

Like the unemployment rates as defined by the ILO, the number of registered unemployed also fell in 2012, though slightly faster than the ILO number, which is to be expected as the average duration of unemployment becomes longer. In 2011, 63.5% of the unemployed were registered with the Unemployment Insurance Fund, but in 2012 their share had fallen to 61.5%. Registration is affected by the general trends in unemployment, and also by what is offered to the unemployed, such as unemployment insurance or benefits, health insurance or training, and these may be more or less attractive to the unemployed at different stages in the economic cycle. The share of those receiving unemployment benefits and insurance among the registered unemployed increased from 41% in 2011 to 45% in 2012 (see Figure 5).

**Figure 5. Number of unemployed in Estonia**



In future the developments in unemployment will depend largely on the external environment and particularly on the recovery of demand in Estonia's main trading partners. At the start of 2013 the expectations of employers for employment over the next months was a little more pessimistic than earlier, with the exception of the service sector. The assessments of consumers of the future trends in unemployment were more optimistic at the start of the year than earlier.

## Labour market flows

Net employment growth in 2012 slowed primarily due to a reduction in the job creation rate to around the stable growth rates seen in the years before the boom. The job destruction rate continued to fall at the same time, also reaching around the level of 2002–2005. The job destruction rate is the ratio of those losing their job due to redundancy, dismissal or liquidation of employer to total employment in the preceding period. The job creation rate is found by adding the employment growth rate and the job loss rate<sup>3</sup>.

**Figure 6. Labour market flow indicators 2001–2012**

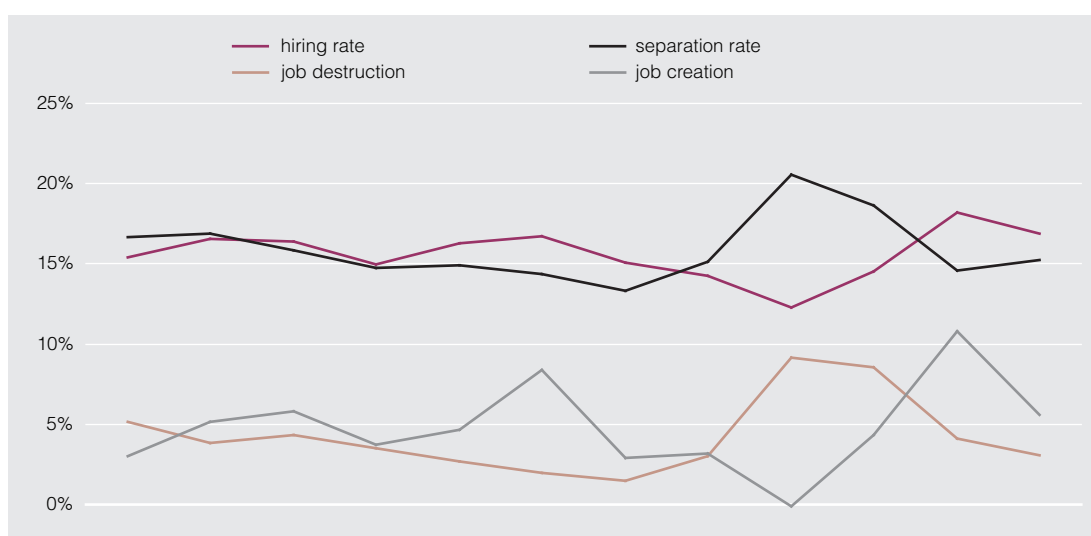


Figure 7 shows the job-to-job movement rate, which rose to 8.1% in 2012. In 2009–2011 the rate of job-to-job transfers among the employed was extraordinarily low. During the crisis this was probably due to the high uncertainty and the low rate of job creation, but in 2011 it was because there was a large available labour force whose average reservation wage may have been lower than that of the potential job changers. The share of those job changers who went to a new job in a different sector than their old one was surprisingly stable, remaining between 47 and 51% in 2009–2012 (see Figure 7).

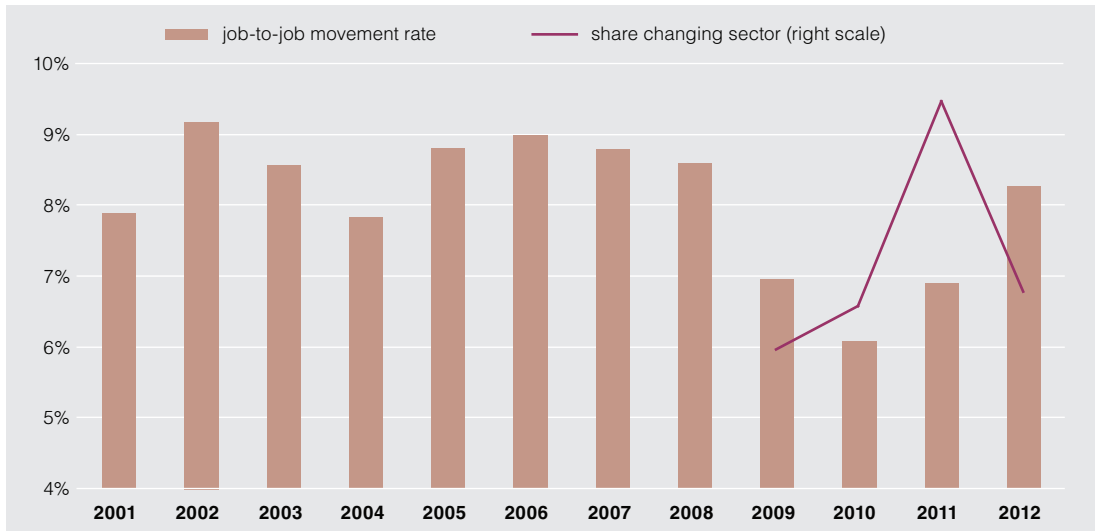
## Vacancies

The share of jobs that were unfilled grew from 1.3% in 2011 to 1.4% in 2012. In recent years there seems to have been an increase in seasonality in the vacancy time series as the vacancy rate increases in the third quarter and then drops in the fourth. This is partly caused by the education system, where contracts are signed for the academic year and the number of vacancies climbs high before September. In information and communication technologies, where the vacancy rate reached a peak of 3.5% in 2010–2011, the rate of jobs unfilled has now fallen to 1.8%.

Representing the relationship between the vacancy rate and the unemployment rate on a graph gives us the Beveridge curve, which shows how well available labour and jobs match in the labour market. At the end of 2012 when both the unemployment rate and the job vacancies rate fell at the same time,

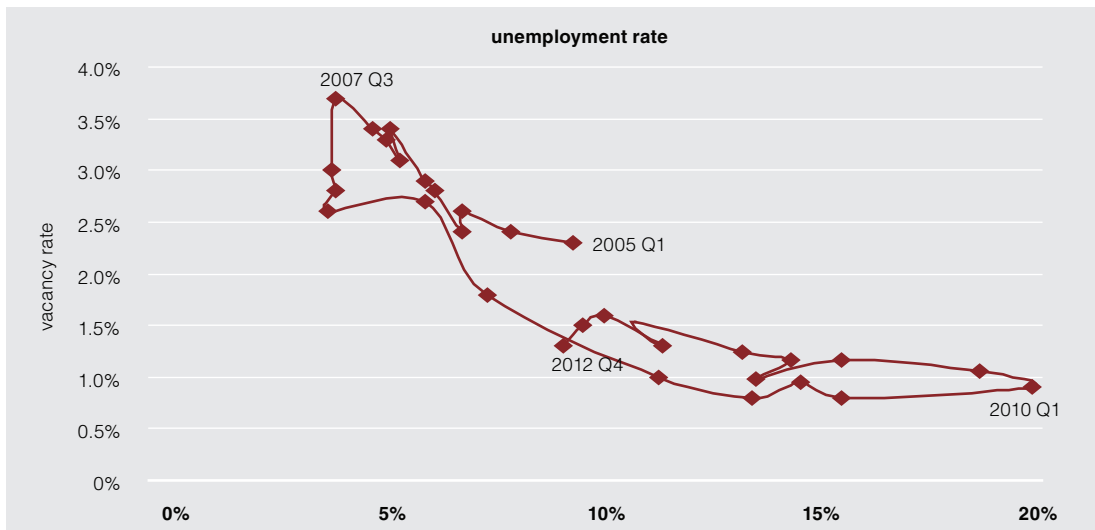
<sup>3</sup> For a more detailed description of the methodology see Meriküll (2011) <http://www.eestipank.ee/publikatsioon/toimetised/2011/12011-jaanika-merikull-labour-market-mobility-during-recession-case-estonia>.

**Figure 7. Job-to-job movement rate 2001–2012**



the curve shifted towards the origin where the axes intersect. However, as both the vacancy rate and the unemployment rate are estimates with a probability distribution, it cannot be concluded that the curve has shifted on a 95% confidence level. Greater uncertainty is given by the possible seasonality problem, which it is hard to remove reliably because of the short time series (see Figure 8).

**Figure 8. Beveridge curve (Q1 2005–Q4 2012)**



### Wages and labour costs

At the start of 2012 the acceleration of the growth in average gross wages was in direct contradiction of the slowdown in the economy, but from the second quarter the rate of wage growth started to stabilise and it came below 6% in the second half of the year. The growth in real wages was positive throughout the year, reaching 1.7% in the first half of the year and accelerating to 2% in the second half. Although

the nominal average gross wage was at its highest ever level, the average real wage adjusted for consumer price inflation has not yet returned to its level from before the crisis.

**Figure 9. Annual growth in average gross monthly wages and real wages**



The nominal and real growth in average net wages was slightly lower than in gross wages in 2012 as a whole and in the second half of the year, meaning that the effective tax rate increased slightly during this time. As the unemployment insurance contribution rate was cut at the start of 2013, it can be expected that this year the growth in net wages will exceed that in gross wages by up to 0.7 percentage points.

Average gross wages grew at a rapid 9% in the electricity, gas, steam and air conditioning supply sector. It is probable that this growth rate was a consequence of the bonuses paid in connection with the opening of the electricity market, and of the predominantly monopoly status of the companies, which makes it relatively easy for them to raise wages as they can pass the resulting costs on to the price of their end products. Wages in construction grew by 11%, breaking the 1000-euro level for the first time. The ending of insulation projects part-financed through the sale of emissions quotas (AAUs) should reduce the demand for labour in the construction industry to some extent, but the pressure on wages to rise may continue as workers have the option of going to work in neighbouring countries. The wage growth in construction may also have been affected by the increasingly effective measures taken by the Estonian Tax and Customs Board against undeclared wages, which have led to an increase in the share of wages that are officially declared, which is then reflected in the rise in the wage statistics. Wages rose least in transport and warehousing, where the increase was 0.7%, and in financial and insurance activities, where it was 2.9%. The wide difference in the wage growth rates increased even further the heterogeneity between different activities, and this could lead to increased social tensions.

The form of ownership of companies and organisations which saw the slowest wage growth was local government administration, where wages only began to recover after the crisis in the second half of 2011, and grew by only 2.9% in 2012. In state-run organisations the average wage rose by 6.2%, while in the private sector the fastest growth was seen in companies owned by Estonians, where it reached 8%. The average wage in private companies owned by foreigners fell by significantly less during the crisis and so its later growth rate has been more moderate, remaining below the rate for Estonian-owned companies at 5% for the whole year.

Barometer surveys show that labour shortages have declined as a factor inhibiting increases in production in construction and manufacturing, and a survey in January showed that the pressure has also eased in the service industry. Wage growth is expected to accelerate further this year as collective agreements come into force in health and education, while the minimum wage also rose in January by 15% to 320 euros. There are not yet enough data to allow an assessment of the impact of this rise, but the LFS shows that the level of the minimum wage directly affects around 12–16% of wage earners.

### Reservation wage of the unemployed

The wage expectations of the unemployed increased in 2012. The largest movement was among those looking to get 450–600 euros in wages, who accounted for 38.2% of the unemployed in 2012, almost 10 percentage points more than a year earlier. The share of the unemployed expecting more than 600 euros in wages also increased, by 4.2 points to 28.8%, though this was still less than in 2008, when 41% of all the unemployed fell into this category. In 2011, 19% of the unemployed were prepared to take a job for up to 300 euros a month in gross wages, which was very close to the minimum wage, but in 2012 only 13.7% were, with 20% of unemployed women and 8.4% of men agreeing to that level, down from 24.8% and 13.9% in 2011. The gender pay gap is already apparent in the expectations of the unemployed.

**Table 2. Reservation wage of the unemployed and growth in 2012 by education level and gender**

	Resevation wage (euros)			Reservation wage growth		
	Men	Women	Total	Men	Women	Total
<b>Level 1 education: up to primary and vocational education</b>	571	436	531	-0.3%	10.4%	2.0%
<b>Level 2 education: up to secondary and professional education</b>	653	486	581	13.5%	9.9%	12.7%
<b>Level 3 education: upper secondary and higher education</b>	893	634	726	31.3%	12.8%	21.3%

### Unit Labour Cost

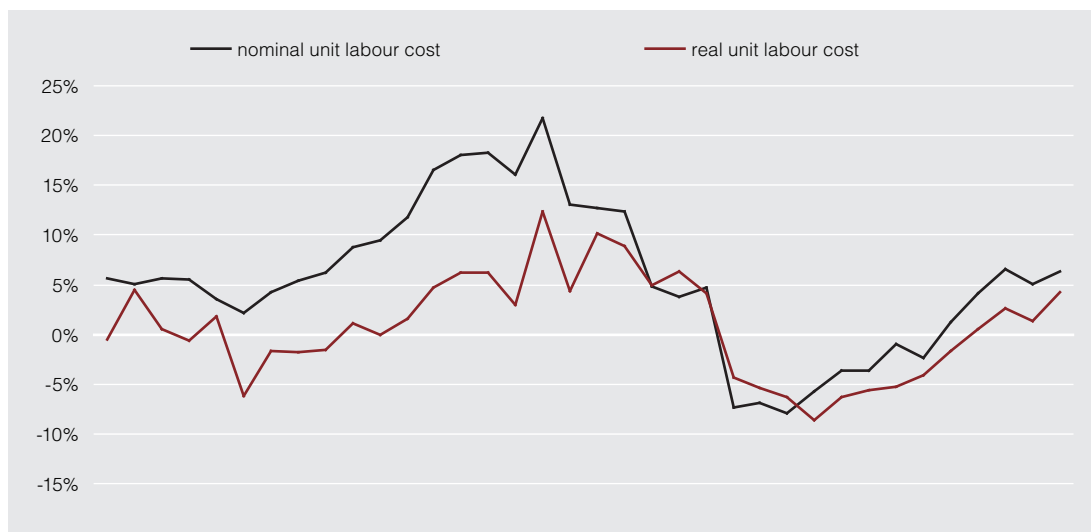
The simultaneous slowing of GDP growth and acceleration of wage growth in 2012 led to a rise in unit labour costs to an extent that could see imbalances start to emerge. The nominal annual growth in unit labour costs accelerated in the second quarter to 6.6%, slowed temporarily in the third quarter, and picked up again in the fourth quarter to 6.3%. For the year as a whole, growth in nominal unit labour costs was 5.6% (see Figure 10), meaning that domestic inflation pressures had increased.

Real unit labour costs increased by 2.2% over the year. The total value added of the economy grew by 6.6% in current prices, while the payroll increased by 8.8%. The rise in the payroll came from the increase in the number of employees, which was 2.1% according to the LFS, and also from an increase in the wage payments per employee, which was 6.6% in the data from the LFS.

Growth in the real unit labour cost was affected to an extent in 2012 by structural changes in the economy, but mostly it reflected wage growth that was faster than productivity growth. The largest divergence between wage growth and productivity growth was in manufacturing, trade, transport and accommodation, where



**Figure 10. Annual unit labour cost growth**



value added at current prices grew only slightly during the year or fell, as it did in manufacturing by 1.8%. In construction, value added and the payroll both grew rapidly by around 24%, but in a more balanced way.

If the rise in the payroll slows down but still remains above value added growth in the longer term, it will slow the growth in the components of profit.

## **INSTITUTIONAL DEVELOPMENTS**

### **The minimum wage**

In January 2013 the minimum wage was raised from 290 euros to 320 euros, and the minimum hourly rate from 1.8 euros to 1.9. Many countries in the European Union have no minimum wage, but in those that do it averages around 40% of the average wage. The minimum wage in Estonia is 33% of the average wage. It has been found that if the minimum wage is too high, it has a negative impact on the employment rate of labour force members with low qualifications, as jobs can only be created if labour costs are lower than labour productivity.

### **The Public Service Act**

On 1 April 2013, a new Public Service Act came into force, which aims to bring in a new and narrower definition of a civil servant, to ensure equality of access to official positions for all through compulsory use of open competition for positions, and to create a transparent and fair salary system that reflects the labour market and the individual employee's responsibility and competitiveness<sup>4</sup>. The narrower definition of the post of civil servant means that around 5000-7000 people who have been working as civil servants will have to sign a contract under the Employment Contracts Act that will give them much more flexible pay conditions than they have had before. This will affect future wage growth, which will no longer be linked to changes in salary scales. Making the official pay system simpler and more

<sup>4</sup> Explanatory note to the Public Service Act, page 3 (5.12.2011).

transparent means increasing the share of the base salary in the total wage. The new law sets a cap for variable salaries of 20% of the base salary and 5% of the institution's total payroll.

The impact of civil service reform on salaries in the public sector is hard to predict, but it will probably make the annual salary profile more uniform, meaning that the growth rates for the next 12 months may be affected by seasonal changes. Although there is a five-year transition period for the raising of the retirement age, the motivation package beyond wages for public sector employees is becoming thinner as the extra holiday days are abolished for new workers.