Economic Policy Council Report 2016

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Economic Policy Council

VATT Institute for Economic Research

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Helsinki, January 2017

Preface

The Economic Policy Council was established in January 2014 to provide independent evaluation of economic policies in Finland. According to the government decree (61/2014) the council should evaluate:

1. the appropriateness of economic policy goals;

2. whether the goals have been achieved and whether the means to achieve the policy goals have been appropriate;

3. the quality of the forecasting and assessment methods used in policy planning;

4. coordination of different aspects of economic policy and how they relate to other social policies;

5. the success of economic policy, especially with respect to economic growth and stability, employment and the long-term sustainability of public finances;

6. the appropriateness of economic policy institutions.

The members of the Council are appointed by the government for a five-year term based on a proposal by economics departments of Finnish universities and the Academy of Finland. The Council members are university professors and participate in the work of the Council in addition to their regular duties. The Council is hosted by the VATT Institute for Economic Research but works independently from the Institute.

This is the third report of the Economic Policy Council. As in the previous reports, the Council concentrates on selected key issues of economic policy.

In this report we primarily discuss the government's employment policies. In particular, we focus on the employment effects of the competitiveness agreement, on reforms of the unemployment insurance system and on developments in the wage-setting system. As usual, we also make detailed comments on the government's fiscal policy decisions. Evaluation of several other major policy issues is left for the future. For example, the details of the government's social and health care reform are not yet fully known, and reform of the funding of transport investments is still at the planning stage. We will return to these issues in future reports.

The Economic Policy Council has resources to commission research projects to support its work. These reports are published as attachments to the Council report, but the authors of the reports are responsible of their content.

Six background reports are published in connection with this Council report. Tomi Kyyrä, Hanna Pesola and Aarne Rissanen of the VATT Institute for Economic Research evaluate the recent changes in the Finnish unemployment insurance system and provide new estimates of the effect of the unemployment insurance system on the duration and incidence of unemployment. Annika Nivala of the Turku School of Economics studies the effect of subsidies for firms to hire their first employee based on a system that existed between 2007 and 2011. Johannes Herala, Santtu Karhinen, Suvi Orenius, Jaakko Simonen and Rauli Svento of the University of Oulu examine local adjustment to structural changes that took place in Oulu after the decline in the ICT sector. Petri Böckerman, Tuomas Kosonen, Terhi Maczulskij and Henri Keränen of the Labour Institute for Economics study the flexibility of the Finnish labour market focusing on employment protection legislation, minimum wages and workforce mobility. Jari Vainiomäki of the University of Tampere examines the development of wage dispersion and wage rigidity. Dominik Hangartner of the London School of Economics and Matti Sarvimäki of Aalto University and the VATT Institute for Economic Research review policies adopted to deal with the effects of the recent refugee inflow and contrast the Finnish experience with those of other European countries. In addition, a Council secretariat report by Jussi Huuskonen provides a critical assessment of the estimates of the elasticity of labour demand that are used in evaluating the employment effects of the competitiveness agreement.

Several experts have attended Council meetings or commented on parts of the draft. We thank Olli Rehn, Tomi Kyyrä, Hanna Pesola, Juuso Vanhala,

Tuulia Hakola-Uusitalo, Jari Vainiomäki, Markus Jäntti, Lauri Kajanoja, Matti Pohjola and Tuomas Kosonen for sharing their views and expertise. We would also like to thank Mikko Spolander, Veliarvo Tamminen and Ilari Ahola of the Ministry of Finance for patiently responding to several detailed questions by the Council. Jussi Huuskonen and Konsta Lavaste have been competent research assistants for the Council. We are also thankful to Tiina Heinilä, Päivi Tainio, Anita Niskanen, Raija-Liisa Aalto and Nina Intonen of VATT for their help in administration, communication and layout.

Despite the criticism levelled at the previous Council report, the report is still published in English, which is the working language of the Council. A Finnish summary is attached to the report. We do recognize the need to promote domestic economic policy discussion in Finnish and will reconsider the choice of language in the next report with the help of additional resources allocated to the Council in its 2017 budget.

Helsinki, 24th of January 2017

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1 Summary/yhteenveto

1.1 Summary

Economic outlook: Return to a normal growth path is insufficient for meeting employment targets

The Finnish economy has left the recession behind and is now adjusting itself to the new normal. GDP growth was about 1.5% in 2016. Most forecasts predict that the growth rate will be close to 1% in 2017 and 2018. The construction sector is already booming with an estimated growth rate in 2016 around 8%. Shipbuilding, the auto industry and the forest industries have reported some positive news lately. Nonetheless long-term growth prospects remain subdued. Most forecasters predict that real GDP will grow on average by 1-1.5% a year over the next 20 years.

Slow economic growth is naturally also reflected in employment and unemployment rates. Employment rate has declined since 2012 but started to increase in the beginning of 2016. The seasonally adjusted employment rate in the age group between 15 and 64 years was 68.8% in November 2016. According to the government's forecasts this employment rate will increase to 69.7% at the end of 2019. The government's employment rate target of 72% is still very unlikely to be met. Achieving it would require not only a decrease in unemployment but also an increase in the labour supply.

The unemployment rate, which has increased since 2011, is now declining slightly. The Ministry of Finance forecast for unemployment in 2016 is 9.0%. According to the same forecast the unemployment rate will decline to 8.1% by the end of 2019. A problematic feature is that the fraction of long-term unemployed persons has increased so that currently (November 2016) 37% of unemployed persons have been unemployed for more than a year. While

this is a natural consequence of a prolonged recession it also implies that unemployment is likely to decrease only slowly even if demand conditions improve. Another noteworthy feature of the labour market is that the difference between registered unemployment in the labour market offices and open unemployment reported in the Labour Force Survey is growing. An increasing fraction of those unemployed are apparently not actively seeking work and therefore the unemployment rate reported by the Labour Force Survey does not fully reflect the severity of the unemployment problem.

Fiscal policy targets will not be reached

The prolonged recession has had serious consequences for public sector finances. Despite the spending cuts by the current and the previous governments, general government gross debt has increased from 32.7% of GDP in 2008 to 64.3% of GDP in 2016. Debt will continue to grow, the general government deficit is projected to be 2.4% of GDP at the end of 2016.

According to current forecasts the deficit will still be 1.5% of GDP in 2019. In fact, the deficit is projected to increase during 2017 due to tax concessions adopted in connection with the competitiveness pact. The structural (cyclically adjusted) deficit was 1.2% of GDP in 2016 and will increase to 1.6% of GDP in 2017. In 2019 the structural deficit is forecast to be1.1 % of GDP.

While Finland will probably continue to meet the 3% deficit limit of the EU Stability and Growth Pact at least during the next few years, it is already breaking the 60% debt limit. Perhaps more worrying is that Finland will most likely not meet its structural balance target (MTO) in the near future. The chances of reaching the fiscal policy targets in the government programme, according to which the public deficit should be zero in 2019, are even smaller.

In its public sector fiscal plan, the Finnish government has set a medium-term fiscal objective (MTO) for the structural deficit of 0.5 per cent of the GDP, but is likely to run substantially larger deficits up to 2020. Reaching the MTO would require further budget adjustments leading to an improvement in the budget balance of about EUR 1.3 billion by 2019. Meeting the government's own balanced budget targets as described in the government programme and in the General Government Fiscal Plan would require a further adjustment of about EUR 1.1 billion.

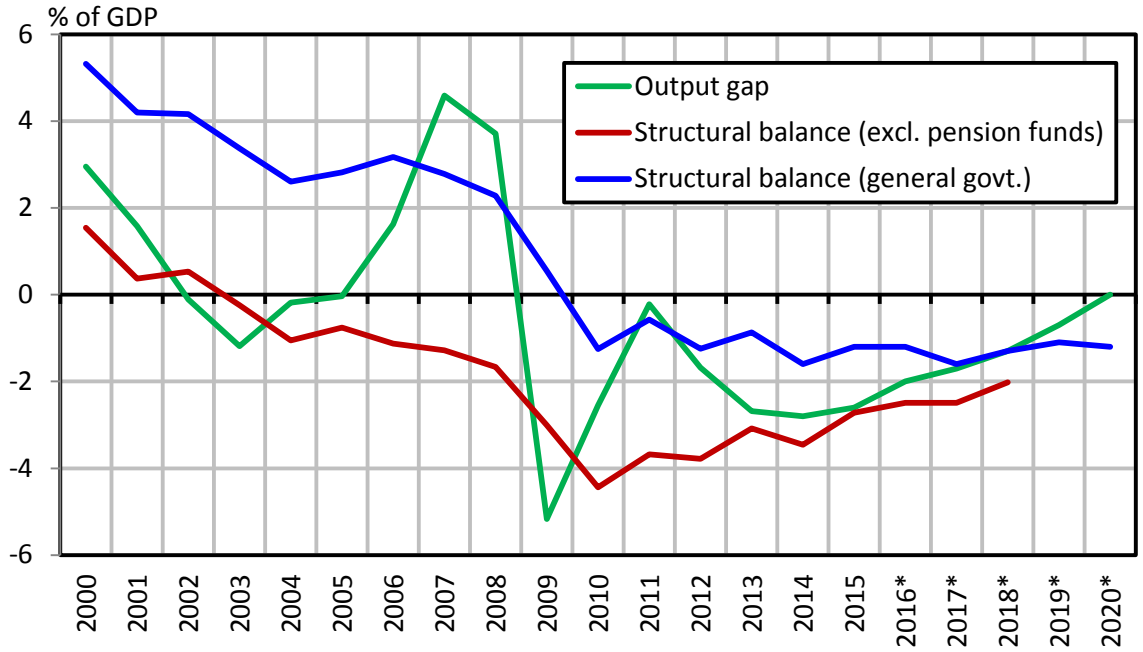
In the General Government Fiscal Plan 2017–2020 government notes that even a path leading to the achievement of the MTO cannot currently be presented. According to the General Government Fiscal Plan the measures aimed at ensuring that the public finance-enhancing effects of the Competitiveness Pact reach the targets set in the Government Programme as well as reforms directed at the management of public finances, particularly the healthcare, social welfare and regional government reform package, have not yet been confirmed in detail.

However, the council notes that these administrative reforms will not affect public finances by 2019. The council finds it unlikely that measures that have been implemented so far to support growth and employment would increase the tax base by an amount that would lead to reaching fiscal policy targets by 2019. The Council also notes that the expected effects of these policies are already included in forecasts. If the government still aims at reaching its fiscal policy targets, it would urgently need to formulate an explicit and realistic plan on how to consolidate public finances or how to increase employment so that fiscal policy targets could be achieved. A credible plan would also make it easier to phase fiscal adjustment over a longer period.

Another question is whether the targets are set appropriately. As we have argued previously, medium-term fiscal objectives should be derived from long-term goals and set in a way consistent with ensuring long-term sustainability. In practice this would require a slight tightening of current fiscal policy targets.

The structural deficit target set in the General Government Fiscal Plan refers to the deficit of the entire public sector, which in Finland also includes pension insurance funds. Pension insurance companies have prepared for future ageing costs by increasing the size of pension funds. For this reason pension funds have had a permanent surplus. Without the contribution of these funds the public sector deficit would have been substantially larger. According to the Council's calculations, the combined structural deficit of central and local government is still about 2.5% of GDP.

Figure 1.1: Structural deficit with and without the contribution of the pension funds



Sources: Data from the Ministry of Finance (2016b) and Statistics Finland National Accounts, calculations by the Economic Policy Council

Fiscal sustainability would require faster fiscal adjustment over the next few years

The structural deficit is a serious issue, mainly because of its consequences for long-term fiscal sustainability. Public expenditures will be increasing due to population ageing and the projected costs of pensions and health care expenditures. According to current estimates, the Finnish public sector has a 3% sustainability gap. This means that the projected expenditures and revenues of the public sector would be equal in the present value terms if the budget balance were immediately and permanently improved by an amount corresponding to 3% of GDP.

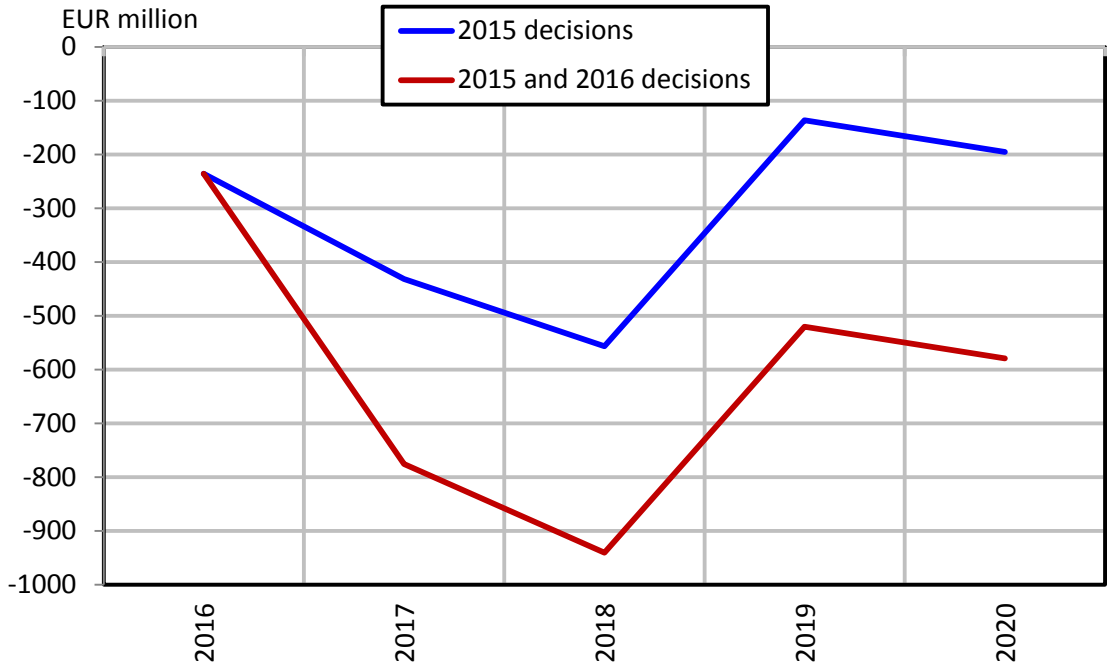
The current government plans to gradually reduce the deficits utilizing both budget adjustment and structural reforms so as to reach the medium-term fiscal objectives by the end of 2019. Such gradual consolidation process is a good compromise when government fiscal policy has two aims, supporting economic growth after recession and securing the long term sustainability.

In the past weak economic activity has been used as an argument for postponing reforms to consolidate public finances and ensure fiscal sustainabil-

ity. However, the economic situation has changed. Current growth rates are not very different from long-term forecasts and the output gap is decreasing. Immediate tightening of fiscal policy would have adverse effects on growth, but prevailing long term sustainability gap makes consolidation necessary in coming years.

Moreover, there are some critical aspects related to implementation of the government's fiscal policy plans. As we noted in a statement to the Parliamentary Finance Committee, the government is slipping from the fiscal adjustment path it has announced earlier. The public deficit is estimated to grow both in cyclically unadjusted and cyclically adjusted terms in 2017. The main reason for this deviation from a gradual adjustment towards the fiscal policy targets is the government's commitment to tax cuts in return for a labour market contract intended to deliver low wage increases and improved cost-competitiveness. Even though the current plan is for the government to return to an adjustment path after 2017, even a temporary deviation from the adjustment plans will raise questions about the consistency of the government's fiscal policy. The tax cuts will also widen the sustainability gap further, creating the need for further tightening of fiscal policy later unless the tax cuts and the reduction of labour costs lead to unexpectedly large increases in employment.

Figure 1.2: The net effect of revenue adjustments on the government budget balance (EUR, million)



Sources: Data from Ministry of Finance, calculations by the Economic Policy Council.

Low interest rates reduce the returns on pension savings, thus aggravating the sustainability gap

The current low level of nominal and real interest rates has also been advanced as an argument for a more accommodative fiscal policy. Interest rates clearly affect the cost-benefit analysis of public investment projects, and low interest rates over a prolonged period may make some projects worthwhile even if they would not pass such analysis if rates were higher. Hence it could be wise to borrow to fund public investments as long as their future benefits exceed the capital cost of investment.

However, two caveats are worth mentioning here. First, separating public investment from public spending is often a matter of definition. Investments that lead to permanent increases in government expenditures without a corresponding increase in government revenues have an adverse effect on fiscal position of the public sector even if these investments are socially profitable. Second, although lower interest rates lower the cost of government debt, they also reduce general government revenues. Lower interest rates reduce the return on pension fund assets and therefore make meeting future increases in pension costs more difficult. Given that the Finnish general government has more financial assets (mainly in the pension funds)

than debt, the net effect of a reduction in interest rates is an increase in the sustainability gap. According to calculations presented in this report, a one percentage point decrease in real interest rates increases the sustainability gap by 0.8 percentage points.

Table 1.1: Sensitivity of sustainability gap to changes in underlying assumptions

	Baseline scenario, %	Change in assumptions	Impact on the sustainability gap
Real interest rate / real return on assets	3.0 / 3.5	+ 1.0 pp – 1.0 pp	– 0.66 pp + 0.77 pp
Productivity growth	1.5	+ 1.0 pp – 1.0 pp	– 0.57 pp + 0.68 pp
Employment rate	71.7 (since 2060)	+ 1.0 pp – 1.0 pp 72 % in 2025	– 0.41 pp + 0.42 pp – 0.53 pp

Finnish employment outcomes not as good as among peer European countries

One of the government's aims in terms of labour market reforms has been to increase the working time of full-time workers by 24 hours a year. The Council has conducted an international comparison of working hours and employment rates to evaluate this goal and to put the Finnish labour market outcomes into perspective. These calculations, where Finland is compared to seven other countries (Denmark, France, Germany, the Netherlands, Sweden, the United Kingdom and the United States), reveal that the Finnish employment rate (60% in 2014) among 15-74-year-olds is the second lowest in this inter-country comparison. The employment rate in Finland on this definition was almost the same in 1999 and 2014.

Average working hours are in an intermediate category, mainly because part-time work is uncommon in Finland. The working hours of full-time workers are among the shortest in this comparison. Therefore the government's aim of increasing working time is understandable, but the magnitude of the desired increase is not large. Despite the fact that a low share of the Finnish population works part-time, the share of part-time workers who would like to work more (often called involuntary part-time workers) is high in Finland. This may reflect the current business cycle or more structural factors, and there is an urgent need to learn from measures that have

catered for a better match between supply and demand for voluntary part-time work elsewhere.

Persons with low education and low skills face a challenge in the Finnish labour market

In Finland, the average working time of 15-74-year-old adults with only lower secondary education is less than 500 hours a year (which compares with more than 1,000 hours on average for other Finns in the same age group). This outcome, together with an employment rate of approximately 30% among persons with lower secondary education only, are the lowest values in this country comparison.

Based on data for 2012 from the PIAAC (Programme for International Assessment of Adult Competencies), an internationally standardized survey of the skills of the adult population, the employment outcomes for those in the lowest skill group also appear particularly problematic in Finland. This means that possible differences in the skills of people with notionally the same educational level in an international comparison cannot drive the above results for the lowest educated Finns.

The magnitude of these poor labour market outcomes for people with low education or skills in terms of overall employment and hours of work is mitigated by the fact that these groups represent a small share of the total Finnish workforce. This, however, does not help the situation of the individuals themselves.

Increasing employment is a key goal for the government, and rightly so

Increasing the employment rate is a key policy goal of the current government. In addition to improving the welfare of the unemployed, an improvement in the employment rate is also important for reaching other fiscal policy goals. In particular, a high employment rate is crucial for long-term fiscal sustainability. According to our calculations, a one percentage point increase in employment would reduce the sustainability gap by 0.4 percentage points.

The government employment rate goal, 72%, is ambitious. The employment rate has not reached this level since 1990. Even in the boom years of the first decade of the 2000s, the annual average employment rate among 15 to 64 -year-olds never exceeded 71%. Ambitious policy goals are not a problem in

themselves, but may become a problem if fiscal policy goals are tied to reaching the employment rate target. Then not reaching the employment target would also imply not reaching the deficit and debt targets.

The government has taken several policy measures in order to reach its employment goals. The government has actively promoted a cost competitiveness package to improve the competitiveness of export industries. Most labour market organizations negotiated contracts compatible with this package in June 2016. The government has launched an entrepreneurship programme that would encourage hiring in small firms and has already lowered taxes for some entrepreneurs. The unemployment insurance system has been reformed from the start of 2017. The pension reform that based on earlier decisions is also projected to increase employment by raising the retirement age and improving incentives for part-time work after retirement.

These employment-promoting policies aim to increase both the demand for and supply of labour. Even though unemployment is still high, supply-related policies are well motivated. As demonstrated in this report, bringing the unemployment rate down to current estimates of the structural rate would not be sufficient to reach the employment rate targets. Hence encouraging labour supply is also required in order to meet the policy goals.

The government's estimates of the competitiveness pact are too optimistic

The Council supports the policy goals of the government but is somewhat sceptical on the likelihood of the chosen policies being sufficient to meet the targets. In particular, we consider the estimates of the effects of the competitiveness package to be overly optimistic. The package aims at lowering the cost of labour in order to boost exports and labour demand. The employment effects of the package depend on two factors: the magnitude of the decrease in labour costs and the responsiveness of employment to the cost of labour. We argued in our previous report that mandated decreases in employee benefits are unlikely to result in the targeted labour cost reductions in the medium term as employees or their unions will demand compensation for the loss of benefits and will be successful in at least some sectors. A cost reduction based on a broad agreement that was negotiated between labour market organizations is more likely to reach the target. Shifting the burden of payroll taxation is simply one way of achieving a reduction in the labour costs when nominal wages are downward rigid. However, even in

this case, impact on the labour costs is likely to be temporary. In the long run wages are determined by the supply of and demand for labour.

Using macro estimates on labour demand elasticity in policy analysis is problematic

The Council is still critical towards estimates that the government is using to assess the effect of labour costs on employment (the elasticity of labour demand). The estimates used by the government are based on macroeconomic relationships between average wages and employment. In the report we list several problems associated with the procedure used to assess this elasticity, and we show that small and well-motivated changes in the approach can lead to widely different assessments.

Moreover, a summary of studies – mostly based on experiences from the Nordic countries – shows that even though a decrease in the cost of labour has a significant positive effect on employment, the magnitude of it is well below what is assumed by the government in its assessment of the effects of the cost competitiveness pact. This suggests that the employment effect of the cost competitiveness package will be much smaller than the government estimates. At the same time this implies that the effect of the cost competiveness package on public finances will be substantially negative: increased tax revenue due to improvements in employment will fall short of the loss in tax revenue due to the income tax cuts the government implemented to encourage the labour market organizations to reach an agreement.

Tighter rules in unemployment insurance

The maximum duration of unemployment benefits will be 100 days shorter than previously from the beginning of 2017. Unemployed persons are also required to attend regular meetings with their caseworkers and accept jobs further away from their home even if the wage in the new job is lower than unemployment benefits. This reform is the most significant tightening of unemployment benefits in 15 years.

Unemployment benefits are valuable in providing insurance against the risk of job loss. At the same time better insurance weakens the incentives to search for and accept available jobs. Optimally designed unemployment insurance would attempt to find a balance between consumption-smoothing

benefits and adverse incentive effects and take into account the budget constraints.

Theoretical literature on unemployment insurance provides little guidance in setting the level or duration of unemployment benefits. Existing studies also disagree on whether benefits should decrease or increase with the duration of an unemployment spell. On the other hand, theoretical results imply that the level and duration of benefits should probably depend on the unemployment rate so that benefits would be more generous when unemployment is high and when the search effort has less effect on job-finding rates. An optimal insurance system also includes monitoring, guidance and sanctions so that monetary incentives are not the only incentives to search for work. Therefore an unconditional basic income would not in general be an optimal unemployment benefit system. There is also a good case of making unemployment insurance compulsory social insurance instead of being based on voluntary fund membership.

The maximum duration of unemployment insurance is comparatively long in Finland. Shortening the maximum duration of benefits is likely to shorten unemployment spells and thereby increase employment. The calculations attached to this report indicate that the employment effect of benefit reform might even slightly exceed the government's estimates.

The wage-setting system in Finland has not fared well in its first real test under the common currency

Another major policy initiative of the current government has been to reform the wage negotiation system. In Finland wage negotiations have historically been highly centralized. Trade union confederations and employers' organizations have had a major role in the negotiations even if the actual union contracts have always been made between individual unions and the corresponding employer organizations.

The track record of the centralized wage bargaining system was reasonably good in the past. However, the system has come in for increasing criticism in recent years and the employers' associations have decided to stop participating in central bargaining.

Any wage negotiation system faces three challenges: 1) How to coordinate wage changes at the aggregate level so that wage growth roughly follows

changes in productivity and cost-competitiveness is maintained? 2) How to adjust relative wages? and 3) How to create sufficient flexibility at the level of individual workers and firms?

The Finnish wage negotiation system may have failed in all three dimensions after the 2009 crisis. The cost-competitiveness of Finnish industries has been declining. This is partially due to the large shocks Finland experienced as profits and output declined in the ICT sector and forest industries. However, wages have grown after 2011 equally rapidly as in the other Eurozone countries even though unemployment has simultaneously increased by more than in the Eurozone. At least at the macro level, wages have not been very responsive to changes in unemployment. Low inflation makes this adjustment even more difficult. As we demonstrate in the report, nominal wage rigidities have hampered wage adjustment in the crisis years.

A centralized system has made changing relative wages difficult

A centralized system may also make adjusting relative wages difficult. Differences in productivity across sectors of the economy have been one of the main arguments for moving away from centralized agreements. However, industry-level bargaining may not solve the issue either. Attempts to increase relative wages in some sector (e.g. health) can lead to compensating wage demands in other sectors and eventually to roughly equal wage increases in all sectors and to wage increases that are too high compared to the changes in productivity. In fact, the adjustment of relative wages is one of the key problems discussed in the Swedish wage-setting system, which is often cited as an example pointing the way for the Finnish system. As long as wage negotiations are coordinated and the bargaining outcome has a major impact on actual wages, it is difficult to reach an agreement that would generate higher wages for some particular groups.

Will greater local flexibility be achieved?

Finally, the system has been criticized for insufficient local flexibility. Due to the automatic extension of union contracts, roughly 95% of the workers are affected by the bargaining outcomes irrespective of whether they are union members or whether their employers belong to an employers' association. This automatic extension of union contracts - combined with high union membership - is the cornerstone of the Finnish labour market system, and despite occasional pressures it is unlikely to be changed. However, increas-

ing the options for deviating from a union contract is one of the key goals of the current government. A disagreement on the status of worker representatives already halted plans to extend existing options in union contracts to small employers that do not belong to employers' organizations. However, an escape clause that allows deviations from the terms of union contracts by local agreements in cases where the employer faces major economic problems was added to most contracts in June 2016.

At the time of writing this report the outcome of the process of developing a new wage-setting system - the Finnish model - is still highly uncertain. In response to a government request the labour market organizations issued a joint statement in March 2016 according to which they will develop a system where "labour market contracts will support the competitiveness of industries exposed to international competition, support long-term employment and productivity growth and strengthen the public sector fiscal balance". However, no concrete plans exist on how this would be achieved in practice. It may be that in future export industries will lead the bargaining rounds and attempt to reach a contract based on assessments of competitiveness in these sectors. It is an open question whether other sectors would then simply agree on similar wage increases or whether there should be a mechanism to allow differential wage developments in different sectors. It is also far from clear what the role of local bargaining should be and to what extent market forces should affect relative wage growth across firms in this system.

More flexibility in terms of local wage-setting and labour mobility

Making wage-setting more localized is likely to increase wage flexibility. Currently firms facing difficulties have had to adjust their total wage bill by cutting jobs. Much wider adoption of hardship clauses, especially if combined with employment guarantees by employers, would contribute towards allowing firms facing temporary difficulties to have more flexible ways of adjustment. In the Council's view, this would not shift entrepreneurial risk more on to the workers, since the present situation with a "corner solution" that makes labour input bear the brunt of adjustments does not seem appropriate.

The Finnish labour market is also affected by mismatches in regional labour markets: many unemployed persons currently reside in areas where it is difficult for them to find jobs. According to calculations commissioned by the

Council, only approximately 5% of individuals who ended up unemployed have migrated to another NUTS-3 level region within two years of their unemployment spell. If unemployed persons moved more often than others, the economy would benefit from greater regional mobility. Success in achieving this is unlikely to be rapid – it is necessary to increase the supply of housing in growing areas, for instance – but some measures could be taken already now. In addition to the moving subsidy introduced this year, further increases in the job-search area could be considered, at least for younger or single unemployed persons.

Relatively high wages with low skills may hamper job market prospects

In Finland the distribution of wages is relatively narrow, especially at the lower end of the distribution. The lowest wages negotiated in various sectors are also fairly binding in the sense that many workers in low-wage sectors such as retail and cleaning earn wages that are just above the minimum wage. A survey of careful econometric work on the impacts of minimum wages reveals that they seem to have only very small effects on the employment of the groups affected, but increasing minimum wages from current levels may reduce employment. It is also conceivable that minimum wages hurt the employment prospects of particularly vulnerable groups.

Currently, the Finnish labour market contracts allow trainees to be paid lower wages. Given the particularly problematic situation of low-skill job seekers, and because of the need to integrate migrants better into the labour market, it would make sense to allow greater usage of temporarily lower wages for such groups. At the same time, efforts to improve the skill level of these people e.g. via more active vocational training should be intensified. Also the social security framework should be adapted to make it possible to work in jobs with lower than minimum wage.

1.2 Yhteenveto

Taloustilanne: Paluu normaalikasvuun ei riitä työllisyystavoitteen saavuttamiseen

Suomen taloudessa on vihdoin merkkejä talouskasvun elpymisestä. Suomen talous on jättänyt taantuma-ajan taakseen ja edessä on sopeutuminen uuteen normaaliin. Bruttokansantuote kasvoi vuonna 2016 arviolta 1,5 %. Useimpien talousennusteiden perusteella vuosien 2017 ja 2018 talouskasvu on noin yhden prosentin luokkaa. Päättyneenä vuonna kasvu on ollut voimakkainta rakennusteollisuudessa, joka kasvoi lähes 8 %. Myös telakka-, auto- ja metsäteollisuudesta on vuoden aikana kantautunut hyviä uutisia. Talouskasvun käynnistymisestä huolimatta pitkän aikavälin kasvunäkymät ovat edelleen vaimeita. Useimmat ennusteiden tekijät arvioivat talouskasvun pysyttelevän noin yhdessä prosentissa seuraavan 20 vuoden ajan.

Hidas talouskasvu on luonnollisesti heijastunut myös työllisyys- ja työttömyysasteisiin. Vuodesta 2012 jatkuneen laskun jälkeen työllisyysaste kääntyi kuitenkin nousuun vuoden 2016 alussa. 15–64 -vuotiaiden kausitasoitettu työllisyysaste oli marraskuussa 68,8 prosenttia. Viimeisten ennusteiden mukaan hallituskauden lopussa vuonna 2019 työllisyysaste kohoaa 69,7 prosenttiin. Hallituksen asettaman 72 % työllisyystavoitteen saavuttaminen näyttää siten erittäin epätodennäköiseltä. Pelkästään työttömyyden aleneminen rakenteellisen työttömyyden tasolle ei tavoitteen saavuttamiseen riittäisi vaan tähän tarvittaisiin myös rakenteellisen työttömyyden laskua ja työvoiman tarjonnan kasvua.

Vuodesta 2011 lähtien kohonnut työttömyysaste saavutti huippunsa vuonna 2015, minkä jälkeen alkanut hidas työttömyyden lasku on jatkunut myös vuonna 2016. Valtiovarainministeriön ennuste vuoden 2016 työttömyysasteeksi on 9,0 %. Ennusteen mukaan työttömyysaste laskee 8,1 prosenttiin vuoteen 2019 mennessä. Työttömyyden kasvun myötä myös pitkäaikaistyöttömien osuus on kasvanut. Vuoden 2016 marraskuussa 37 % työttömistä oli ollut yli vuoden työttömänä. Pitkäaikaistyöttömyyden kasvu on luonnollinen seuraus pitkittyneestä taantumasta, mutta merkitsee myös sitä, että työttömyys tullee laskemaan hitaasti vaikka työvoiman kysyntä alkaisi kasvaa. Toinen merkillepantava seikka työmarkkinoilla on ero työttömiksi

työnhakijoiksi rekisteröityneiden ja työvoimatutkimuksessa aktiivisiksi työnhakijoiksi tilastoituvien lukumäärissä. Kasvava osa työttömistä on luopunut aktiivisesta työnhausta, jolloin työvoimatutkimuksen luvut aktiivisesti työtä etsivistä työttömistä eivät enää tarjoa kokonaiskuvaa työttömyysongelman suuruudesta.

Finanssipolitiikan tavoitteita ei tulla saavuttamaan

Pitkittyneellä taantumalla on ollut vakavia vaikutuksia julkiseen talouteen. Nykyisen ja edellisen hallituksen menoleikkauksista huolimatta julkinen velka on kasvanut nopeasti. Vuonna 2008 julkisen sektorin bruttovelka oli 32,7 % suhteessa kokonaistuotantoon. Vuonna 2016 julkisen sektorin velka on kasvanut jo noin 64,3 prosenttiin. Velkaantumisen kasvu jatkuu edelleen. Vuonna 2016 julkisyhteisöjen rahoitusalijäämä oli 2,4 % suhteessa BKT:hen.

Vuonna 2017 julkisen talouden alijäämän ennakoidaan kasvavan kilpailukykysopimukseen liittyneiden veronalennusten seurauksena. Suhdanteiden vaikutuksesta puhdistettu julkisen sektorin rakenteellinen alijäämä oli vuonna 2016 1,2 % suhteessa bruttokansantuotteeseen. Vuonna 2017 sen ennakoidaan kasvavan 1,6 prosenttiin. Rakenteellisen alijäämän arvioidaan olevan vuonna 2019 vielä 1,1 % suhteessa bruttokansantuotteeseen.

Suomi tulee todennäköisesti noudattamaan lähivuosina EU:n vakaus- ja kasvusopimuksen 3 %:n alijäämäsääntöä, mutta velan 60 %:n kynnysarvo on jo ylittynyt. Tätä huolestuttavampaa on, että mitä todennäköisimmin Suomi ei saavuta rakenteelliselle alijäämälle asetettua keskipitkän aikavälin tavoitetta (MTO). Vielä epätodennäköisempää on saavuttaa julkisen talouden suunnitelmassa asetettu rahoitusasematavoite, jonka mukaan julkinen talous olisi tasapainossa vuonna 2019.

Keväällä 2016 julkaistussa julkisen talouden suunnitelmassa Suomen hallitus on asettanut rakenteelliselle alijäämälle tavoitteen jonka mukaan se saa olla enintään 0,5 % suhteessa bruttokansantuotteeseen. Ennusteiden mukaan julkisyhteisöjen rakenteellinen alijäämä pysyy kuitenkin tätä merkittävästi suurempana vuoteen 2020 saakka. Rakenteellista alijäämää koskevan tavoitteen saavuttaminen vuonna 2019 vaatisi julkisyhteisöjen rahoitusaseman kohentamista noin 1,3 miljardilla eurolla. Jotta hallituksen oma tavoite julkisen talouden tasapainosta saavutettaisiin, tulisi julkisen sektorin tuloja kasvattaa tai menoja pienentää tämän lisäksi vielä 1,1 miljardilla eurolla.

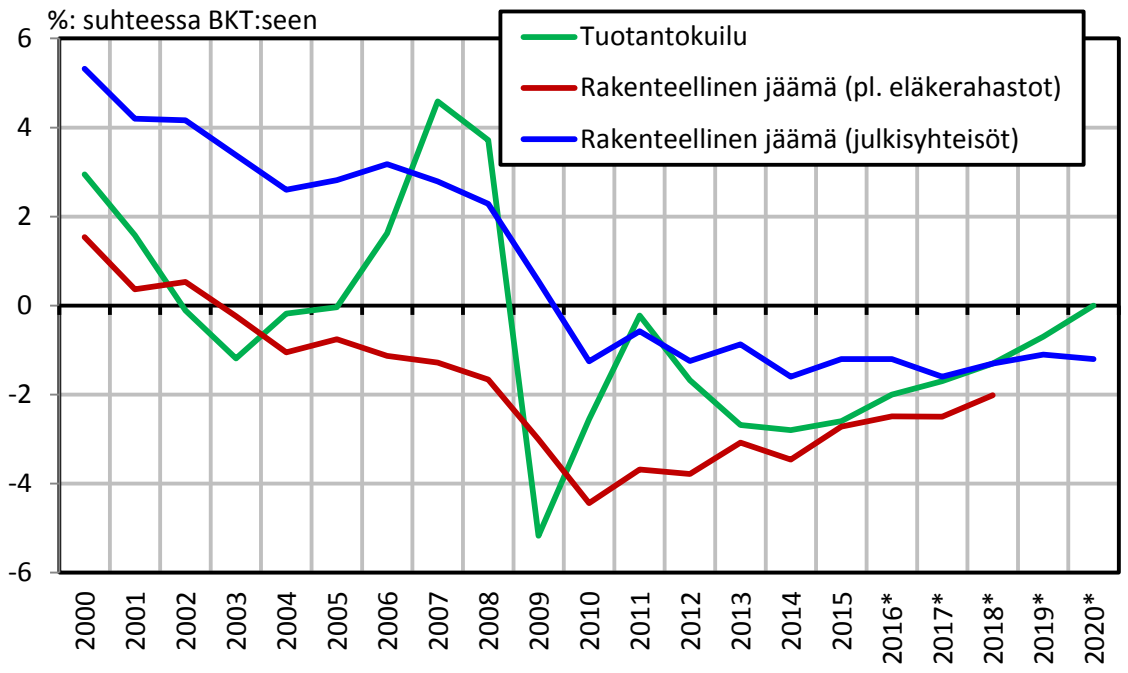
Hallitus toteaa keväällä 2016 julkaistussa julkisen talouden suunnitelmassa, että finanssipoliittisten tavoitteiden saavuttamiseen johtavaa uraa ei voida tällä hetkellä esittää. Julkisen talouden suunnitelman mukaan hallituksen toimet, joilla varmistetaan kilpailukykysopimuksen julkista taloutta kohentavien vaikutusten toteutuminen hallitusohjelmassa tavoitteeksi asetetussa mitassa, sekä julkisen talouden hoitoon kohdistuvat uudistukset, erityisesti sote- ja aluehallintouudistus, ovat vielä täsmentymättä.

Arviointineuvosto huomauttaa kuitenkin, että nämä hallinnolliset uudistukset eivät ehdi vaikuttaa julkisen talouden tasapainoon vuoteen 2019 mennessä. Hallituksen jo päättämien työllisyyttä ja kasvua tukevien uudistusten vaikutusarviot ovat jo mukana vuotta 2019 koskevissa ennusteissa. Ilman uusia toimenpiteitä on epätodennäköistä, että työllisyys ja veropohja kasvaisivat niin voimakkaasti, että se riittäisi finanssipoliittisten tavoitteiden saavuttamiseen. Mikäli näihin tavoitteisiin edelleen pyritään, hallituksen tulisikin pikaisesti luoda yksityiskohtainen ja toteutettavissa oleva suunnitelma julkisen talouden sopeutukselle kohti asettamiaan tavoitteita. Uskottava ja perusteltu suunnitelma auttaisi myös sitoutumista pitkäjänteiseen finanssipolitiikkaan.

Myös finanssipolitiikan tavoitteiden mitoitusta voidaan kritisoida. Kuten totesimme vuoden 2015 raportissa, finanssipolitiikan keskipitkän aikavälin tavoitteet tulisi johtaa pitkän aikavälin tavoitteista ja asettaa tasolle, joka turvaa julkisen talouden kestävyyden pitkällä aikavälillä. Tekeillä olevilla sosiaali- ja terveydenhuoltosektoria koskevilla uudistuksilla pyritään pitkän aikavälin menokasvua rajoittamaan. Vaikka nämä uudistukset onnistuttaisiin tavoitteiden mukaisesti toteuttamaan, pitäisi finanssipoliittiset tavoitteet asettaa jonkin verran nykyistä kireämmiksi, jotta ne olisivat sopusoinnussa pitkän aikavälin julkisen talouden kestävyyden kanssa.

Vakaus- ja kasvusopimuksen mukainen tavoite rakenteelliselle alijäämälle koskee koko julkista sektoria, johon Suomessa lasketaan valtion ja kuntien lisäksi myös työeläkerahastot. Työeläkeyhtiöt ovat keränneet tulevaisuudessa kasvavia eläkemenoja varten varoja rahastoihin ja työeläkerahastot ovat tästä johtuen olleet selvästi ylijäämäisiä. Ilman työeläkerahastoja Suomen julkisen talouden alijäämä olisi merkittävästi suurempi. Valtion ja kuntasektorin yhteenlaskettu rakenteellinen alijäämä on edelleen noin 2,5 prosenttia suhteessa bruttokansatuotteeseen.

Kuvio 1.1: Eläkerahastojen vaikutus rakenteelliseen jäämään



Lähteet: Tiedot Tilastokeskus ja Valtiovarainministeriö (Taloudellinen katsaus, syksy 2016) sekä arviointineuvoston laskelmat.

Julkisen talouden kestävyys vaatisi nopeampaa sopeutusta seuraavien vuosien aikana

Finanssipolitiikan tavoitteista lipsuminen on ongelmallista lähinnä julkisen talouden pitkän aikavälin kestävyyden kannalta. Väestön ikääntymisen seurauksena eläke- ja terveydenhuoltomenot kasvavat seuraavien 20 vuoden aikana. Tämänhetkisten arvioiden mukaan julkisen talouden kestävyysvaje on noin 3 % suhteessa bruttokansantuotteeseen. Nykyarvion mukaan julkisen talouden pitkän aikavälin tulot ja menot olisivat siis tasapainossa, jos julkisen talouden rahoitusasemaa kohennettaisiin välittömästi ja pysyvästi 3 prosentilla suhteessa BKT:hen.

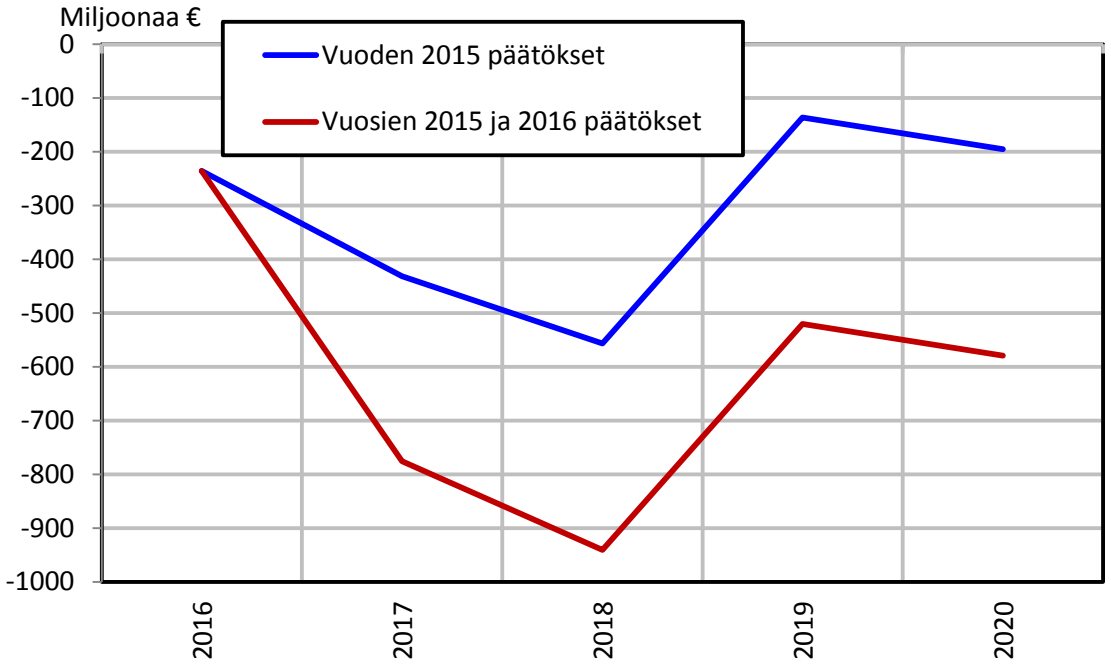
Hallitusohjelmansa mukaan hallitus pyrkii saavuttamaan finanssipoliittiset tavoitteensa vuoteen 2019 mennessä kohentamalla asteittain julkisen talouden rahoitusasemaa sekä toimeenpanemalla rakenneuudistuksia. Tavoite alijäämän supistamisesta asteittain on järkevä kompromissi pitkän aikavälin kestävyysongelman ja lyhyen aikavälin suhdanneongelmien välillä.

Edellisissä raporteissaan arviointineuvosto on korostanut tarvetta sellaiselle finanssipolitiikalle, joka varmistaisi julkisen talouden kestävyyden ja haittaisi silti mahdollisimman vähän kansantalouden kasvua lyhyellä aikavälillä.

Taantuman aikana tehdyllä finanssipolitiikan tiukentamisella voi olla pitkäkestoisia negatiivisia vaikutuksia talouskasvuun. Onkin perusteltua välttää julkisen talouden välitöntä tiukentamista. Julkisen talouden kestävyysvajeen vuoksi finanssipolitiikan tiukentaminen kuitenkin on välttämätöntä tulevina vuosina - kysymys ei ole sopeutustoimien tarpeellisuudesta vaan niiden ajankohdasta ja kohdentamisesta. Hallituksen vähitellen kiristyvä finanssipolittinen linja on järkevä kompromissi eri suuntaisten tarpeiden välillä.

Vaikka arviointineuvosto pitää hallituksen finanssipoliittisia tavoitteita oikeansuuntaisina, ohjelman täytäntöön panossa on kritisoitavaa. Arviointineuvosto huomautti jo eduskunnan valtiovarainvaliokunnalle antamassaan lausunnossa hallituksen jäävän tavoitteistaan. Vuonna 2017 julkisen talouden rahoitusaseman ennustetaan heikentyvän sekä nimellisesti että suhdannevaihtelut huomioon ottaen. Merkittävin vaikutus finanssipolitiikan linjan muutokseen on ollut kustannuskilpailukyvyn parantamiseksi tehtyyn sopimukseen liittyvillä verohelpotuksilla. Hallituksen nykyisen suunnitelman mukaan sopeutusuralle palataan vuoden 2017 jälkeen. Vuodelle 2017 toteutetut veroleikkaukset kasvattavat kuitenkin entisestään kestävyysvajetta ja lisäävät tarvetta sopeutustoimille tulevina vuosina, mikäli työvoimakustannusten pienentyminen ja verotuksen madaltaminen eivät lisää työllisyyttä odotettua enemmän.

Kuvio 1.2: Veromuutosten vaikutus valtiontalouden tasapainoon



Lähteet: Valtiovarainministeriö ja arviointineuvoston laskelmat.

Matala korkotaso pienentää eläkesäästöjen tuottoa kasvattaen kestävyysvajetta

Yleinen korkotaso on poikkeuksellisen matala ja korkojen odotetaan pysyvän matalana vielä useita vuosia. Matala tai jopa negatiivinen korkotaso alentaa korkokustannuksia ja siten tekee julkisista investoinneista entistä kannattavampia. Voisi siis olla viisasta rahoittaa julkisia investointeja lainarahalla, mikäli tulevat hyödyt ylittävät korkokulut.

On kuitenkin huomioitava kaksi ongelmaa. Ensiksi, rajanveto julkisen kulutuksen ja investointien välillä on usein määrittelykysymys. Investoinnit, jotka kasvattavat pysyvästi julkisia menoja ilman, että niillä on vastaavaa vaikutusta julkisen sektorin tuloihin heikentävät julkisen talouden rahoitusasemaa, vaikka ne olisivat kokonaistaloudellisilta vaikutuksiltaan kannattavia.

Toiseksi alhainen korkotaso pienentää julkisen talouden korkomenojen lisäksi julkisen sektorin tuloja. Julkisyhteisöjen osaksi laskettavien eläkerahastojen sijoitusten tuotot ovat laskeneet korkotason laskun myötä, mikä vaikeuttaa tulevina vuosina kasvavien eläkemenojen kattamista. Koska Suomen julkisyhteisöjen yhteenlaskettu rahoitusvarallisuus on julkisen sektorin bruttovelkaa suurempi, korkotason ja sijoitustuottojen lasku heikentää julkisen talouden pitkän aikavälin kestävyyttä.

Taulukko 1.1: Kestävyysvajearvion herkkyys laskelman taustaoletuksille.

	Baseline scenario, %	Change in assumptions	Impact on the sustainability gap
Reaalikorko / eläkerahastojen reaalituotto	3.0 / 3.5	+ 1.0 %-yks. – 1.0 %-yks.	– 0.66 %-yks. + 0.77 %-yks.
Tuottavuuden kasvu	1.5	+ 1.0 %-yks. – 1.0 %-yks.	– 0.57 %-yks. + 0.68 %-yks.
Työllisyysaste	71,7 Vuodesta 2060 lähtien	+ 1.0 %-yks. – 1.0 %-yks. 72 % vuonna 2025	– 0.41 %-yks. + 0.42 %-yks. – 0.53 %-yks.

Suomen työllisyystilanne heikompi kuin monissa muissa Euroopan maissa

Yksi hallituksen työmarkkinauudistuksen tavoitteista on kasvattaa vuotuista säännöllistä työaikaa 24 tunnilla. Tavoitteen arvioimiseksi tässä raportissa esitetään työtunteja ja työllisyyttä koskeva kansainvälinen vertailu. Tulokset

osoittavat, että Suomessa 15–74 -vuotiaiden työllisyysaste (60% vuonna 2014) oli vertailumaista (Tanska, Ranska, Saksa, Alankomaat, Ruotsi, Yhdysvallat ja Yhdistyneet kuningaskunnat) toiseksi alhaisin. Suomen työllisyysaste oli vuonna 2014 yhtä korkea kuin vuonna 1999.

Suomessa osa-aikatyö on verrattain harvinaista. Työtunnit työssäkäyvää kohden ovat vertailun keskitasoa ja säännöllistä työaikaa tekevien työpäivät lyhyempiä kuin muissa maissa. Hallituksen tavoite työajan pidentämisestä on tilastojen valossa perusteltu, mutta pidennyksen mittaluokka voidaan pitää vähäisenä. Vaikka osa-aikatyö on Suomessa harvinaista, niiden työntekijöiden osuus, jotka haluaisivat tehdä enemmän työtä, ns. vastentahtoistenosa-aikatyöntekijöiden, on korkea suhteessa vertailumaihin. Tällä perusteella arviointineuvosto katsoo, että Suomen työmarkkinat voisivat hyötyä niistä toimista, joilla muissa maissa on pystytty parantamaan osa-aikatyön tarjonnan ja kysynnän kohtaantoa.

Työllisyystilanne on erityisen heikko ryhmissä, joiden koulutustaso on matala. Ilman toisen asteen koulutusta jääneiden 15–74 -vuotiaiden keskimääräinen vuosityöaika on alle 500 tuntia, kun taas muiden samanikäisten työtunnit per työikäinen väestö on yli tuhat tuntia vuodessa. Matalasti koulutetun ryhmän työllisyysaste on Suomessa noin 30 %. Molemmat tunnusluvut ovat alhaisimmat luvun 4 kansainvälisessä vertailussa. Myös PIAAC:n (Programme for International Assessment of Adult Competencies) kansainvälisen aikuisväestön taitokartoituksen mukaan, matalimman taitotason omaavien työllistyminen on Suomessa erityisen ongelmallista. Täten alimman koulutustason verrattain alhainen työllisyysaste ei selity maiden välisillä mahdollisilla eroilla koulutuksen tilastoinnissa. Matalan koulutus- ja taitotason omaavien huonon työmarkkinatilanteen vaikutusten mittaluokkaa pienentää tosin ryhmän pieni osuus koko työvoimasta.

Työllisyyden lisääminen on perustellusti hallituksen keskeinen tavoite

Työllisyysasteen kohottaminen on hallituksen talouspolitiikan keskeinen tavoite. Työllisyysasteen kohottaminen olisi tärkeää myös hallituksen muiden talouspoliittisten tavoitteiden saavuttamisen ja julkisen talouden pitkän aikavälin kestävyyden turvaamisen kannalta. Raportissa esitettyjen laskelmien mukaan yhden prosenttiyksikön suurempi työllisyysaste pienentäisi kestävyysvajetta 0,4 prosenttiyksiköllä.

Hallituksen 72 prosentin työllisyystavoite on kunnianhimoinen. Työllisyysaste ei ole ollut tavoitteen mukaisella tasolla kertaakaan vuoden 1990 jälkeen. Edes 2000-luvun huippuvuosina 15–64 -vuotiaiden työllisyysaste ei ylittänyt 71 %:n tasoa. Kunnianhimoiset tavoitteet eivät itsessään ole ongelmallisia. Talouspolitiikan onnistumisen kannalta voi kuitenkin muodostua ongelmia, jos muiden tavoitteiden toteutuminen perustuu epärealistisen kunnianhimoisen työllisyystavoitteen saavuttamiseen. Tällöin työllisyystavoitteen jääminen saavuttamatta merkitse myös julkisen talouden tasapainotavoitteen rikkoutumista.

Hallitus on toimeenpannut useita merkittäviä uudistuksia työllisyystavoitteensa saavuttamiseksi. Se on aktiivisesti edistänyt kilpailukykypaketin syntymistä. Tavoitteena on ollut parantaa ennen kaikkea vientiteollisuuden kilpailukykyä. Useimmat työmarkkinajärjestöt solmivat kilpailukykypaketin mukaiset työehtosopimukset kesäkuussa 2016. Lisäksi hallitus on koonnut yrittäjyyspaketin, jonka tarkoitus on tukea pienyritysten työllistämismahdollisuuksia ja on jo laskenut ei-osakeyhtiömuotoisten yritysten verotusta. Työttömyysturvajärjestelmää uudistetaan vuoden 2017 alusta lähtien. Myös jo aikaisempiin päätöksiin perustuvan eläkeuudistuksen ennakoidaan tukevan työllisyyttä nostamalla eläkkeelle siirtymisikää ja kannustamalla jatkamaan osa-aikaista työntekoa myös eläkkeelle siirtymisen jälkeen.

Edellä mainituilla toimilla pyritään lisäämään sekä työn tarjontaa että työn kysyntää. Vaikka työttömyysaste on edelleen korkea, ovat työn tarjontaa kasvattavat toimet perusteltuja. Tässä raportissa esitetyt laskelmat osoittavat, että työttömyysasteen lasku rakenteellisen työttömyyden tasolle ei riitä tavoitellun työllisyysasteen saavuttamiseen. Työn tarjontaa kasvattavat uudistukset ovat siten tarpeen työllisyystavoitteen saavuttamiseksi.

Hallituksen arviot kilpailukykysopimuksen työllisyysvaikutuksista liian optimistisia

Arviointineuvosto pitää arvioita kilpailukykysopimuksen vaikutuksista ylioptimistisina. Sopimuksen tarkoituksena on madaltaa työvoimakustannuksia tavalla, joka kasvattaisi vientiä ja lisäisi työllisyyttä. Kilpailukykysopimuksen työllisyysvaikutukset riippuvat kahdesta seikasta: työvoimakustannusten laskun suuruudesta ja työvoimakustannusten muutosten vaikutuksesta työvoiman kysyntään.

Edellisessä raportissaan arviointineuvosto katsoi, että sosiaaliturvamaksujen siirtäminen lakisääteisesti työnantajilta työntekijöille ei laske suunnitellulla tavalla työvoimakustannuksia, sillä työntekijät ja heitä edustavat työmarkkinajärjestöt tulevat vaatimaan kompensaatiota ansioiden laskulle. Ainakin aloilla, joilla työvoimasta on kysyntää nämä kompensaatiovaatimukset todennäköisesti johtaisivat ansiotason kasvuun. Pitkän aikavälin tasapainossa työnantajamaksujen nimellinen kohtaanto ei vaikuta työvoimakustannuksiin. Kilpailukykysopimus perustuu kattavaan työmarkkinasopimukseen, jolloin työvoimakustannusten lasku on todennäköisempää. Sosiaaliturvamaksujen siirtäminen työnantajilta työntekijöille on tässä järjestelmässä yksi tapa toteuttaa tavoiteltu työvoimakustannusten ja nettopalkkojen alennus, silloin kun nimellispalkat ovat jäykkiä alaspäin. Tässäkin tapauksessa työnantajamaksun nimellisen kohtaannon muutoksilla on vain tilapäinen vaikutus työvoimakustannuksiin. Pitkällä aikavälillä työvoimakustannuksen määräytyvät työvoiman kysynnän ja tarjonnan perusteella.

Makromalleihin perustuvien työvoiman kysyntäjoustoestimaattien käyttö työvoimakustannusten työllisyysvaikutusten mittaamisessa on ongelmallista

Arviointineuvosto suhtautuu edelleen kriittisesti hallituksen käyttämiin arvioihin työvoimakustannusten alenemisen vaikutuksesta työllisyyteen. Hallituksen arviot työn hinnan vaikutuksesta työn kysyntään perustuvat makrotaloudellisiin riippuvuussuhteisiin keskipalkan ja työllisyyden välillä. Nämä arviot eivät tuota estimaatteja, jotka voitaisiin tulkita työvoimakustannusten kausaalivaikutuksiksi työllisyyteen ja joita siten voitaisiin uskottavasti käyttää laskelmissa työvoimakustannuksia alentavan politiikan vaikutuksista työllisyyteen. Tässä raportissa havainnollistetaan yksityiskohtaisesti, miten pienet hyvin perustellut muutokset estimointimenetelmissä voivat johtaa merkittävästi erilaisiin, jopa positiivisiin, arvioihin työvoiman kysynnän hintajoustosta.

Mikroekonometriset tutkimukset, joissa voidaan arvioida vain rajattuun ryhmään kohdistuvan työvoimakustannusten muutosten vaikutuksia, voivat antaa luotettavampia arvioita työn kysynnän hintajoustosta. Jos esimerkiksi työvoimakustannusten muutos koskee vain jotakin ikäryhmää tai rajattua aluetta, voidaan muutoksen kohteena ollutta ryhmää vertailuryhmään, jonka työvoimakustannukset ovat pysyneet ennallaan. Jos ryhmät ovat muilta osin kyllin samanlaisia, voidaan ryhmien työllisyyskehitystä vertaamalla arvioida

mitä olisi tapahtunut kohderyhmälle ilman muutosta ja siten tuottaa arvio muutoksen vaikutuksesta työllisyyteen.

Tapauksia, joissa työvoimakustannukset muuttuvat vain rajatun ryhmän kohdalla, on luonnollisesti vähän, mikä rajoittaa mahdollisuuksia toteuttaa luotettavia mikroekonometrisia tutkimuksia. Lisäksi tällaiset koeluontoiset muutokset ovat usein väliaikaisia ja kokeiluja koskevien tulosten yleistäminen pysyvien muutosten vaikutusten arvioimiseen voi olla vaikeaa. Silti parhaat arviot työvoimakustannusten muutosten vaikutuksista työvoiman kysyntään saadaan tarkastelemalla tällaisia luonnollisia koetilanteita.

Tässä raportissa käymme läpi joukon työn kysyntää käsitteleviä eri Pohjoismaissa toteutettuja mikroekonometrisia tutkimuksia, joissa työvoimakustannusten vaikutusta työllisyyteen arvioidaan vain rajattua aluetta tai vain tiettyä ikäryhmää koskettaneita, työn verotuksen muutoksia analysoimalla. Useimpien tutkimusten mukaan työvoimakustannusten alentaminen on johtanut tilastollisesti merkitsevään työn kysynnän kasvuun. Muutoksen mittaluokka on kuitenkin ollut huomattavasti pienempi kuin ne arviot, joita hallitus käyttää kilpailukykysopimuksen vaikutusten ennakoinnissa.

Jos mikroekonometristen tutkimusten tuottamat arviot työn kysynnän herkkyydestä palkkakustannusten muutokselle ovat lähempänä totuutta kuin hallituksen käyttämät estimaatit, jää kilpailukykysopimuksen vaikutus työllisyyteen oleellisesti hallituksen arvioita pienemmäksi. Samalla kilpailukykysopimuksesta koituu julkiselle taloudelle huomattavasti arvioitua suurempia kustannuksia. Työllisyyden kasvaessa arvioitua vähemmän tuloverokannan kasvu ei riittäisi kompensoimaan tuloveroasteen laskua, jonka hallitus toteutti edesauttaakseen kilpailukykysopimuksen syntyä.

Työttömyysturvaan tiukemmat säännöt

Vuoden 2017 alussa voimaan tulleessa työttömyysturvauudistuksessa ansiosidonnaisen työttömyyspäivärahan enimmäiskestoa laskettiin 100 päivällä. Työttömien tulee myös osallistua työnhakuvalmennukseen, ottaa työtä vastaan entistä kauempaa asuinpaikastaan ja vaikka tarjottu palkka olisi ansiosidonnaista päivärahaa matalampi. Voimaan tullut uudistus merkitsee suurinta työttömyysturvan tiukennusta 15 vuoteen.

Työttömyysturvaa tarvitaan suojaamaan työntekijöitä työttömyyden aiheuttamilta ansiomenetyksiltä. Toisaalta parempi työttömyysturva vähentää ha-

lukkuutta uuden työpaikan etsimiseen ja vastaanottamiseen. Optimaalista työttömyysturvaa koskevassa kirjallisuudessa pyritään löytämään työttömyysturvan taso, joka parhaalla mahdollisella tavalla tasoittaa työttömyyden myötä aiheutuvaa kulutuksen laskua, mutta luo silti riittävät taloudelliset kannustimet työn vastaanottoon, eikä aiheuta julkiselle sektorille kohtuuttomia kustannuksia.

Työttömyysturvaa käsittelevä teoreettinen kirjallisuus antaa kuitenkin vain vähän viitteitä työttömyysturvan tason ja keston optimaaliseen valintaan. Teoreettiset tulokset ovat ristiriitaisia jopa sen suhteen pitäisikö työttömyysturvan tason laskea vai nousta työttömyyden pitkittyessä. Sen sijaan teoreettisten tutkimusten mukaan työttömyysturvan tason tulisi vaihdella yleisen työttömyysasteen mukaan. Työttömyysturvan tulisi olla korkeampi silloin, kun työttömyyttä on paljon eivätkä lisäpanostukset työn etsintään kasvata työn saannin todennäköisyyttä. Optimaalinen työttömyysturvajärjestelmä sisältää myös valvontaa, ohjausta ja tarpeen vaatiessa sanktioita, jotta rahalliset kannustimet eivät jäisi ainoiksi syiksi etsiä työtä. Tällä perusteella vastikkeeton perustulo ei ole optimaalinen työttömyysturvajärjestelmänä. Sen sijaan olisi hyviä syitä tehdä työttömyysturvajärjestelmästä pakollinen sosiaalivakuutus vapaaehtoisen työttömyyskassan jäsenyyteen perustuvan järjestelmän sijaan.

Ansiosidonnaisen työttömyysturvan enimmäispituus on Suomessa verrattain pitkä. Enimmäispituuden lyhennys johtaa todennäköisesti myös työttömyysjaksojen lyhentymiseen ja työllisyyden kasvuun. Tässä raportissa esitettyjen laskelmien mukaan työttömyysturvauudistuksen työllisyysvaikutukset voivat jopa ylittää hallituksen esittämät arviot.

Suomen työmarkkinajärjestelmä ei ole selviytynyt hyvin ensimmäisestä koettelemuksesta yhteisvaluutan aikana

Yksi hallituksen keskeisistä tavoitteista on palkkaneuvottelujärjestelmän kehittäminen. Suomessa työehtosopimukset ovat perinteisesti olleet hyvin keskitettyjä. Työnantaja- ja työntekijäjärjestöillä on ollut vahva rooli neuvotteluissa, vaikka työehtosopimukset olisi solmittu liittokohtaisesti.

Keskitetyillä ratkaisulla on päästy menneisyydessä hyviin tuloksiin. Viime vuosina järjestelmään on kuitenkin kohdistunut kasvavassa määrässä kritiikkiä ja työnantajajärjestöt ovat jo päättäneet vetäytyä keskitetyistä työmarkkinasopimuksista.

Neuvottelujärjestelmän kolme keskeistä haastetta ovat: 1) Kuinka yleisen palkkatason muutokset saadaan vastaamaan muutoksia työn tuottavuudessa ja kustannuskilpailukyvyssä suhteessa kilpailijamaihin? 2) Miten eri sektoreiden palkat asetetaan suhteessa toisiinsa? 3) Miten varmistetaan riittävä joustavuus yksittäisten yritysten ja työntekijöiden kohdalla?

Suomalainen työehtosopimusten neuvottelujärjestelmä ei ole onnistunut hyvin millään edellä mainituilla alueilla. Raportissa käsitellään tarkemmin suomalaisten yritysten kilpailukyvyn heikentymistä. Osittain kilpailukyvyn heikentyminen on seurausta ICT-sektorin tuotannon ja voittojen romahtamisesta sekä metsäteollisuuden vaikeuksista. Toisaalta Suomen palkkataso on noussut vuoden 2011 jälkeen yhtä nopeasti kuin muualla Euroopassa työttömyyden kasvusta huolimatta. Makrotasolla työttömyyden kasvu ei ole heijastunut palkkatasoon. Lisäksi vallitseva hidas inflaatio tekee kilpailukyvyn korjaamisen hankalaksi. Raportissa tuodaan esille, kuinka palkkajäykkyydet ovat hidastaneet palkkojen sopeutumista vallitsevaan taloustilanteeseen.

Talouden eri sektoreiden väliset tuottavuuserot ovat olleet keskeisiä argumentteja keskitettyä neuvottelujärjestelmää vastaan. Myöskään alakohtaiset neuvottelut eivät kuitenkaan välttämättä johtaisi suhteellisten palkkojen ja tuottavuuserojen sopeutumiseen. Suhteellisten palkkojen nousu joillain aloilla johtaa helposti vaatimuksiin vastaavista palkankorotuksista myös muilla aloilla ja lopulta lähes yhtä suuriin, mahdollisesti tuottavuuden kasvuvauhdin ylittäviin, palkankorotuksiin kaikilla aloilla. Ruotsissa vallitsevaan käytäntöön on usein viitattu esikuvana suomalaista neuvottelujärjestelmää kehitettäessä. Suhteellisten palkkojen sopeutuminen on kuitenkin keskeinen ongelma myös Ruotsin palkkasopimusjärjestelmässä. Palkkaneuvottelujen ollessa koordinoituja ja neuvottelutuloksen vaikutuksen todellisiin palkkoihin ollessa suuri, on hankala päästä lopputulokseen, jossa tiettyjen alojen palkkojen nousu olisi muita aloja nopeampaa.

Lisääntyykö paikallinen joustavuus?

Suomalaista neuvottelujärjestelmää on kritisoitu paikallisen joustavuuden puutteesta. Työehtosopimusten yleissitovuudesta johtuen noin 95 % työntekijöistä on neuvottelutulosten vaikutuspiirissä, riippumatta siitä kuuluvatko he ammattiliittoon tai kuuluuko heidän työnantajansa työnantajaliittoon. Työehtosopimusten yleissitovuus ja työntekijöiden kor-

kea järjestäytymisaste ovat suomalaisen neuvottelujärjestelmän kulmakiviä. Hallituksen tavoitteena on lisätä mahdollisuuksia yleissitovasta sopimuksesta poikkeamiseen paikallisesti. Neuvottelujärjestelmän muuttaminen on kuitenkin hankalaa. Esimerkiksi kiista järjestäytymättömien työntekijöiden edustuksesta keskeytti neuvottelutulokseen sisältyvien joustavuuselementtien laajentamisen kattamaan kaikkia työntekijöitä. Useimpiin työehtosopimuksiin lisättiin kuitenkin kesällä 2016 kriisilauseke, jonka mukaan yleissitovasta sopimuksesta voidaan poiketa paikallisesti sopien, mikäli työnantajayritys kohtaa vakavia taloudellisia vaikeuksia.

Tämän raportin kirjoitushetkellä ovat uuden neuvottelujärjestelmän, ns. Suomen mallin, kehitystyön tulokset vielä epävarmat. Maaliskuussa 2016 työmarkkinajärjestöt antoivat yhteisen julkilausuman, jonka mukaan ”työmarkkinaratkaisuilla tuetaan kansainväliselle kilpailulle alttiiden alojen kilpailukykyä, pitkäjänteisesti työllisyyttä, tuottavuuden kehitystä sekä julkisen talouden tasapainoa”. Todellisia suunnitelmia tämän varmistamiseen ei kuitenkaan ole esitetty. Todennäköisesti tulevaisuudessa vientiteollisuus avaa neuvottelukierroksen ja pyrkii ulkoisen kilpailukykynsä mukaiseen sopimukseen. Ei kuitenkaan ole selvää, noudattavatko muiden alojen palkankorotukset vientiteollisuuden palkankorotustasoa vai rakennettaisiinko järjestelmään mekanismeja, jotka johtaisivat aloittain eriytyvään palkkakehitykseen. Myös paikallisen sopimisen rooli tässä järjestelmässä on edelleen epäselvä eikä ole selvää missä määrin markkinavoimat vaikuttaisivat suhteelliseen palkkakehitykseen eri aloilla tai eri yrityksissä.

Lisää joustavuutta paikalliseen sopimiseen ja työvoiman liikkuvuuteen

Paikallinen sopiminen parantaisi työmarkkinoiden toimivuutta. Vaikeuksissa olevat yritykset joutuvat nykyisin karsimaan työvoimakustannuksiaan irtisanomalla tai lomauttamalla työntekijöitä. Taloudellisiin vaikeuksiin liittyvien joustavuusehtojen laajempi käyttö yhdistettynä työpaikan pysyvyyden takaamiseen lisäisi yritysten mahdollisuuksia sopeutua ohimeneviin ongelmiin. Arviointineuvoston näkemyksen mukaan tämä ei johtaisi yrittäjäriskin siirtoon työntekijälle, sillä nykyisin työntekijä kantaa riskiä työttömyysuhan takia.

Suomalaisilla työmarkkinoilla vallitsee myös alueellinen kohtaantoongelma; useat työttömät asuvat liian kaukana heille sopivista avoinna olevista työpaikoista. Arviointineuvoston tilaamien laskelmien mukaan vain

5 % työllistyneistä on muuttanut toiseen maakuntaan kahden edellisen vuoden aikana. Vaikka työttömät muuttavat maakuntien välillä useammin kuin työlliset, kansantalous hyötyisi työvoiman suuremmasta liikkuvuudesta alueiden välillä. Liikkuvuuden lisääminen on hidasta, sitä hankaloittavat mm. asuntopula kasvukaupungeissa. Joitain liikkuvuutta lisääviä toimia voidaan toteuttaa melko nopeasti. Voimassa olevan muuttoavustuksen lisäksi tulisi harkita myös työvoiman vastaanottoalueen laajentamista, ainakin nuorten ja perheettömien työttömien kohdalla.

Suhteellisen korkeat palkat vaikeuttavat työllisyysnäkymiä alimmalla taitotasolla

Suomessa palkkajakauma on varsin kapea, erityisesti matalapalkka-aloilla. Eri aloilla neuvotelluilla vähimmäispalkoilla on suuri vaikutus varsinkin matalapalkka-aloilla, sillä esimerkiksi kaupan alalla ja siivousalalla vähimmäispalkkaa tai juuri sitä suurempaa palkkaa ansaitsevien työntekijöiden osuus on suuri. Ekonometriset tutkimukset osoittavat, että minimipalkan tasolla on vain pieni vaikutus sitä ansaitsevan ryhmän työllisyyteen, mutta sen nosto hidastaa työntekijävirtoja. On myös mahdollista, että minimipalkan taso vahingoittaa erityisesti kaikkein haavoittuvimmassa asemassa olevien työllisyysmahdollisuuksia.

Voimassa olevat työehtosopimukset mahdollistavat vähimmäispalkkaa alemman palkan maksamisen harjoittelijoille. Alimman taitotason omaavien huonon työllisyystilanteen parantamiseksi ja maahanmuuttajien kotoutumisen edesauttamiseksi, olisi hyödyllistä sallia ko. ryhmille väliaikaisesti vähimmäispalkkaa matalammat palkat. Samalla näiden henkilöiden taitoja tulisi parantaa, esimerkiksi soveltavaa ammatillista koulutusta tehostamalla. Ongelmaksi jää kuitenkin tästä syntyvä paine toimeentulon järjestämiseksi riittävälle tasolle.

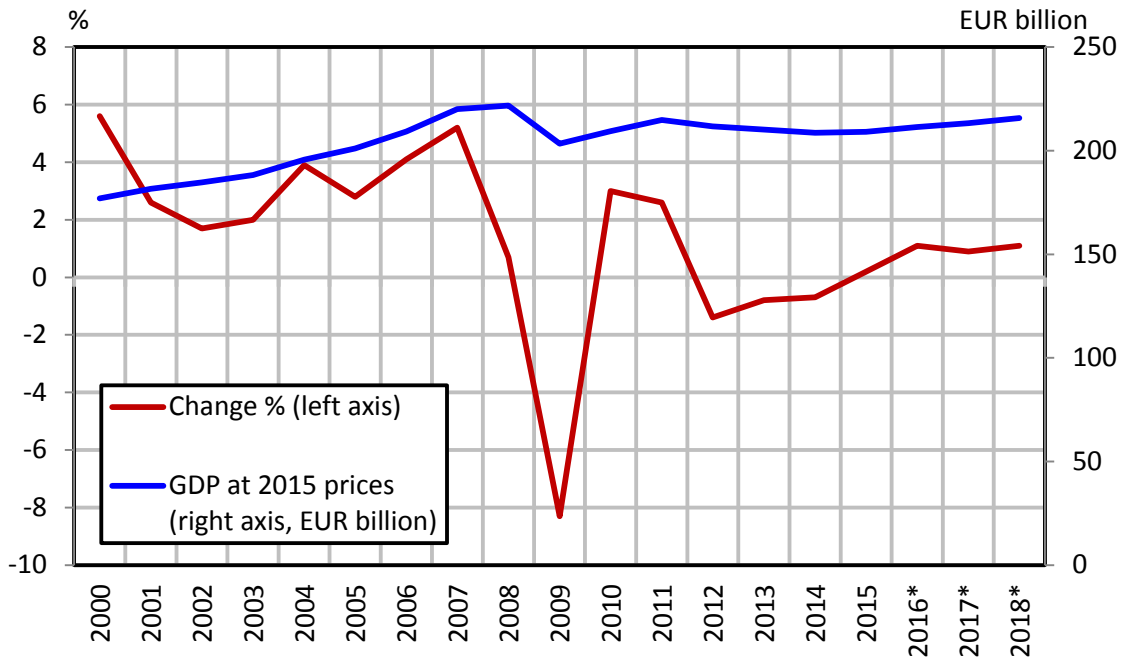
2 Recent economic developments and the labour market

2.1 The business cycle and the economic outlook

Since 2008 Finland has suffered from low or non-existent levels of economic growth. Figure 2.1.1 shows Finland's GDP and its growth rate in 2000–2015, and the predicted growth for 2016–2018. In 2015 GDP grew for the first time since 2011. In 2016 the growth rate will be just above one per cent, but is not expected to accelerate much above that in subsequent years. The slow recovery has had dire consequences for the labour market and public finances.

It is useful to differentiate between business cycle fluctuations around the output trend and trend growth itself. Trend growth is usually computed by estimating potential output over time. Potential output is determined by supply factors such as capital and labour inputs. Various methods are used to estimate potential output. Potential output is sometimes derived from actual output by statistical techniques (see p. 22-23 in Benassy-Quere et al. 2010). The International Monetary Fund (IMF)(see De Masi 1997) uses different techniques for different countries to calculate this.

Figure 2.1.1: Development of GDP

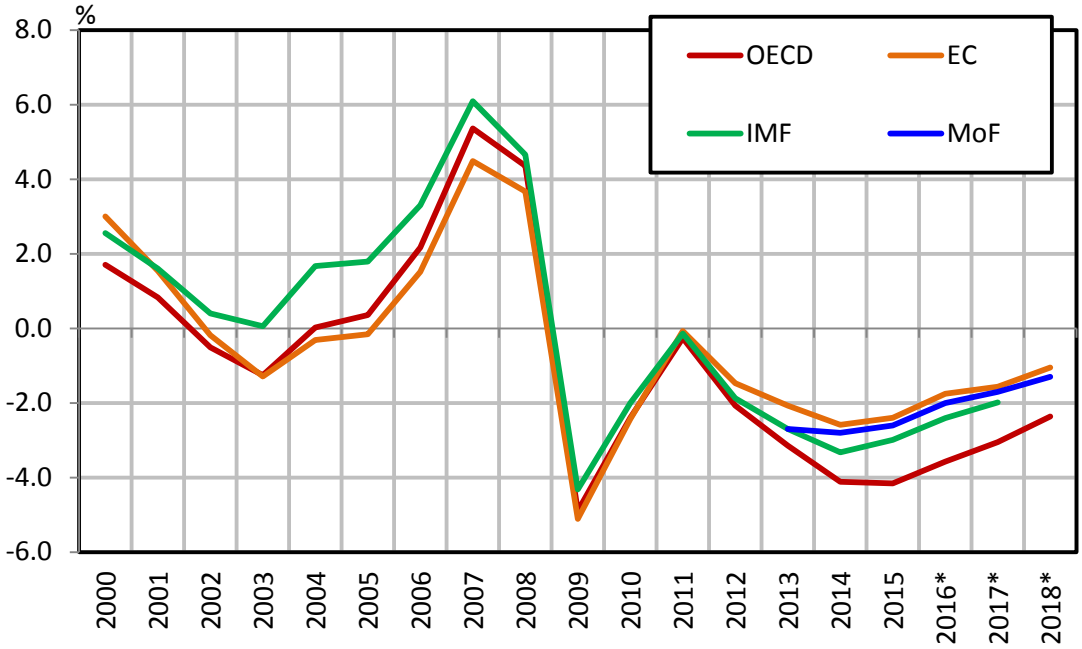


Source: Statistics Finland, National Accounts; Ministry of Finance (2016b)

Notes: * indicates forecast by the Ministry of Finance

The output gap measures the deviation of actual GDP from its potential level. A negative output gap indicates that the economy is performing below its potential capacity. Estimates of the output gap by various institutions (Ministry of Finance, European Commission, OECD and IMF) are shown in Figure 2.1.2. The gap has been negative from 2009 onwards. Estimates for the output gap in 2016 vary between -1.8% (EC) and -3.6% (OECD). The differences in these estimates highlight the fact that a great deal of uncertainty is involved in measuring the output gap. In addition, the methods to estimate the gap are not standardized. A negative gap indicates that Finland's economy is still suffering from a non-favourable business cycle.

Figure 2.1.2: Estimates of the output gap, 2000-2018 (%)



Source: OECD; International Monetary Fund; European Commission; Ministry of Finance (2016b)

The output gap is expected to close gradually. The consensus view among forecasters is that economic growth will be around 1% in 2017 and slightly higher in 2018, although these forecasts are associated with some uncertainty. The growth forecasts of various national bodies and international organizations are summarized in Table 2.1.1 The forecasts of these institutes are pretty much in line with each other. GDP growth is forecasted to be 0.8–1.2% in 2016 and remain between 0.8% - 1.4% in 2017 and 2018.

Table 2.1.1: Forecast GDP, change in volume (per cent)

	2016	2017	2018
Ministry of Finance (22 Dec 2016)	1.6	0.9	1.0
Bank of Finland (13 Dec 2016)	1.0	1.3	1.2
European Commission (9 Nov 2016)	0.8	0.8	1.1
IMF (4 Oct 2016)	0.9	1.1	1.3
OECD (June 2016)	1.0	1.2	
ETLA (27 Sept 2016)	1.1	1.2	1.1
PT (29 Sept 2016)	1.1	1.3	
PTT (22 Sept 2016)	1.2	1.4	

Finland's recent economic performance has been dismal in comparison to countries like Sweden, Denmark and Germany and the Eurozone aggregate: see Figure 2.1.3. The figure also includes European Commission forecasts for 2016–2017.

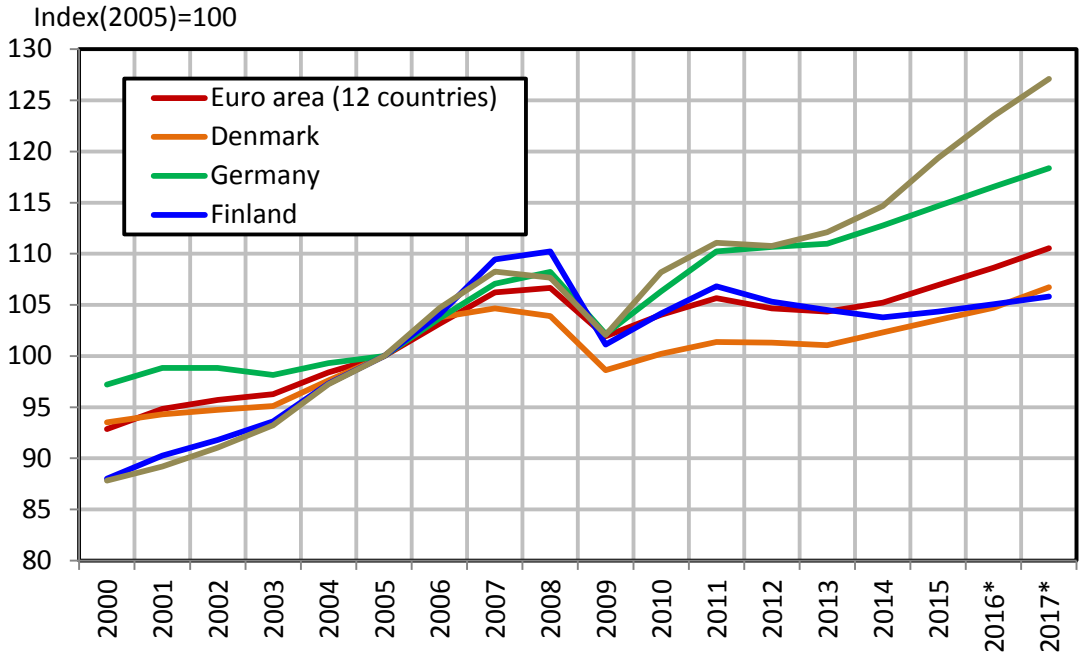
Compared to Finland, Germany, Denmark and the Eurozone, Sweden's economic performance since 2009 has been outstanding. Sweden's GDP growth accelerated from about zero per cent in 2012 to 4.1% in 2015. The growth rate is expected to decrease in the next few years, however. (Based on forecasts by the Central Bank of Sweden and the National Institute of Economic Research; reported in Swedish Fiscal Policy, p. 22 (The Swedish Policy Council) 2016, p. 22).

The Swedish Fiscal Policy Council states that "the upturn was broad-based: exports increased, as did investments, while household consumption continued to rise." (Swedish Fiscal Policy 2016, p. 20). However, according to the Council the principal reason for Sweden's good performance has been that there has been fiscal space to pursue expansionary fiscal policy during the period 2009–2014, which also increased structural net borrowing in the public sector. Comparison of cumulative changes in structural balances reveals that one of Finland has deteriorated more and according to this measure fiscal policy would have been more expansionary in Finland than in Sweden.

The exchange rate of the Swedish krona, however, played its own part. In 2009 it was weak, but started to appreciate up to around the middle of 2012, after which it weakened. The krona has continued to depreciate gradually up to 2016. In 2015 fiscal policy was made less expansionary, but still with a fall in structural net lending, mainly due to asylum immigration. Fiscal policy in Sweden will thus be pro-cyclical for the next couple of years. (Swedish Fiscal Policy 2016, p. 20-23).

GDP growth in Finland in 2000–2008 was exceptionally high, and the drop in 2009 was deeper than in most other European countries, including the Nordic countries. While the comparison countries and the Eurozone seem to have begun their recovery from the recession, GDP growth is still weak in Finland, which suggests that there are specific structural problems.

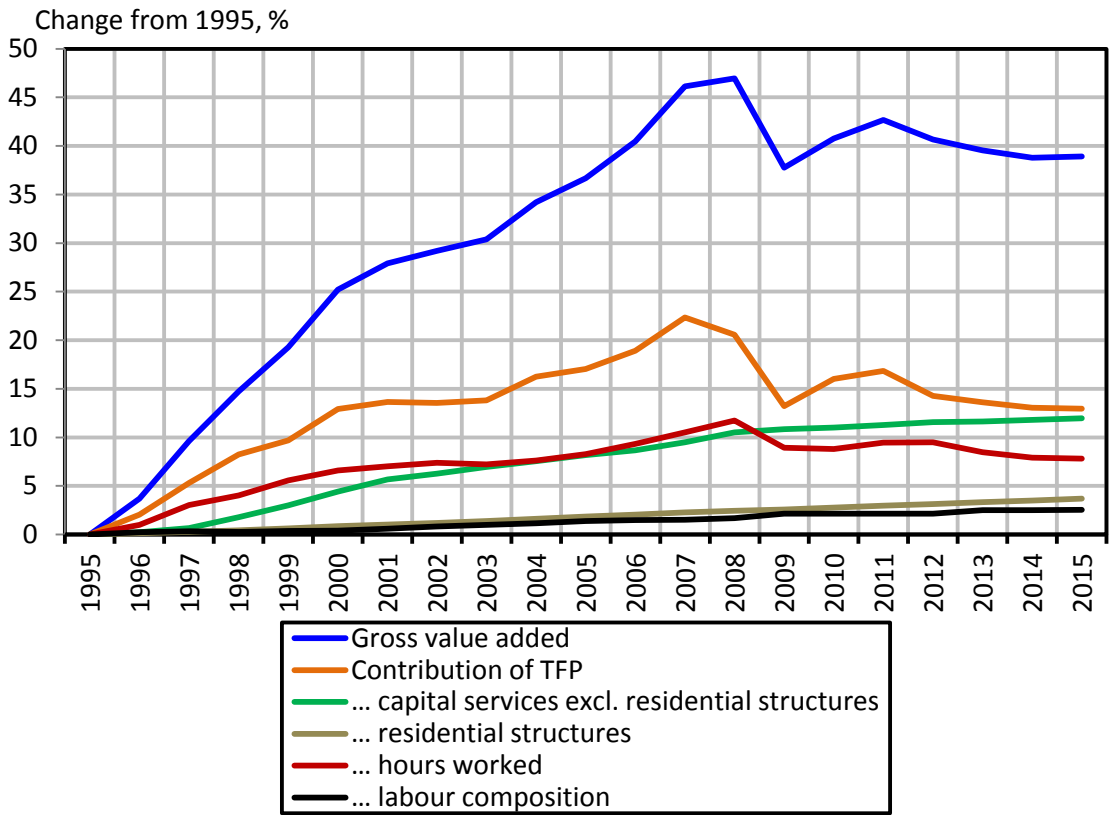
Figure 2.1.3: GDP at constant prices in selected countries and the eurozone, 2000–2017 (index 2005=100)



Source: European Commission, AMECO database (2016*–2017* European Commission forecast)

Decomposing the gross value added (i.e. aggregate output or GDP) by the procedure of growth accounting (Figure 2.1.4) provides further insight into the development of Finland's economy over the period 1995-2015. The factors affecting value added are capital and labour inputs, and a residual, but perhaps the most important item is total factor productivity (TFP) or multi-factor productivity. One can infer from the Figure e.g. that labour input (hours worked, composition) contributed about 10 percentage points to growth in 2015. TFP includes many factors, and the contribution of each of them cannot be surmised from the Figure. (See, however, the discussion on R&D investments below, Figures 2.1.12 and 2.1.13). Gross VA turned downwards in 2008, with a temporary increase in 2010 and 2011. As the Figure indicates, the principal reason for that development was the contribution of total factor productivity, but this reflects the fact that it takes time to adjust production capacity, and consequently that there is excess capacity (c.f. also the discussion above on the output gap). The contribution of hours worked has also been on a slight downward trend since 2008, but that trend has not even been close to the magnitude of TFP.

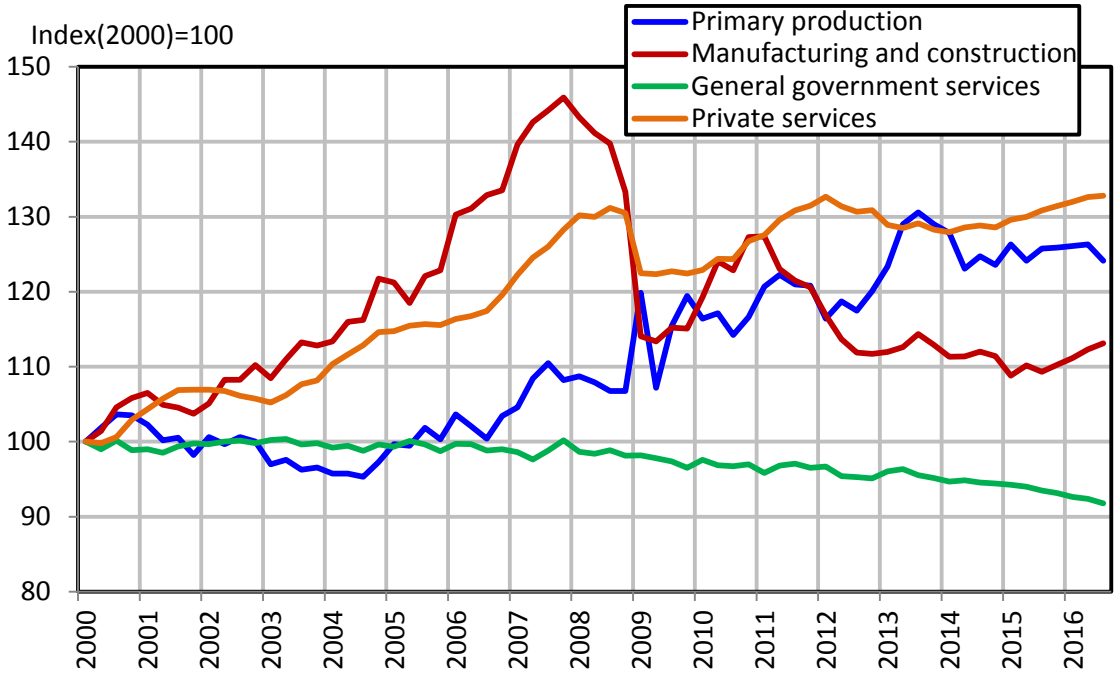
Figure 2.1.4: Cumulative growth of gross value added and its sources



Source: National accounts (Finland), and calculations by M.Pohjola.

To get a more disaggregated, and thus perhaps a deeper, view of Finland's economy, in Figures 2.1.5 and 2.1.6 we describe the development of value added (VA) in different sectors of the economy and in various industries. The salient feature in the sectoral picture (Figure 2.1.5) is the steep drop in the value added of manufacturing and construction after 2007. Although there are some positive signs in the VA of that composite sector in 2015 and 2016, the sector's VA is nowhere near its level in 2007. A good sign for the sector is construction investment, which has picked up steam in the last two years. (See Fig 2.1.10 below). A similar, though only moderately, positive sign can be seen for the private services sector.

Figure 2.1.5: Value added in different sectors, 2000–2016 Q3 (index 2000=100)

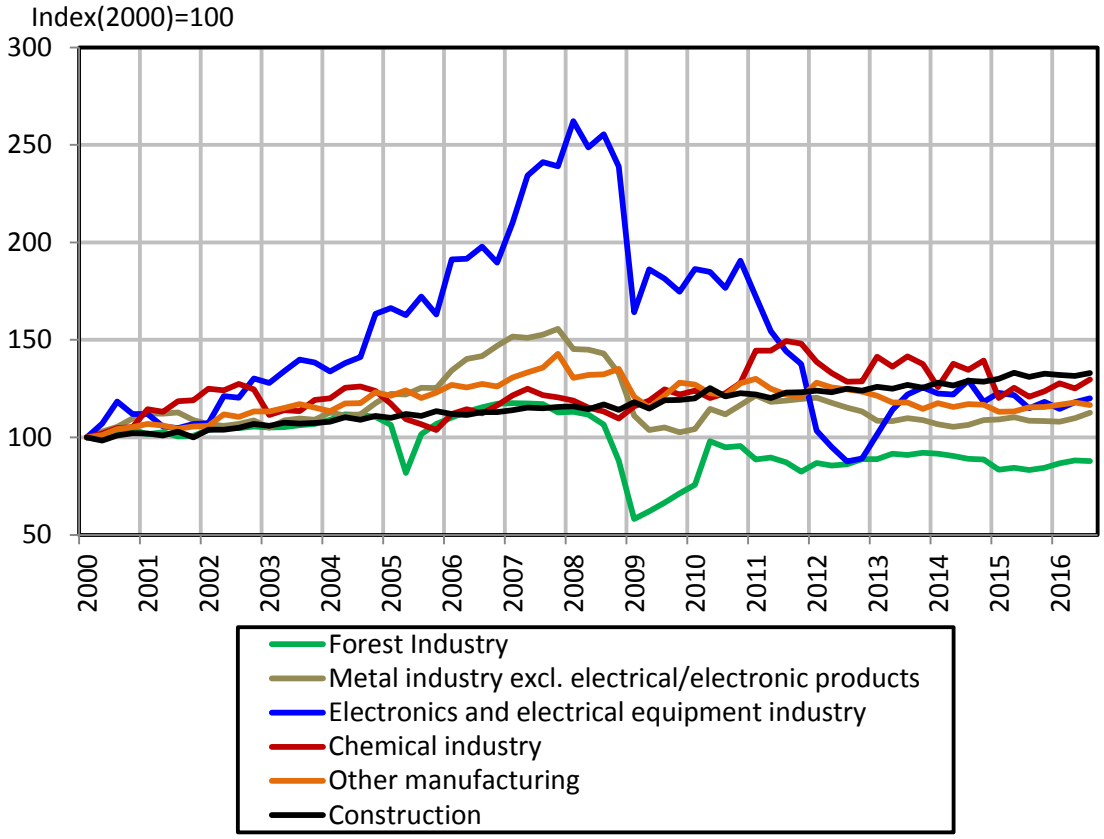


Source: Statistics Finland, National Accounts

Notes: Adjusted seasonally and per working day

The salient feature in Figure 2.1.6 is the steep drop in the value added of the electronics and electrical equipment industry since 2008. This development was mostly due to the metamorphosis of Nokia Corporation from a cell phone manufacturer to a network equipment firm. Although there are some positive signs in the VA of that sector in 2015 and 2016, the sector's value added is nowhere near its level in 2007.

Figure 2.1.6: Value added in various industries (quarterly 2000–2016 Q3, index 2000=100)

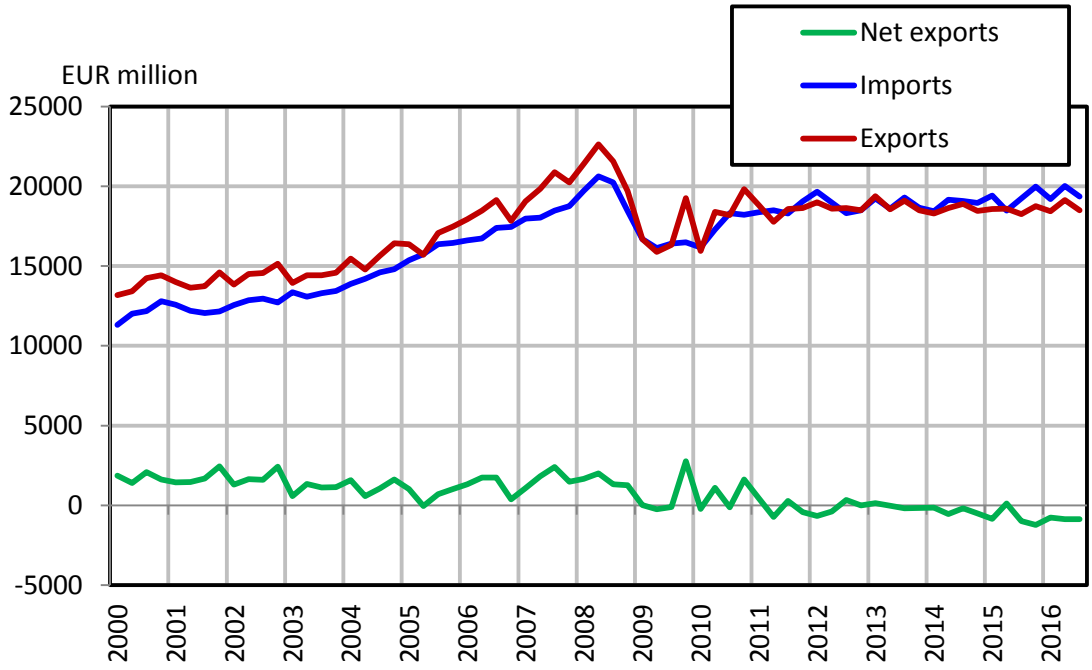


Source: Statistics Finland, National Accounts

Notes: Adjusted seasonally and per working day

Exports (Figure 2.1.7) have been sluggish since 2009, when they declined markedly. Net exports (the trade balance) have roughly been in balance after 2009. Before then Finland had a positive trade balance for a long time. One of the main aims of the government's policy package to improve the cost competitiveness of Finnish firms is to increase exports.

Figure 2.1.7: Imports and exports of goods and services at 2010 prices (quarterly 2000-2016 Q3)



Source: Statistics Finland, National Accounts

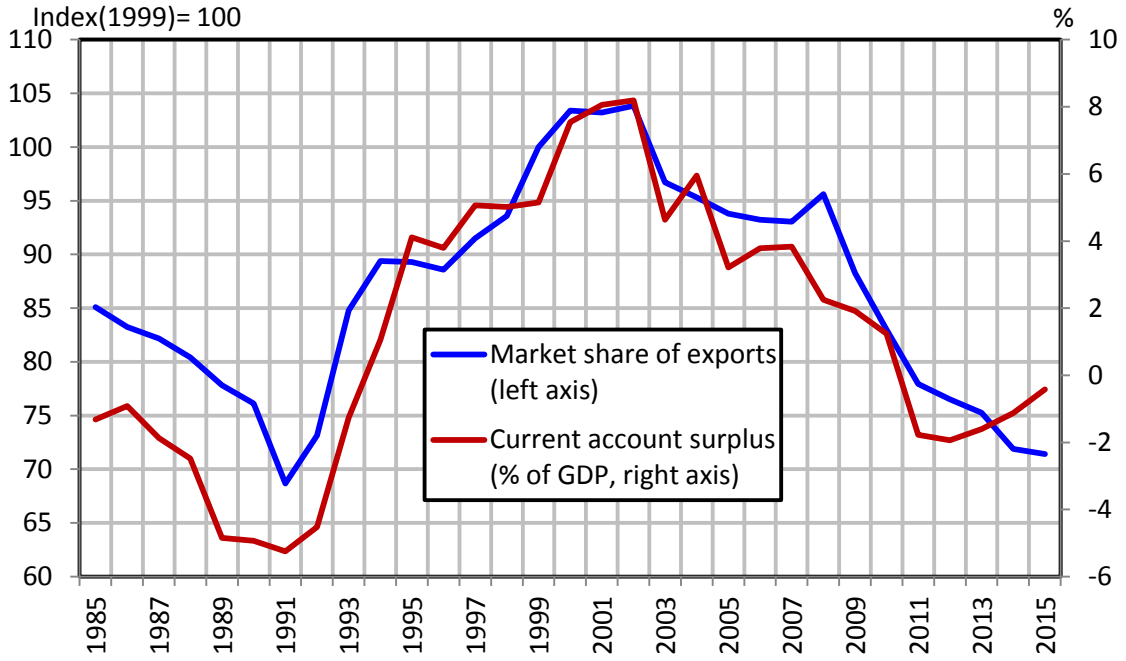
Notes: Adjusted seasonally and per working day

To elaborate on the difficulties faced by Finland's exports, in Figure 2.1.8 we describe the country's export market share and the current account between 1995 and 2015. Export market share is measured as actual growth in exports relative to growth in a country's export market. Export market growth represents the potential for a country's exports on the assumption that the country's market share does not change. A country's market growth indicator is calculated as a weighted average of the growth in the volume of imports in all its markets. The weights are derived from the share of exports going to that market in a base year. (See Carlin, Glyn and Van Reenen, 2001 and Kajanoja, 2016). If the share goes up, Finland's exports grow relatively faster than imports from countries to which Finland exports. The export share rose from 1992 to 2002. It started to go down from 2002, and has declined considerably since then. The current account has deteriorated at the same time, and in fact has moved almost in perfect sync with the export share.

A major reason for the rather disappointing export performance has been the severe decline in high tech exports. In Figure 2.1.9 we describe the

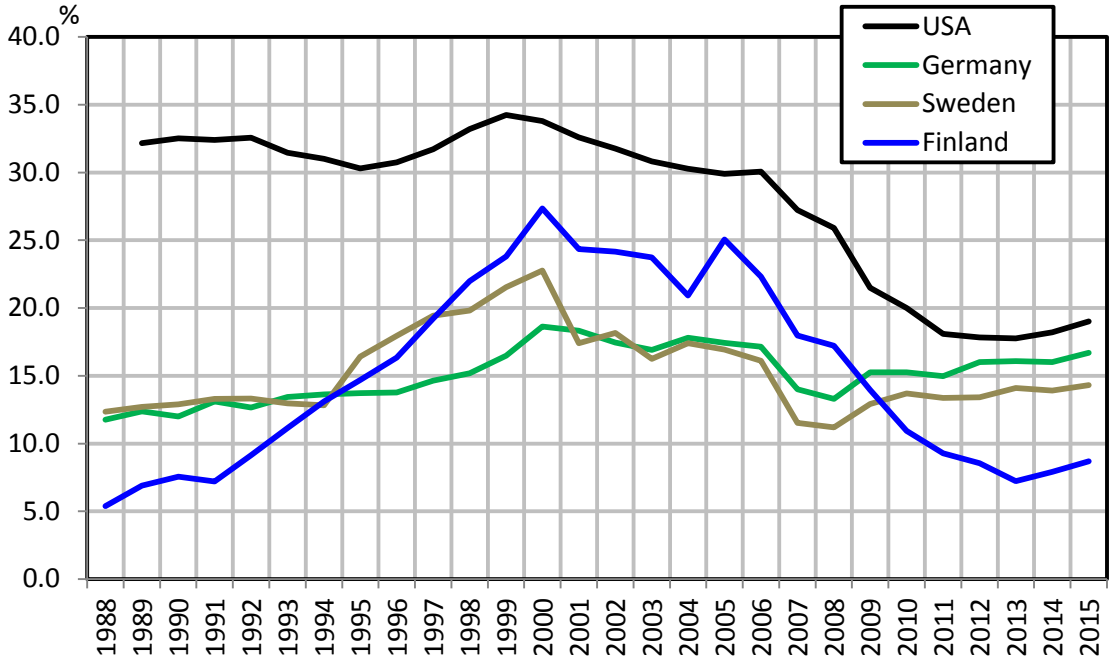
shares (relative to GDP) of high tech products in the exports of goods in Finland, Sweden, Germany and the U.S. In Finland the share has declined since 2000, and more rapidly so since 2005, when the share was about 27%, to about 7% in 2013. The same trends can be seen in the high tech exports of the other countries. However, for them the downward trends have not been as steep as for Finland. Thus there has been a significant structural change in the composition of Finland's exports. Finland has not been able, at least so far, to come up with exportable items (commodities, services etc.) to replace the role of high tech exports.

Figure 2.1.8: Market share of Finland's exports



Source: National accounts (Finland) and Annex Table 53, OECD Economic Outlook data base inventory.

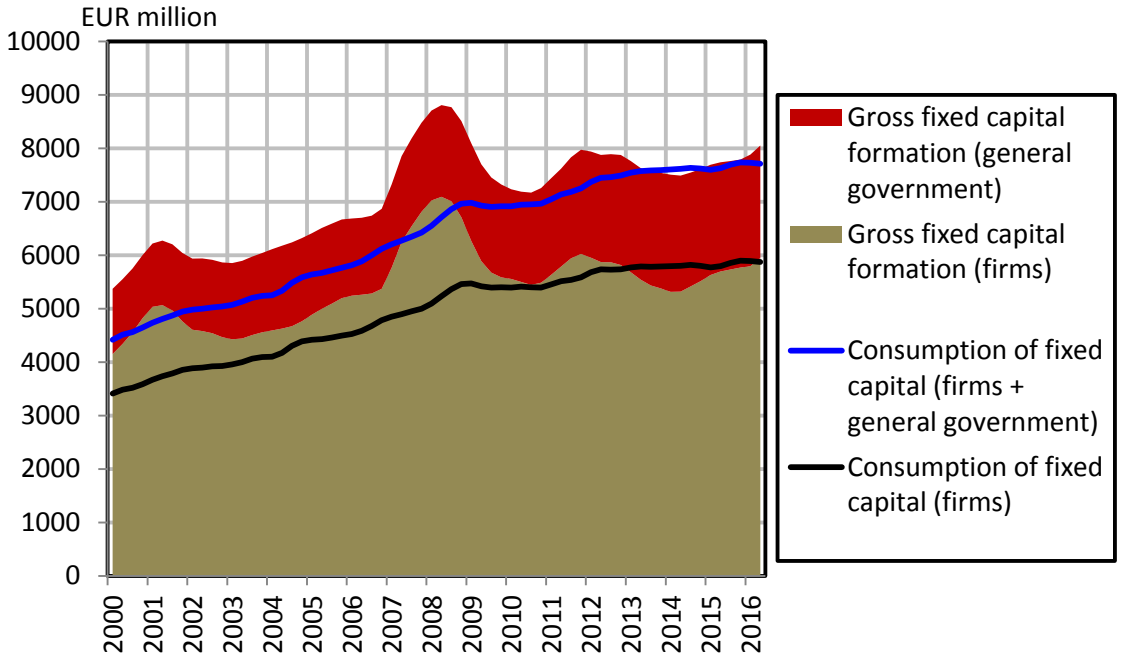
Figure 2.1.9: Shares of high tech products in exports of goods 1998-2013



Source: World Development Indicators, World Bank.

Since 2009 total investment, including public sector investment, has been slightly above what has been needed to replace worn-out capital (depreciation). In particular, investment in physical capital by firms has hardly ever exceeded depreciation (Figure 2.1.10). Since gross investment equals net investment plus depreciation, the capital stock of firms has not grown at all since 2009. Firms invest in physical capital to be able to produce more in the future. To invest in new capital, they need to be optimistic about the future. The Figure thus indicates that Finnish firms have had a mainly pessimistic view of the future since 2009. The developments in investment are hardly surprising, since output growth has been low or non-existent. The "flexible accelerator" model predicts that investment increases when output growth is expected to rise. In addition, there is some excess capacity left after the prolonged recession, which is depressing investment further. And finally, it is perhaps the case that intangible capital (R&D, intellectual property etc.) plays a more important role in the "modern" economy than it used to. In addition, many companies such as digital start-ups need less fixed capital investment than typical firms (Summers 2015).

Figure 2.1.10: Investment and depreciation of capital (quarterly 2000-2016 Q2)

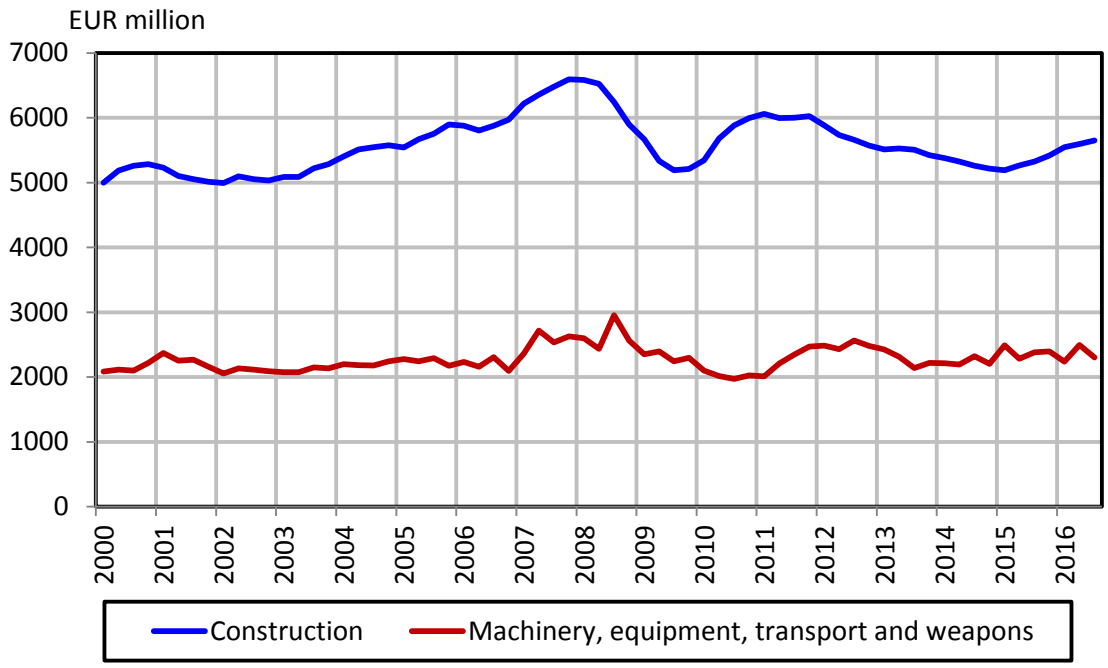


Source: Statistics Finland, National Accounts (quarterly sector accounts).

Notes: Adjusted seasonally and per working day. Excludes households, non-profits and rest of the world. Including these, total net capital formation would be positive.

Investment in construction has recovered strongly in the last two years (Figure 2.1.11). The level is still far from the peak in 2008 and even from the relatively high level in 2011 and 2012. There is no evidence that investment in machinery and other sectors is going to pick up strongly in the near future.

Figure 2.1.11: Different types of investment (quarterly 2000-2016 Q3)

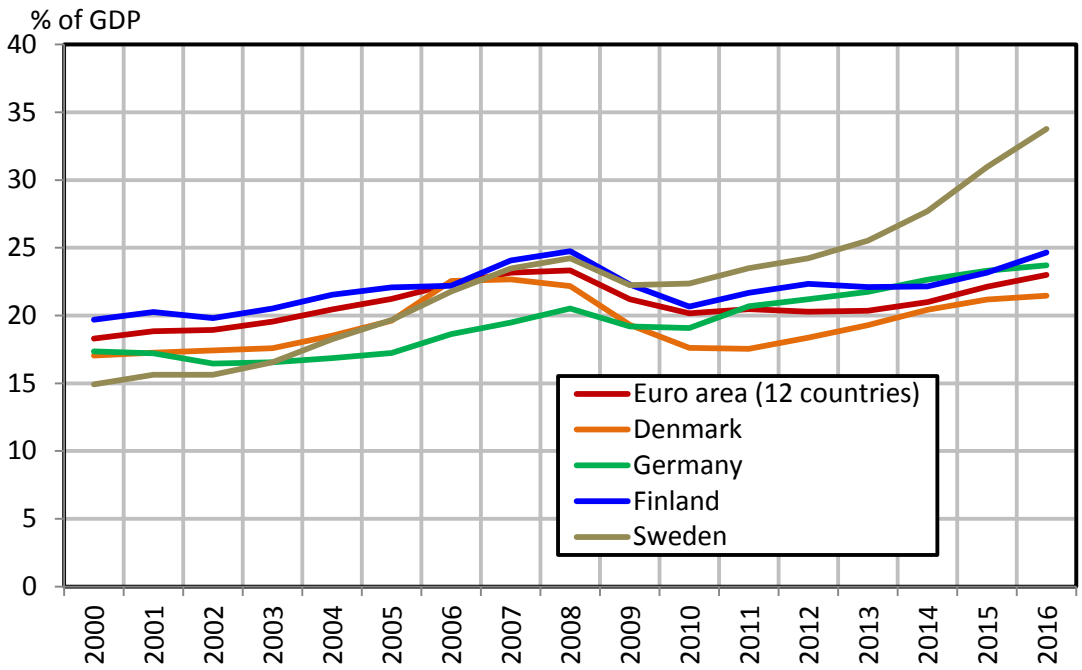


Source: Statistics Finland, National Accounts

Notes: Adjusted seasonally and per working day

Comparatively speaking, gross investment as a share of GDP has followed the same path as in most other countries (Figure 2.1.12). The clear exception since 2008 has been Sweden, where the share has risen from about 25% to more than 35%. There is no great difference in the performance of Finland compared to Germany, Denmark and the Eurozone composite. The favourable investment behaviour in Sweden contributed heavily to the recent success of Sweden's economic performance (Swedish Fiscal Policy 2016, p. 20, 21).

Figure 2.1.12: Gross fixed capital formation relative to GDP (2000-2018)

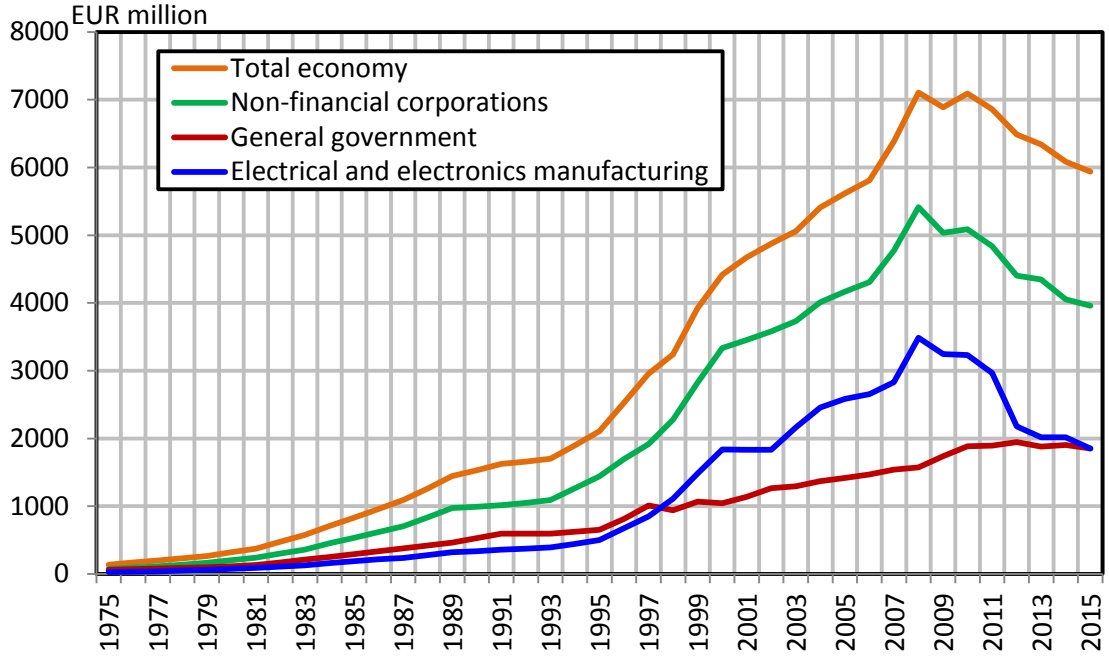


Source: European Commission, AMECO database

To create profitable investment and new innovations, firms have to devote resources to research and development (R&D) activities. Figure 2.1.13 describes R&D investments in Finland between 1975 and 2015. R&D investments started to decline before 2010, and have declined steadily since. The diminished role of Nokia certainly contributed heavily to the decline in R&D expenditure in Finland. General government is the only sector where investments have not declined. It is certainly possible that a slowdown in R&D investments has contributed heavily to the decline in TFP reported above (Fig 2.1.5).

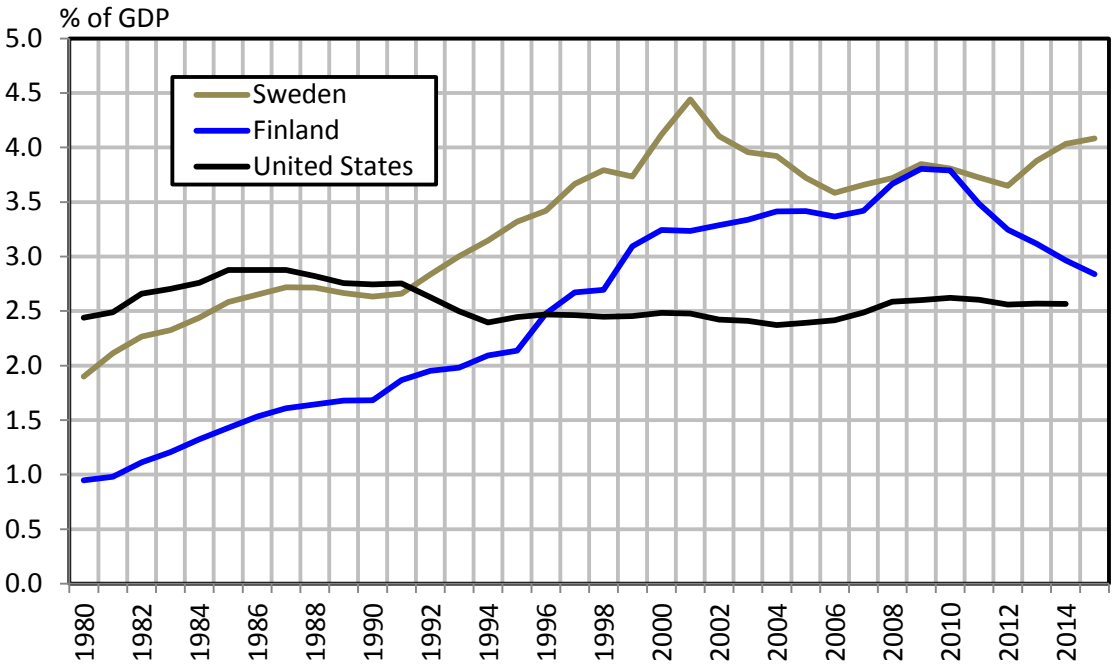
The share (relative to GDP) of R&D investments in Finland increased from 1980 to about 2010 (Figure 2.1.14). It then started to decline, and has shown no sign of recovering since. After 2005 Sweden was able to halt the decline in its R&D investment share, and actually embarked on an upward trend, which seems to be continuing. The share in the U.S. has remained relatively flat since 1995.

Figure 2.1.13: Research and development investment in certain sectors in Finland, EUR million



Sources for Figures 2.1.13 and 2.1.14: National accounts, Statistics Finland, Statistics Sweden, BEA, and calculations by M. Pohjola.

Figure 2.1.14: Research and development investment: share of GDP,%



Sources: National accounts, Statistics Finland, Statistics Sweden, BEA, and calculations by M. Pohjola.

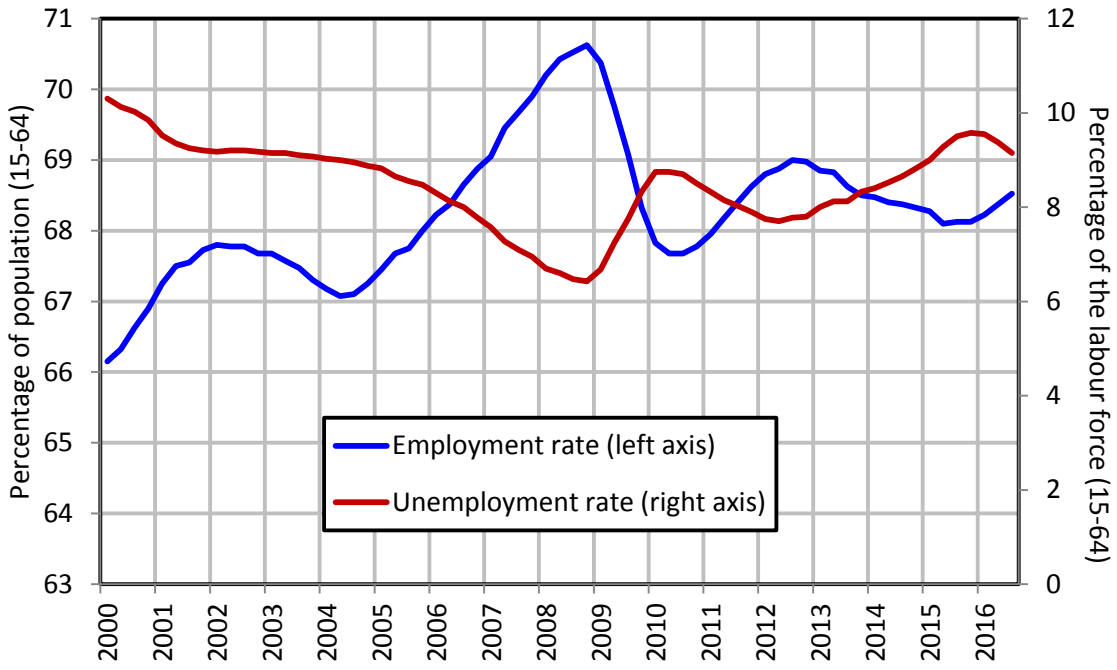
2.2 The labour market

The prolonged crisis has had a major impact on the labour market. The employment rate has been lower and the unemployment rate higher since the onset of the crisis. Reversing the situation in the labour market is very important, and raising the employment rate to 72% is one of the government's key policy targets. This section describes the development of the labour force, employment and unemployment, and then discusses the government's employment target in relation to estimates of structural unemployment.

2.2.1 Labour force, employment and unemployment

The persistent decline in the employment rate and the increase in the unemployment rate can be seen from Figure 2.2.1. In 2016, unemployment started to decline after increasing for several years. At the same time the employment rate increased. In October 2016, employment rate was 68.4%. Given that figure, the government's employment rate goal of 72% seems ambitious. Even in the boom years of the 2000s the annual average employment rate among 15- to 64-year-olds never exceeded 71%.

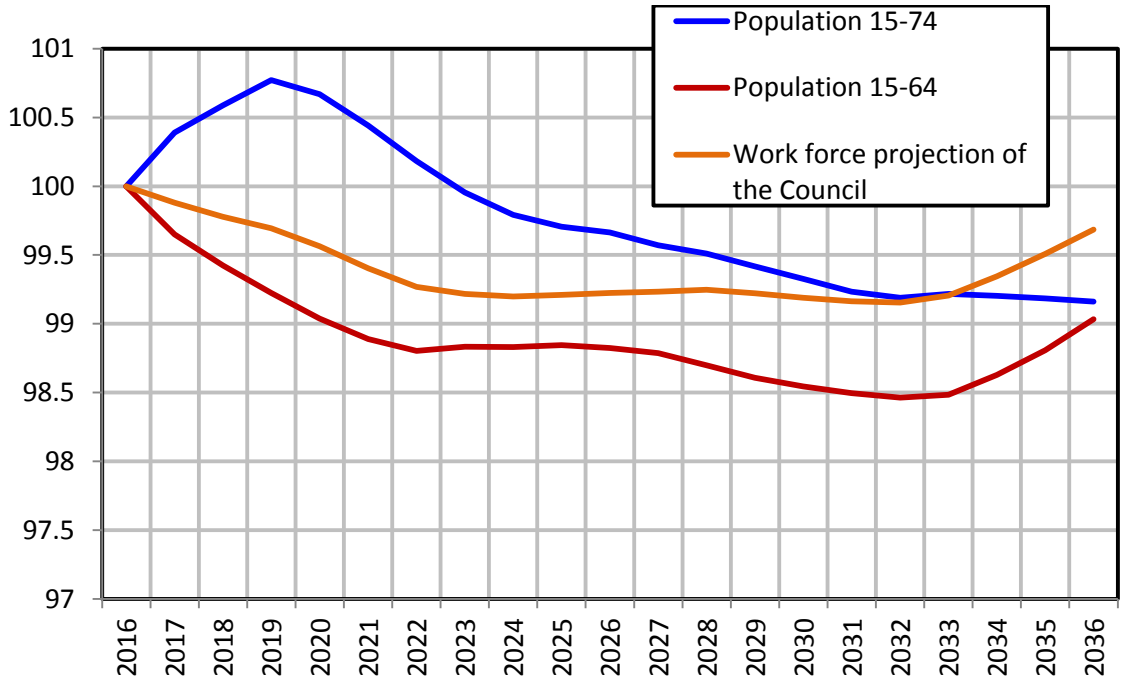
Figure 2.2.1: Employment rate and unemployment rate of 15-64 yo population (2000–2016 Q3, 4-quarter moving average)



Source: Statistics Finland, Labour Force Survey

The working-age population is decreasing or starting to decrease, depending on the definition used. The population projections[1] by Statistics Finland with two alternative definitions of working age population - 15-64-year-olds and 15-74-year-olds - are shown in Figure 2.2.2. The Council notes that neither of these provides an accurate description of the likely future development of the size of the work force because they do not take into account differences in labour force participation rates in different age groups. Therefore, the figure also shows how the work force would evolve in future if participation rates remained unchanged (dashed line). The projection is calculated by combining labour force participation rates in 10-year age groups (15-24, ..., 65-74) in 2015 with the projected size of each age group.

Figure 2.2.2: Projected working age population and work force 2016 – 2036, Index 2016=100

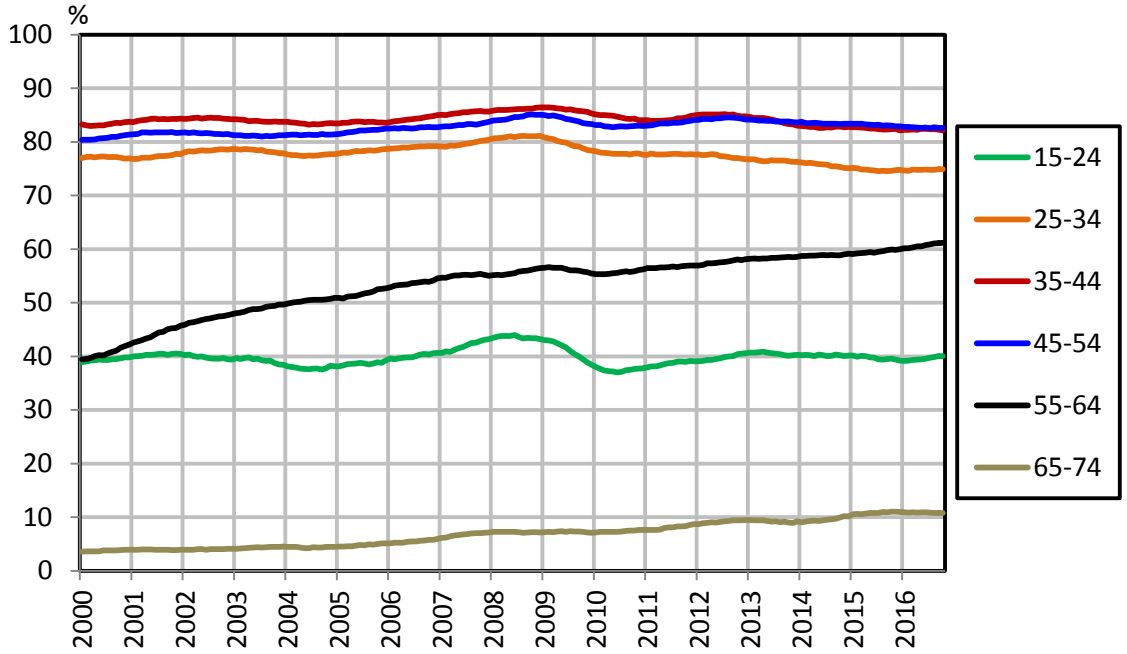


Source: Statistics Finland, Population Projection and Labour Force Survey; Economic Policy Council

[1] Statistics Finland's latest population projection assumes that the birth rate will remain constant in future. The imputed number of children that women give birth to during their lifetime, i.e. the total fertility rate, is assumed to be 1.70, which is below the replacement rate. However, net migration is assumed to stay positive and counteract the impact of low fertility. The forecast also assumes that Finland's migration gain from abroad will be 17,000 per year from 2016 onwards. Mortality is assumed to continue declining similarly to what has been detected when comparing the mortality for 1987 to 1991 and 2010 to 2014.

The figure shows that the number of 15-64-year-olds is expected to decrease by more than one per cent in the next five years, while the number of 15-74-year-olds is expected to increase until 2019. In the Council's projection the size of the work force will decrease slower than 15-64-year-old population. According to the projection, the work force is already declining and expected to decrease by roughly 0.75 per cent by 2023, after which it is expected to stabilize – contrary to the population projections, which show a further decline until 2032. The Council notes that there is some uncertainty involved in the population projections. In addition, the work force projection assumes that participation rates will stay at the current level. This may be an overly pessimistic view of the development of the workforce if the upward trend in the employment rates of older age groups continues (See Figure 2.2.3).

Figure 2.2.3: Employment rate by age group (2000/1 – 2016/10, 12-month moving average)

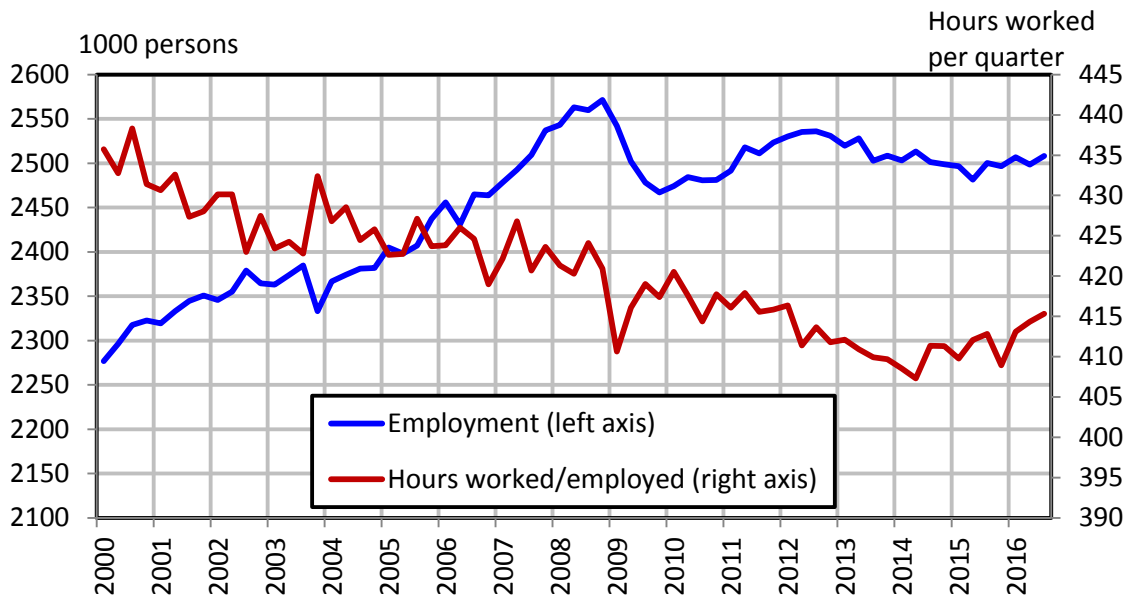


Source: Statistics Finland, Labour Force Survey; Economic Policy Council

The development in employment rates has differed across age groups, see Figure 2.2.3. Since 2008, the employment rate has declined especially among 25-34-year-olds, but the decline has levelled out during the past year. The employment rate is growing among 55-64-year-olds and among 65-74-year olds. Chapter 3 provides a more extensive analysis of employment and hours worked in different demographic groups and compares Finland with other countries.

The fact that the Finnish economy is growing again, albeit slowly, is contributing to higher employment. In addition to changes in employment, the labour market can respond to the business cycle through changes in hours of work. Figure 2.2.4 shows that hours worked per employed person have fallen during the 2000s, but the decline halted in 2014, and there are some indications of an increase in hours worked in 2016. This would suggest that aggregate labour input is growing faster than the employment rate.

Figure 2.2.4: Employment and hours worked per employed person (2000 – 2016 Q3)



Source: Statistics Finland, National Accounts

2.2.2 Structural unemployment

The moderate upturn in the economy in 2016 will further increase employment and decrease employment. As the recovery continues, the scope for further employment growth may, however, be limited if structural unemployment is high.

Structural unemployment refers to the level of unemployment that would prevail when the economy is in balance or in a normal business cycle situation. In the short run unemployment can deviate from the structural level due to cyclical variations in the level of activity. Unemployment can temporarily fall below its structural level in an economic boom, in which case wag-

es tend to increase at an accelerating rate, decreasing the demand for labour and bringing unemployment eventually back towards the structural level.

There are several ways to measure structural unemployment. We start with measures of structural unemployment that are based on economic theory and are estimated using macroeconomic data, and proceed to statistical measures that use information e.g. on the duration of unemployment.

In macroeconomic analysis, structural unemployment is assessed using statistical time series methods, see Box 2.2.1. Measuring the structural unemployment rate is difficult and can only be assessed with some uncertainty. By its nature, it is non-observable and depends on a wide range of institutional and economic factors. It is well known that empirical estimates of the structural unemployment rate tend to be a smoothed average of past unemployment rates. Box 2.2.1 discusses measurement of the structural unemployment rate in more detail.

Various estimates of the structural unemployment rate[2,3] by the European Commission, the Ministry of Finance (MoF) and the OECD as well as the actual unemployment rate are shown in Figure 2.2.6. Currently the EC's estimate of the structural unemployment rate is 7.9%, and the OECD's estimate and the MoF's estimate are both 7.4%. Actual unemployment was 8.6% in October 2016. Thus unemployment rate seems to be quite close to the level where accelerating wage claims can be expected to dampen further declines in unemployment. Developments of the structural unemployment rate estimates over time differ somewhat. According to the EC, structural unemployment has increased since 2009, while the MoF and OECD estimates suggest that structural unemployment has decreased. All three organisations forecast a decline in structural unemployment in the next two years. According to the MoF, the competitiveness package will contribute to this development (Ministry of Finance, 2016).

[2] Orlandi (2012) describes the EC's methodology.

[3] See Rusticelli et al. (2015) for the OECD's methodology. The OECD estimates the equilibrium unemployment rate (NAIRU) using a Kalman filter in a Phillips curve framework which assumes inflation expectations are anchored at the central bank's inflation target. The NAIRU is then projected forward from the last estimated period using a simple autoregressive rule, exceptionally modified to account for recent labour market reforms, until the end of the forecasting horizon.

Box 2.2.1 Measuring the structural unemployment rate

Structural unemployment is defined as the natural rate of unemployment that the economy would settle at in the long run, i.e. when the economy is not subject to shocks. The concept of structural unemployment is also used in the production function method to estimate potential output.

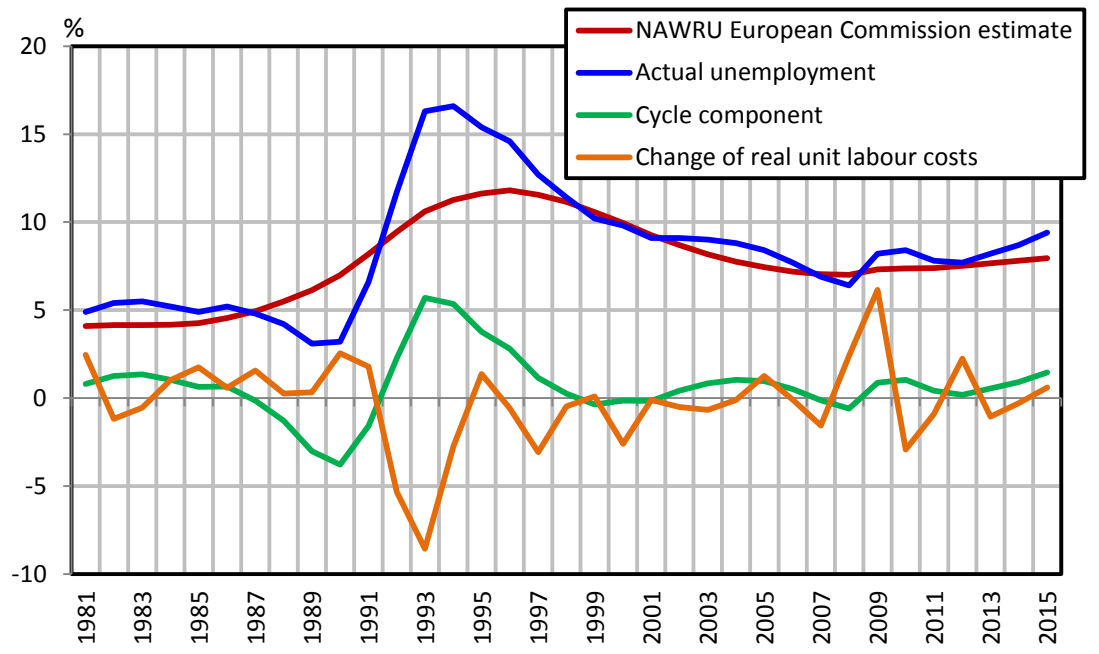
The level of structural unemployment is partly determined by fiscal measures such as unemployment benefits and tax rates and by other institutional factors that affect the reservation wage. Structural unemployment cannot be directly observed, and thus has to be estimated by econometric methods that rely on a theoretical definition of structural unemployment.

To estimate structural unemployment, actual unemployment is broken into trend and cycle components. Shocks to trend unemployment are assumed to have a permanent effect, and trend unemployment reflects supply-side shocks such as policy and population changes. Shocks to cyclical unemployment are assumed to have only temporary effects as they reflect demand-side shocks associated with the business cycle.

In the commonly used approach to identify structural unemployment, it is assumed that short-term unemployment fluctuations and wage inflation have a Phillips curve relationship: when actual unemployment is below its structural level, wage inflation accelerates and vice versa. This relationship is used to assist in the identification of the cyclical component of the unemployment rate. The remaining trend component is the non-accelerating wage rate of unemployment (NAWRU) and variation in it over time does not affect wage inflation. In the estimation, wage inflation is normalized with consumer price inflation and productivity. Thus the resulting series is real unit labour costs.

The European Commission (EC) includes its NAWRU estimates for the EU member countries in its forecast publications. The estimates for Finland are presented in Figure 2.2.6 below. The relationship between the cycle component and real wage inflation is clear. When the cycle component has been positive, wages have increased slower than overall domestic inflation and productivity. Finland's structural unemployment rose above 10% during the depression in the early 1990s and decreased slowly to 7½% in 1997-2007. In the 2000s actual unemployment has been below structural unemployment only in 2007, when unemployment decreased rapidly. Structural unemployment has increased since 2008.

Figure 2.2.5: Structural unemployment in Finland, European Commission (Autumn forecast 2016)

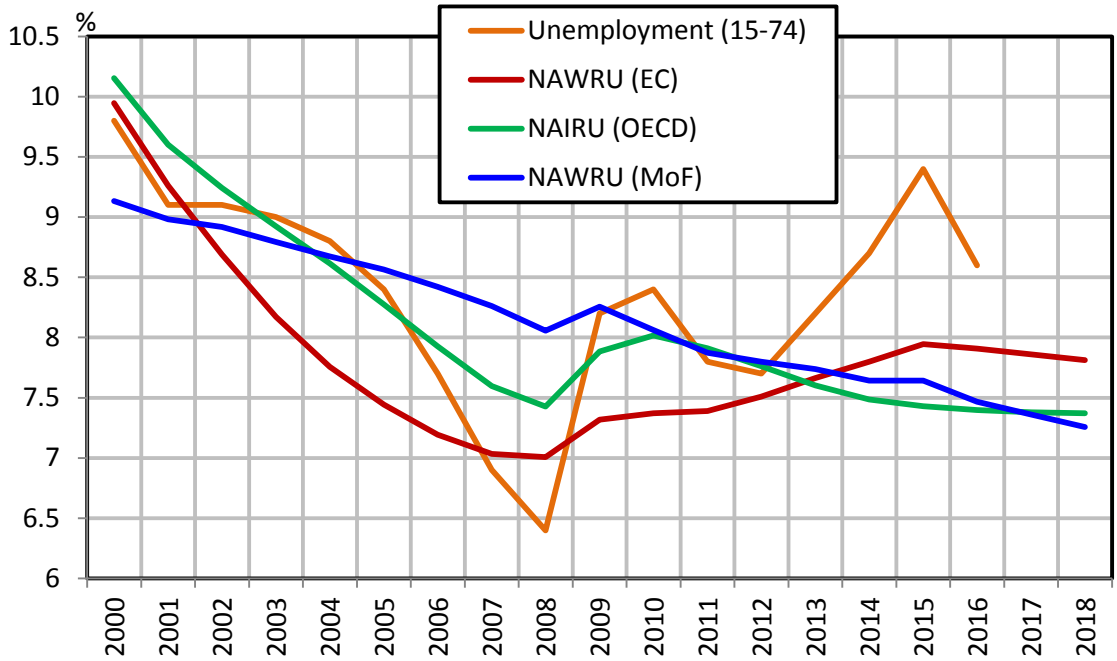


Source: European Commission

Estimates of NAWRU are sensitive to the technical parameters chosen in the estimation. For example, Fioramanti (2016) shows how the estimation results of the trend component may change drastically depending on the starting values and other slight differences in estimations. The level of structural unemployment can also be explained by structural factors in the labour markets, such as active labour market policies, taxation, unemployment benefits and wage bargaining institutions, and also by the mixture of other factors, such as changes to trend growth in productivity, real interest rates and large demand shocks causing hysteresis effects. Utilizing panel estimation with data from 13 European countries, including Finland, Orlandi (2012) shows that the level of structural unemployment measured with NAWRU is consistent with that measured by structural factors.

In Finland, the Ministry of Finance uses the production function method of the European Commission to produce estimates of potential output and structural unemployment. In their estimates both institutions use their own forecasts for macroeconomic developments. The Ministry of Finance also uses the population forecast of Statistics Finland, while European Commission uses the Eurostat population forecast. These differences in forecasts also affect the NAWRU estimates for current and recent years.

Figure 2.2.6 Estimates of structural unemployment and actual unemployment 2000–2018



Source: AMECO database; OECD; Ministry of Finance and Statistics Finland

Notes: Unemployment rate for 2016 is the seasonally adjusted trend in November 2016.

Table 2.2.1 compares actual employment with the government's target, and actual unemployment in October 2016 with estimates of the structural unemployment rate. The structural unemployment rates are given here in terms of the number of unemployed people assuming that the size of the labour force is unchanged. The last line of the table shows that reaching the government's target of a 72% employment rate would require an increase of 111,000 in the number of employed persons. For comparison, the difference between the actual number of unemployed and the MoF or OECD estimate of the structural unemployment rate is 33,000 persons, and the difference between the EC structural unemployment rate and actual unemployment is only 19,000 persons. Thus only a small share of the required employment growth (111,000 persons) can be expected to be achieved through unemployed people finding jobs in a more favourable business cycle.

Table 2.2.1: Government employment target and structural unemployment

	%	1000 persons
Unemployment (15-74)	**8.6**	**235**
MoF and OECD structural unemployment	7.4	202
Unemployment - MoF or OECD structural unemployment	1.2	33*
EC structural unemployment	7.9	216
Unemployment - EC structural unemployment	0.7	19*
Employment (15-64)	**68.9**	**2456**
Government target	72.0	2567
Employment - Government target	– 3.1	– 111

Source: Statistics Finland, Labour Force Survey; OECD; European Commission; Ministry of Finance and own calculations.

Notes: Labour Force Survey data adjusted seasonally. *Unemployment level in terms of number of people corresponding to structural unemployment is calculated keeping size of the labour force unchanged.

The importance of getting people currently outside the labour force to participate in the labour market can be further highlighted with the following simple calculation. In a hypothetical case where the whole adjustment to the government target employment occurs through lower unemployment, without any change in labour force participation, the unemployment rate would fall to 4.6%, which is 2-2.5 percentage points below the structural level. By contrast, if the 110,000 increase in employment occurred solely through an increase in labour force participation, the unemployment rate would decrease only slightly to 8.4%and stay above the structural level. Of course, neither of these extreme scenarios is realistic. In practice, increased labour demand in the current upturn can be expected to affect both labour force participation and unemployment. The simple calculation, however, reveals that reaching the target of a 72% employment rate is very unlikely without structural reforms to substantially increase labour force participation. These structural reforms would also cut structural unemployment, removing the pressure for wage increases impeding further employment growth before the target employment is reached.

The development of so-called disguised unemployment can be used as an indicator of the potential for an increase in labour force participation in a more favourable business cycle. Disguised unemployment includes persons outside the labour force who would like gainful work and would be available for work within a fortnight, but have not looked for work in the past four

weeks. Since the crisis of 2009, disguised unemployment has grown from 2.5% to 3.5% of the 15-74-year-old population, cf. Figure 2.2.7.

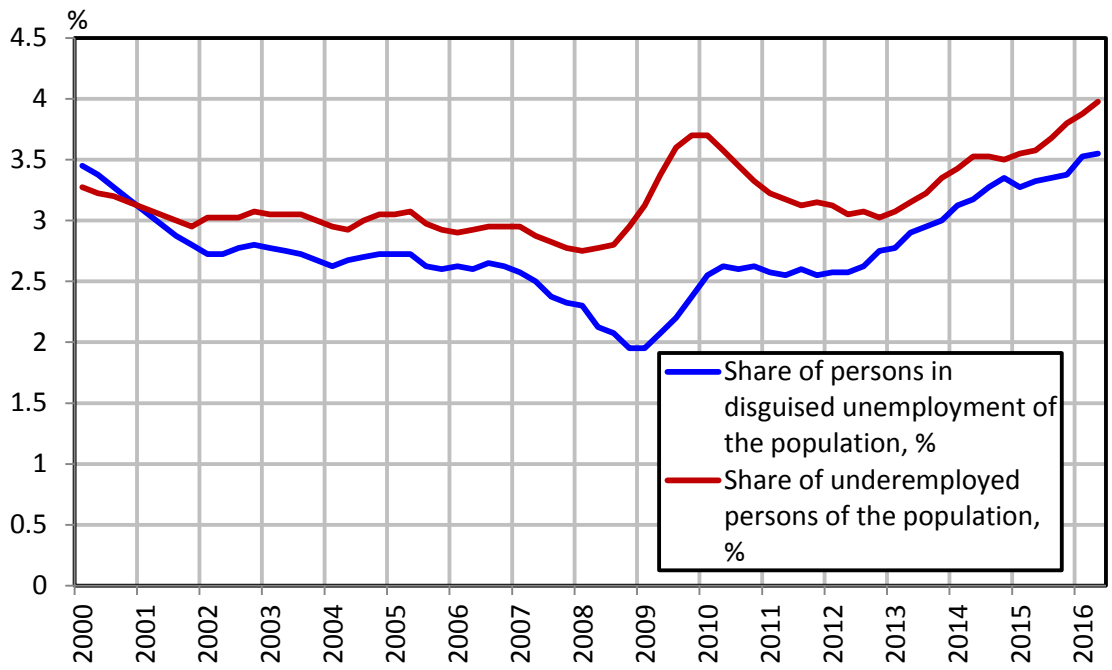
The reasons for disguised unemployment are giving up searching for a job or other reasons, such as studies, caring for children or health reasons. Depending on which of these reasons are prevalent, high disguised unemployment may imply that there is scope for higher labour force participation in an economic boom. The conclusion of the discussion surrounding Table 2.2.1 would, however, not change, even if disguised unemployment returned to the normal level[4] of about 2.5% from the current 3.5%. This would increase the size of the labour force by approximately 35,000 people. If all of these people found jobs, in addition to unemployment declining to the structural level, total growth in employment would be in the range of 50,000–70,000, which would be still well below the government's target of 110,000.

The number of part-time workers who would like to work longer hours (underemployed[5]) has grown during the past three years, cf. Figure 2.2.7. This suggests that there is scope for increased labour input through further increases in hours worked, in addition to higher employment.

[4] Disguised unemployment was approximately 2.5% when the output gap was close to zero in 2002-2005 and 2011-2012 (See Figure 2.1.2).

[5] Underemployed persons are persons who are engaged in part-time work because full-time work is not available, or whose employer has them work a reduced working week, or who have had no work due to a shortage of orders or customers or because of having been laid off. Thus an underemployed person is an employed person who would like to do more work

Figure 2.2.7: Disguised unemployment and underemployment

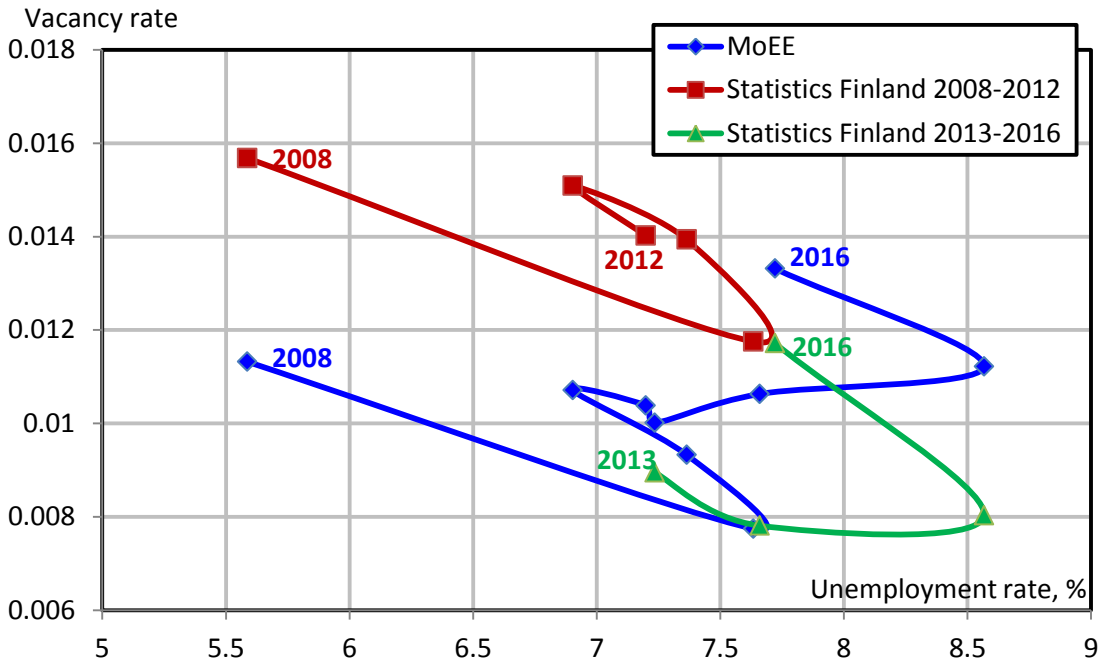


Source: Statistics Finland, Labour Force Survey

The discussion above takes structural unemployment rate estimates (NAWRU/NAIRU) at face value. The estimates are necessarily imprecise and the whole concept of structural unemployment can be criticized. To get a more broad-based view, we next discuss the development of various alternative indicators of structural problems in the labour market.

A commonly used indicator of structural unemployment is the Beveridge curve (Figure 2.2.8), which plots the relationship between the vacancy rate (vacant jobs/labour force) and the unemployment rate. In a recession the number of vacancies decreases and the unemployment rate increases. In an expansion vacancies increase and unemployment decreases. This implies a downward-sloping relationship between unemployment and vacancies where movements along the curve indicate cyclical fluctuations. An outward shift in the unemployment–vacancy relationship, i.e. a simultaneous increase in vacancies and unemployment, indicates that unemployment is becoming increasingly structural. The reasons may include a mismatch of the skills of the unemployed with the requirements of available jobs or a regional mismatch of vacancies and the unemployed.

Figure 2.2.8: Unemployment and vacancy rate, 2008–2016 (3rd quarter of the year)



Source: Statistics Finland, Labour Force Survey; MoEE, Finnish Labour Review

On the horizontal axis, we use the unemployment rate based on the Labour Force Survey of Statistics Finland. On the vertical axis we use two alternative definitions of vacancies: vacancies notified to the employment services (MoEE) and vacancies based on a survey by Statistics Finland. There is a break in the Statistics Finland vacancy series in 2013 due to a change in the survey design, which caused a level shift downwards in the estimated vacancy rate. Thus the Statistics Finland series is divided into two parts: 2008–2012 and 2013–2016. Both vacancies and unemployment are scaled by dividing them by the size of the labour force. All variables are measured in the third quarter of the year to make them comparable (2016 Q3 was the latest observation available at the time of writing the report).

Our interpretation of Figure 2.2.8 is that the movements in the Beveridge curve indicate large business cycle fluctuations between 2008 and 2012 but little sign of changes in structural problems. However, in 2013 and 2014 there were some indications of outward movement and a somewhat stronger shift outward in 2015. The increase in unemployment without changes in vacancies indicates that unemployment became increasingly structural in 2013-2015. In 2016, the vacancy rate started to increase and unemployment rate decrease, indicating a more favourable business cycle.

We note that it is likely that the vacancy data grossly underestimates the true number of available jobs. According to a survey by Sitra, only 23% of current employees ended up in their current job by applying for a vacant job and only 6% found their job through the employment office (Sitra, 2016). Even though the level of the vacancy rate is likely to be severely underestimated in the figure, the changes in vacancy rate estimates probably reflect true changes in the availability of jobs, since there is no reason to expect the relative underestimation to have changed significantly during past 8 years.

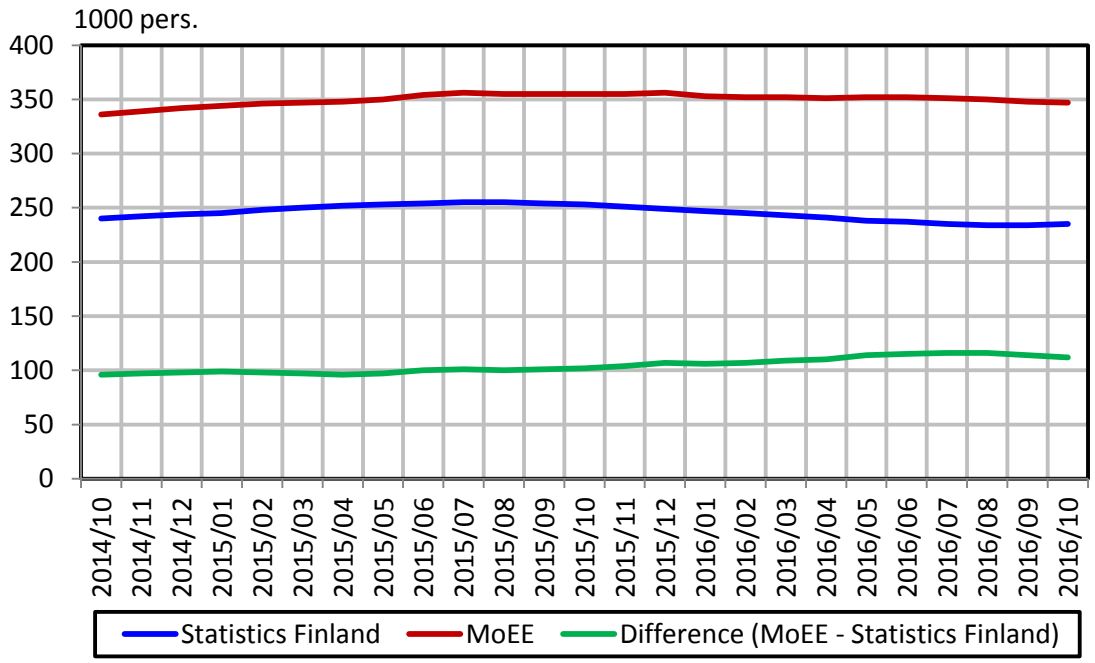
Our next indicator of structural unemployment is based on a comparison between unemployment statistics by the Ministry of Employment and the Economy (MoEE) and Statistics Finland. The number of registered jobseekers provided by the MoEE is an often used alternative measure of unemployment. This differs from the Statistics Finland measure of unemployment, which is based on the Labour Force Survey and classifies survey respondents who are not working but actively looking for work as unemployed persons. The divergence of the two measures can be interpreted as a sign of an increasing number of discouraged unemployed persons who are registered as jobseekers and claim unemployment benefits but are not actively looking for work. In the Economic Policy Council (2015) we argued that the apparent divergence of the two measures between 2012 and 2014 was to a large extent due to the reform of the unemployment pension system in 2005[6]. In practice, the reform implied that many long-term unemployed persons who would have been on an unemployment pension under the old system were registered as unemployed jobseekers. Another policy change compromising the comparability of the MoEE unemployment figures over time was that from July 2013 onwards all workers on temporary layoffs were required to register at an employment office. These reforms together led to an inconsistency in the MoEE data over time. The effect of the unemployment pension reform had, however, phased out by the end of 2014, and therefore we use the MoEE data only from October 2014 onwards in Figures 2.2.9 and 2.2.10.

Figure 2.2.9 shows the number of unemployed persons as measured by Statistics Finland and the MoEE, and the difference between them. These two

[6] The unemployment pension system was abolished in 2005 and replaced with extended unemployment benefits. Currently, unemployed persons who turn 59 before receiving benefits for 500 days are eligible for extended benefits up to age 65.

measures have diverged somewhat in the past two years. The difference increased from 96,000 in October 2014 to 112,000 in October 2016. This suggests that the number of discouraged unemployed persons has increased somewhat, which can be indicative of unemployment becoming increasingly structural.

Figure 2.2.9: Number of unemployed persons according to Statistics Finland and MoEE 2014/10 – 2016/10 (seasonally adjusted)

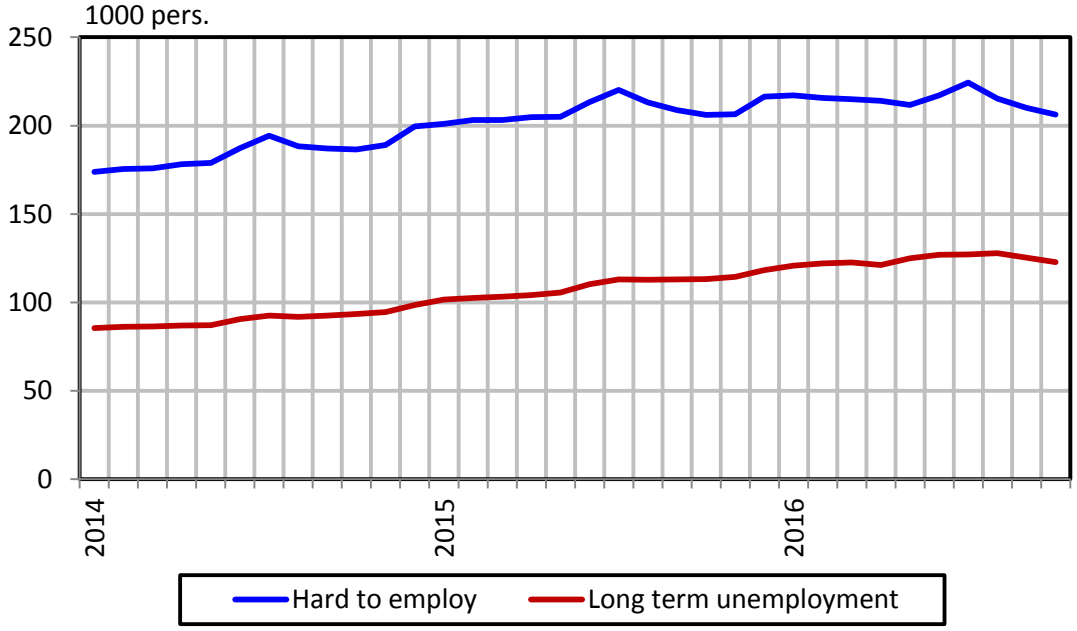


Source: MoEE, Employment service statistics; Statistics Finland, Labour Force Survey.

The number of long-term unemployed persons, based on MoEE statistics, is also often used as an indicator of structural unemployment. Figure 2.2.10 shows the number of long-term unemployed persons, defined as those who have been continuously unemployed for at least 12 months. We use data only from October 2014 onwards because the unemployment pension reform discussed above implied that the numbers are not comparable over time in earlier years (see Economic Policy Council, 2015). The figure also reports a measure of the number of those who are difficult to employ, which includes the long-term unemployed, those who have been unemployed for at least 12 months during the past 16 months and those who have been switching between active labour market policy programmes and unemployment. In the past two years the number of long-term unemployed persons has risen by roughly 30,000 and the number of hard-to-employ unemployed persons by

20,000. There are, however, signs of levelling or decline in the autumn of 2016.

Figure 2.2.10: The number of long-term unemployed and persons hard to employ by the MoEE, 2014/10 – 2016/10



Source: MoEE, Employment service statistics.

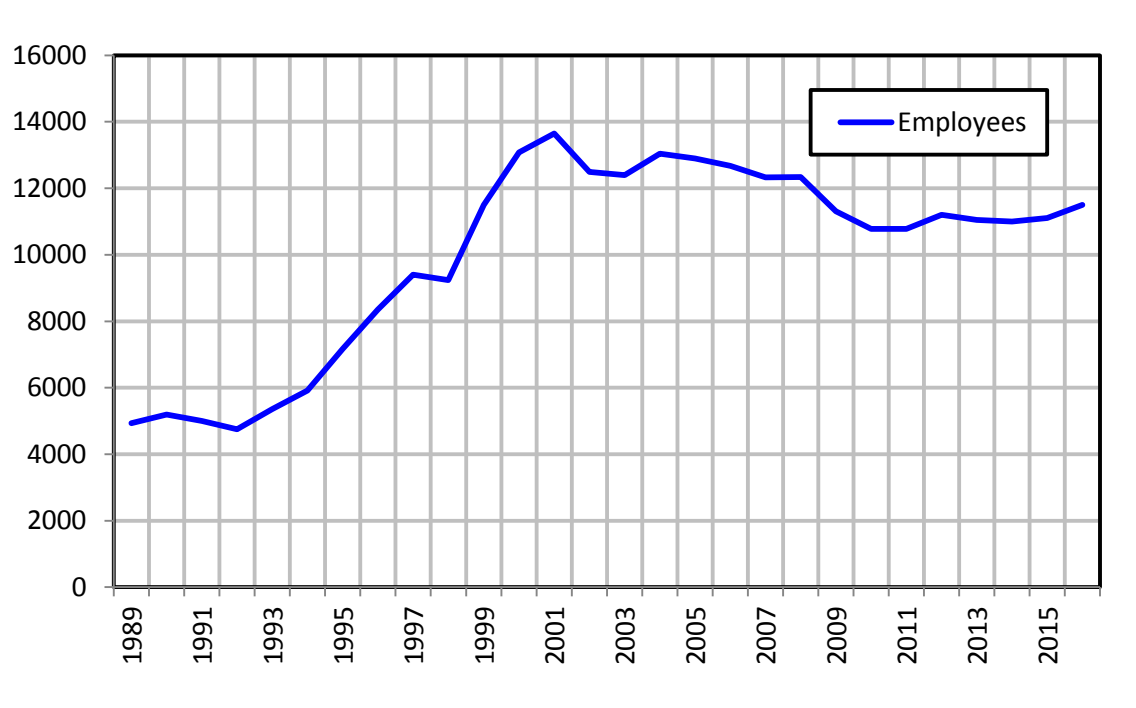
The conclusion drawn from the above discussion is that various indicators of structural unemployment point towards increased structural problems in the labour market, which suggests that the recent signs of positive developments in the labour market may slow down as the recovery continues.

In Box 2.2.2 we discuss the developments and policy responses in the Oulu region as a special case of a structural shock in the labour market.

Box 2.2.2 Sudden structural change in the Oulu region

In the report commissioned by the Council, Herala, Karhinen, Orenius, Simonen and Svento (2017) examine the Oulu region's economic development between 2007 and 2016, paying special attention to the high tech industry. They survey and describe the main aspects of the region's structural change, in particular the effects on employment. In addition, and importantly, they explore the content and effects of some policy measures designed to alleviate the adverse effects of the structural change. Especially, they survey the measures to support the emergence of start-up firms, and efforts to re-educate laid-off employees. They also describe how the public finances awarded to the region have been utilized.

Figure 2.2.11: Employees in the high technology sector in Oulu region

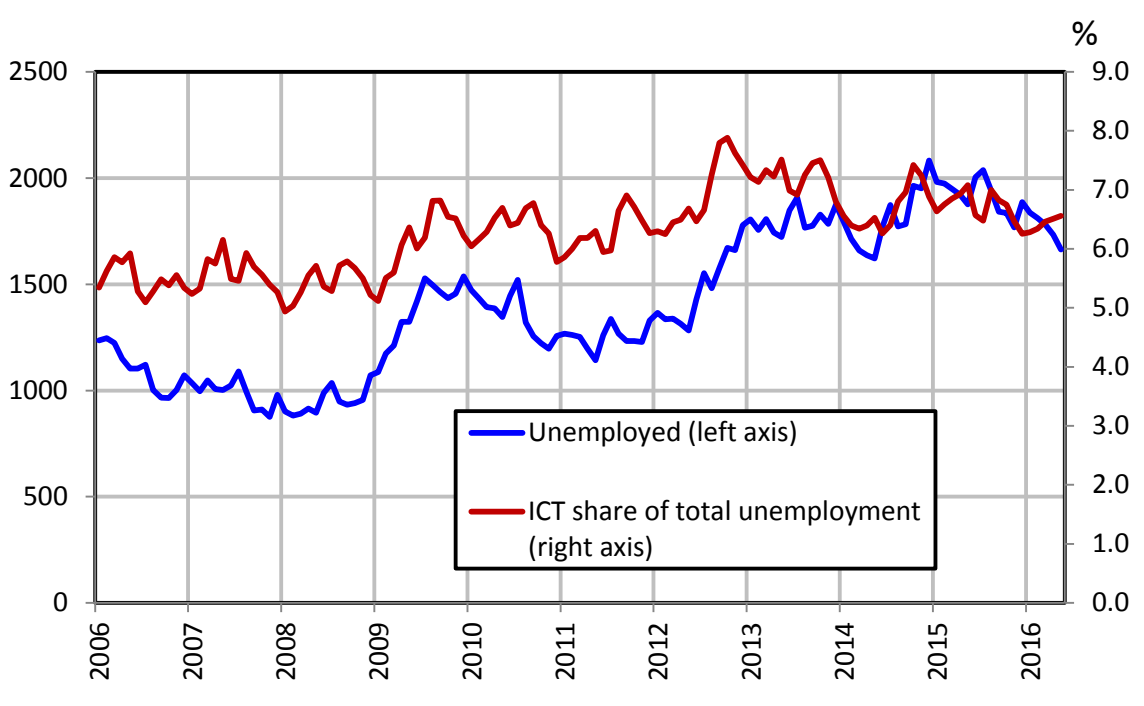


Source: Herala et al. (2017)

At the start of this millennium the city of Oulu and the surrounding region was a hub for mobile technology and its development. The high tech industry, mainly Nokia Corporation, employed almost 14,000 people in 2001, which amounted to 16% of the region's total employment (Figure 2.2.11). Since 2001 employment in the sector has declined by about 3,000 people up to 2011. Recently the sector has recovered quite significantly, and currently employs nearly 12,000 people. Over the past few years, the unemployment rate in the ICT sector has dropped to around 6.5% (Figure 2.2.12). Despite

the recovery in the high tech sector, the unemployment rate in the region is still 17%, which is alarmingly high compared to the rates prevailing 10 years ago.

Figure 2.2.12: Unemployment in the ICT sector in Northern Ostrobothnia

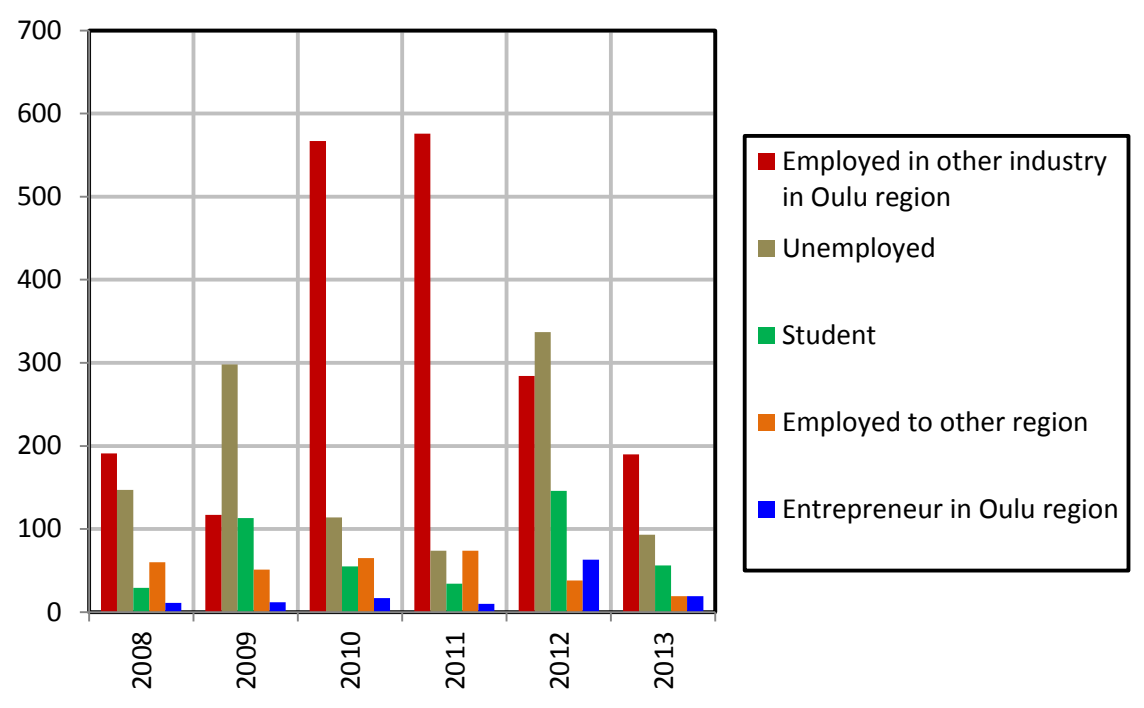


Source: Herala et al. (2017)

A vast majority of the skilled high tech labour force laid off by Nokia and its subcontractors have stayed in the region and settled themselves into new high tech positions in the area (Figure 2.2.13). A key element in the renewal process, according to the report, has been the application of mobile and wireless technologies to other promising industries such as services, health care, cleantech and printed electronics (Figure 2.2.14).

The Oulu region recovered from the structural change quite rapidly. The report is optimistic about the future of high technology in the region. The crucial element in launching the recovery was understanding the diminished role that Nokia would be able to play in the future. This understanding helped policy action to be directed into new areas. For example, various possibilities for laid-off employees to participate in re-education courses were launched.

Figure 2.2.13: Outflows from electronics industry

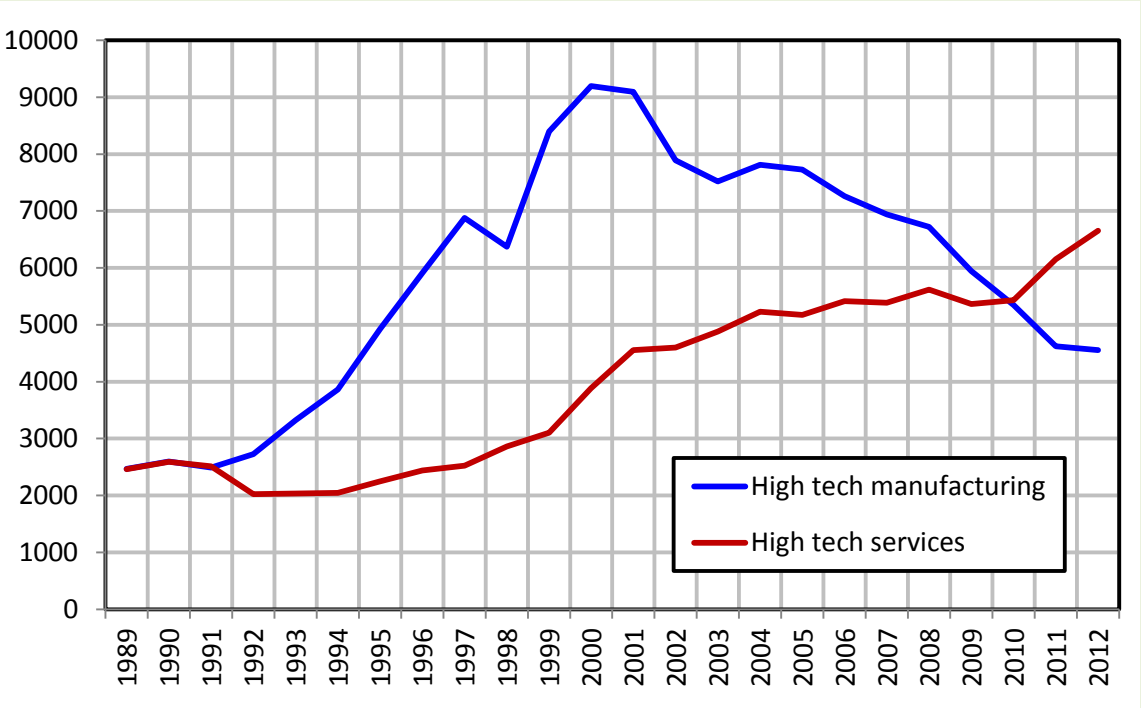


Source: Herala et al. (2017)

Several new business opportunities creating accelerators and hatcheries were opened. As a result of these policy measures, a new kind of start-up ecosystem was created, generating more than 200 start-ups after 2012. In the beginning of 2016, about 70% of these were still existing and active.

The Oulu region seems to be very resilient and has good possibilities to reach the pre-shock growth rates, at least in high tech sectors. The authors argue that the positive development is a result of an efficient combination of *creative destruction* and *correctly allocated policy* measures. Market forces were allowed to displace the declining sector of mobile phone development. This was the creative destruction part. The successful recovery of the Oulu region has been based on early analysis of other know-how fronts through instruments like the Oulu Innovation Alliance. The allocation of policy measures especially towards education in new leading areas completed the package by compensating for missing markets.

Figure 2.2.14: The development of high technology employees in manufacturing and service sectors in the Oulu region



Source: Herala et al. (2017)

2.3 The 2015 refugee crisis: challenges for employment and integration policies

The number of international migrants in the world is growing rapidly, and nearly two thirds of such people live in Europe. International migration touches all European countries. In discussing the implications of migration, it is important to distinguish between different types of migrants, including worker migration, students and refugees (and the associated potential family unification). Clearly, migrant workers have higher employment rates, while the employment rates of refugees, especially from low-income countries, is low due to various barriers, including language, education etc. It is accordingly no surprise that the economic effects of migration are very heterogeneous and it is impossible to make unconditional statements on the effects of migration, see EEAG (2017).

The current "refugee crisis" in Europe associated with the large inflow of asylum seekers in 2015 has radically changed the European discussion on

migration, and also the discussion in Finland. This involves both political aspects but also the economic consequences for labour markets and public finances. Therefore it is important to examine the refugee crisis and its possible impact on employment and the economy. This section builds on the report by Hangartner and Sarvimäki (with a contribution by Spirig) (2017)[7].

The recent refugee crisis is deep and extensive, causing additional financial and human expenses for the refugees themselves and destination countries. It is a challenge for European integration and employment policies, not to mention the cultural and political consequences in terms of changing voting patterns and the rise of anti-immigrant and populist movements and parties. The fiscal, and perhaps also the political, impacts of immigration depend crucially on the extent to which immigrants integrate into the host countries' labour markets. Thus a key question facing policy makers is how to design efficient integration policies.

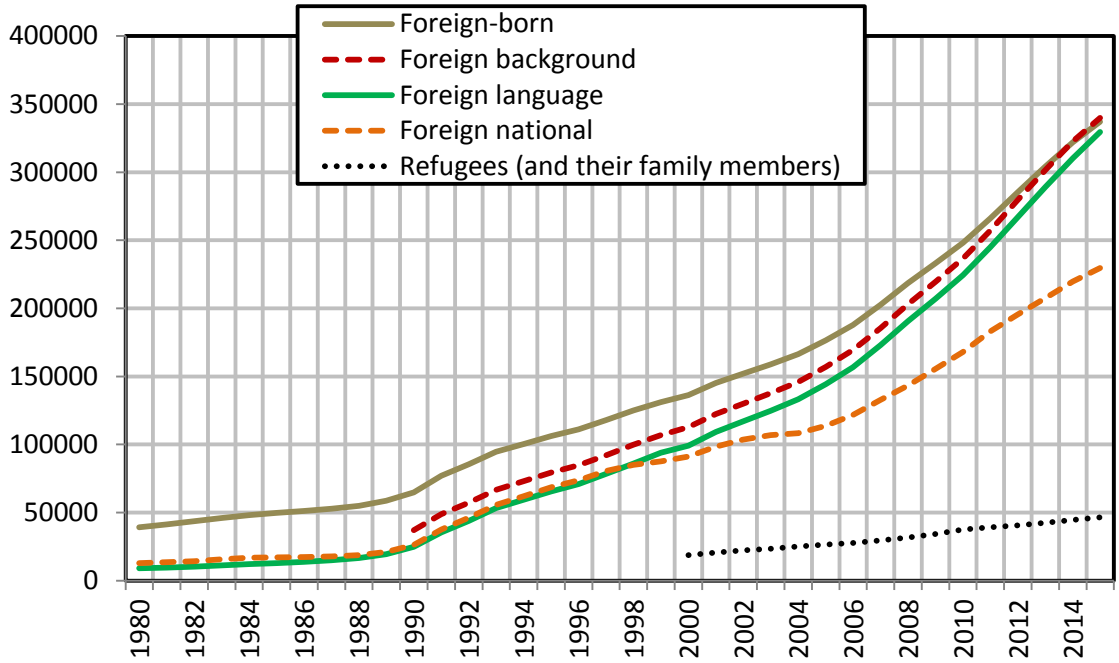
The European Union faced a sudden increase in the number of people applying for asylum. The number of asylum applications increased sharply 2015 and hit a peak of almost 170,000 applications in October 2015. In Finland, the peak was reached in September, when more than 10,000 new asylum seekers arrived. In total, Finland experienced a 890% increase in asylum applications in comparison to the previous year. Since many asylum seekers are from countries with protracted conflicts like Syria, it is not only the number of asylum claims that has increased, but also the number of people who will be living – temporarily or indefinitely – in European countries. Finland and other European countries face a number of short- and long-term challenges in how to handle the asylum procedure and the integration of a new generation of residents, see Hangartner and Sarvimäki (2017). The authors also stress that the 2015 inflow of asylum seekers needs to be compared to Finland's larger immigration experience.

The total immigrant population grew almost ninefold from 37,000 in 1990 to 340,000 in 2015 (or from 0.8 to 6.2 percent of the Finnish population). In

[7] In the report commissioned by the Council, Hangartner and Sarvimäki assess immigration. They provide a timely review of the 2015 "refugee protection crisis" and highlight recent policy changes by European governments and the likely effects of refugees on host countries' labour markets, economies and politics. The report also discusses what kind of asylum policies European citizens prefer. It also includes relevant economics and political science research on immigration and the integration of refugees and asylum seekers in the context of European countries. This section is based on the report's findings.

the 2010s, Finland's immigrant population has increased by roughly 20,000 individuals each year. Prior to the 2015 refugee crisis, at most 15% of the immigrants living in Finland had arrived due to a need for international protection or were family members of those granted asylum. Assuming that 10,000 of the asylum applications filed in 2015 were approved, the share of refugees out of the total immigrant population would have increased to at most 16–17%.

Figure 2.3.1: Immigrants in Finland, 1980–2015



Source: Hangarter and Sarvimäki (2017); Statistics of Finland

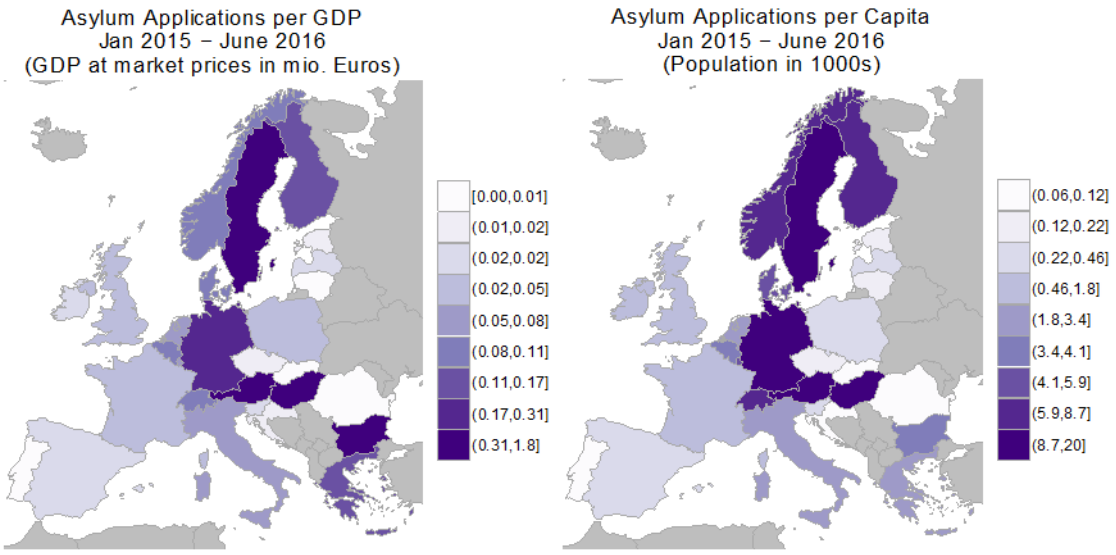
Notes: The top solid line reports the number of foreign-born individuals living in Finland at the end of each year. The upper dashed line reports the number of individuals with a foreign background as defined by Statistics Finland. The middle dashed line corresponds to the number of individuals whose registered mother language is not Finnish, Swedish or Saame. The lower dashed line is the number of foreign nationals. The bottom dotted line is the number of refugees and their family members.

The 2015 refugee crisis changes at least to some extent the overall pattern of migration in Europe. In 2015, Finland received 32,476 asylum applications and roughly 10,000 of these are expected to be approved. Such high numbers had not been documented since the post-WWII period. The number of annual asylum applications had ranged between 1,500 and 6,000 in 1990–2014. During this period, a total of 68,187 asylum applications were received and 21,801 individuals were granted asylum in Finland. The relative-

ly large number of asylum seekers in 2015 was certainly a dramatic change but was not unprecedented. In 1922, Finland hosted at least 20,000 refugees who had fled the Russian revolution. During World War II, 430,000 persons were internally displaced from areas ceded to the Soviet Union and resettled in the remaining parts of the country. In addition, 63,000 Ingrian Finns were moved to Finland but then returned to the Soviet Union. In the early 1990s, they were granted return migrant status and roughly 30,000 Ingrian Finns moved to Finland in the next two decades.

A comparison to other 'Dublin countries' in 2015–2016 shows that Finland received a relatively large proportion of the asylum applications. Taking all EU28 states together, Syrian nationals represented by far the largest group (over 550,000 first-time asylum applications). There is, however, large variation in the origin country mix across the EU28 countries. Among the Nordic countries, Syrians were by far the largest group in Sweden, Denmark and Norway, while Finland received most applications from Iraqis (~21,000 applications), followed by Afghan, Somali and Syrian asylum seekers (~5,700, ~2,200 and ~1,100 applications).

Figure 2.3.2: Asylum Applications per GDP and per capita January 2015 – June 2016 in EU



Source: Hangarter and Sarvimäki (2017); Eurostat.

Notes: These graphs display the variation in first-time asylum applications received by European states, relative to GDP (left) and per capita (right). Independent of the denominators used, countries such as Sweden, Germany, Austria, Hungary and Finland carry a relatively large responsibility.

In 2016 refugees and asylum seekers constituted the largest group of immigrants. This is the reason why it is important to focus on this group of immigrants without forgetting the broader picture.

Migrants accounted for 47% of the increase in the workforce in the United States and 70% in Europe over the past 10 years. They fill important niches both in fast-growing and declining sectors of the economy and contribute significantly to labour market flexibility, notably in Europe. Labour migrants have the most positive impact on the public purse. According to OECD calculations, migrants contribute more in taxes and social contributions than they receive in benefits (OECD, 2015). Economic theory has studied international labour mobility extensively, paying attention to wage differences and labour assimilation, for instance (Kerr & Kerr, 2011). Bratsberg, Raaum and Røed (2016, p. 2) write that "in a world with large cross-country productivity differences, there will potentially be considerable economic gains associated with unrestricted movement of persons across national borders, as open borders allow labour to flow towards its best use". Matters become more complicated when taking into account labour market structure and welfare arrangements. In a Nordic context the qualification requirements for entry into the labour market are high, the employment rate is high for both men and women, and welfare arrangements are relatively generous. Hence, in particular migrants from low income countries who tend to have low qualifications may find it hard to enter the labour market, and therefore primarily rely on social transfers.

There is empirical evidence that humanitarian immigrants from poor to rich countries seem to be underrepresented in employment and/or overrepresented among benefit receivers compared to other types of migrants and natives (Bratsberg, Raaum & Røed, 2016). This finding is important in outlining successful integration policies and other policy measures that might help to integrate refugee migrants into the labour market and society at large. A recent study using cross-sectional EU labour force survey data from 2008 (Dumont et al. 2016) documents that employment rates are low among refugees but the native-refugee gap in general declines with the length of stay but is related to the country of origin, so that for example Bosnian refugees are highly successful and refugees from the Middle East have significantly lower employment rates (ibid). It is also evident that employment of refugees varies greatly across EU countries.

Sarvimäki's (forthcoming) study is in line with European research findings. His analysis shows that immigrants born in Afghanistan, Iraq and Somalia earned substantially less and received more social benefits than other immigrant groups or natives. The gaps decreased over time, but remained large. Ten years after arriving in Finland, the average earnings of immigrant men from these countries were only 25–40% of the average earnings of native men of the same age. The relative earnings of women were even lower. Immigrant households from these countries of origin received roughly twice as much equivalence-scaled social benefits as native households.

The employment rate thus varies considerably among different migrant groups. Much research has also been done on the impact of immigration on wages, but the findings are contextual due to very different immigration patterns and situations. Hangartner and Sarvimäki (2016) conclude that receiving (even a large number of) refugees is unlikely to have a large effect on native wages or employment, but may affect natives' disposable income through public finances. But evaluating the magnitude of all fiscal and employment effects is difficult. Existing research shows that refugees tend to struggle to find stable employment and thus pay less taxes and receive more social benefits than natives. The short-term fiscal impact is clearly negative, although immigration in general does not necessarily have any notable impact on long-run native wages or employment. Sudden and large immigration flows might, however, affect the capital-labour ratio and temporarily lower wages but there is no clear evidence of this type of development. In Finland, the number of refugees has remained relatively low in comparison to the size of the labour market. From this follows that the impacts on the employment rate and wages might be marginal. To sum up, immigration flows most often increase the size of the economy, at least in the long run, but might cause extra costs in short run.

Human capital investments are very important in lowering the unemployment level of humanitarian immigrants, and most importantly language skills matter. Integration policies and active labour market measures are of great importance in speeding up the labour market entry of humanitarian immigrants. Salminen (2015) estimated that an average working-age immigrant from Somalia or Iraq constituted roughly a EUR10,000 annual average net cost to the public sector (1997-2011). In comparison, the corresponding net cost for an average working-age immigrant was EUR 520, while working-age natives created an average EUR 3,500 surplus for the public sector.

The net cost or surplus that an individual creates for the public sector varies dramatically over the lifecycle. Many refugees are (young) adults educated and raised in their home countries. Some investment for the future has already been done. In order to truly capture the fiscal impacts of immigration, researchers would need to take these dynamics into account and measure the fiscal impacts as a discounted sum of all future taxes, transfers and costs due to public services, see e.g. Hansen et al. (to appear).

Early entry into the labour market and education are keys to the successful integration of refugees. There is some evidence from Sweden that intensive counselling and coaching helps immigrants to find jobs (Hangartner & Sarvimäki, 2016). Even very small interventions such as Finland's integration plans can have large effects. This also suggests that further policy experimentation on how to improve training and counselling could yield high returns on public investment. Hangartner and Sarvimäki (2016) also pay attention to the length of the asylum decision-making process: the length of time that refugees 'wait in limbo' for a decision on their asylum claim impacts on their subsequent economic integration. Policy reforms that marginally reduce the waiting period for asylum seekers would help refugees to navigate the difficult transition from a life in legal limbo to a successful integration. From a host country perspective, such reforms would reduce public expenditures for welfare benefits significantly due to the increase in employment and the resulting increase in the tax contributions of employed refugees. Providing extensive language training to asylum seekers (and future residents) has proved to be highly beneficial. At the end of the day, however, it is evident, as Åslund, Forslund and Liljeberg (2016, 9-10) note, that labour market entry is a time-consuming process. In Sweden, it takes more than five years for half a cohort of immigrants to enter the labour market. After 15 years, around 80% of the cohorts studied had completed labour market entry.

Conclusions

The fiscal, and perhaps also the political, impacts of immigration depend crucially on the extent to which immigrants integrate into the host countries' labour markets. Thus a key question facing policy makers is how to design efficient integration policies. Early entry into the labour market is very important but has proved to be a difficult target. However, present migration flows are not that large that they would have a significant effect on the employment and wages of natives in Finland. Although public finances

are likely to be affected, it will not be to an extent that will have a major effect on fiscal sustainability assessments.

The literature on the economic impacts of immigration has increased but there is a major shortage of research. Much more evidence is needed to evaluate all the short- and long-term effects on the economy and employment. It is well documented that designing policies like education and employment maximizes the benefits of migration (OECD, 2015). The long-term fiscal effects are determined by a combination of the labour market integration of refugees and their children and the way the host countries arrange their social transfers, public services and taxes. These factors are hard to predict and, of course, are profoundly affected by the policy decisions made now and in the future.

2.4 Conclusions

The Finnish economy has returned to growth after a prolonged economic downturn. The strongest growth has been seen in private services, but growth in manufacturing and construction is also gathering pace. In 2016 growth is projected to peak above 1%. The projected growth for 2017 and 2018 will also be around 1%, and the output gap is expected to close slowly. The growth in construction will also boost private investments, which have been below capital depreciation in recent years.

The upturn in the economy is also visible in the labour market. In 2016 employment has started to increase and unemployment to decrease, which will ease government finances slightly. However, the current employment rate of 68.9%is far below the target of 72% set by the government.

The Council notes that reaching the government's objective of a 72% employment rate will be impossible without structural reforms. Meeting the employment target would require the number of employed persons to increase by 110,000. Estimates of the structural unemployment level, above which wage growth can be expected to accelerate and prevent further employment growth, are close to the current unemployment rate. Measured in terms of the number of unemployed people, the difference between current unemployment and structural unemployment estimates (NAIRU by the OECD and NAWRU by the European Commission and the Ministry of Finance) is approximately 20,000–35,000. There is substantial uncertainty

related to these estimates of structural unemployment, but it seems very unlikely that the employment rate could be sustainably increased to 72% without structural reforms that increase the incentives to take up jobs. The need for structural reforms to reach the target employment rate is rightly noted in the government programme.

The developments in statistical indicators of structural unemployment point towards a moderate increase in structural unemployment in the past couple of years. Long-term unemployment has increased and the unemployment rate has increased at the same time as the number of vacant jobs has increased.

In the 2010s Finland's immigrant population has increased roughly by 20,000 each year and in 2015 the inflow of refugees was exceptionally high. The fiscal impact of immigration depends crucially on the extent to which immigrants integrate into the labour market. For refugees, the length of the asylum decision-making process has a negative effect on subsequent labour market outcomes. With present migration flows, the impact of immigration on the labour market outcomes of natives is limited.

3 Employment and hours worked– an international comparison

The economic policy strategy is critically dependent on increasing the employment rate. The employment rate is currently low for cyclical reasons, but as argued in Chapter 2, the government target of an employment rate of 72% requires structural changes. It is accordingly important to assess the potential to increase labour force participation and employment. To bring this discussion into perspective, this chapter considers employment and hours worked in a comparative perspective. Specifically, Finland is compared to seven other countries (Denmark, France, Germany, the Netherlands, Sweden, the UK and the US). The countries were chosen partly to reflect variation in the outcomes and partly to compare Finland to a group of countries that are most relevant. In order to analyse employment and hours worked by age, gender and education level, we use comparable microdata for these countries. The data span over the period 1995-2014. The data and the methods used are described in more detail in Box 3.1.

Total labour input measured in terms of the total of hours worked by the population is the relevant metric for the overall performance of the economy (production) and it is therefore important to consider both how many persons are in employment (the extensive margin) and their working hours (the intensive margin). In its competitiveness pact, the government also aims to increase the annual hours worked by employed persons by 24 hours, and the chapter also discusses whether this goal is sufficient.[8]

[8] The intensive margin of labour supply in Finland and other European countries has recently been analysed by Kauhanen (2015). This analysis considers average weekly working hours per person in 2014 only. According to the report, which is based on Eurostat open data, Finnish working hours

Box 3.1 Data and methods

The data used for the analysis are from the European Union Labour Force Survey (EU-LFS), excluding statistics for the United States, which are derived from the Bureau of Labour Statistics' Current Population Survey (CPS). The data for the EU-LFS are harmonized by collecting the same set of variables and using the same concepts, definitions and methodologies. Ultimately the comparability between countries in the EU-LFS is good (Eurostat-b); however, comparability across years is somewhat less perfect, because of structural breaks in methodologies. The most important break is due to the transition from annual to a continuous quarterly survey starting from 1998. There are no structural breaks in the CPS data.

The information from the two data sets is, by and large, comparable. Both collect working time information using two distinct measures: the number of hours usually worked per week and the number of hours actually worked per week. Both concepts comprise all working hours irrespective of whether the hours are paid or not. The difference between the two concepts is that usual hours measures how many hours the person should have worked during the reference week, whereas actual hours measures how many hours they actually worked. The actual hours of work concept is more suitable for international comparisons of labour supply while usual working hours remains useful for comparisons concerning institutional changes between countries. Differences in actual working time also reflect differences in the length of annual holidays. The results in this Chapter are based on actual working hours.

There is a minor difference between EU-LFS and CPS concerning collecting information on working hours. Both surveys separate the working hours a person performs in their main job from the remainder of working hours. However, EU-LFS assumes a maximum of only two simultaneous jobs per individual. As a result, the working time variables of EU-LFS are the number of hours actually worked in the main job and in the second job. CPS does not restrict the amount of simultaneous jobs. The CPS working time variables are the number of actual weekly working hours in all jobs.

are close to the European average if all employed people are taken into account. However, if only full-time workers are observed, the Finnish working week is shorter than in any other country in Europe. The working week of Finnish part-time workers is also among the shortest.

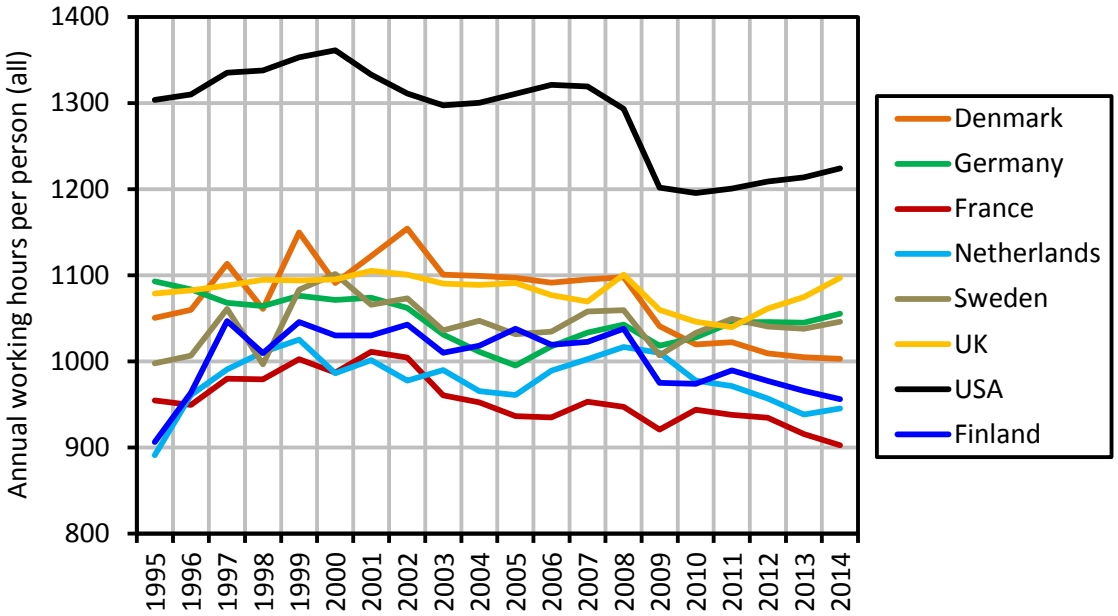
In both surveys, the main factor determining employment, and thus the extensive margin, is a labour contract. An employed person is, therefore, an individual who has worked or has been temporarily absent from his/her job during the reference week.[9]

3.1 Developments in employment and hours worked 1995-2014

Average working hours per working age population vary considerably between countries, with the US having exceptionally high working hours. Total hours have been slowly but steadily declining over time, cf Figure 3.1. Countries can be sorted into two groups according to their recent development. There are countries which have been able to recover to their pre-recession levels (Sweden, Germany & the United Kingdom) and those which have not (incl. Finland). In Finland, average working time was rather stable between 1997 and 2008, but declined in 2009, and had not recovered to the pre-crisis level by 2014. In 2014, average hours worked were at the lower end of this country comparison.

[9] For data, see Cencus Bureau, Current Population Survey (CPS), and EU labour force survey by Eurostat.

Figure 3.1: Average annual working hours per 15-74-year-old population

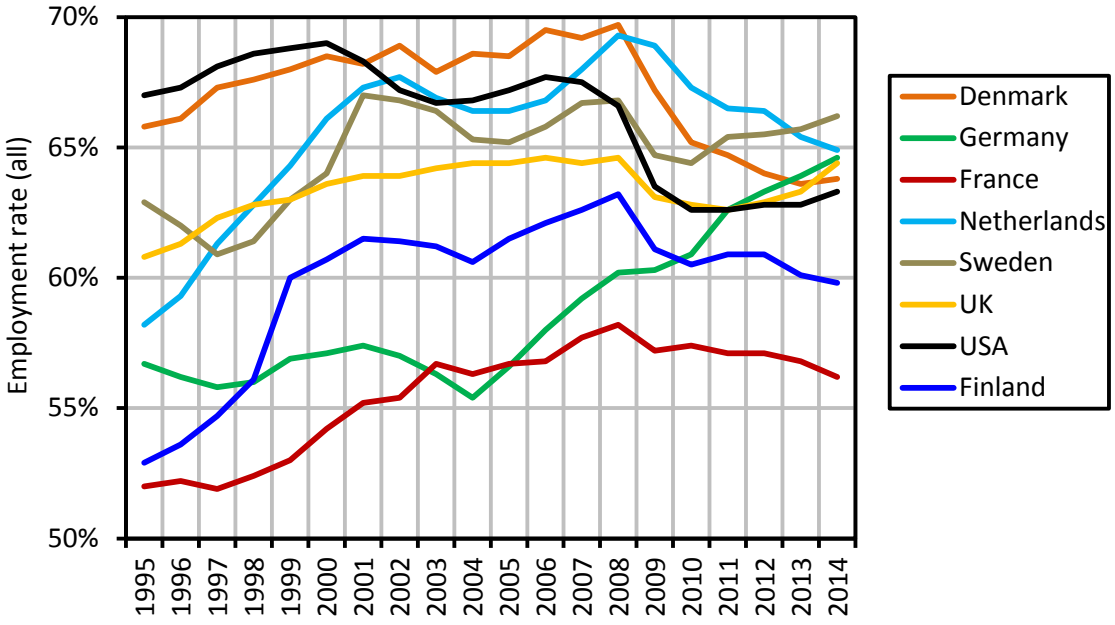


Sources: Calculations by the EPC based on Labour Force Survey microdata (by Eurostat) and Current Population Survey microdata (by the Bureau of Labor Statistics).

Employment rates (the extensive margin) differ both in the levels and cyclicality across countries, cf. Figure 3.2.[10] Notably, all countries, except Germany, experienced a fall in employment rates as a consequence of the financial crisis. Some countries have recovered (e.g. Sweden) whereas the employment rate has remained low in Finland (see further discussion in Chapter 6). The striking improvement in the employment rate in Germany is also seen clearly in the Figure. Along the intensive margin (Figure 3.3), hours worked per worker have generally declined, except in the US.

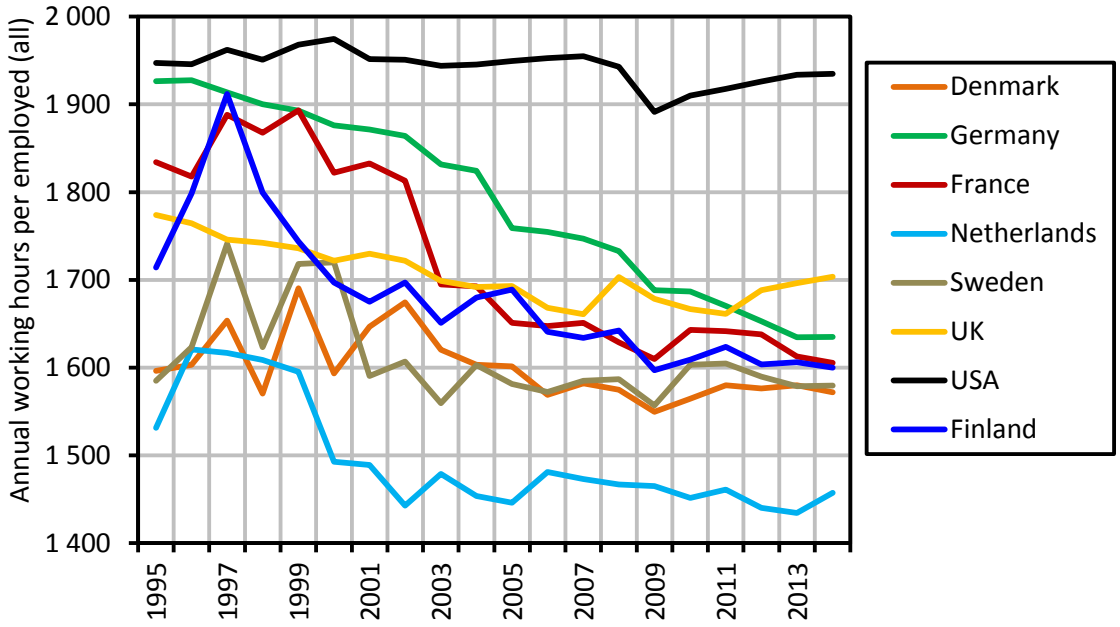
[10] The employment rate in this chapter refers to that of 15-74-year-olds, capturing better the full potential of older workers than the employment rate of 15-64-year-olds. The government's 72% employment rate target pertains to 15-64-year-olds.

Figure 3.2: Employment rate of 15-74-year-old persons



Sources: Calculations by the EPC based on Labour Force Survey microdata (by Eurostat) and Current Population Survey microdata (by the Bureau of Labor Statistics).

Figure 3.3: Annual hours worked per worker



Sources: Calculations by the EPC based on Labour Force Survey microdata (by Eurostat) and Current Population Survey microdata (by the Bureau of Labor Statistics).

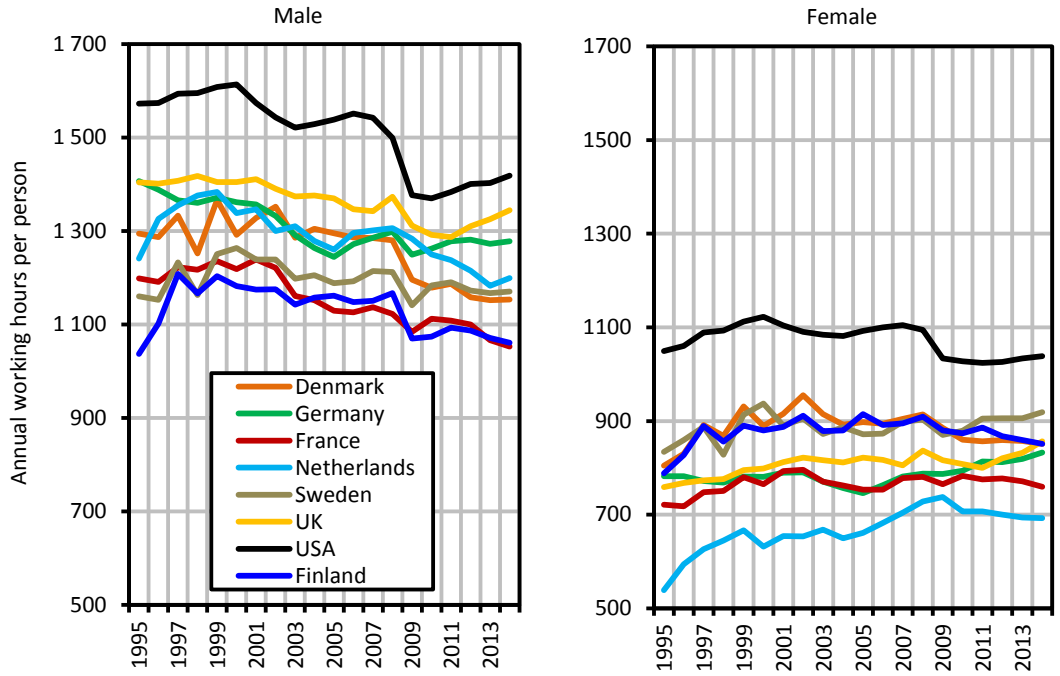
Finland's employment has remained persistenly low since the onset of the financial crisis. The employment rate followed an upward trend from 1995

to 2008 and fell as a consequence of the global recession. The years 2010 to 2012 were characterized by a slow recovery but the trend turned downward again in 2012. Finland performed second to worst among the reference group from 2010 on. This means that the employment rate was approximately the same in 1999 and 2014. In 2014, Finland did not differ significantly from other countries (except the US) in working hours per worker.

Males and females

Finnish men work a comparatively low number of hours (Figure 3.4). Instead, Finnish women have, until 2011 at least, worked long hours. It is clear that the gender differences in the Nordic countries are among the smallest in the reference group. The high working hours of women balance the low working hours of men. Cross-country differences among women are smaller than among men. One observation is that American women work almost as many hours as Finnish men.

Figure 3.4: Working hours per adult population

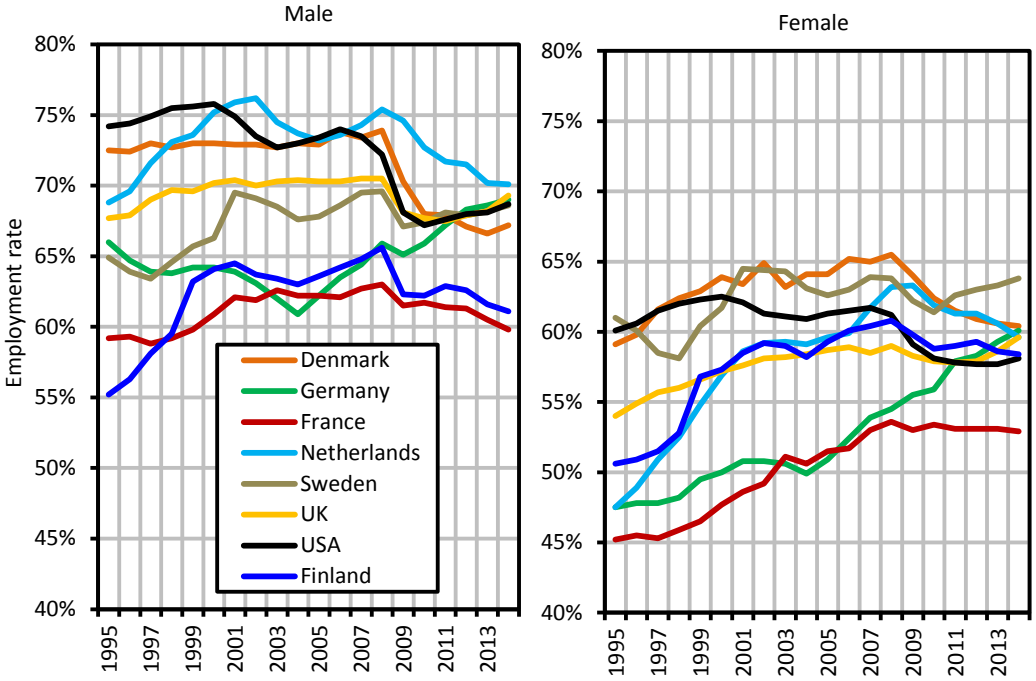


Sources: Calculations by the EPC based on Labour Force Survey microdata (by Eurostat) and Current Population Survey microdata (by the Bureau of Labor Statistics).

The development of the male employment rate has been weak in Finland since 2008 (Figure 3.5). Women's employment rate in Finland does not differ significantly from the reference group. Germany stands out as a country where women's employment rate has steadily risen and is now as high as in

Denmark and the Netherlands. Overall, men's employment rates have been more severely affected by the crisis than women's. These differences may reflect the fact that a higher share of men have been employed in sectors most severely affected by the crisis.

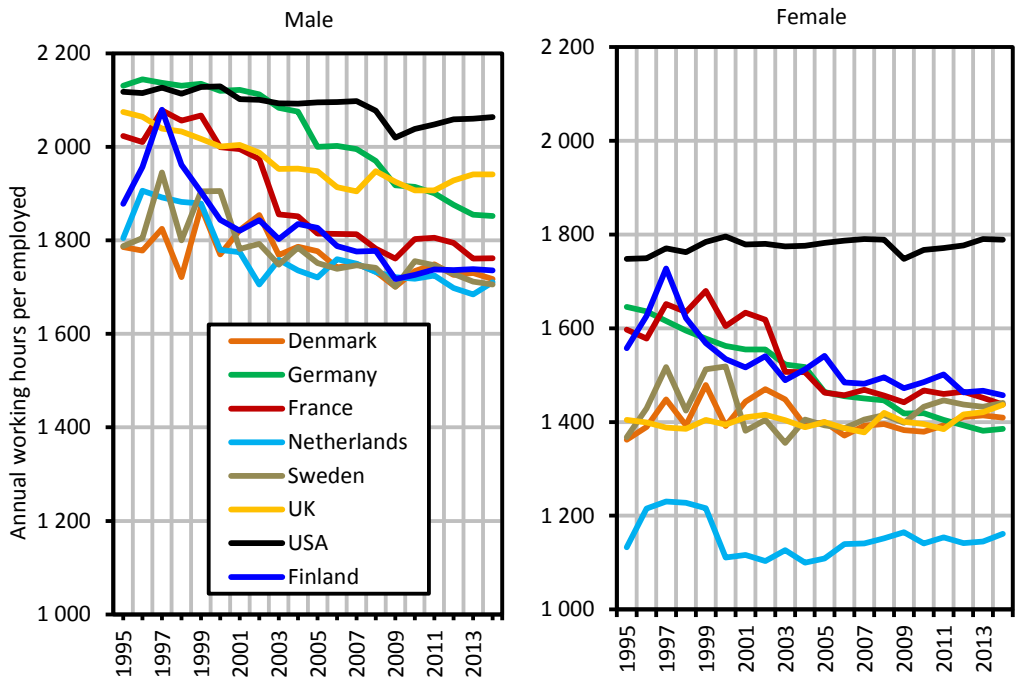
Figure 3.5: Employment rates of men and women



Sources: Calculations by the EPC based on Labour Force Survey microdata (by Eurostat) and Current Population Survey microdata (by the Bureau of Labor Statistics).

According to Figure 3.6, Finnish female workers have relatively long working hours, whereas hours for Finnish working men are at the lower end. The differences in the working hours of women are small, execpt for the US and the Netherlands.

Figure 3.6: Working hours per worker for men (left) and women (right)



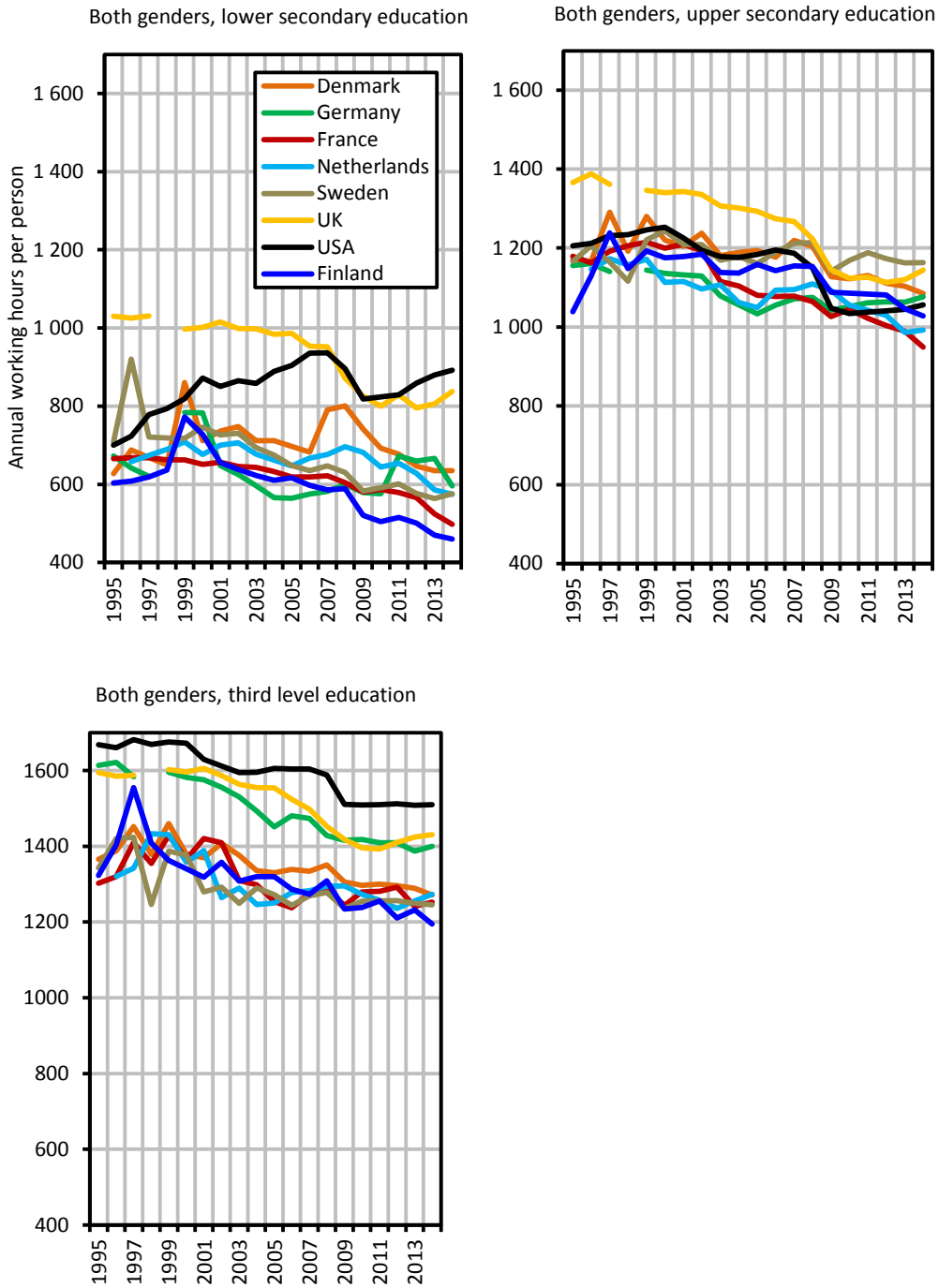
Sources: Calculations by the EPC based on Labour Force Survey microdata (by Eurostat) and Current Population Survey microdata (by the Bureau of Labor Statistics).

Differences between education levels

Next we will divide the population into three groups according to education level. Education level is measured as the highest level completed. The lowest level also includes individuals who received less education than lower secondary education.

Figure 3.7 depicts annual hours per person for people with different educational backgrounds. In the least educated group, Finnish working hours have been lower than in other countries since 2008. In 2014 they worked on average less than 500 hours per person. However, this group has a limited impact on Finland's aggregate hours at the level of the whole population as their share of the labour force is relatively small.

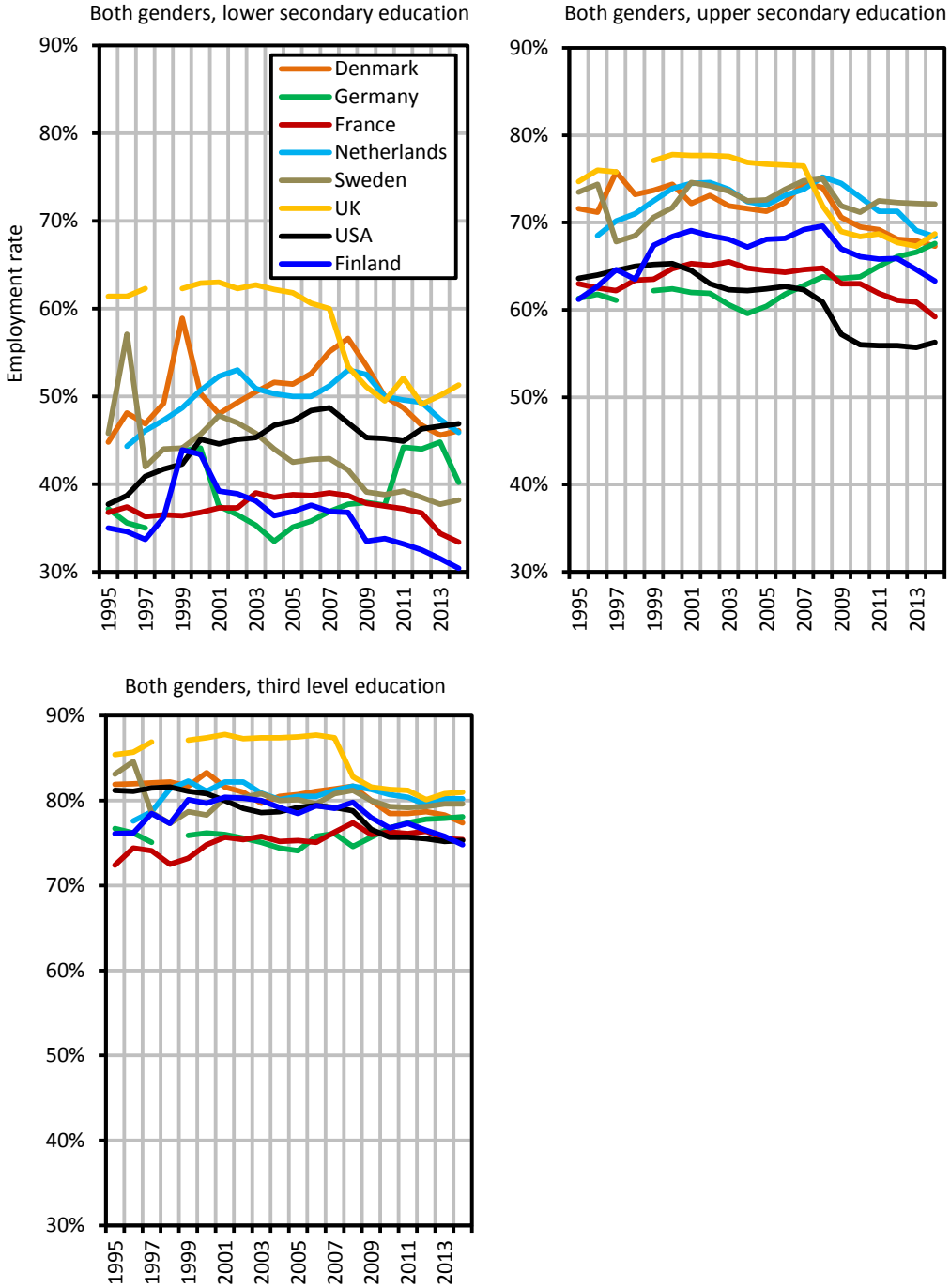
Figure 3.7: Annual hours per person for people whose highest completed education level is either lower secondary education (LHS), upper secondary education (RHS), or tertiary education (bottom)



Notes: The year 1998 is missing for Germany and the UK, and the year 1995 is missing for the Netherlands.

Sources: Calculations by the EPC based on Labour Force Survey microdata (by Eurostat) and Current Population Survey microdata (by the Bureau of Labor Statistics).

Figure 3.8: Employment rate for people whose highest completed education level is either lower secondary education (LHS), upper secondary education (RHS) or tertiary education (bottom)



Notes: The year 1998 is missing for Germany and the UK, and the year 1995 is missing for the Netherlands.

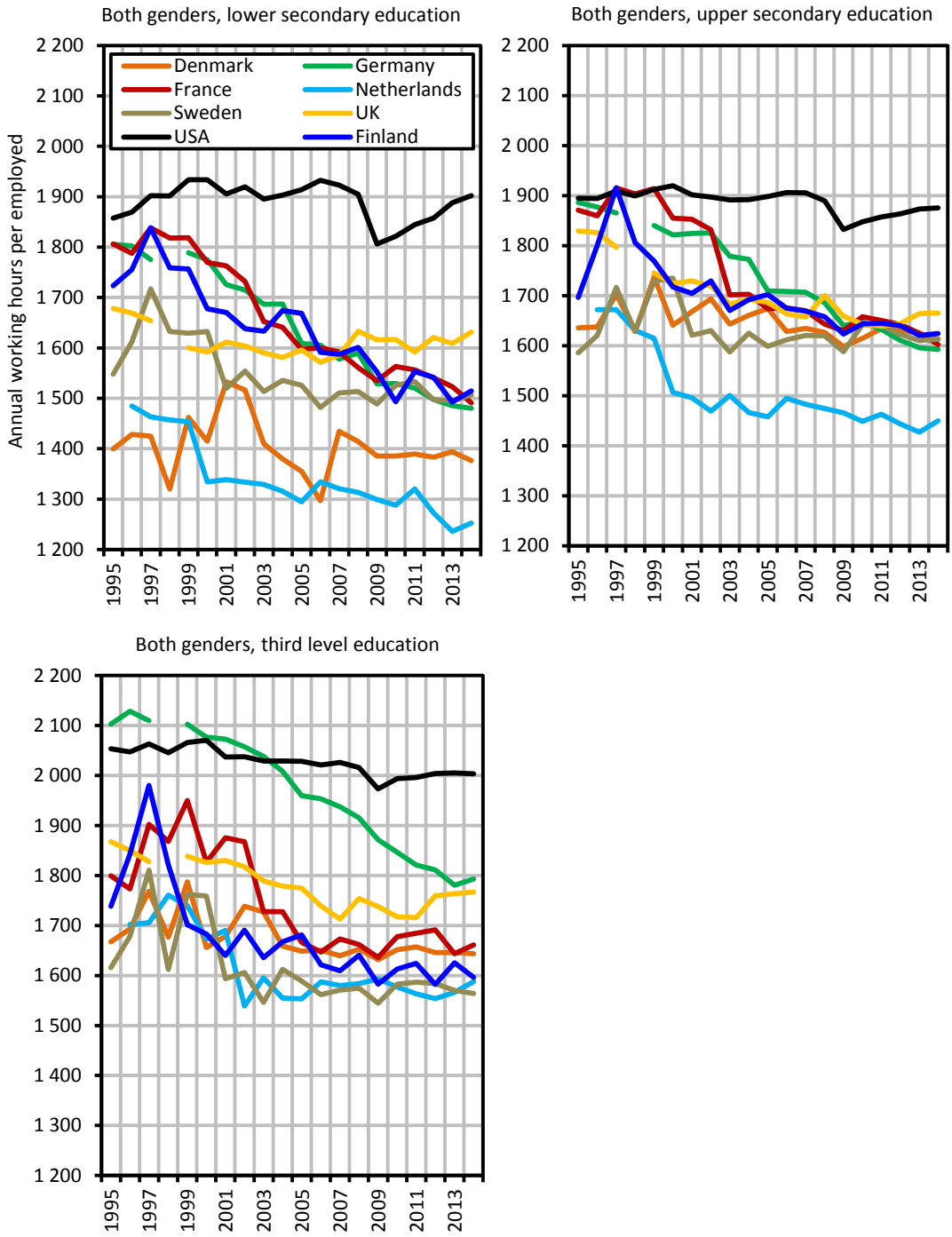
Sources: Calculations by the EPC based on Labour Force Survey microdata (by Eurostat) and Current Population Survey microdata (by the Bureau of Labor Statistics).

The employment rates for different educational groups are illustrated in Figure 3.8. The employment rate of the least educated individuals is exceptionally low in Finland, approximately 30% in 2014. It is also lower than in the beginning of the time period. The employment rates in all three groups have declined in Finland since 2008.

The working hours of employed persons do not differ significantly from the reference countries (Figure 3.9). Those with the highest level of education work more than people with upper secondary education in many countries, but not in Finland.

The macro-level impact of the low working hours of the low-education group is mitigated in Finland by the low share of workers with low education alone. Finland has a comparatively low share of people with lower secondary education out of the total labour force (approximately 13% in 2014) but a high share of highly educated people (41%). The share of people with upper secondary education is similar to the reference countries.

Figure 3.9: Annual hours for employed people whose highest completed education level is either lower secondary education (LHS), upper secondary education (RHS) or tertiary education (bottom)



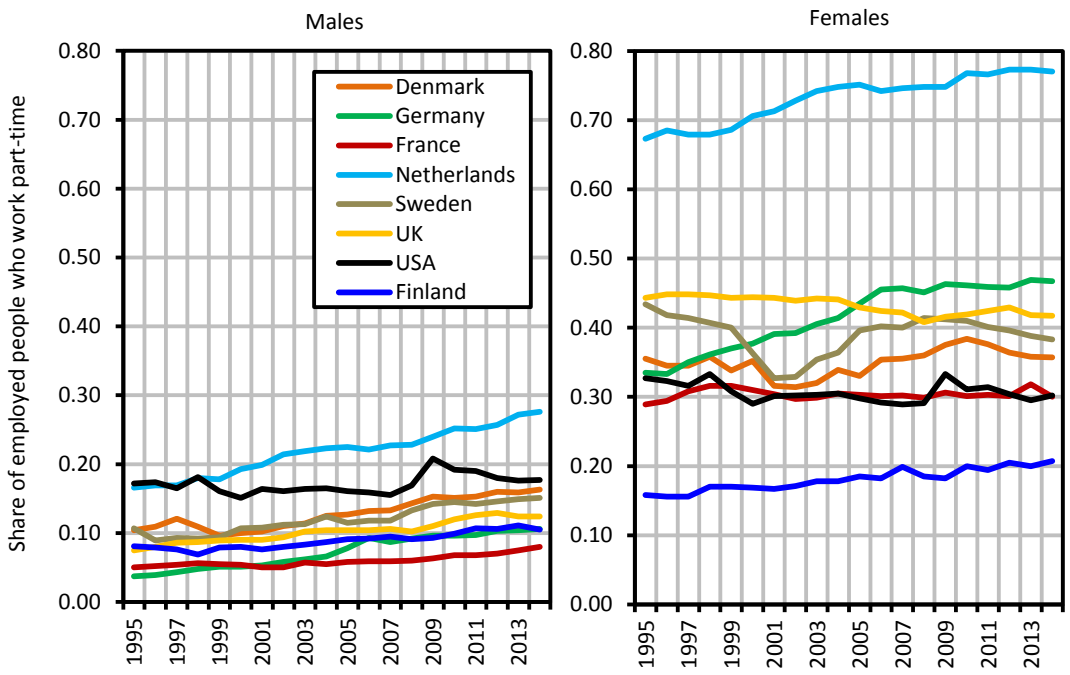
Sources: Calculations by the EPC based on Labour Force Survey microdata (by Eurostat) and Current Population Survey microdata (by the Bureau of Labor Statistics).

Notes: The year 1998 is missing for Germany and the UK, and the year 1995 is missing for the Netherlands.

Differences in full-time and part-time work

According to Figure 3.10, there has been a steady increase in part-time work among all employed people. Part-time work is not as common in Finland as in the reference countries. In particular, female part-time work is much more common in the reference countries. The Netherlands is a notable exception as almost 30% of employed men and almost 80 percent of employed women worked part-time in 2014.

Figure 3.10: The share of employed people who work part-time: men (left) and women (right)

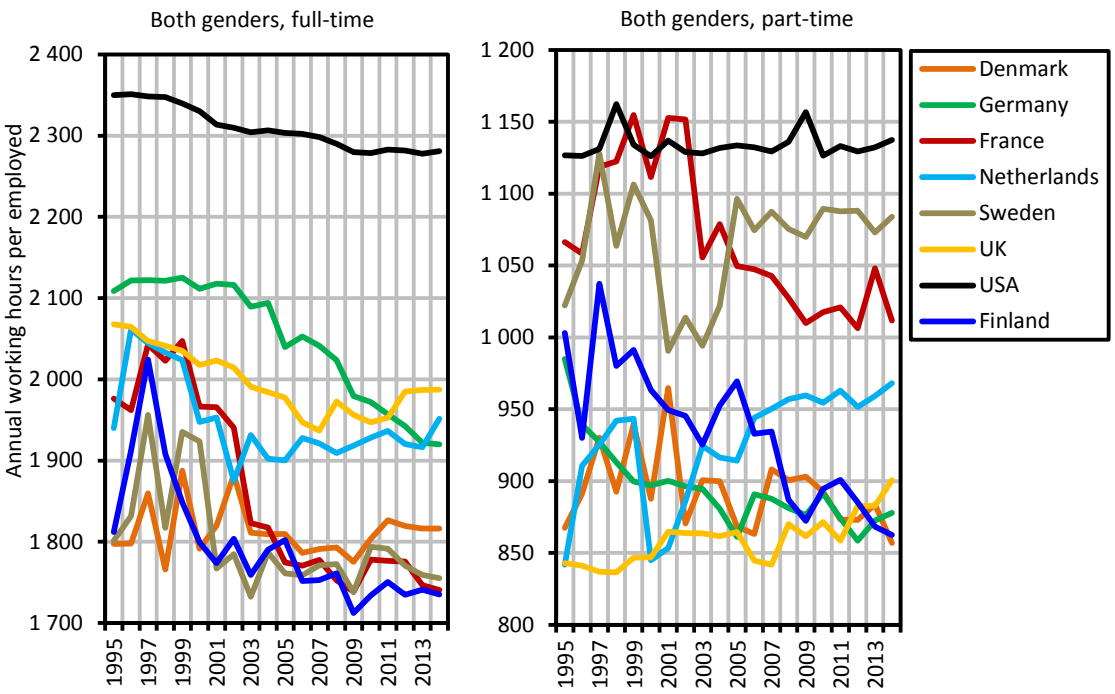


Sources: Calculations by the EPC based on Labour Force Survey microdata (by Eurostat) and Current Population Survey microdata (by the Bureau of Labor Statistics).

Full-time hours have mostly been on a declining trend (Figure 3.11). Part-time hours have been stable (US & Sweden), declining (Finland, France, Germany & Austria) or even increasing (UK & Netherlands).

Finland's full-time and part-time hours are among the lowest in this eight-country comparison. Against this backdrop, the government's aim to raise working hours for full-time workers is well motivated, but the planned increase would not close the gap between Finland and the comparison countries.

Figure 3.11: Annual hours of people with full-time jobs (left) and part-time jobs (right)

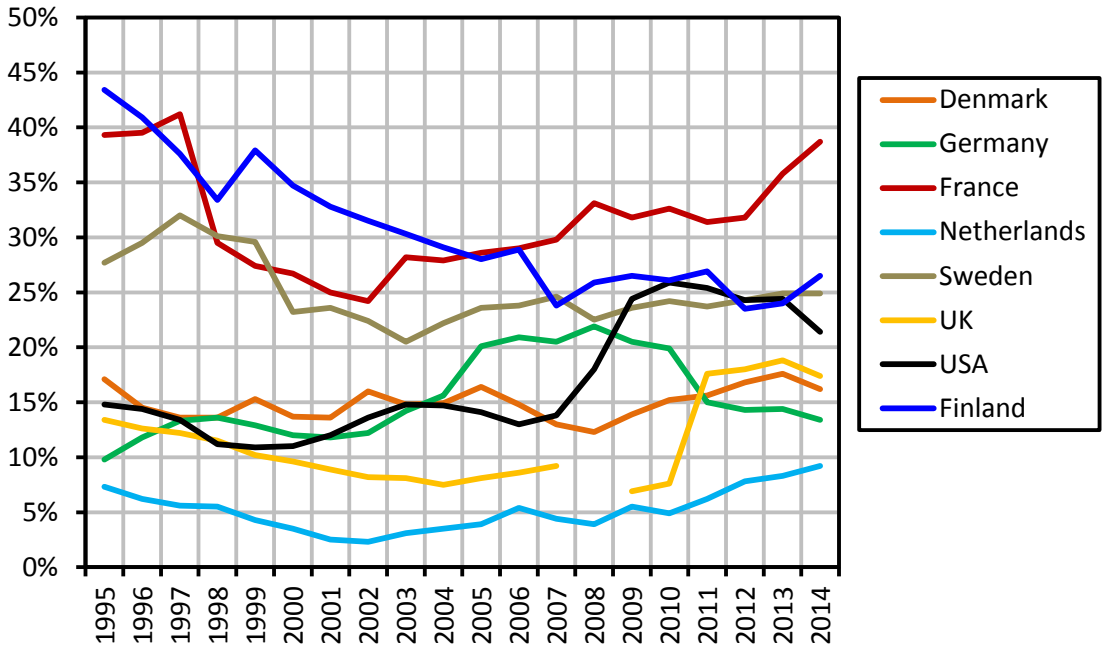


Sources: Calculations by the EPC based on Labour Force Survey microdata (by Eurostat) and Current Population Survey microdata (by the Bureau of Labor Statistics).

An interesting difference between Finland and most other countries in this group is that part-time work is much less common in Finland. Many countries have a part-time-to-full-time ratio close to 50%. The Netherlands is an exception as almost 4 out of 5 employed women work part-time. In Finland women do much less part-time work. In 2014 only 1 out of 5 did so.

Part-time work is not as common for men, but is gaining popularity over time. Approximately 10%of employed Finnish men work part-time. Again, the gender differences in Finland are the lowest in the reference group.

Figure 3.13: Share of part-time workers who wish to work full-time



Sources: Calculations by the EPC based on Labour Force Survey microdata (by Eurostat) and Current Population Survey microdata (by the Bureau of Labor Statistics).

Note: Year 2008 is missing for the UK.

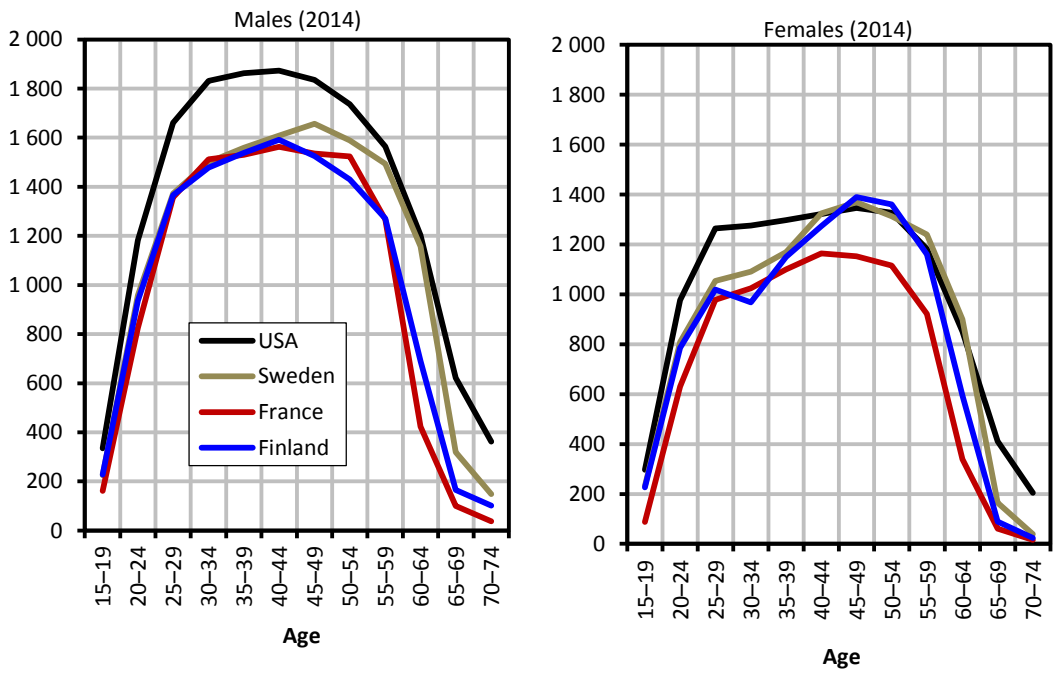
Despite the low part-time-to-full-time ratio, a large share of part-time workers are so-called involuntary part-time workers in Finland. This means that they would prefer to work full-time but have not been able to find a full-time job. Involuntary part-time work is much less common in the Netherlands despite the high occurrence of part-time work. There seems to be a negative correlation between the prevalence of part-time work and the involuntary-to-voluntary ratio among those who work part-time.

3.2 Age patterns of hours worked in 2014

Figure 3.14 demonstrates that Finnish men on average work more in comparison to Sweden until around age 40, after which a difference starts to emerge, in Sweden's favour. In the US, hours for men of all ages are much higher than in European countries.

For women, the situation is well known: Finnish women of child-bearing age work on average less than in comparison countries, which is linked to their low labour force participation, which is in turn a consequence of the home-care allowance. Middle-aged women in Finland work much by international comparison, but again working hours among older women fare less well.

Figure 3.14: Working hours by age groups: men (left) and women (right), 2014



Sources: Calculations by the EPC based on Labour Force Survey microdata (by Eurostat) and Current Population Survey microdata (by the Bureau of Labor Statistics).

In an annex to this chapter, we present two decompositions that further describe the developments in total hours of work. The first of those shows how the drop in Finnish hours is mostly due to a reduction in hours among men in the younger and prime-aged groups. The second demonstrates that in Finland the bulk of the drop in total hours is due to changes at the extensive margin (lower employment rates), but hours have also dropped because of shorter working hours for those who work. It is interesting that in Germany total hours have risen much less than employment, since working hours for those who work have declined.

3.3 Discussion

A lively discussion has taken place within economics about the reasons behind the large difference in hours worked between the US and Europe. The extent of the welfare state and, in particular, higher tax rates in European countries have been at the centre of this discussion. While much microeconometric work typically comes to the conclusion that taxes do matter for employment and working hours but the magnitude of the effect is moderate, some macroeconomists have argued that taxes can have a larger impact in determining the long-run cross-country differences in hours of work.[11]

An influential study in this tradition was Prescott (2002, 2004), who used a simple simulation analysis and argued that tax differences could explain almost all the difference in hours worked between the US and Europe. A survey article by Keane and Rogerson (2012) concludes that the elasticity of hours of work with respect to net hourly salary could be between one and two. This would be an order of magnitude larger than typical micro estimates would suggest, thus backing up the crucial assumption underlying Prescott's arguments.

It is clear that country-level comparisons suffer from many confounding effects. The impact of taxes is typically weaker if permanent country-level differences and time-varying factors other than taxes are controlled for. For example, Alesina et al. (2005) suggest that unionization plays a key role whereas Oh et al. (2012) point out that rising inequality has kept working hours long in the US.

But it is not clear either that careful microeconometric studies can identify the long-run impact of taxes on labour supply. They often focus on fairly small changes in tax rates, and inattention (people fail to react) can play a role, implying that the estimated effect is smaller than the true long-run relation (Chetty 2012). A short follow-up period can also imply that longer-run impacts arising from learning by doing are ignored (Imai and Keane 2004). In addition, some groups, especially those in the beginning or at the end of their working career, can have large extensive margin elasticities (Rogerson and Wallenius 2009).

[11] See Ch. 7 of the 2015 Economic Policy Council report for a summary of such microeconometric work for Finland.

Chetty et al. (2012) recommend calibrating macro models to an overall compensated labour supply elasticity of 0.5, with a 0.3 intensive margin and 0.2 extensive margin elasticity. Jäntti et al. (2015), who estimate intensive margin effects from the same data, identified either from within-country differences or between-country differences, also find that the intensive margin macro estimate appears to be somewhat larger than the average micro estimate. This would be in line with the optimization friction story, according to which optimization frictions could make a bigger difference to intensive margin estimates (Chetty 2012).

The overall picture is, of course, much more nuanced than a simple comparison between the US and Europe for a representative agent. What also matters is the way public spending is organized. The Scandinavian practice of extensive public provision of goods that support labour supply (most notably childcare), enables both spouses to participate in the labour market (Rogerson 2007, Ragan 2013). Moreover, the social safety net in Scandinavia has a strong employment focus, i.e. entitlement is conditional on active job searching, participation in activation programmes etc.

The second qualification concerns tax progressivity. Guvenen et al. (2014) argue that the more progressive taxes in Europe dampen incentives to acquire human capital. For example, the lifecycle profile of mean wages is flatter in Germany than in the US, as implied by the higher progressivity in the former country. A similar result is found for within-cohort wage inequality in Germany and the US. The relevance for this in a Scandinavian context is, however, an open question. Education is largely tax-financed, and various measures of human capital do not indicate that human capital accumulation has been impaired. All of this highlights that the role of taxes cannot be seen independently of what they are used for; see the discussion in the Economic Policy Council (2016).

Bick et al. (2016) offer a detailed analysis of different drivers of the overall hours difference between different European countries and the US. Longer annual leave explains around 1/3 of the difference. In Scandinavia, where employment rates are fairly high, the main additional reason for the shorter annual hours per person is the shorter work week for people in the labour market. The authors repeat the exercise by Prescott using arguably better data and find that the differences in tax rates explains around half of the working hours gap between the US and Europe. Since the number of weeks worked seems to be unrelated to working hours for those who work or the

employment rate, they postulate that the reasons determining the number of working weeks (such as unionization) can be distinct from the reasons for the other margins of response.

We would like to emphasize that the literature discussed above has not yet come to firm conclusions about the underlying reasons for the determination of aggregate working hours. Given the type of question – long-run differences between countries – it could be the case that very solid evidence regarding the matter will be hard to find. On the other hand, this discussion provides interesting food for thought that challenges some of the micro estimates.

The second point we would like to highlight is that even if research indicates a clear link between economic policy (tax policy in particular) and working hours, it must be remembered that long working hours are not an aim per se. It could be that longer vacation periods are something Europeans value because of social conventions, and cutting them would not necessarily raise welfare.

3.4 Council views

The picture that emerges from the comparative analysis is somewhat pessimistic about the performance of the Finnish labour market. Finnish employment rates are lower than in the best performing European countries. The working hours of the Finnish adult population are average. The main reason for this is that part-time work is relatively rare in Finland; working hours for full-time workers are among the shortest in this country comparison. Despite the low prevalence of part-time work, the share of involuntary part-time workers is high. An interesting follow-up question is: what are the mechanisms in other European countries that provide a better outcome in terms of voluntary part-time work?

Given the descriptive nature of the analysis in this chapter, firm policy recommendations cannot really be drawn. The analysis can, however, be useful for identifying groups where the labour supply falls short in international comparisons. Cross-country differences in the age profiles of hours worked, for example, suggest that there is potential for increased labour input especially among women of child-bearing age and men in their 50s and 60s.

What is also noteworthy is the particularly problematic situation in terms of employment rates and hours of work for those with the lowest education level in Finland: they are the lowest in this country comparison. The macro-level impact of this is mitigated by the relatively small share of those with the lowest education in Finland. This does not, however, improve the situation of the individuals themselves.

Against this backdrop, the government's goal of increasing working hours is well motivated, but the magnitude of the aspired increase (24 hours a year) is moderate. Another question is whether overall hours of work should mostly be tackled via increasing hours for those already in the labour market or by trying to increase employment rates.

ANNEX: Detailed decomposition of working hours

We follow Blundell et al. (2013) and decompose the change in the total hours per adult population from the pre-crisis level (2008) to the latest year (2014) in two ways. First, hours are decomposed by age and sex groups in Table A.1. The subgroups' contributions would add up to the aggregate level estimate if the population structure had remained constant over time. In that case the residual would be 0. If population shares have changed, the residual shows that the change in population shares has contributed to the changes in the mean annual hours on an aggregate level.

Using population shares from 2008, the Table shows the contribution of changes in aggregate hours by men and women in different age groups. The results suggest that the drop in Finnish hours is mostly due to a reduction in hours among men in the younger and prime-aged groups.

The delta term reveals that Finnish average annual working hours (-82) have declined substantially more than Swedish hours (-13). The reason is partly due to the more favourable demographical evolution in Sweden, but it is mainly a consequence of lower working hours in the subgroups.

Second, the change in aggregate hours is split into components stemming from the extensive and intensive margins. The results are presented in Table A.2, where I stands for the intensive margin (hours worked by employed person) and E for the extensive margin (the share of employed persons). They reveal how much each margin has contributed to delta, the overall change in hours worked. Two versions are presented: two indices, Laspeyres (L) and Paasche (P), are calculated for each margin[12]. These indices indicate the bounds of the margins. For example, the working hours of prime-aged Finnish males dropped 14 hours, and out of that the contribution of the intensive margin was between -10 and -9 hours. Due to the relatively short time span, the choice of the year of the population share measurement does not seem to matter.

In Finland, the bulk of the drop in total hours is due to changes at the extensive margin (lower employment rates), but hours have also dropped be-

[12] $I - L = p_{2008}(h_{2014} - h_{2008})$, $I - P = p_{2014}(h_{2014} - h_{2008})$, $E - L = h_{2008}(p_{2014} - p_{2008})$ and $E - P = h_{2014}(p_{2014} - p_{2008})$. p stands for the employment rate and h for average annual working hours per employed persons.

cause of shorter working hours for those who work. It is interesting that in Germany total hours have risen much less than employment, since working hours for those who work have declined.

Table A.1: Decomposition of the changes in working hours 2008–2014.

		Youth (15–29)		Prime-aged (30–54)		Old (55–74)		Residual	All (15–74)
		Men	Women	Men	Women	Men	Women		
Finland	q_{2008}	0.13	0.12	0.23	0.22	0.15	0.16		
	H_{2008}	962	741	1622	1287	650	509		1038
	H_{2014}	852	669	1510	1229	610	508		956
	Δ	-14	-8	-25	-13	-6	0	-15	-82
USA	q_{2008}	0.14	0.13	0.24	0.25	0.12	0.13		
	H_{2008}	1197	961	1883	1353	1069	743		1293
	H_{2014}	1112	893	1826	1314	1053	744		1224
	Δ	-11	-9	-14	-10	-2	0	-24	-69
Denmark	q_{2008}	0.12	0.11	0.24	0.23	0.15	0.15		
	H_{2008}	1028	729	1710	1288	785	477		1098
	H_{2014}	801	595	1621	1248	768	499		1003
	Δ	-27	-15	-21	-9	-3	3	-23	-95
Germany	q_{2008}	0.12	0.11	0.24	0.23	0.15	0.16		
	H_{2008}	1049	832	1822	1088	648	317		1043
	H_{2014}	1017	829	1734	1105	777	454		1055
	Δ	-4	0	-21	4	19	22	-7	13
Sweden	q_{2008}	0.13	0.13	0.23	0.22	0.15	0.15		
	H_{2008}	905	687	1631	1236	845	598		1059
	H_{2014}	887	727	1585	1257	811	604		1046
	Δ	-2	5	-10	5	-5	1	-6	-13
France	q_{2008}	0.13	0.13	0.23	0.24	0.13	0.15		
	H_{2008}	878	637	1625	1139	475	319		947
	H_{2014}	774	572	1533	1113	533	383		903
	Δ	-13	-8	-21	-6	8	9	-13	-45
Netherlands	q_{2008}	0.12	0.12	0.24	0.24	0.14	0.14		
	H_{2008}	1079	813	1761	949	699	277		1017
	H_{2014}	891	693	1670	945	742	318		945
	Δ	-23	-14	-22	-1	6	6	-23	-71
UK	q_{2008}	0.13	0.13	0.23	0.23	0.13	0.14		
	H_{2008}	1176	863	1794	1083	831	397		1101
	H_{2014}	1105	815	1809	1138	812	446		1097
	Δ	-9	-6	3	13	-2	7	-9	-4

Table A.2: Intensive and extensive margins between 2008 and 2014 by sex and age group

		Youth (15–29)		Prime-aged (30–54)		Old (55–74)		All (15–74)
		Men	Women	Men	Women	Men	Women	
Finland	Δ	-14	-8	-25	-13	-6	0	-82
	[I-L,I-P]	[-3,-3]	[-5,-5]	[-10,-9]	[-3,-3]	[-1,-1]	[-3,-3]	[-27,-25]
	[E-L,E-P]	[-11,-11]	[-4,-3]	[-16,-16]	[-10,-10]	[-5,-5]	[3,3]	[-56,-54]
USA	Δ	-11	-9	-14	-10	-2	0	-69
	[I-L,I-P]	[-1,-1]	[-2,-2]	[-3,-3]	[1,1]	[1,1]	[2,2]	[-5,-5]
	[E-L,E-P]	[-10,-10]	[-7,-7]	[-11,-11]	[-11,-11]	[-2,-2]	[-1,-1]	[-64,-64]
Denmark	Δ	-27	-15	-21	-9	-3	3	-95
	[I-L,I-P]	[-6,-5]	[-3,-3]	[-1,-1]	[7,7]	[1,1]	[0,1]	[-2,-2]
	[E-L,E-P]	[-22,-21]	[-13,-12]	[-20,-20]	[-16,-16]	[-3,-4]	[3,3]	[-93,-93]
Germany	Δ	-4	0	-21	4	19	22	13
	[I-L,I-P]	[-6,-6]	[-5,-5]	[-24,-24]	[-9,-10]	[-6,-8]	[-1,-1]	[-59,-63]
	[E-L,E-P]	[2,2]	[4,4]	[3,3]	[14,14]	[27,25]	[22,22]	[76,72]
Sweden	Δ	-2	5	-10	5	-5	1	-13
	[I-L,I-P]	[-2,-2]	[2,2]	[-7,-7]	[6,6]	[-3,-3]	[1,1]	[-5,-5]
	[E-L,E-P]	[-1,-1]	[3,3]	[-4,-3]	[-1,-1]	[-2,-1]	[0,0]	[-10,-9]
France	Δ	-13	-8	-21	-6	8	9	-45
	[I-L,I-P]	[0,0]	[-1,-1]	[-4,-4]	[-3,-2]	[-2,-3]	[-1,-1]	[-14,-13]
	[E-L,E-P]	[-13,-13]	[-7,-7]	[-17,-17]	[-4,-4]	[10,10]	[11,11]	[-33,-32]
Netherlands	Δ	-23	-14	-22	-1	6	6	-71
	[I-L,I-P]	[-8,-7]	[-6,-5]	[2,2]	[9,9]	[1,1]	[1,1]	[-7,-6]
	[E-L,E-P]	[-15,-14]	[-9,-9]	[-24,-24]	[-10,-10]	[5,5]	[5,5]	[-65,-64]
UK	Δ	-9	-6	3	13	-2	7	-4
	[I-L,I-P]	[-1,-1]	[-3,-3]	[0,0]	[8,8]	[-1,-1]	[1,2]	[0,0]
	[E-L,E-P]	[-8,-8]	[-3,-3]	[4,4]	[5,5]	[-1,-1]	[5,5]	[-3,-3]

4 The government's fiscal policy

At the beginning of its tenure in early Summer 2015, Prime Minister Juha Sipilä's government laid out plans to consolidate public finances in such a way that at the end of the parliamentary period the central government budget deficit would be at most ½% of GDP, the local government deficit at most ½% of GDP, the earnings-related pension funds surplus around 1% of GDP, with the other social security funds being approximately in balance. To achieve these targets the government adopted a slew of consolidation measures on expenditures, benefits and taxes amounting to EUR 4 billion and committed itself to fill up the EUR 10 billion sustainability gap with other policy measures during this parliamentary term. In addition, the government proposed measures to improve the competitiveness of Finnish industry to boost exports and employment. The competitiveness pact was signed by the unions and the employers' federations on 14 June 2016. As of the beginning of September 2016, the package covers more than 90% of employees. This extensive coverage was the precondition set up by the government to provide substantial tax cuts.

The current and near-term picture for public finances is still not very good. At the end of 2015 (2016 forecast), the central government budget balance relative to GDP was -3.0% (-2.8%). The forecasts for 2017 and 2018 are -2.8% and -2.3%. These numbers are far from the government's targets. The numbers for local government net lending are -0.6% (-0.5%), and the forecasts are -0.4% for both of those years. The local government deficits are therefore in line with the government's targets. At the end of 2015 (2016 forecast), general government gross debt relative to the aggregate output was 62.6% (64.3%). The forecasts for 2017 and 2018 are 65.8% and 66.4%. These numbers exceed the limits in EU legislation. (Ministry of Finance 2016b).

In this chapter we describe the expenditure ceiling decisions in the budget bill for 2017. We also scrutinize the deficit and debt situation. Furthermore we discuss fiscal stimulus. This discussion is based on the idea of hysteresis, and the fact that interest rates are, and have been for quite some time, low by historical standards. We also explore the sensitivity of the sustainability gap estimates.

4.1 The spring 2016 spending limit decision

Each year the government makes ceiling decisions for central government spending for the following four years. In its programme the government laid out a rule on spending limits to ensure that central government spending is EUR 1.2 billion (in real terms) lower in 2019 than in the previous ceiling decision made by the previous government.

On 5 April 2016 the government decided the expenditure ceilings (spending limits) for the period 2017–2020. In spring 2016 the government lowered the spending limits by EUR 80 million for 2017 and 2018 and by EUR 120 million for 2019. The ceiling places an upper limit on central government expenditures. The ceiling includes about 80% of budgetary items. The items which do not come under the ceiling are: interest on central government debt and expenditures dependent on cyclical conditions (automatic stabilizers). These include unemployment security expenditures, pay guarantee, housing allowances and basic social assistance, VAT expenditure, financial investment expenditure, and expenditures corresponding to technically transmitted payments and external funding contributions. The ceiling is set separately for each department (ministry) of government.

The ceilings are used to enforce a trend-based expenditure policy or to gradually reduce the size of the public sector (Robinson 2016). Another purpose of the ceilings is to restrain the burden of taxation. Furthermore, the expenditure targets are a planning instrument to avoid unplanned deviations between expenditures and revenue. And, importantly, the ceilings introduce a top-down mechanism in the budget process. There is empirical evidence to show that problems with expenditure control in the past have primarily been due to bottom-up budget processes. (See Hallerberg, Rauch and von Gahen 2007).

The government can at least partly avoid the discipline of the expenditure ceiling by using supplementary budgets. At the start of Prime Minister Sipilä's government there was only EUR 30 million of "non-committed" euros available.

Thus the government decided to adopt a EUR 300 million supplementary budget for 2015, implying that there were altogether EUR 500 million for the supplementary budget. Overall, the expenditure ceilings have been honoured in 2015. The National Audit Office of Finland, however, concludes in its spring 2016 report (p.18) that without the extra supplementary budget the expenditure ceiling for 2015 would have been broken. (See also p. 16-17 in the National Audit Office's separate report to Parliament: Interim Report on Fiscal Policy Evaluation for the 2015-2018 Parliamentary Term . In its programme the government committed to decrease expenditures coming under the ceiling by EUR 1.2 billion by 2019.

The expenditure ceiling rule can be amended by the requirement that the expenditures covered by the ceiling should not rise faster than nominal GDP. In Sweden, for example, Prime Minister Löfven's government proposed in its budget bill for 2015 that the ceiling should be a constant percentage of potential nominal GDP (Swedish Fiscal Policy Council 2015, p. 54). This would restrict the ceiling to exactly the trend growth of nominal GDP. In fact, the expenditure ceiling in Sweden in 1997-2015 declined from about 32.5% of GDP to just below 28% (Swedish Fiscal Policy Council 2016, p. 42). Since 2007 the ceiling has been hovering around 28% and 29%. It is forecast to rise somewhat towards 2020.

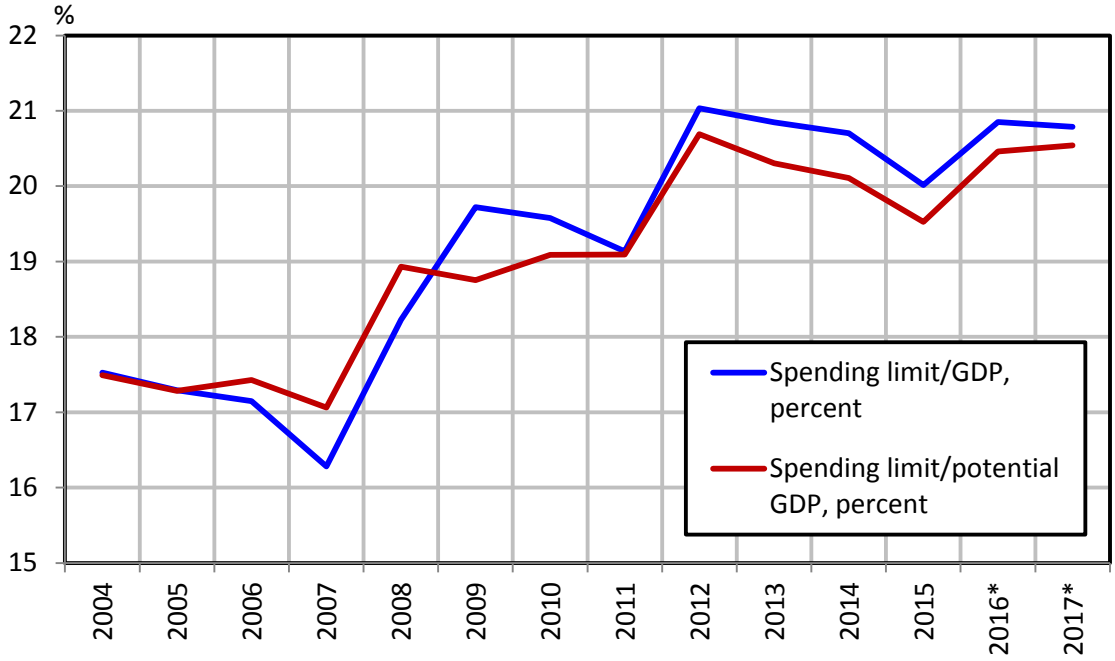
As with any rule, breaking it should have consequences. For a fiscal rule such as the expenditure ceiling it is quite hard to design penalties for breaking it. The government as a whole naturally faces the political cost of its actions at election time. The announcement of targets, monitoring and the work of bodies like the Economic Policy Council are means to increase those costs. In Finland ceilings have been set for different ministries, and they are monitored quite effectively by the Ministry of Finance.

Although expenditures coming the ceilings will be decreased in real terms over the parliamentary period, the level of the ceilings has not been linked to the target for the central government structural balance (-0.5% of GDP). Achieving such a link would require constraints also on the revenue side.

Compared to the previous decision on ceilings of 28 September 2015, the government revised the ceilings for the years 2017-2019 upwards on average by about 1.5%. (Julkisen talouden suunnitelma 2017 - 2020, p.17-18). The revision is lower than the government's forecast for the growth of nominal GDP, which for these three years is on average about 2.6%. For 2017 the expenditure ceiling was set at EUR 44.805 billion. EUR 153 million was set aside as an unallocated reserve after the budget proposal, and EUR 300 million was reserved for the supplementary budget. The total of expenditures outside the spending limit amounts to EUR 10.9 billion.

The system of expenditure ceilings in Finland was adopted in the spring of 2003. In Figure 4.1.1 we describe the evolution of the expenditure ceiling in relation to nominal GDP and potential GDP in 2004-2017. The numbers for 2016 and 2017 are based on forecasts. If the ratio stays constant nominal expenditures coming under the ceiling will have been growing at the same rate as nominal GDP. Over the period in question there has been a slight upward trend in the ratio of the expenditure ceiling to GDP and potential GDP, mostly caused by negative surprises in GDP growth. Since 2009 the ratio in relation to nominal GDP has been fairly flat. Although the ceilings have not been overrun during their existence they have not been able to reverse the slight upward trend in government expenditures. It is not, however, just expenditures that matter for the sustainability of fiscal policy. Government revenues, naturally, have a crucial role in pursuing that goal.

Figure 4.1.1: Spending limit relative to GDP and potential output



Source: Ministry of Finance; Statistics Finland

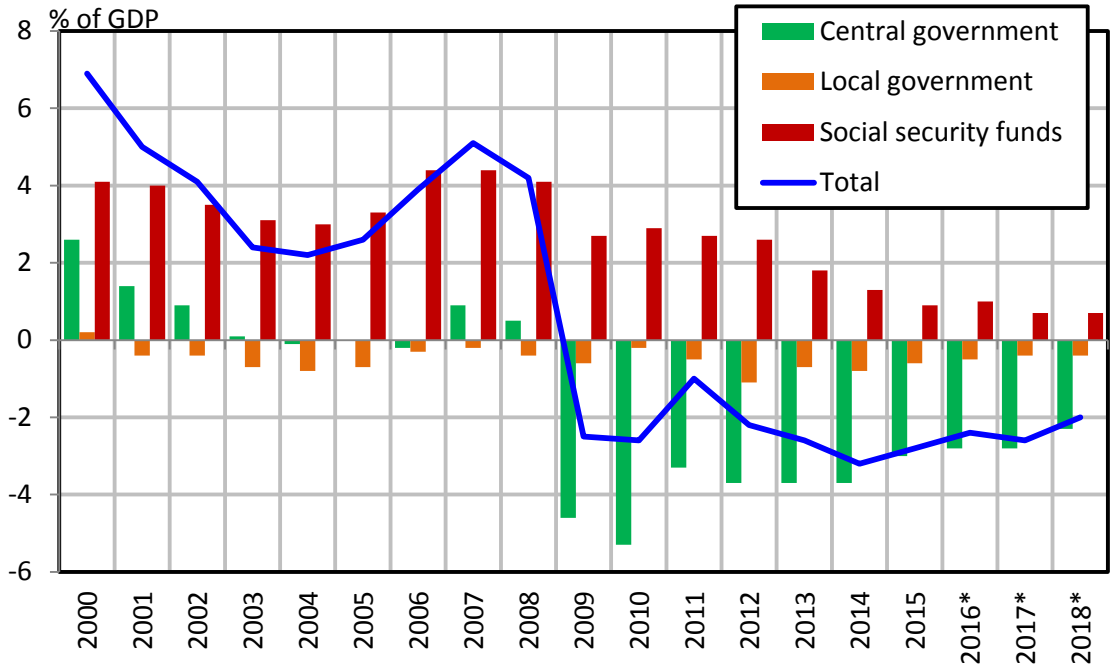
4.2 The budget bill for 2017

The Government submitted its budget proposal to the Parliament on 16 September 2016. The expenditures are EUR 55.2 billion, which is about EUR 800 million more than in the budget for 2016. The increases are explained mostly by appropriations of more than EUR 200 million for the government's key projects to be implemented from 2016 to 2018, by changes resulting from the competitiveness package, transfers to municipalities for tax compensation, and higher pension expenditures. Debt servicing costs amount to EUR 1.3 billion, which, due to low interest rates, are EUR 200 million less than in the current year. The total sum for the government's key projects is EUR 1.6 billion. This amount will be allocated before 2019. The government computes that expenditures in real terms will increase by about 0.7% in 2017, which is a little less than the government's forecast for the growth rate of real GDP (0.9%) in 2017. Revenues are estimated to be around EUR 49.7 billion. To cover the deficit of approximately EUR 5.5 billion, new debt must be issued. About EUR 900 million of the deficit for 2017 is due to tax cuts necessitated by the competitiveness pact. This estimate assumes that there is no effect on employment.

4.3 Debt and the deficit

Below we describe the evolution of the general government deficit (central government, local government and social security funds) as a share of GDP in Figure 4.3.1. The Figure includes the forecasts of the Ministry of Finance for 2016–2018. The general government deficit started to decline in 2014, when it was above the threshold level of 3%. The general government deficit is due to deficits in both central and local government. The social security funds have been in surplus in all the years described in the Figure. A somewhat worrying feature is that the social security funds' surplus (relative to GDP) has been declining steadily since 2010. From 2016 onwards, the central government deficit relative to GDP will be reduced.

Figure 4.3.1: General government net lending in 2000-2018



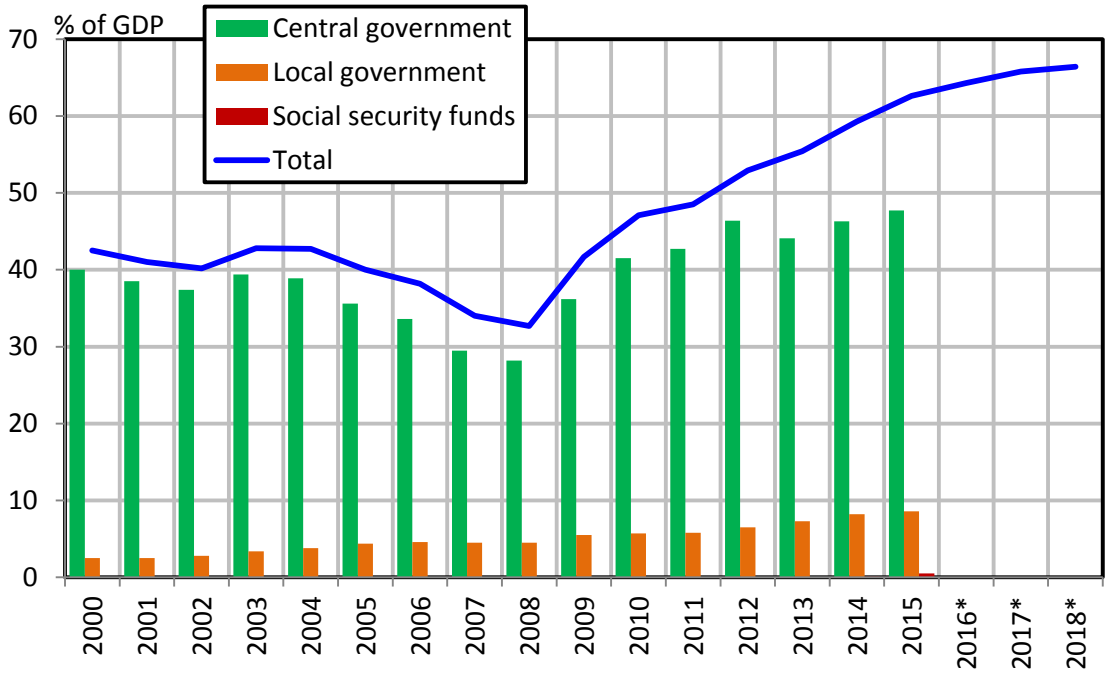
Source: Statistics Finland, general government deficit and debt; Ministry of Finance (2016b)

Fiscal policy is also constrained by the following three rules, which are derived from EU legislation: 1. The general government deficit should not exceed 3% of GDP. 2. Public debt should not exceed 60% of GDP. 3. A medium-term objective (MTO) must be placed on the structural deficit in general government finances. In spring 2016 the government maintained the target for the structural balance (the so-called preventive arm) at -0.5% of GDP. The MTO is complemented by the expenditure benchmark, which is a rule containing the growth rate of government spending at or below the coun-

try's medium-term growth rate of potential output. Spending above this rate must be matched by additional discretionary revenues.

Public debt and its components as a share of GDP are depicted in Figure 4.3.2. Total debt rose above the threshold of 60% in 2015, and is forecast to stay above that limit at least up to 2020. Central government debt has been rising since 2008. The trend has been the same for local government debt. Compared to many other EU countries, Finland's debt ratios have been lower. The rather rapid rise in the ratio has been mainly caused by the dismal performance of real GDP. The only way to force the ratio lower, however, is to keep a tight rein on the deficits.

Figure 4.3.2: General government debt in 2000-2018



Source: Statistics Finland, general government deficit and debt; Ministry of Finance (2016b)

The 60% debt ceiling and the 3% deficit threshold are the key components of the EU fiscal rules. Finland has recently had troubles in achieving the debt ceiling. It seems that the same trend will continue in the near future. The deficit is on a more favourable path but the deficit targets are still unlikely to be met

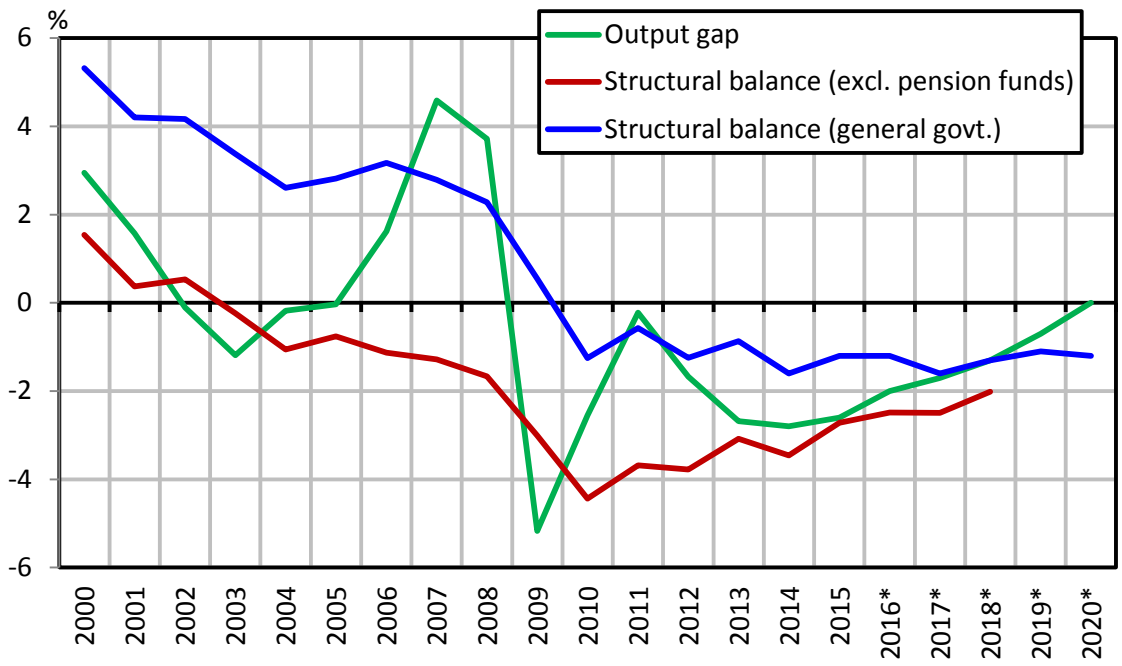
In Figure 4.3.3 we describe the general government structural balance with and without pension funds. Since our emphasis is on short-term (cyclical) issues, we depict Finland's output gap in the same figure. Furthermore, we

re-emphasize that the structural balance is a metric for discretionary fiscal policy. The structural balance deteriorated considerably after 2008. It has recovered slowly since 2010. In simple terms, fiscal policy can be deemed to be expansionary when the balance has been decreasing. But as we pointed out in last year's report (p.44), the estimate of the structural deficit is affected by many factors which are not due to discretionary policy decisions. But in any case it needs to be pointed out that the deficits are quite large. Since pension funds, which have been in surplus, understate the need for improving the structural balance, we depict the balance without the funds, too. The structural balance excluding pension funds has improved since 2010 as a result of central government consolidation measures. Finland has been operating below its potential level of output since 2008. The Ministry of Finance's forecast predicts that the gap will close in 2020.

The government's target for the structural deficit was maintained at -0.5% in relation to GDP in the spring of 2016. According to the Ministry's own forecast the structural deficit will still be at -1.3% in 2020. It seems highly probable that this target will not be achieved during this parliamentary term (2015-2019).

In its letter (dated 25 October 2016) commenting on Finland's Draft Budgetary Plan (DBP) for 2017, the European Commission worried about the country's chances of achieving the goal for the structural deficit in the near future. The Commission stated: "A preliminary assessment of the DBP suggests that the planned change in the structural balance is well below the recommended improvement". And indeed, the structural deficit is forecasted to spike temporarily in 2017, but then to come back down in 2018. In addition, the Commission requested more information on how the country is planning to reach the debt target (60% of GDP).

Figure 4.3.3: Output gap and structural balances in 2000-2020



Source: Data from Ministry of Finance (2016b) and Statistics Finland National Accounts, calculations by the Economic Policy Council

In its "midterm report" (National Audit Office's separate report to Parliament: Interim Report on Fiscal policy evaluation for the Parliamentary Term of 2015-2018), the National Audit Office of Finland declares that there is a high probability that Finland will not be able to achieve the expenditure benchmark of the MTO in 2017 and 2018. (See p. 38-40 in the National Audit Office's report cited above). The deviation from the benchmark is expected to be significant. The deviation follows from the higher than expected growth in real government expenditures and from the tightening of the benchmark.

In its reply (27 October 2016) to the Commission's letter, the government referred to the negative short-term effects of the structural reforms (incl. the competitiveness package, and social and health care reforms). The government still expects to meet the MTO targets in 2019.

Box 4.1 Can fiscal adjustment be self-defeating? The discussion around hysteresis

The conflict between long-term sustainability and short-term stabilization is well known: because of the sustainability gap, fiscal policy needs to be tightened over the longer term. On the other hand, Finland has had a positive output gap, suggesting that there would be room for fiscal stimulus in the short term. The main question is not whether fiscal adjustment ought to take place, it is rather about the timing. To what extent do the short-term needs justify postponing adjustment?

These were some of the questions discussed at length in the Economic Policy Council's 2015 Report (Ch. 6). The report concluded that there is some evidence that fiscal multipliers are larger during recessions, which would point towards postponing the brunt of fiscal contractions. However, an analysis by Keränen and Kuusi (2016) based on a macroeconomic model concluded that the benefits of postponing fiscal consolidation are likely to be small. Therefore, the Council favoured continuing fiscal adjustment, with the rate of adjustment increasing in the next few years.

Since then, there has been some discussion supporting more fiscal stimulus, mainly for two reasons. First, it is possible that fiscal adjustment could lead to permanently lower output because of the so-called hysteresis effect, a point emphasized in the Finnish discussion by Haaparanta (2015, 2016). Second, interest rates on Finnish sovereign debt have kept falling; the interest rate on five-year bonds is now negative, whilst it was still marginally above zero in 2015.

The idea that the presence of hysteresis could lead to fiscal stimulus paying itself back was suggested by DeLong and Summers (2012).[13] Their idea is that if a permanent reduction in economic activity due to a temporary drop in output (measured using the so-called hysteresis parameter) is large enough relative to the real interest rate, fiscal stimulus could be a 'free lunch'. Using their formula, Haaparanta (2015) calculated that Finland is now in a

[13] Many of the same issues were already discussed by Andersen (2010). He concluded that the fiscal multipliers would need to be quite large for a temporary fiscal adjustment to be self-financing, but he also pointed out that the possibility to bring down persistent unemployment can reduce the sustainability consequences of fiscal stimulus. However, according to Andersen, this conclusion overlooks the fact that the same two conditions imply that the effect of exogenous shocks on public finances is more severe and therefore adds to fiscal sustainability problems. Hence, it is not correct to infer that a difficult choice between short-run and long-run considerations disappears.

situation where increasing public spending would indeed be self-financing. His hysteresis parameter was estimated from the revision to the forecasts made by the IMF as a response to the new economic situation during the Great Recession. He arrived at a value of around 0.6. Haaparanta (2016) referred to estimates by Rawdanowicz et al. (2014), whose estimate for Finland is in the same ballpark (0.5). In fact, with a negative real interest rate, expansions are automatically self-financing if the fiscal multiplier is positive. However, negative real interest rates will not necessarily endure for the duration of the payback time on additional debt.

Fatás and Summers (2016) provide very recent estimates of the hysteresis effects. They first regress the IMF's forecast error (for real or potential GDP) for later years (2012, 2015) on the forecast error for real GDP for 2009 and find that the forecast errors are highly persistent. They also offer a two-step analysis that ties GDP developments to fiscal policy. In the first step, they replicate the analysis by Blanchard and Leigh (2013) and estimate the impact of planned fiscal consolidation on the forecast error. In the second step, they use the predicted values of forecast errors for the early years (2009-2011) to explain forecast errors in later years. The interpretation of the second regression is that they are measuring the effects on long-term GDP of changes that took place in 2010-11 that were caused by the fiscal consolidation in those two years. Again, the effects are highly persistent. The estimated coefficients are large, suggesting that an initial decline in GDP is turned into a long-term reduction of the same, or even larger, magnitude.

One criticism levelled against this type of analysis (pointed out by e.g. Blanchard in the comment section on DeLong and Summers, 2012 and discussed in last year's Council report) is that it is not clear whether revisions of estimates during recessions are due to changes in the permanence of demand shocks, since they can also result from changes in the understanding of the severity of structural problems that the economy faces.

Again, in the comments sections on the original article by de Long and Summers (2012), Ramey investigated the longer-run consequences (up to four years) of fiscal expansion on output in the US using a VAR impulse response analysis and found no evidence of a long-term positive impact. Kuusi and Keränen (2016) present similar analysis for Finland, separately for good and bad times (their Figure 17). The model also implicitly allows for the presence of a hysteresis effect. In recessions, expansionary fiscal policy could have a positive impact on longer-term (five years) output. Despite this finding, they

find that postponing fiscal adjustment would not bring large benefits.

Drawing conclusions for current fiscal policy is complicated by the fact that it may now be too late to respond with more countercyclical measures, as the unemployment problem started already earlier and the unemployment rate has started to decrease. As the Council indicated earlier, there is no guarantee that the benefits of expansions channelled via, say, infrastructure investment would trickle down to those individuals who are at risk of exclusion from the labour market. In addition, as Chapter 2 demonstrates, economic developments have been very uneven between different sectors in Finland. Fiscal stimulus would not directly improve the situation in the badly-hit export sector, for instance.

Perhaps the main argument to be cautious with respect to delaying adjustment is the need to have some room for fiscal policy reactions in the event of a new downturn and crisis. This notion of fiscal space showed its value in the beginning of the Great Recession when Finland could allow its automatic stabilisers to be fully operational and even some discretionary expansionary measures were taken. Had the debt level been high at the outset of the crisis, such counter-cyclical policy would not have been possible to the same extent. Not continuing with fiscal adjustments in the current situation would therefore entail risks.

The presence of low interest rates makes the case for public investment strong. The public sector is already investing a lot (see Figure 2.1.10). If additional beneficial projects are in the pipeline, starting them sooner rather than later makes obvious sense: if there are projects that would be profitable based on calculations with higher interest rates, they are also profitable in current conditions. But if the overall deficit needs reduction, further increases in investments need to be balanced with larger spending cuts in public expenditure.

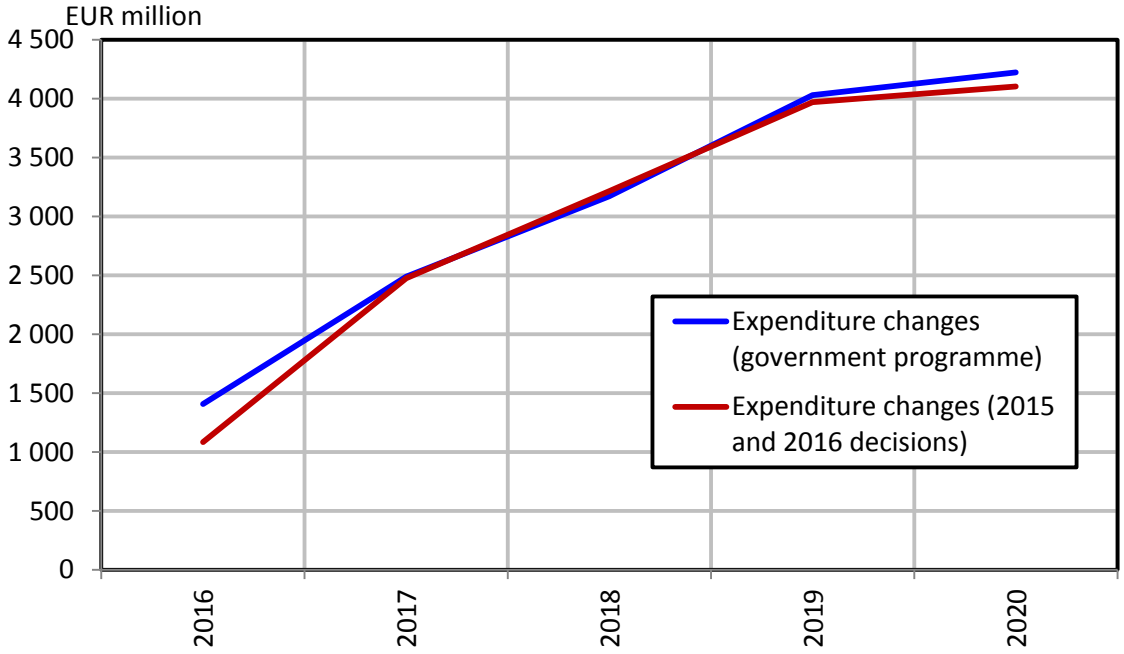
4.4 Discretionary fiscal policy measures

This section describes the impact of the fiscal policy decisions of the current government on the combined central and local government financial position by summing up the fiscal impact estimates of expenditure adjustments and tax policy measures. The estimates for the impact of the decisions are

based on data provided by the Ministry of Finance. The main purpose of the analysis is to describe how the fiscal policy line of the government for 2016–2020 has changed since last year.

Figure 4.4.1 compares the expenditure-cutting programme put forward in the programme (blue line) of the current government with the actual decisions made in the budget bills for 2015 and 2016 (red line). The figure shows the annual cumulative effect of most of the government's expenditure-side decisions. The figure is based on the follow-up (by the MoF) of the consolidation measures listed in Annex 6 of the government programme. Thus some changes in spending, such as the expenditure effects of the competitiveness pact and temporary additional expenditure due to increased immigration, are not included. Overall, the expenditure adjustments follow closely the plan presented in the government programme. In 2016, the government was lagging roughly EUR 300 million behind the initial plan but is projected to catch up with the planned schedule in 2017. In 2020 the annual effect of the spending cuts will be some EUR 120 million lower than initially planned.

Figure 4.4.1: The net effect of expenditure adjustments on the central and local government budget balance (EUR million)

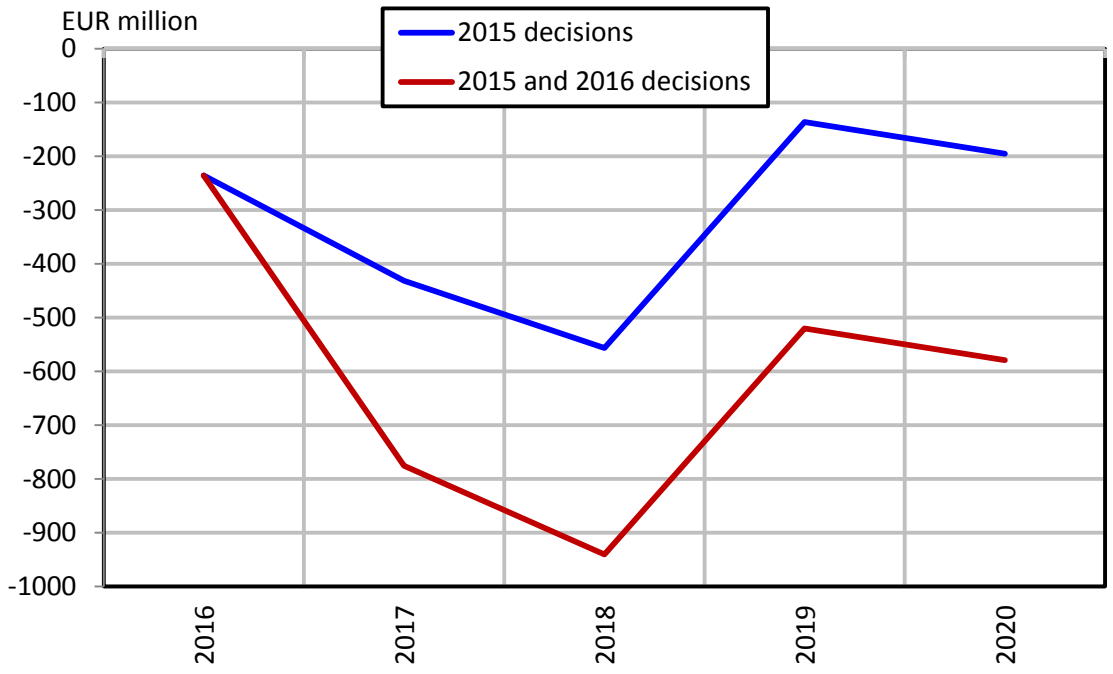


Source: Appendix 6 of the Government Programme (May 2015) and additional information provided by the Ministry of Finance; calculations by the Economic Policy Council

Figure 4.4.2 illustrates the fiscal impact of the government's tax policy measures (excluding payroll taxes). It is based on follow-up tables of tax policy measures by the Ministry of Finance. Adjustments to the income tax schedule due to inflation and earnings levels are not included in the figure.[14] The blue line shows that the tax changes decided on in 2015 were expected to cut revenue in 2016-2020, compared with a situation with no tax changes.

The main reason for the reduction in revenue in 2016 was the increase in the earned income tax credit (estimated revenue effect -425 million). The entrepreneurship deduction (estimated revenue effect -120 million) and temporary revenue losses due to changes in the VAT system were expected to cut revenue further in 2017 and 2018. In 2019, tax revenue was expected to increase as e.g. the gradual increase in cigarette tax and the reduction in mortgage interest deduction were fully implemented, and VAT revenue would bounce back after the one-off decreases in 2017 and 2018. At the level of 2020, tax policy decisions made in 2015 were mildly expansionary. Estimated revenue loss in 2020 was roughly 200 million.

Figure 4.4.2 The net effect of revenue adjustments on the central and local government budget balance (EUR million)



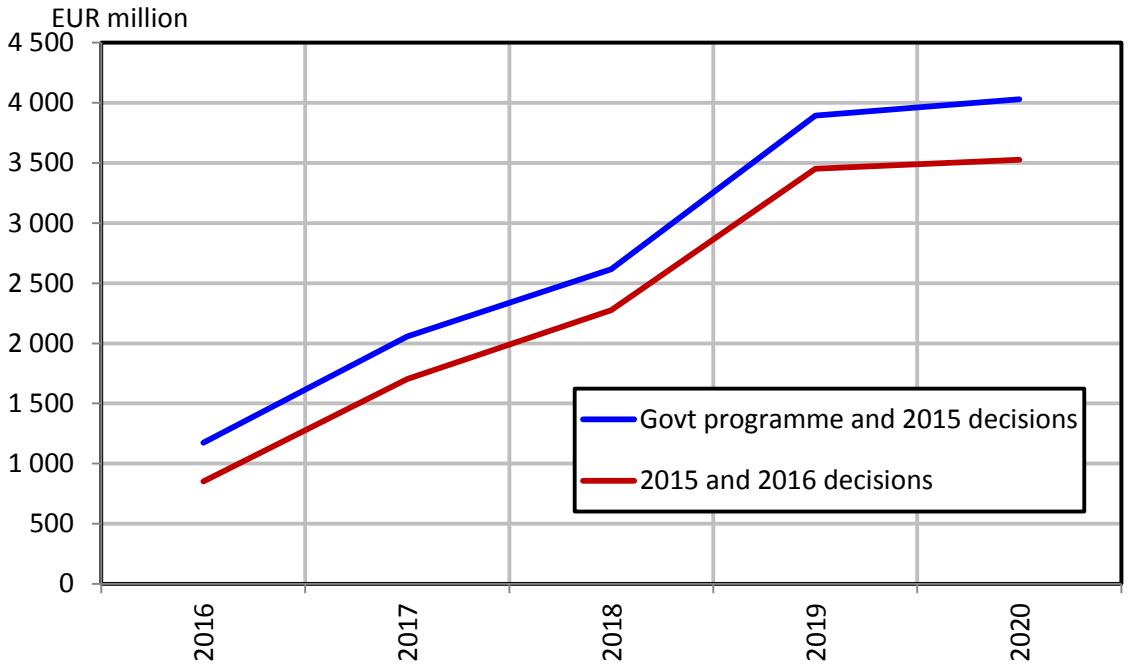
Source: Data on tax policy changes and their fiscal impact estimates provided by the Ministry of Finance; calculations by the Economic Policy Council

[14] This adjustment has been implemented every year since 1993, except in 2013.

The tax policy decisions made in 2016 changed the pattern substantially. The government's current tax policy is clearly expansionary in all years 2016-2020. The gap between the lines representing last year's decisions and the current decisions is roughly EUR 350-400 million in 2017–2020. The main reason for this change is the tax cuts related to the competitiveness pact.

Figure 4.4.3 combines Figures 4.4.1 and 4.4.2 to describe the combined effect of expenditure- and revenue-side adjustments on public finances. The blue line represents the situation in autumn 2015 and the red line November 2016. All in all, the expenditure and revenue side adjustments decided on in 2016 have loosened fiscal policy compared with the fiscal policy line laid out in the government's programme in 2015. Between 2016 and 2018, the current consolidation programme will cut the central and local government deficit by EUR 300-350 million less than planned, and the gap is projected to widen to EUR 440 million in 2019 and EUR 500 million in 2020. The change is mainly attributable to the loss of tax revenue due to the tax cuts related to the competitiveness pact.

Figure 4.4.3: The net effect of expenditure and revenue adjustments on the central and local government budget balance (EUR million)



Source: Expenditure adjustment data is based on Appendix 6 of the Government Programme (May 2015) and additional information provided by the Ministry of Finance; tax policy changes and their fiscal impact estimates is provided by the Ministry of Finance; calculations by the Economic Policy Council

It should be noted that Figures 4.4.1-4.4.3 give a somewhat incomplete picture of the actual impact of government decisions on public finances. For example, they exclude some effects of the competitiveness pact, such as the direct effects of the payroll tax changes on social security funds and the indirect impact on income tax revenue. On the other hand, the figures also exclude expenditure savings due to longer working hours and temporary cuts in holiday payments in the public sector included in the competitiveness pact.

Moreover, treating the tax cuts related to the competitiveness pact as any other tax cuts neglects the fact that they were conditional on the competitiveness pact coming into force. The purpose of the pact was to increase employment, which in turn would improve public finances. We next discuss the fiscal impact of the competitiveness pact in more detail in Box 4.2, and argue that the employment effect of the competitiveness pact is unlikely to be sufficiently large to cover the direct negative impact on public finances. As the competitiveness pact is will weaken the general government's budget balance by EUR 1.1 - 1.2 billion in 2017-2019, it can be deemed to be a rather costly and uncertain way to increase employment and economic activity. The competitiveness pact was also an answer to a need for more flexibility in the Finnish wage negotiation framework. However, the future of the framework is mainly in the hands of the social partners, leaving the future of this structural reform rather unclear.

Box 4.2 Impact of the competitiveness pact on public finances

The government is also seeking to enhance the situation of public finances by promoting growth in employment. A key policy measure is the competitiveness pact, which aims to increase employment in the private sector by improving the cost-competitiveness of Finnish export companies. The competitiveness pact reduces wage costs both by freezing salary increases, by reducing employers' health insurance payments and by transferring part of employers' mandatory pension and unemployment insurance payments to employees. In addition, working hours will be extended with no increase in pay, so hourly wages will decrease.

The government has pushed the competitiveness pact by promising to reduce taxation on labour income if the the competitiveness pact gains sufficient support. On the basis of the situation in the autumn, the government has proposed tax cuts of EUR 550 million for 2017. In practice, these tax cuts will compensate the increase in employees' insurance payments, in which case employees' disposable income will on average remain unchanged.

The competitiveness pact and the related tax cuts will weaken the general government's budget balance by EUR 1.1 - 1.2 billion in 2017-2019, and in the long term by approximately EUR 840 million. The government estimates that the reduction in labour costs will improve employment by approximately 40,000 persons, which at the same time would improve the fiscal balance by about EUR 850 million, in which case the competitiveness pact would be roughly cost-neutral from the public sector's point of view in the long run.

There are some asymmetric risks in the calculations of the competitiveness pact's impacts. The static effects of tax cuts and reductions in employers' payments are relatively easy to calculate. In contrast, the impact of reducing labour costs on employment growth is more difficult to assess. In addition, the government uses rather optimistic estimates of the impact of labour costs on employment. As the Economic Policy Council stated in its previous report, economic research does not support such large estimates. With more realistic assumptions, the employment effect will be less than half of the government's estimation, which would also mean that the competitiveness pact would weaken the stability of public finances by approximately EUR 500 million.

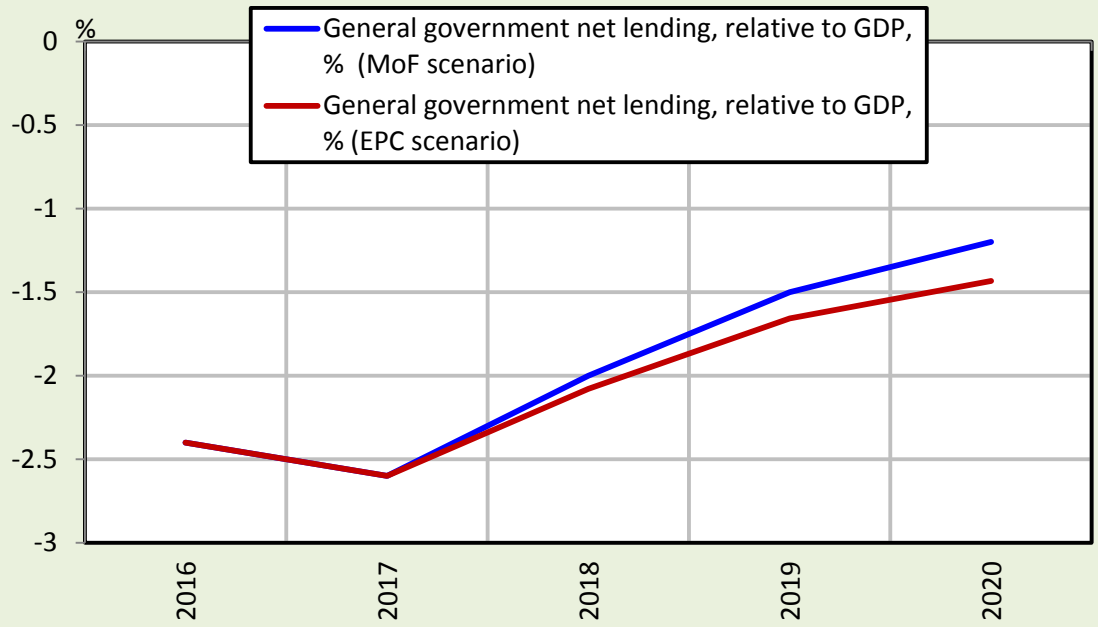
The Economic Policy Council reports an alternative and more plausible scenario of the impact of the competitiveness pact on public finances in Figure 4.4.4. The Council's estimates are based on the assessment of the impact of

the competitiveness pact presented in Minsitry of Finance (2016b) but use more realistic assumptions to calculate the likely effect on employment. The positive effects of the competitiveness pact on public finances depend linearly on its effect on employment. According to the MoF, employment can be expected to rise by roughly 40,000, 35,000 of which is due to the improved competitiveness of Finnish firms and 5,000 is due to the expansionary effect of the related tax cuts. The estimate of 35,000 due to improved competitiveness assumes that the elasticity of labour demand with respect to price is -0.7. This elasticity estimate is based on the MoF's analysis with aggregate data and the results of Riihimäki (2009). Box 5.2.1 of this report and Huuskonen's (2017) background report discuss in depth the problems related to the econometric estimation of labour demand elasticities.

Most studies using large micro-level datasets and published in peer-reviewed scientific journals report substantially lower elasticities. The Council's alternative assessment of the likely effects of the competitiveness pact uses an elasticity of -0.215, which is the mean of elasticities reported in recent studies in the Nordic countries (Huuskonen, 2017). Instead of the -0.7 assumed by the MoF, using this elasticity produces an estimate of only 10,750 more employed people due to improved competitiveness (-0.215/-0.7*35000 = 10 750). The combined effect of the improved competitiveness and the tax cuts on employment would be about 16,000 persons. Thus the positive effect of the increased employment on public finances would only be about EUR 340 million (16,000/40,000*850 million), implying that the competitiveness pact would weaken public finances even in the long run by roughly EUR 500 million.

Figure 4.4.4 below illustrates the sensitivity of the impact of the competitiveness pact on the employment effect. The Figure assumes that the employment effect materializes gradually over 2018–2020 (one third each year). The public deficit-to-GDP ratio would be 0.1 percentage point lower in 2018 and roughly 0.2 percentage points weaker in 2020 under the alternative scenario using a more realistic assumption of the price elasticity of labour demand than under the scenario using the employment effect estimates by Ministry of Finance.

Figure 4.4.4 The effect of the competitiveness pact measures on public finances with alternative assumptions regarding the employment effect



Source: Data from the Ministry of Finance (2016b) and calculations by the Economic Policy Council.

4.5 Sensitivity of sustainability gap estimates?

One of the main fiscal policy goals of the current government is to ensure fiscal sustainability over the long term. The short- and medium-term policy targets are mainly intermediate targets, while long-term sustainability is the ultimate target. In the previous report the Council proposed that to make the fiscal target system internally consistent and to justify the medium-term deficit and debt targets, all the medium-term policy targets should be derived from the long-term sustainability goals. Uusitalo (2016) later illustrated how deficit targets could be derived from the long-term sustainability targets and how structural reforms that may improve sustainability could be accounted for in these calculations.

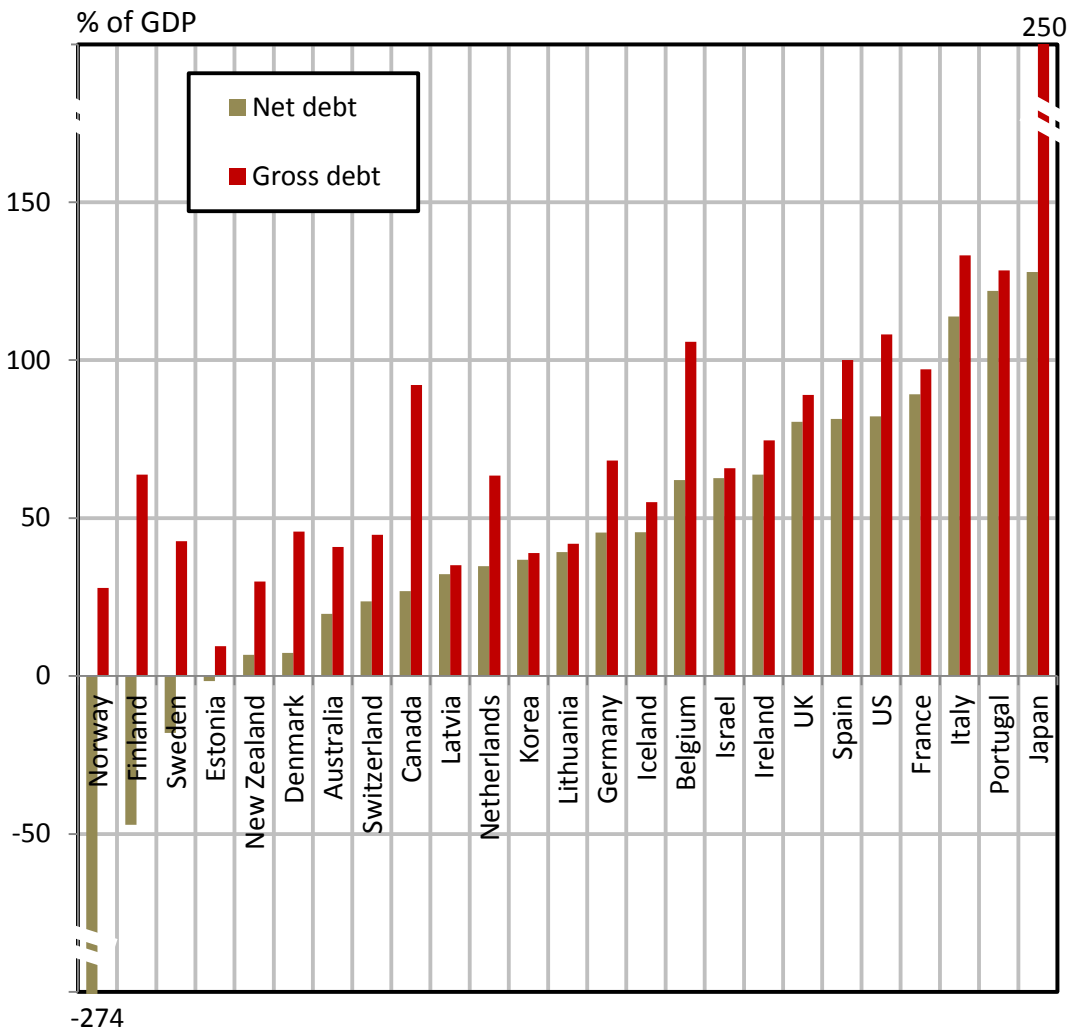
The long-term sustainability measures have also been criticized. The main issues are year-to-year variability, and therefore apparent uncertainty in the sustainability measures and sensitivity to the assumptions involved in these calculations. It seems odd that estimates related to developments up to 2060

change frequently and it is clear that 50-year forecasts involve considerable uncertainty. In this report we mainly discuss the sensitivity of the sustainability gap estimates with respect to assumptions of future growth, interest rates, and productivity. We should also note that, in fact, the volatility of the sustainability gap estimates is not due to updates of forecasts of future developments but rather changes in the current (estimates of) the structural deficit. The sustainability gap is the difference between the current structural deficit and the deficit consistent with sustainability. Of these, the former is frequently updated, the latter is based on long-term projections and they are revised only when estimates of, for example, the future population structure are updated.

Criticism of the goals related to long-term sustainability is easy to understand in the current economic situation. Growth is stagnant and would benefit from a demand boost generated by an increase in public consumption or public investment. Interest rates are low or negative, implying that the government could finance investments at a low cost. Low interest rates could easily turn many investments profitable as long as the future returns are sufficient to cover the initial costs. Accumulating more public debt seems less of a problem at low interest rates.

Unfortunately, low interest rates make the sustainability problem more, rather than less, difficult in Finland. This is due to the public sector's positive net assets. Finland's general government gross debt is estimated to be 64.3% of GDP at the end of 2016 (see Ministry of finance 2016b). However, general government also has substantial financial assets, mainly pension funds. According to the IMF Fiscal Monitor database, Finland's general government net debt is negative, -47.1% of GDP at the end of 2016, see Figure 4.51. Measured on net assets, the government of Finland is the second wealthiest among 25 advanced nations listed by the IMF.

Figure 4.5.1:Net and gross debt rates in 2016



Source: IMF Fiscal Monitor October 2016.

Positive net assets naturally alleviate sustainability problems. The Finnish population structure is unusual in the European context and the fraction of the population of retirement age will increase more rapidly than in most other European countries. This increases pension expenditures, but the increase can be accommodated by withdrawing assets from the pension funds, and by using the return on these assets to cover pension expenditures. Current calculations imply that if the long-term real return on assets in the pension funds is 3.5%, current pension contribution rates are sufficient for the next 60 years. The sustainability gap calculations also use this 3.5% real return as a basic assumption for asset returns in the long term.

If interest rates remain at current levels and if the equity premium remains low, reaching these return targets will be difficult. Therefore, a permanently

lower interest rate will reduce the burden of serving government debt but at the same time reduce the returns on public assets. The net effect for a country with positive net assets is negative. Lower interest rates increase the sustainability gap.

Below we will examine in more detail the effects of interest rates, employment and growth on the sustainability gap. The baseline scenario follows calculations by the Ministry of Finance in spring 2016 according to which the sustainability gap is 3.2% of GDP. Those calculations take into account the projected initial budgetary position of public finances in 2020, and the development of age-related expenditure as well as interest rates and property income. The base year is 2020 and the projection of age-related expenditure extends to 2060, after which their GDP share is assumed to remain constant. Table 1 summarizes prevailing assumptions in the baseline scenario. According to these, the long-term productivity growth rate is approximately 1.5%, real interest rate on public debt 3.0%, and the real rate of return on assets 3.5%. Both the employment rate and the labour force rate will improve steadily through the period. The assumptions used are reported more specifically in the Ministry of Finance's Economic Survey of spring 2016.

Table 4.5.1: Baseline scenario assumptions in the SOME model

	Assumptions, %			
	2020	**2030**	**2040**	**2060**
Real wage growth and labour productivity growth	0.2	1.4	1.5	1.5
Real GDP growth	1.1	1.4	1.8	1.5
Labour force (15 to 64)	76.1	76.2	76.3	77.0
Employment rate (15 to 64)	69.7	70.8	71.1	71.7
Unemployment rate	8.2	6.9	6.8	7.3
Inflation	1.8	2.0	2.0	2.0
Real interest rate on public debt	1.0	3.0	3.0	3.0
Real rate of return on bonds	1.0	3.5	3.5	3.5
Real rate of return on equity	3.5	3.5	3.5	3.5

Source: Social Protection System Model, MoF, January 2016, spring assumptions

These long-term projections are naturally uncertain, and the sustainability gap estimate is therefore sensitive to the assumptions used. In the following sensitivity calculations, different scenarios are implemented by first changing assumptions in the SOME model. Any changes in the baseline scenario are made for the years 2021-2060 since the values of the base year 2020 are parts of a larger system and affect the public sector budget deficit. The re-

sulting projections of age-related expenditure and GDP growth rates are then exported to the MoF's sustainability calculation template, which indicates the size of the sustainability gap in each scenario. There the GDP share of pension funds is set to be the same in 2020 and 2200. We have also obtained some comments from the MoF to support these calculations.

While examining sensitivity to the interest rate, it is realistic to assume that the return earned by pension funds and the interest rate on public debt are connected. More precisely, if interest rates remain at a lower level than expected, the return earned by pension funds is likely to be lower too. In the baseline scenario, the real interest rate on public debt is 3.0%, while the real return on bonds and equity are both 3.5%. In an alternative scenario it is reasonable to assume that they will differ by the same amount and in the same direction.

According to the results, a one percentage point lower interest rate and rate of return compared to the baseline would increase the sustainability gap by 0.8 percentage points. In this scenario, the interest rate on public debt, the return on bonds and equity are all one percentage point lower than in the baseline scenario. A lower interest rate on public debt would reduce the costs of debt, which would improve sustainability. However, lower returns earned by pension funds will result in an even greater negative effect on sustainability, and the total impact of lower interest rates is a larger sustainability gap. The results of the opposite scenario suggest that a higher interest rate would improve the sustainability of public finances.[15] In this case the return earned by pension funds is much higher, whereas the costs of debt increase proportionately less.

Consider next what happens if productivity growth from 2021 onwards were different from the baseline scenario. Following the Cobb-Douglas production function, GDP growth is the sum of productivity growth and employment growth in the SOME model. Therefore 0.5 percentage point higher productivity growth results in 0.5 percentage point higher GDP growth. Besides, in accordance with economic theory real wage growth follows produc-

[15] This conclusion and those from other sensitivity analyses in this section need to be interpreted with some caveats. The results are derived from an accounting framework, which does not take into account economic dynamics, such as the potentially beneficial impacts of low interest rates on economic activity.

tivity growth. In the baseline scenario, real wage growth and labour productivity growth are approximately 1.5% per annum.

According to the results, 1 percentage point higher productivity growth compared to the baseline scenario would reduce sustainability gap by 0.6 percentage points. Correspondingly, 1 percentage point slower productivity growth compared to the baseline would increase sustainability gap by 0.7 percentage point. These results suggest that faster productivity growth would reduce sustainability gap to some extent but would not completely remove sustainability gap.

Higher productivity growth results in higher GDP growth and a higher GDP level. On the other hand, wage growth is also then higher, which increases age-related expenditure compared to the baseline scenario. However, those expenditures are indexed and also depend in part on the rate of inflation. Thus, an increase in productivity increases the GDP by more than it increases government expenditures. To sum up, higher productivity growth would result in a lower GDP share of age-related expenditure and would therefore improve the sustainability of public finances.

Table 4.5.2: Sensitivity of sustainability gap to changes in underlying assumptions

	Baseline scenario, %	Change in assumptions	Impact on the sustainability gap
Real interest rate / real return on assets	3.0 / 3.5	+ 1.0 pp – 1.0 pp	– 0.66 pp + 0.77 pp
Productivity growth	1.5	+ 1.0 pp – 1.0 pp	– 0.57 pp + 0.68 pp
Employment rate	71.7 (since 2060)	+ 1.0 pp – 1.0 pp 72 % in 2025	– 0.41 pp + 0.42 pp – 0.53 pp

According to the baseline scenario, the employment rate and labour force rate will rise steadily to 71.7% and 77.0% in 2060. Consider next scenarios in which the development of employment differs from the baseline. It is assumed that if the employment rate is one percentage point higher, the labour force rate is 0.3 percentage points higher than in the baseline scenario, implying that circa 30% of the extra employees come from outside of the labour force. Thus labour force rate changes when employment changes, meaning that a rise in employment is due to both a reduction in unemployment and rise in the labour force rate.

According to the results, a higher employment rate would reduce the sustainability gap. If employment were one percentage point higher than in the baseline scenario, the sustainability gap would be 0.4 percentage points lower than in the base case. This is due to a lower GDP share of age-related expenditure. First, higher employment would reduce the costs of unemployment benefits expressed in euros. Although some expenses (such as pensions) would be higher, age-related expenditure as a whole would be lower. Besides, higher employment growth leads to higher GDP growth. Since GDP is higher and expenses are lower compared to the baseline scenario, the result is a lower sustainability gap.

If the employment rate were one percentage point lower than in the baseline scenario, the resulting sustainability gap would be 0.4 percentage points higher than in the base case. Sensitivity calculations can also be used to examine how achieving the employment target of 72 % would affect the sustainability of public finances. As previously explained, in this sensitivity analysis the employment rate in 2020 is left unchanged. Assume that the employment rate is 72 % in 2025, after which employment rises at the same rate as in the baseline scenario, resulting in an employment rate of 73% in 2060. Correspondingly the labour force rate is 0.39 percentage points higher compared to the baseline. The results show that achieving the employment target in 2025 would reduce the sustainability gap by 0.5 percentage points.

In the previous calculations it was assumed that if the employment rate were one percentage point higher, the labour force participation rate would be 0.3 percentage points higher than in the baseline scenario. Assuming that the labour force participation rate does not change (a rise in employment is due to a reduction in unemployment), a one percentage point higher employment rate would reduce the sustainability gap by 0.5 percentage points. If both the employment rate and the labour force participation rate were one percentage point higher than in the baseline scenario, the sustainability gap would be reduced by 0.3 percentage points. To sum up, a higher employment rate would reduce the sustainability gap more, the majority of the rise being due to decreasing unemployment.

4.6 Evaluation

The government target is to achieve a central government budget deficit not exceeding ½% of GDP, a local government deficit not exceeding ½% of GDP ,

a surplus in earnings-related pension funds of 1% of GDP, and approximate balance in the other social security funds. In the latest forecast prepared by the Ministry of Finance (p.19, ES Autumn 2016) the central government deficit is forecast to get smaller every year till 2020, when the forecast for the deficit is still at -1.6% of GDP. The local government deficit forecast for the years 2017-2020 is -0.4%, which is in line with the government's target. For the same years the forecast for the social security funds fluctuates between 0.7% and 0.8%.

The debt in relation to GDP is going to exceed the EU target for the whole period 2017-2020. The deficit is forecast to be smaller than the threshold level of -3%. The government's own target for the structural deficit was maintained at -0.5% in relation to GDP in spring 2016. It seems highly probable that this target will not be achieved during this parliamentary term (2015-2019).

In its programme, the government stated that the debt-to-GDP ratio should start to get smaller by 2021, and that "living off debt should be brought to an end". The government estimates that real GDP will grow by 1.3%in 2019 and 2020. The long-term interest rate (10-year government bonds) and the inflation rate are forecast to stay low at least for the next few years. Thus the expected real rate of interest is close to zero, which does not put extra pressure on the dynamics of public debt in the near future.

The structural deficit clearly exceeds the target level of -0.5% up to and including 2020, so it is hard to achieve a sustainable path for public finances before 2020. To ensure fiscal sustainability, the government has to continue in its tight fiscal policy line. New measures are also necessary to reach the sectoral deficit targets set in the government programme. The analysis by the Council presented in this chapter shows that the closing of the sustainability gap, with policies other than direct deficit reduction, requires comprehensive structural reforms to enhance productivity and employment.

5 The labour market reforms

5.1 Employment policies

Increasing the employment rate is one of the key goals of the government. According to the government programme the target is to increase the employment rate to 72% which implies creating 110,000 new jobs by the end of 2019.

Key policies for reaching the employment targets include

- a competitiveness package that restrains wage growth and aims to improve the cost-competitiveness of Finnish firms exposed to international competition

- a reform of the unemployment insurance system that shortens the duration of unemployment benefits and encourages the unemployed to take up short-term jobs

- entrepreneurship promotion measures aimed to encourage entrepreneurship and job creation in small firms

Even if these policies are successfully implemented, reaching the employment rate target of 72% seems unlikely. According to the Labour Force Survey, the seasonally adjusted employment rate in the age group 15 - 64 was 68.8% in November 2016. Despite of a 0.8 percentage point increase in the employment rate compared to the situation 12 months earlier, the target is quite ambitious. According to the forecast by the Ministry of Finance published in autumn 2016, the employment rate is expected to reach 69.7% by 2019 and 70.1% by 2020. Note that these forecasts already include the estimated effects of policy packages such as the competitiveness agreement and

unemployment insurance reform. Reaching the employment rate target would require further measures or unexpectedly fast economic growth.

The employment target is important because, in addition to improving employment prospects for those who are currently unemployed and boosting economic growth, an increase in the employment rate would be necessary for reaching other policy goals. An increase in the employment rate would both increase government tax revenue and decrease unemployment-related expenditures, hence reducing the government deficit and improving the sustainability of public finances. An increase in employment due to an increase in competitiveness, and thereby exports, would also lower the current account deficit.

In this section we first discuss the likely effects of the competitiveness agreement. Our evaluation is somewhat more pessimistic than the government's estimates. As we will describe below, more pessimistic estimates of the employment effects will also reduce the expected benefits of the competitiveness agreement to the public finances. In fact, it seems likely that the net effect of the competitiveness agreement and the associated tax cuts on public finances is substantially negative.

We then discuss the reforms related to the unemployment insurance system. Here the most important policy change is shortening the duration of unemployment benefits, a decision that was included in the government proposal announced in June (HE 113/2016). The reform will be implemented from January 2017 and will cut the maximum duration of unemployment insurance benefits to 300 or 400 workdays depending on the length of previous employment. The Council has commissioned a report evaluating the effects of recent changes in unemployment insurance and we discuss the likely effects of forthcoming reforms in the light of this report. The full report by Tomi Kyyrä, Hanna Pesola and Aarne Rissanen is published as an attachment to the Council report.

Although the change in the duration of benefit periods is probably the most important change in the unemployment insurance system, it is not the only substantial change. The number of unpaid days in the beginning of an unemployment spell increases from five to seven days, higher benefits after a long career will be abolished, requirements to accept jobs tightened, and the debt ceiling of the unemployment insurance fund increased. We will briefly also discuss the impacts of these proposals, as well as the impacts of pro-

posals that the government working group proposed on 4 October 2016. Finally, we will discuss some policy initiatives that could have been implemented. These include making membership of UI funds compulsory and linking the size or the duration of UI benefits to the level of unemployment.

The last section of this chapter deals with policy proposals that the government is planning to implement in order to encourage entrepreneurship and growth of small enterprises. This entrepreneurship package published in April 2016 contains a number of elements including support for hiring the first employee, encouraging the unemployed to become self-employed, subsidies for innovation and making recruitment of foreign experts easier (TEM 12.4. 2016).

One of the key elements in this policy package is a subsidy for firms that hire their first employee. Details of the first-employee subsidy scheme are still unknown at the time of writing this report. However, a somewhat similar scheme existed between 2007 and 2011. In order to assess the likely employment effects of the first-employee subsidy the Council has commissioned a report evaluating the effects of the earlier scheme. This report was prepared by Annika Nivala of the Turku School of Economics and is published as an attachment to the Council's report.

Some of the measures for promoting entrepreneurship have mainly distributional or fairness-related goals. For example, a tax-deduction for entrepreneurs (HE 176/2016) reduces the tax gap between firms with different ownership structures and increases the incomes of entrepreneurs but probably will have no significant effect on the employment rate (Statement by the Council of Regulatory Impact Analysis, Sept 12 2016). We treat these as political decisions that have more to do with what is considered to be a fair distribution of the tax burden than with how the changes will affect employment.

5.2 Cost-competitiveness package

A key policy initiative of the current government is to improve the cost-competitiveness of Finnish companies. The government initially planned to introduce legislation that would have extended working hours, reduced sickness benefits and cut holiday bonuses. Eventually the labour market organizations reached an agreement that fulfilled the government's goals of

reducing labour costs and the government withdrew the legislative package. The government also encouraged negotiations by promising to cut income taxes if a sufficient fraction of labour market organizations signed an agreement that would reduce labour costs.

The key elements of the competitiveness pact include:

- Extending current collective agreements by 12 months with no wage increases.
- Shifting pension contributions and unemployment insurance contributions from employers to employees. If wages do not react to these changes labour costs will be reduced by approximately 2%.
- Reducing employer social insurance contributions by about 1% of the wage sum between 2017 and 2019 and permanently by 0.58%.
- Extending annual working time by 24 hours with no compensatory wage increases.
- Cutting holiday bonuses in the public sector by 30% in 2017 - 19 in order to finance the cuts in employer social insurance contributions.

The Ministry of Finance estimates (Ministry of Finance 2016a) that these changes will reduce labour costs by 4.2% in 2018. However, the ministry notes in its evaluation that some of the effects of the cost-competitiveness package are difficult to evaluate and that the estimates are highly uncertain. In particular, the MoF notes that their calculations assume that wages do not react to the changes in social security contributions.

Essentially the MoF assumes that wages are downward-rigid so that even when unemployment is at a high level wages do not adjust. When nominal wages are rigid, shifting the burden of payroll taxes from employers to employees is therefore a way of achieving wage adjustment. The MoF also notes that in its projections unemployment decreases below its structural rate but still assumes that this has no impact on wage rates. According to the government calculations the net long-term impact of improved competitiveness could be about 35,000 new jobs. The calculation is based on multiplying the estimated decrease in hourly labour costs by an estimate of the elasticity of the demand for labour.

In our last report (Economic Council 2016) we argued that wages do react to changes in social security contributions. Workers or their unions demand higher wage increases in response to a shift in payroll taxation from employers to employees. Hence, wage costs and net wages are unrelated to the nominal incidence of taxation. Hence, a nominal shift of payroll taxes from employers to employees would be fully compensated by wage adjustments, leaving net after-tax wages and gross labour costs unchanged. If wage adjustment fully compensated changes in the tax burden, employment would also be unchanged.

This prediction is different if wage adjustment is hampered by downward nominal rigidity (see also Chapter 6). In this situation a shift of payroll taxes from employers to employees is more likely to affect gross labour costs and employment. A shift in the tax burden is simply a practical way of achieving a cut in labour costs when nominal wages are rigid. This implies that a reduction in labour costs and an improvement in cost-competitiveness is much more likely after the cost-competitiveness agreement than it would have been after legislative changes. However, even this is likely to be a temporary, not a permanent, effect. Shifting the tax burden from employers to employees may speed up the adjustment towards equilibrium when wages are rigid but in the long run wages adjust to balance demand and supply. Therefore the employment effects of shifting the tax burden are also likely to be temporary.

In the previous report the Council also argued that the government employment effect estimates are likely to be biased towards predicting overly optimistic employment growth. In that report we focused on the tax incidence and labour cost estimates. However, we also argued that the government is using rather large estimates of labour demand elasticities in calculating the employment effects. We also pointed out that estimates of the effects of labour costs on employment based on macro data are not properly identified due to the lack of exogenous variation in labour costs between years, between industries or even between firms within industries.

In the response to our report (Yläoutinen 2016), the Ministry of Finance claims that the elasticity of labour demand has increased in recent years, perhaps due to increasing economic integration. Yläoutinen also notes that a recent dissertation (not cited in response, but the background memo refers to Riihimäki 2009) estimates that the constant output elasticity of labor demand is between -0.7 and -0.8.

In the following box we illustrate in detail why estimates based on macro data are likely to produce overly large estimates of the effect of labour costs on employment. We also provide alternative estimates produced by the Council secretariat where some of the error sources are eliminated and note that according to the resulting estimates the employment effect of a reduction in labour costs is likely to be much smaller.

Box 5.2.1 On the estimation of labour demand elasticity

The estimates of labour demand elasticity in the calculations by the Ministry of Finance are based on equations such as

$$lnL_{it} = \alpha + \beta_{L,w|Y} ln\left(\frac{W(1+s)_{it}}{L_{it}}\right) + \gamma lnY_{it} + \varepsilon_{it} \qquad (1)$$

In this equation the logarithm of employment (usually hours) is explained by the logarithm of real labour costs per hour and the logarithm of output. The key parameter is labour demand elasticity $\beta_{L,w|Y}$ which measures how much relative employment changes due to relative changes in real wages. This equation is often estimated based on industry-level time series; therefore it is indexed by industry (i) and time (t). In such data hourly wages are typically not directly measured but estimated by dividing total labour costs $W(1+s)$ where W is the wage sum in the industry and s is the mandatory employer contribution rate, by total hours worked (L) in the industry.

Unfortunately estimating equations such as Equation 1 is unlikely to produce labour demand elasticities that would be useful in predicting the effects of policies that lower labour costs. In addition, the estimates are likely to be upward-biased, therefore predicting overly large effects on employment. There are several reasons for this.

First, estimating constant output demand elasticities makes little sense when cuts in labour costs aim at both increasing employment and boosting output. Constant output elasticities describe how relative prices affect firms' optimal (i.e. cost-minimizing) choice of the input mix whilst keeping output fixed. The estimates therefore indicate how the relative price of labour affects the share of labour in production. Even in this case the appropriate explanatory variable is the relative price of labour compared to the price of capital goods, not the price of labour alone. When a cost-cutting policy aims at boosting both employment and output, controls for output do not belong in the equation.

Second, a lack of independent measures of wages causes a bias in the estimates. Estimating equation 1 effectively explains variation in hours worked partly by its inverse[16]. This will bias the estimated coefficients toward -1. The

[16]Note that L appears on both sides of equation 1 and that

problem gets more severe when output is controlled for. Measures of output (Y_{it}) in an industry are strongly correlated with labour compensation $W(1+s)_{it}$. Hence output controls pick up a large share of the variation in imputed labour costs $\frac{W(1+s)_{it}}{L_{it}}$ so that the demand elasticity is largely identified from variation in hours, reducing the equation almost to an identity.

Third, the composition of employment changes over the business cycle. In a recession employment reductions are larger in low-wage occupations than in high wage occupations. Job creation is also reduced, decreasing the number of entry-level (low-wage) jobs. Similarly in a boom employment grows more in low-wage sectors and more rapid job creation increases the number of entry-level jobs. In principle, this composition effect could lead even to counter-cyclical average wages so that wages decrease in a boom and increase in a recession.

It is now well known that due to this composition effect the average wages of all employed persons are less pro-cyclical than the individual wages of those who remain employed both in booms and recessions (Solon et al., 1994; Abrahan et al. , 1995). The effect of the composition bias on labour demand elasticities has not been previously demonstrated. However, the mechanism is similar. In a boom employment increases and, as more low-wage employees enter the market, average wages grow less than individual wages. In a recession employment declines, but the average wages of those who keep their jobs may even increase if high-wage workers are more likely to keep their jobs. Therefore the correlation between employment and average wages is more negative than the correlation between employment and the wages of those workers who remain employed also in a recession. As a result, there is a negative bias (towards overly large absolute values) in labour demand estimates. Again the effect is amplified by a lack of exogenous variation in wages. Even when estimated using industry-level data, equation 1 is largely identified from variation of wages and employment over time, i.e from cyclical variation in average wages and aggregate employment.

An attached Council staff report prepared by Jussi Huuskonen demonstrates

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$$\alpha + \beta_{L,w|Y} ln\left(\frac{W(1+s)_{it}}{L_{it}}\right) + \gamma lnY_{it} + \varepsilon_{it} = \alpha + \beta_{L,w|Y} ln(W(1+s)_{it}) - \beta_{L,w|Y} ln(L_{it}) + \gamma lnY_{it} + \varepsilon_{it} \quad .$$

For example, any measurement error in hours worked will have an effect on both sides of the equation and this effect is of equal magnitude but opposite sign and will therefore bias the coefficient $\beta_{L,w|Y}$ towards -1.

the magnitude of the bias. He starts by estimating constant-output labour demand elasticities using industry-level data from 1975 to 2013. This produces elasticities that range between -0.7 and -0.8 and resemble those used by the MoF in calculations related to the employment effects of the competitiveness agreement.

Dropping the controls for output and hence estimating a model that should be more relevant for policy purposes reduces the estimate to -0.3, and to -0.2. The estimate is barely statistically significant when variation across time is controlled by adding year effects.

The bias induced by the measurement error in hours affecting both sides of the equation can be alleviated if an independent measure of wages is available. Finding a proper independent measure of wages for the whole period is difficult, but from 1995 this is available from the Wage Structure Statistics. Apparently reducing the original data to a period from 1995 to 2013 does not have much effect on the estimates. However, replacing the imputed wage cost estimate used in previous analyses with an independent observation of average wages in an industry reduces the estimated demand elasticities to a statistically insignificant -0.1 or even a positive 0.2 when the year effects that capture cyclical variation are included in the equation.

Finally, replacing changes in the average wages of all employed workers by the average change in the wages of those who stay in a firm in two consecutive years[17] even produces *positive* labour demand elasticities if the year effects are included in the model. If this were interpreted as a causal effect it would imply that *raising* wages *raises* employment.

None of the models estimated by the Council secretariat have exogenous variation in wages and therefore none of these should be interpreted as a causal effect of wages on employment. We are also not claiming that the elasticity of labour demand is zero or positive - even though the estimates producing small or positive estimates are more appropriately specified than the models producing large negative estimates.

[17] We thank Mika Maliranta for calculating these for the Council. The methods are described in Kauhanen and Maliranta (2012), who analysed these changes after 2005. The data we received form Mika Maliranta stretches back to 1995.

Rather, the point of this exercise is to show that the government estimates used in calculating the employment effects of cost-competitiveness measures are likely to have a large bias. Correcting the factors causing the bias leads to estimates that are much smaller in absolute value. At the same time this implies that the number of jobs created by reducing labor costs is likely to be much smaller than the government estimates.

As already noted, none of the estimates listed above qualifies as an estimate that could be used for policy analysis in a reliable way. In order to predict what happens to employment when labour costs are reduced, one needs to study cases where labour costs are reduced for some exogenous reason. Estimating correlations between labour costs and employment will never produce estimates of causal effects.

Episodes that are useful for obtaining causal estimates that would be needed for policy analysis are often related to situations where employer contributions - i.e. part of labour costs - are changed for a particular group of workers while remaining unchanged for other, comparable workers. Finnish examples include cutting employer social security contributions in Lapland between 2003 and 2009, cutting payroll taxes for low-wage workers over the age of 55 in 2006 and allowing young persons below the age of 25 to work on subminimum wages in 1993. (All cases surveyed in more detail in the background report). Unfortunately many of these experiments were short-lived and affected only relatively small groups, making the estimates rather imprecise. Naturally it is also possible that more permanent changes affecting larger groups would have larger or possibly smaller effects on employment. Still, experiments that allow comparing observed changes to credible comparison groups constitute the best available evidence of the effect of labour costs on employment.

The attached staff report contains a small meta-study on estimates of labour demand based on studies that estimate the causal effects of wages on employment. All utilize data from the Nordic countries and all are based on post-2000 data. We would recommend that the government used these or similar studies in its employment projections. A mean elasticity from the studies included in the attached staff report is -0.22. Unfortunately this also implies that the likely employment effect of labour cost reductions is roughly 31% of the government estimate based on an elasticity of 0.7, and that even if the goal of labour cost reduction is fully achieved, the number of jobs created will only be 11,000.

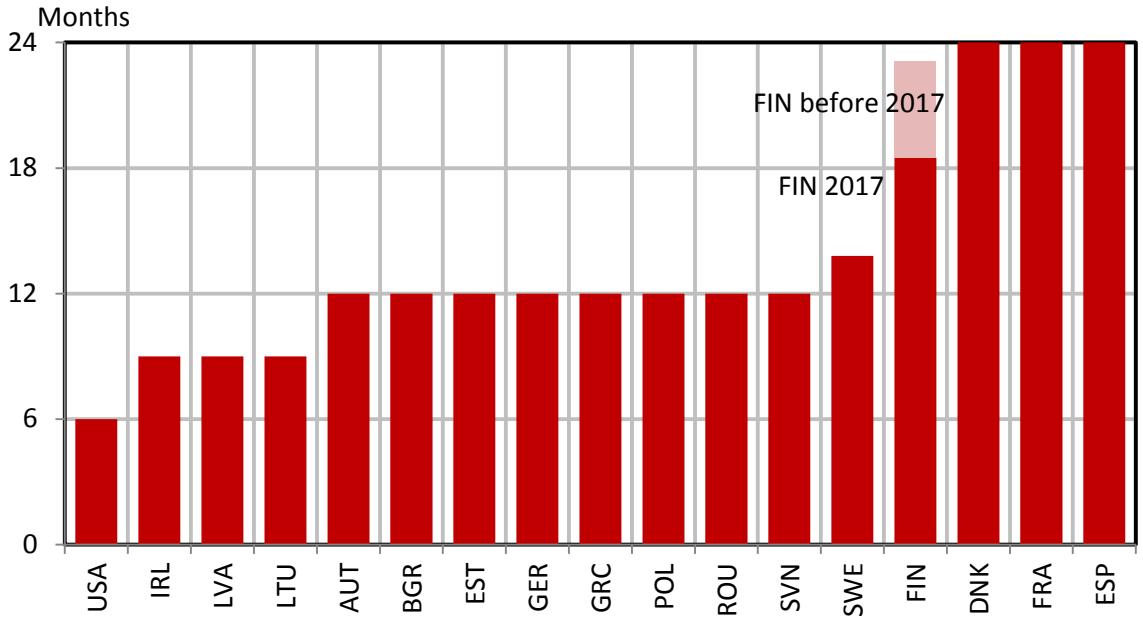
While it is theoretically possible that at the macro level labour demand elasticity could be greater due to e.g. positive export performance associated with cost-competitiveness, we do not have good estimates of such effects[18]. Therefore anchoring policy to high elasticities is a risky strategy that may hide the need for carrying out other policy measures.

5.3 Unemployment insurance reform

One of the main labour market policy initiatives of the government is reforming the unemployment insurance system. From the beginning of 2017 the maximum duration of unemployment insurance spells will be cut from 500 to 400 days. For workers with less than three years of labour market experience the maximum duration is cut from 400 to 300 days. Even after these cuts the maximum duration of unemployment benefits is relatively long in Finland. As demonstrated in Figure 5.3.1 benefit duration is longer only in Denmark, France and Spain.

[18] There are very few macroeconomic studies on exogenous variation in wages. One promising, though so far unpublished, attempt is a working paper by Díez-Catalán and Villanueva (2015), who study the effects of the timing of wage contracts in Spain. They find that contracts signed before the fall of Lehman Brothers in September 2008 resulted in on average 1.3 percentage point higher wage increases than contracts signed after September 2008 and that the probability of job loss was 1% higher in industries where wage contracts were signed before the crisis. This would indicate a rather high elasticity of job loss with respect to wages. The authors also claim that wage rigidity at a time of crisis may have a particularly large effect on the employment of workers with pre-recession earnings close to the minimum wage.

Figure 5.3.1: Duration of the unemployment insurance period, (earnings-related allowance), months



Source: The EU's Mutual Information System on Social Protection (MISSOC). Note that for example in the US the benefit period is often extended from the usual six months during periods of high unemployment.

Cutting the maximum duration of benefits is the most visible but not the only change in the benefit system. Other significant changes include an increase in the number of uncompensated days in the beginning of the unemployment spell and the removal of the higher UI benefits available for the unemployed with long careers. Search requirements are tightened so that after three months of unemployment the unemployed are required to accept jobs even if their earnings from employment are below unemployment insurance benefits and even if the jobs offered are outside their commuting region. In addition, the unemployed are required to attend interviews where their job search plans are reviewed by the employment agencies every three months.

The change in benefit duration only directly affects the unemployed who do not find employment within 300 or 400 days. In addition there are indirect effects. A shorter benefit period increases incentives to search for work already before benefits expire. In terms of unemployment expenditures, the increase in the number of uncompensated days in the beginning of unemployment spell and the removal of higher UI benefits available for the unemployed with long careers also affect those unemployed who do not exhaust

their benefits and therefore these changes will have a large fiscal impact even if they do not affect the duration of unemployment.

The unemployment insurance reform has two overlapping goals. First, cutting unemployment insurance benefits is simply a measure to cut government spending. According to the government proposal government expenditures on unemployment will be reduced by 198 million euros, 115 million of which are due to shortening the maximum duration of benefits. This estimate includes the effect of the increase in expenditures for labour market support for the unemployed whose earnings-related benefits expire faster due to the shortening of the maximum duration of earnings-related benefits. However, this is a static estimate that does not include savings in unemployment benefits due to improved incentives encouraging the unemployed to find jobs faster.

The other goal of the UI reform is to promote employment through improved incentives to search for work and to accept available jobs. Job search incentives will increase both due to the reduction in benefits and due to a reduction in the maximum duration of earnings-related benefits. If unemployed persons are forward-looking these measures should affect re-employment rates already before benefits expire. In principle the decrease in benefits could also decrease entry rates into unemployment if lower benefits disencourage voluntary termination or if employers are altruistic and take the potential benefits into account in their layoff decisions. The government estimates that the reform could increase employment by 9000 persons in the long term.

The main difficulty in designing the unemployment insurance system is to balance the consumption-smoothing benefits of insurance and the costs of undesirable behavioural effects. Unemployment is a major risk and insurance against income loss is valuable for any risk-averse workers. However, insurance has effects on the behaviour of the insured. Insurance might lower incentives to search, increase reservation wages and thereby prolong the unemployment period.

Ideally the goal of designing unemployment insurance should be to maximize the welfare of workers whilst taking the government budget constraint and the incentive effects of insurance into account. In principle one could try to derive optimal replacement rates, the optimal duration and the optimal time profile of benefits from this welfare maximization problem. In practice

this is difficult. Welfare calculations depend on the structure of the underlying model and are sensitive to a number of assumptions. Recent studies (eg. Chetty (2008) have attempted to calculate optimal replacement rates based on a small number of reduced-form parameters that can be shown to be sufficient statistics for optimality of the benefit system. Evidence is still scarce and the results highly country-specific. Existing studies cannot even agree on whether it is optimal to have a declining, flat or increasing time profile for benefits (see e.g. Cahuc and Zylberberg 2004, Holmlund 2015 and Kolsrud et al. 2015).

However, optimal unemployment insurance literature provides some useful results that help in designing the benefit system. First, an optimal unemployment insurance system includes not only monetary incentives but also counselling, search requirements, monitoring and sanctions (Boone et al. 2007). Insurance can be better when monetary incentives are not the only tool for encouraging search. Hence, for example, an unconditional basic income is unlikely to be optimal unemployment insurance.

Second, the level and duration of unemployment insurance benefits should depend on the state of the business cycle. In a recession search incentives are less important if increasing search intensity has a smaller effect on job-finding rates. Also the need for insurance may be higher in a recession and increases in UI benefits in a recession make public spending counter-cyclical. On the other hand it would be sensible to improve incentives during booms when more vacancies are available and job search more likely to be productive (Andersen 2014). Automatic indexing of UI benefits to the state of the cycle is rare, but for example in many US states the maximum duration of unemployment benefits is typically extended when the unemployment rate increases beyond a certain level. Canada has a more elaborate and rule-based system. A practical solution in the Finnish case could be cutting unemployment benefits but making these cuts conditional on the unemployment rate reaching the structural rate of unemployment.

Finally, some degree of experience-rating in unemployment benefits may be useful. If employers are partly liable for the cost of unemployment this may reduce layoffs and avoid cross-subsidizing industries where seasonal fluctuation in unemployment is large (Feldstein 1976). In Finland experience-rating is only used to finance extended unemployment benefits for older workers. According to Hakola and Uusitalo (2005), this has reduced the layoff rate of workers who are eligible for these benefits.

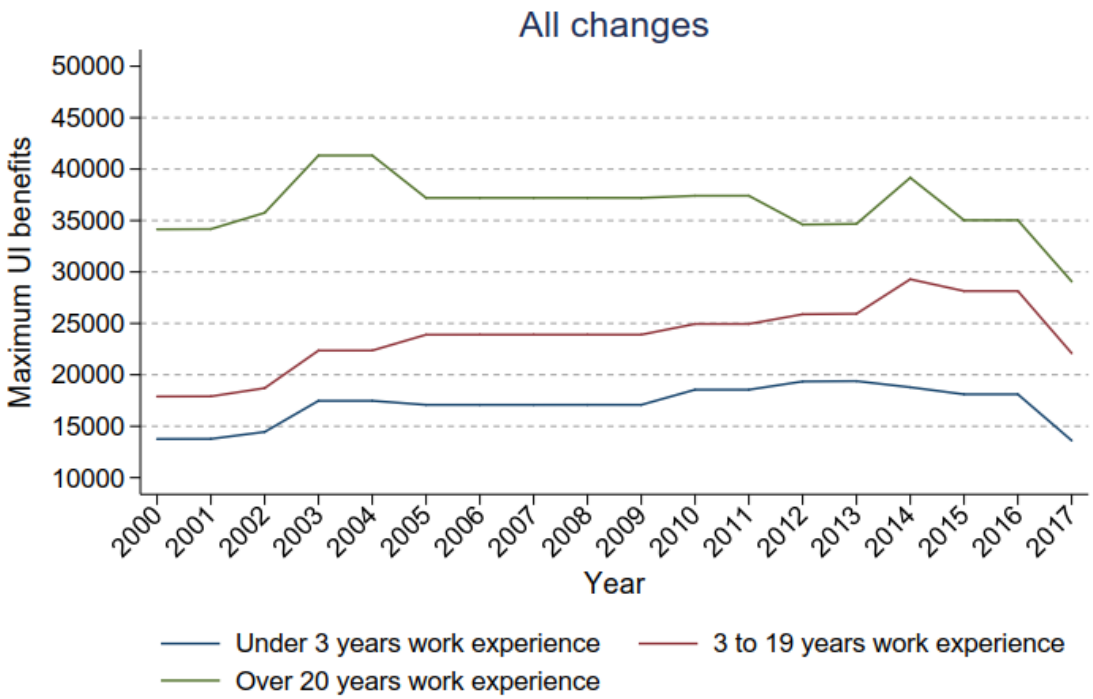
Another form of experience-rating has been applied in Sweden. In 2007 unemployment insurance contribution rates were linked to the cost of unemployment benefits in the industry. The goal was to moderate wage demands by making labour market organizations internalize the effects of wage increases on unemployment. However, the timing of the reform was unfortunate and the increasing contribution rates due to increases in unemployment rates led to a large decline in fund membership. Eventually the differentation in contribution rates was abolished. (Swedish Economic Policy Council 2011).

An extensive evaluation of the Finnish unemployment insurance system is published as an attachment to the Council's report. In the report, Tomi Kyyrä, Hanna Pesola and Aarne Rissanen evaluate the effects of changes in the UI benefit system that have taken place during the past 15 years. They discuss the effects of eligibility conditions, benefit level, benefit duration, partial benefits and extended benefits for older workers. The report contains a rather detailed survey of existing Finnish research but also a number of previously unpublished results and a discussion on the likely effects of the 2017 reform.

The Finnish unemployment insurance system has been subject to numerous changes during the past 15 years. In general, the eligibility conditions have been relaxed, and benefit levels increased while the maximum benefit duration has been reduced, particularly for the oldest unemployed persons who have been affected by the increases in the age limit for extended benefits in 2005, 2012 and 2015. More recently, benefit levels have declined due to the benefit cuts in 2014, 2015 and 2017.

In their report, Kyyrä, Pesola and Rissanen measure the overall generosity of the UI system by multiplying average unemployment-related benefits by the maximum duration of benefits. As can be seen in Figure 5.3.2 reproduced below, the 2017 benefit cut is the largest cut in UI benefits in past 15 years for most workers. Only the 2005 drop in the oldest age group that was caused by a change in the age limit of extended UI benefits is comparable in magnitude.

Figure 5.3.2: Generosity of unemployment benefits



Source: Kyyrä et al. (2017).

As benefit levels and eligibility conditions have been frequently changed in Finland, their effects have been extensively studied and are now rather well known even though there still is substantial variation from study to study. However, according to the vast majority of existing studies an increase in UI benefits increases the duration of unemployment.

The impact of benefit generosity on inflows into unemployment is less well known except for the effect of age limits on extended benefits, which has consistently been demonstrated to be very large. Kyyrä et al. show in the background report that the effects of benefit eligibility on inflow do not appear to be significant in younger age groups. They also estimate the effects of benefits on the quality of post-unemployment jobs. According to their results, higher UI benefits lead to more stable jobs but to jobs that pay lower wages. However, combining these two conflicting effects and the effect of benefit size on unemployment clearly indicates that the net effect of higher benefits on future earnings is negative.

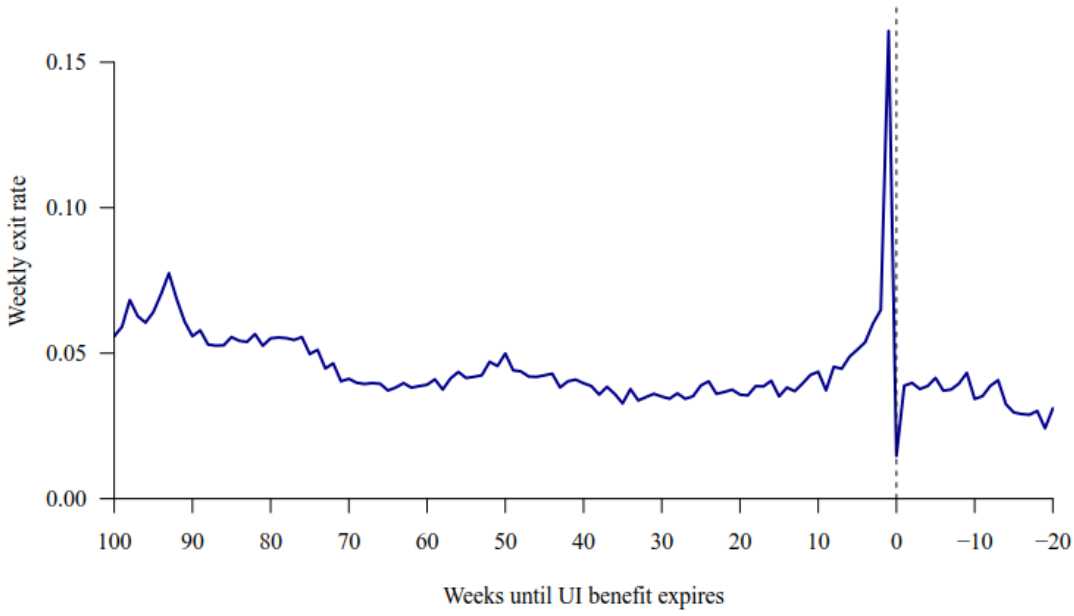
Evaluating the effects of maximum benefit duration with Finnish data has been difficult because the duration of benefits has been unchanged at 500

days for decades[19]. In their report Kyyrä et al. manage to evaluate the effects of benefit duration in two complementary ways. In both cases they examine the effect of remaining benefit eligibility at the time of entry into unemployment. This varies across the unemployed because many unemployed persons have used part of their benefit period already during previous unemployment spells. In addition, changes in employment condition, i.e. rules on the length of the employment period, required to renew the right to a full 500 days of UI benefits changed in 2003. Exploiting these changes, the authors manage to come up with estimates of the effect of benefit duration even though no changes in maximum duration have taken place.

To highlight the results we reproduce the graph on the exit rate from unemployment by remaining duration of unemployment benefits below. Apparently there is a large spike in the exit rate at the point where UI benefits expire. Part of the effect is due to exits into non-participation and entry into various labour market programs, but the job-finding rate also increases substantially just before UI benefits expire, illustrating the effects of benefits on search behaviour.

[19] The maximum benefit duration was shortened to 400 days for unemployed persons who had less than three years of work experience in 2014. So far no data have been available to evaluate the effects of this reform (the reform only affected new unemployment spells for which the maximum duration is reached in 2016).

Figure 5.3.3: Exit from unemployment by remaining days of benefit eligibility



Source: Kyyrä et al. (2017).

From the beginning of 2017 the maximum duration of unemployment benefits will be shortened by 100 days. These changes are likely to decrease the average duration of unemployment spells and reduce the unemployment rate in the long term. According to the government proposal the aim of the reform is to reduce unemployment by roughly 9,000 persons.

In their report Kyyrä, Pesola and Rissanen conclude that the changes in the benefit system, in particular the decrease in the maximum duration of benefits, are likely to reduce unemployment. According to their results the government estimates are somewhat conservative and the likely effects larger than the government estimates. The difference is mainly due to differences in the estimates related to the effect of benefit duration on the duration of unemployment.

5.3.1 Should unemployment insurance be compulsory?

Finland is one of the few countries where unemployment insurance is based on voluntary membership in unemployment insurance funds. Similar systems exist currently only in Sweden, Denmark and to some extent in Belgium. In most other countries unemployment insurance is part of the social insurance system with a high coverage rate and compulsory contributions.

Unemployment insurance is a textbook example of a market failure. Due to information asymmetries private insurance companies cannot run unemployment insurance and the public sector has to step in. A private insurance company that cannot use price discrimination would need to set contribution rates according to the average unemployment risk. At such prices persons with a secure employment contract would not be willing to buy insurance. Hence only high-risk persons would remain insured, forcing insurance companies to raise the price of insurance further so that revenues cover the expected cost of unemployment among these above-average risk clients. This price increase would then induce the lowest-risk clients from the remaining pool to leave the insurance scheme, inducing yet another price increase to match the unemployment risk among those those remaining and eventually leading to sub-optimal coverage rates or even collapsing the entire market.

Even though private insurance agencies have difficulties running a sustainable insurance scheme, unemployment insurance has obvious benefits. As long as workers are risk-averse, they would be willing to buy insurance at a fair price ('fair' implying that expected costs equal expected benefits). However, as long as there is asymmetric information such that the insured are more aware of the unemployment risk than the insurance companies, the market solution will not be socially optimal.

In most countries the problem is solved by making participation in the unemployment insurance system compulsory. In these countries UI contributions resemble other payroll taxes and the unemployment insurance benefits need not be 'fair' but can have explicit distributional goals.

Another way of solving the adverse selection problem is to subsidize unemployment insurance so that fund membership also becomes worthwhile for low-risk clients. In the Finnish case membership fees only cover 5.5% of the cost of earnings-related benefits, implying a 94.5% subsidy rate to fund members. With subsidies of this magnitude it is natural to ask whether replacing the current system with compulsory insurance would be a more sensible solution. In particular, the fairness of a system that collects insurance contributions from all workers but channels earnings-related benefits to fund members only can be questioned.

Effectively a compulsory insurance system would increase the unemployment insurance contributions of those who are currently not UI fund mem-

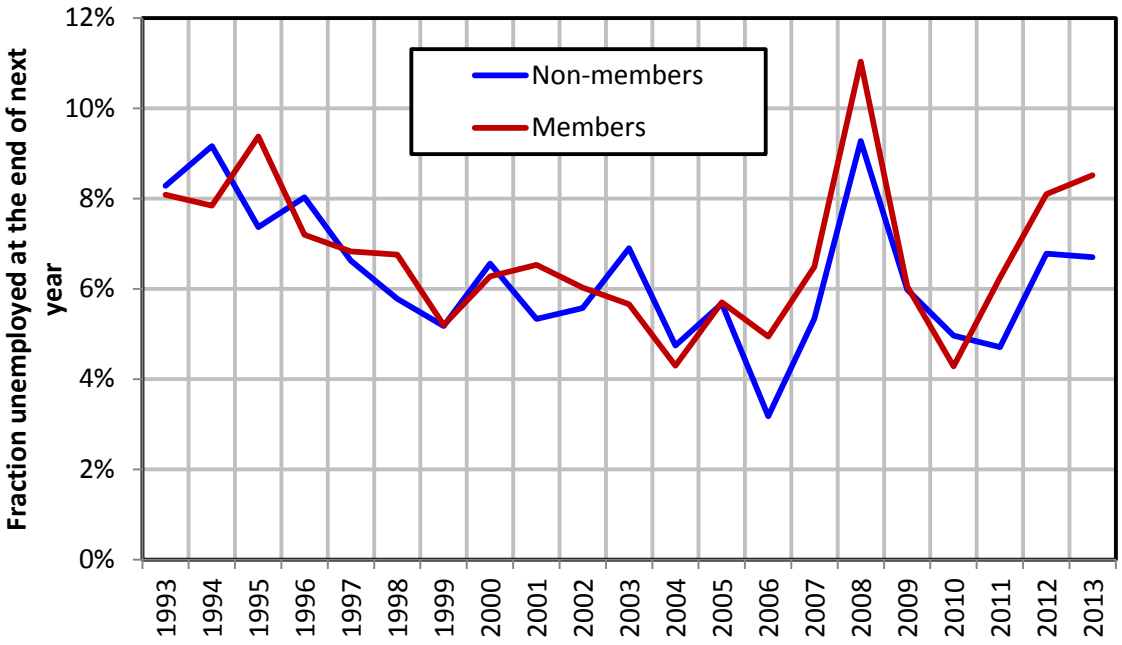
bers by roughly 5% while substantially increasing their insurance benefits in the event of unemployment. The difference in unemployment benefits between insured and uninsured persons depends on their pre-unemployment wage rate. The average earnings-related benefits (EUR 67/day) are roughly twice the average basic unemployment allowance (EUR 33/day) or the average labour market subsidy (EUR 37/day), but this naturally also reflects differences in average pre-unemployment wage rates.

Whether such a change would be beneficial depends on the reasons why workers opt out from the insurance system and on the characteristics of the workers who opt out. Böckerman and Uusitalo (2006), Maczulskij (2016) and Aalto (2016) evaluate the differences in membership rates in various groups. According to these studies, young, low-wage workers, workers with temporary contracts, workers in the private sector and men are less likely to be UI fund members. Attempts to limit the sample so that it only includes persons who fulfil employment conditions and therefore would be eligible for earnings-related benefits if unemployed do not change these patterns.

Adverse selection would imply that UI fund members have a higher unemployment risk than non-members. In Figure 5.3.4 below, we use data from the Income Distribution Survey[20] to examine the correlation between UI fund membership and the unemployment risk. It turns out that the differences are not very large, but in recent years the unemployment risk has been slightly higher among fund members. This could reflect adverse selection, but could naturally also be due to moral hazard and higher earnings-related unemployment benefits increasing the risk of unemployment.

[20] IDS is a rotating panel where the same persons can be followed for two years. Information on UI fund membership is based on survey questions and on tax deductions for UI fund contributions

Figure 5.3.4: Unemployment risk among members of UI funds compared to uninsured wage earners



Note: Data from Income Distribution Survey. In order to concentrate on persons who are likely to be eligible for earnings-related benefits the sample was limited to those whose main activity in year t is wage earner. Unemployment risk measured as unemployment at the end of year t+1

Another issue is that compulsory unemployment insurance would probably decrease the fraction of workers belonging to trade unions. Even though membership of a UI fund does not require union membership and an independent unemployment insurance fund (YTK) is currently the largest UI fund, most unemployment funds have close links to unions. According to the latest survey (Akava, STTK and SAK 2012), eligibility for unemployment benefits is still the most important reason for belonging to a union. In an international comparison, union density is clearly highest in countries where union-related funds run the unemployment insurance system.

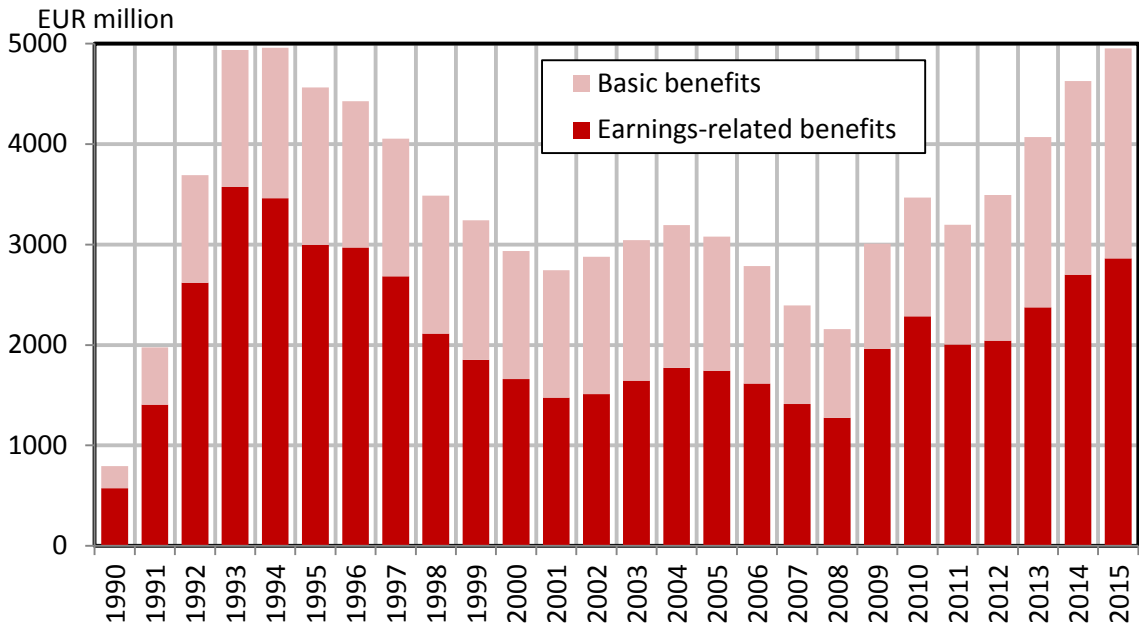
Making UI fund membership compulsory would therefore most likely reduce the fraction of workers belonging to unions. High union membership may have some beneficial effects in the labour market. But it is far from clear that supporting union membership indirectly by subsidizing union-affiliated UI funds is the most effective way of fostering union membership. For example, the Swedish Economic Policy Council notes in its 2011 report (p. 247) that if the government wants to promote union membership, direct subsidies to unions would have the advantage of directly showing the government´s as-

sessment of the difference between the social and private return on union membership.

5.3.2 Buffer fund

Unemployment expenditures vary over the business cycle. In 2015 expenditures on unemployment benefits were approximately twice as large as in 2008. This cyclicality affects in a roughly equal way both earnings-related benefits and basic benefits.

Figure 5.3.5: Expenditure on unemployment benefits, 1990–2015 (at 2015 prices)



Source: Statistical Yearbook on Unemployment Protection in Finland 2015, Financial Supervisory Authority and Social Insurance Institution 2016

Unemployment benefit expenditures that are caused by changes in the unemployment rate do not come under government expenditures that are regulated by the spending limit decisions. This makes perfect sense: unemployment-related expenditures that vary in a counter-cyclical manner are an important part of the automatic stabilizers that increase government spending in a recession and decrease spending in a boom, thereby smoothing the variation in output over the cycle.

Earnings-related benefits are mainly financed through the Unemployment Insurance Fund (Työttömyysvakuutusrahasto), which collects contributions

from employers, employees and the government, and pays contributions to the 28 unemployment funds that then pay the benefits to the unemployed.

In order to avoid the need to raise insurance contributions in recessions when expenditures are high, the Unemployment Insurance Fund has a buffer fund. The maximum size of this buffer corresponds to the annual unemployment insurance expenditures that would finance UI benefits when the unemployment rate is 5%, i.e. EUR 1.6 billion. The buffer is symmetric so that the fund can have assets up to the maximum or an equal amount of debt. According to the government proposal (HE 170/2016), the size of this buffer will be temporarily increased so that in 2017 - 19 it will correspond to expenditures that would finance annual benefits when the unemployment rate is 7%. In practice this increases the debt limit to EUR 2.3 billion.

The buffer fund exceeded its maximum size in 2008. After the maximum buffer was increased in 2010, the asset balance has been well below the maximum and well above the minimum limits. According to the estimate determined by TVR's Board of Directors on 25 August 2016, TVR's net position on 31 December 2016 would be EUR -640 million . This is only 40% of the current debt limit, and according to its own forecast the fund will have a surplus, further lowering its debt in 2017.

The increase in the size of the buffer will make smoothing the variation in unemployment insurance expenditures easier without changing contribution rates and is therefore welcome. However, it is difficult to understand why such a change should be temporary. A permanently higher buffer that could freeze UI contribution rates for a longer period would be a more rational solution. A larger debt limit could have avoided for example the increase in contribution rates that took place in the beginning of 2016 in response to estimates according to which the debt of the buffer would have reached EUR 1.3 billion by the end of 2016 and the limit of the buffer would have been exceeded already in 2017 (Työttömyysvakuutusrahasto 2016). These estimates turned out to be too pessimistic, but the pessimistic forecasts still resulted in an increase in contribution rates and an unintended tightening of the fiscal stance.

5.3.3 Incentives to take up short term jobs

During budget negotiations the government appointed a working group to propose new initiatives for increasing employment and shortening the duration of unemployment spells. In its final report published in October 2016 the working group discussed improving incentives in the unemployment insurance system, providing a one-time retirement option for the older unemployed, using unemployment insurance benefits as a wage subsidy, promoting youth employment and options of subsidizing low-pay jobs for the long-term unemployed. The working group could not reach an agreement. Both the union and employer representatives added a dissenting opinion to the report which makes implementation of the proposals unlikely.

Most innovative idea in the proposal was introducing one uncompensated unemployment day per month after the unemployment has lasted for three months. A key part of the proposal is that the unemployed could avoid this uncompensated day by working or attending labour market programs for five days during the previous three months. The proposal therefore differs from a declining benefit sequence system as the benefits only decline if an unemployed remains on passive benefits.

The proposal was inspired by a recent Danish reform designed by Danish Unemployment Insurance Commission. In the Danish model the number of uncompensated days is smaller and the employment condition more demanding than in the Finnish proposal. In Denmark the unemployed lose one day of unemployment benefits in every four-month period unless they have worked 20 days during a reference period. In Denmark short-term jobs while unemployed also increase the maximum duration of unemployment benefits.

The motivation for the proposal is to increase incentives to accept even short-term jobs while receiving unemployment benefits. In principle, this encouragement may improve labour market attachment of the unemployed and have a stronger effect on re-employment than incentives created by a declining benefit sequence with no options of avoiding the decline.

The working group was rightly cautious in assessing potential effects of the proposal. So far similar system exist only in Denmark where the reform was implemented from the beginning of 2017. In the policy simulations of the Danish Unemployment Insurance Commission the system had reasonably

large employment effects but verifying these results with real empirical data will not be possible until a few years from now. However, the Danish experiences of the UI-reform may be useful in future and should be closely followed.

5.4 Entrepreneurship package

In April 2016 the government announced a policy package aimed at promoting entrepreneurship. The entrepreneurship package has a wide variety of goals, including strengthening the so-called Team Finland activities, better access to finance and further support for R&D activities (via an 'innovation voucher'). These measures are still expressed in fairly general terms, which means that it is difficult to evaluate their likely impacts.

One concrete measure that has been taken is an entrepreneur deduction in the taxation of firms. The deduction is targeted at firms other than corporations. For the affected firms, taxable income is reduced by 5% before taxes due are calculated. According to the government proposal, the annual costs of the tax deduction are estimated to be around EUR 130 million.

The policy was motivated by the aim to level the playing field in the taxation of different types of firms. Corporate income tax was recently reduced to 20%, and the aim of the entrepreneur deduction is to offer a compensating tax decrease to sole proprietors and other non-corporate enterprises.

However, the tax system already has other means to lower the tax burden of non-corporate firms, including the fact that the notional rate of return that is used in calculating the share of income that is taxed as capital income is set at 20% and the base for calculating that share includes not only net assets but also part of the entrepreneur's salary.

Instead of introducing a single measure that complicates the tax system and narrows the taxable income base, it would have been preferable to carry out a more comprehensive analysis of the treatment of different entrepreneurial forms by the tax system. This would have been helpful in identifying ways to plan a more neutral system where different types of firms would be treated by the tax system in a reasonably similar way. There is no guarantee that the current move will lead in a desirable direction.

First employee subsidy

One of the new measures the government decided to adopt was a subsidy for hiring the first employee. The details of the subsidy are still not clear, and the subsidy scheme is likely to start as an experimental pilot programme.

Without further information on the details, the effects of the new initiative are naturally impossible to evaluate. However, a similar scheme existed in Finland earlier, between 2007 and 2011. Regional employment agencies could grant a temporary subsidy that covered 30% of the wage costs during the first year and 15% of the wage costs during the second year after hiring the first employee. The subsidy scheme was first launched in a few high-unemployment municipalities in 2007 but was then extended to a wider area in 2008 and 2009.

To aid the evaluation of the current government proposals the Council commissioned an examination of the previous programme. This study, produced by Annika Nivala of the Turku School of Economics, is published as an attachment to this report.

The effects of 2007-2011 subsidy programme can be evaluated because the subsidy was restricted to firms within certain geographical regions so that their performance could be compared to firms in neighbouring regions where the first employee subsidy was not available.

In the evaluation report Nivala concludes that the subsidy did not have significant effects on the likelihood of hiring the first employee or for the entry of new firms. She notes that the labour demand elasticity of non-employer firms is very small. The results can be due to non-employer firms consisting mainly of self-employed people who are not responsive to hiring incentives. On the other hand, the results suggest that either the constraints in becoming an employer are not that significant or that the subsidy is not large enough to compensate for the cost and risk of becoming an employer.

5.5 Basic income

One of the most visible policy initiatives in 2016 was the basic income experiment launched in the beginning of 2017. Two thousand recipients of basic unemployment allowance or labour market support will be randomly selected as participants in the basic income experiment. The target group

will receive a basic income of EUR 560/month irrespective of their other incomes for two years (1 January 2017-31 December 2018).

The research group working on the basic income experiment proposed in its final report on 16 December 2016 that the basic income experiment should be implemented in multiple stages. After the initial 2017 experiment the target groups should be expanded to other low-income earners and possibly to young people between 18 and 25 years of age.

The basic income experiment has also attracted interest outside Finland. Randomized controlled trials evaluating important aspects of social policies are still rare and the experiences from the Finnish experiment could therefore be useful in social policy design in other countries too.

The Finnish basic income experiment is a welcome example of demonstration programmes where public policies are tested using a limited number of participants before implementing the programme on a full scale at the national level. The basic income experiment is also a noteworthy example as it is implemented using a randomized controlled trial. There is a long history of experimentation of pilot programmes in Finland, but so far the experiments have been mainly regional pilot programmes. As it is very difficult to evaluate what would have happened in these pilot regions without the experiment the effects of experiment are also always uncertain. A randomized experiment guarantees that the treatment and the control groups have no systematic differences and therefore any significant post-programme differences between the treatment and the control groups can be interpreted as programme effects. It may nonetheless be difficult to generalize the findings in an experiment to other settings, other target groups or other times, but at least within the target group of the experiment this produces more reliable evidence than could be obtained in any other way.

The design of the basic income experiment can be criticized for the small sample sizes or for the choice of the target group (those receiving unemployment-related benefits from the Social Insurance Institution). Hence the effects of the experiment may not be very precise and the generalizability of the results to other potential beneficiaries of basic income (parents with small children, students, self-employed person) is questionable. In particular, as the entire target group is unemployed at the beginning of the experiment, it will be hard to evaluate whether entry into benefits - that would imply negative employment effects - is affected by the basic income system.

However, it makes sense to focus on a small well-defined group. The experiment could be easily extended to other groups later on. Another major issue is that a small-scale experiment can never capture potential general equilibrium effects related to the effect of a basic income on wages and the effect of the tax increases that would be needed to finance a national basic income scheme.

According to the government proposal (HE 215/2016), the main goal of the Finnish basic income experiment is to evaluate the effects an unconditional basic income on the labour market behaviour of an initially unemployed target group. A basic income improves incentives to work and removes "incentive traps" caused by income-contingent programmes. Recipients of a basic income keep receiving their subsidies even if they enter part-time or full-time work. Therefore the incentives to search for work and to accept also short-term and part-time contracts even on low wages should be substantially improved.

Another aspect of a basic income is that by removing eligibility conditions and by granting the basic income to recipients of various social benefits, the social benefit system could be simplified and could become more transparent. As earning extra income while receiving benefits does not require going through extensive bureaucratic procedures that might delay benefits, a simplified system might promote employment. A simplified universal benefit system with less bureaucratic needs and means-testing might also lead to savings in public finances (De Neubourg 2009).

One issue that has not been extensively discussed in the Finnish context is that tasks performed by human labour can be to an increasing extent be performed by robots. Machines outperform humans in a number of tasks including not only repetitive manual tasks (such as packing, lifting or carrying), but also demanding cognitive tasks such as data analysis, complex calculations and making inferences based on large quantities of data. A basic income could be one way of transferring the benefits of technology to humans or redistributing income from the owners of technology to the workers displaced by technological advances.

The main problem in the basic income experiment is that the basic income model tested in the experiment would be expensive if implemented as a national programme. The basic income level itself is not very large - EUR 560, which is roughly equal to the after-tax value of labour market support and

basic unemployment allowance. However, these benefits are unconditional so that the benefit level is independent of income or employment - which of course is the key idea of a basic income. To be fiscally sustainable a basic income model would need to be synchronized with the tax system so that the basic income is funded from taxes on persons capable of supporting themselves on their own.

In fact, a fiscally neutral basic income model requires rather high tax rates not only in the lowest income groups but also at higher income levels. Such taxes may have adverse effects on the labour supply. Naturally, similar adverse effects are also caused by employment- or income-contingent support systems that the basic income is supposed to replace[21]. However, a key difference between the basic income system and currently existing income support systems is that in the basic income system financial incentives are the only policy measures available for promoting labour supply. Other benefit systems impose restrictions on behaviour as conditions for receiving benefits, and apply guidance, monitoring and sanctions. The basic income system also provides benefits to a much larger group and therby causes a larger fiscal burden.

Optimal unemployment insurance tries to balance the benefits of insurance and the incentives to work. In a system where no other policy levers exist, the incentives have to be relatively strong and therefore the benefits relatively low. If employment is promoted using other means too, the incentives can be somewhat weaker and the benefits higher than in a basic income system. That is why economic literature generally opposes ideas related to basic income (Holmlund, 2016).

5.6 Council's views

Increasing the employment rate is one of the government's main policy targets. However, according to the government's current forecasts reaching the targets is unlikely. These forecasts already inclucde the government esti-

[21] Atkinson (2015) proposes a participation income, which is a basic income scheme with the requirement that recipients participate in activities that are deemed socially desirable. The activities need not be linked to commercial work, but can include help for the disabled, the elderly or the young or education and training.

mates of the effects of the competitiveness pact and unemployment insurance reform.

The government estimates related to the employment effect of the competitiveness pact are large compared to existing estimates of the effect of labour costs on demand for labour. Hence existing forecasts of changes in employment in next few years also appear to be too optimistic. On the other hand the government's estimates of the effect of unemployment insurance seem conservative and are close to the estimates presented in the background report on unemployment insurance.

Ideally, the design of unemployment insurance systems should try to balance the benefits of insurance with the adverse behavioral effects. The government proposal concentrates on the incentives and costs of the system only and ignores the benefits of the insurance system.

The maximum duration of unemployment benefits is rather long in Finland. Shortening the maximum duration of benefits is a sensible policy initiative that is likely to reduce the average duration of unemployment spells. Extending the number of uncompensated days may also be a reasonable change as short unemployment spells can be financed with precautionary savings.

The possibilities for further developing unemployment insurance systems are not limited to changes in benefit level and benefit duration. The proposals related to incentives for temporary work while unemployed introduced by the government working group in the autumn should be further investigated. The new requirements for tighter monitoring should also be carefully evaluated. Additional issues worth further investigation would be making unemployment insurance compulsory, making the generosity of unemeployment benefits conditional on the state of the busisness cycle and expanding the experience-rating system to younger workers. On the other hand, replacing the unemployment insurance system with unconditional benefits (such as a basic income) is unlikely to be the optimal direction for change.

Unconditional benefits might have other types of gains, e.g. a major simplification of social assistance systems that in turn might lead to savings in public spending. There are, however, groups of unemployed persons, such as young people, who need assistance, activation and guidande to enter the la-

bour market. A basic income does not solve motivational problems; on the contrary, it might encourage some younger people to live 'outside' organized society. While the government aims to raise the employment rate it is crucially important to find solutions that put people living on various benefits into paid work.

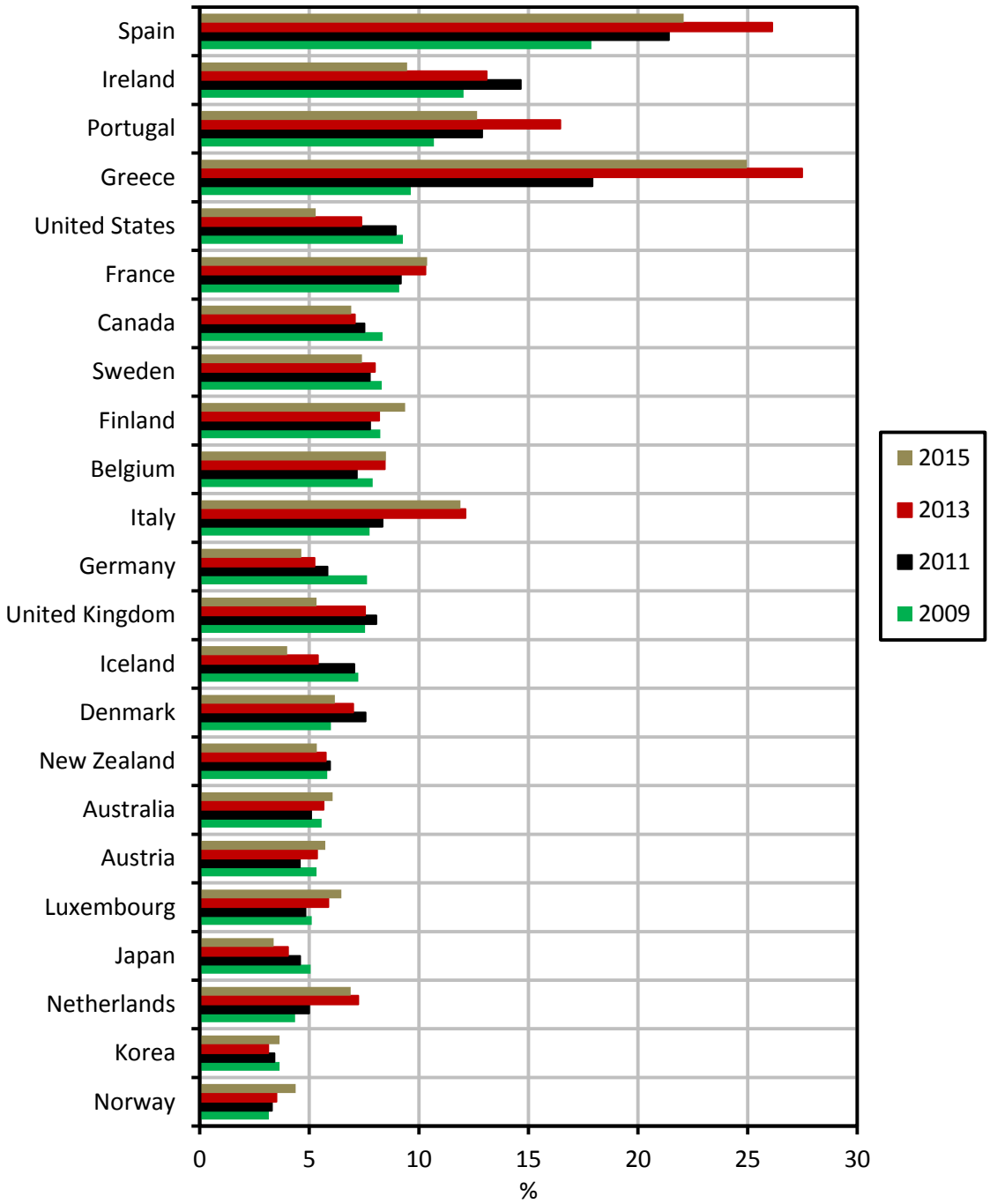
6 Labour market developments and wage-setting

6.1 Introduction

The financial crisis has had severe economic consequences. Economic activity declined by more than 8% between 2008 and 2009 and as a consequence employment declined and unemployment increased. Given the large drop in economic activity, these labour market consequences were to be expected. But the crisis in Finland has been more persistent than in most other countries. While unemployment has started to decrease in a number of countries, this was not the case in Finland by 2015, see Figure 6.1.1.

The slow recovery is seen more clearly in Figure 6.1.2 showing the development in employment rates for Finland compared to Denmark, Sweden and the Eurozone since 2008. On impact, the crisis reduced employment roughly by the same orders of magnitudes in Finland, Denmark and Sweden. However, the subsequent developments have been very different. The fastest recovery has been seen in Sweden, which - assessed in terms of the employment rate - has fully recovered and even surpassed the 2008 level. In Denmark the crisis became deeper than in Finland, but employment has recovered in recent years and the unemployment rate is low, cf. Figure 6.1.1. For the Eurozone on average, employment fell as a consequence of the financial crises and again in the period 2011-13 due to the sovereign debt crisis, but it has since recovered and is approaching the 2008 level.

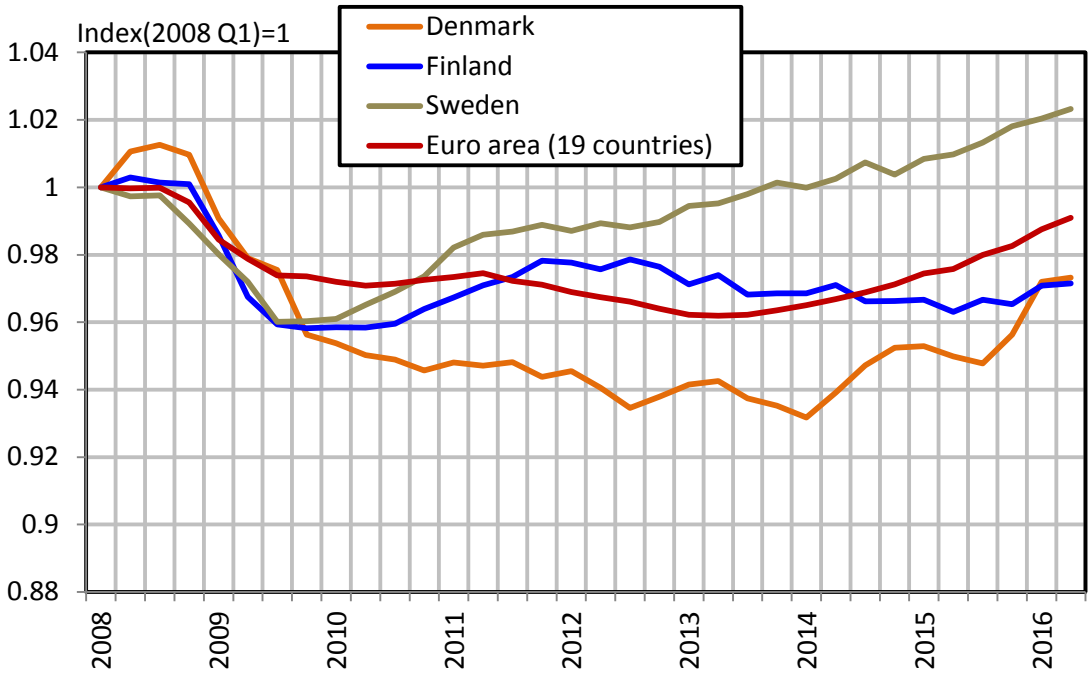
Figure 6.1.1: Unemployment. OECD countries 2009-2015



Note: Harmonized unemployment rates, selected OECD countries.

Source: www.oecd-ilibrary.org

Figure 6.1.2: Employment rates, 2008 Q1-2016-Q2



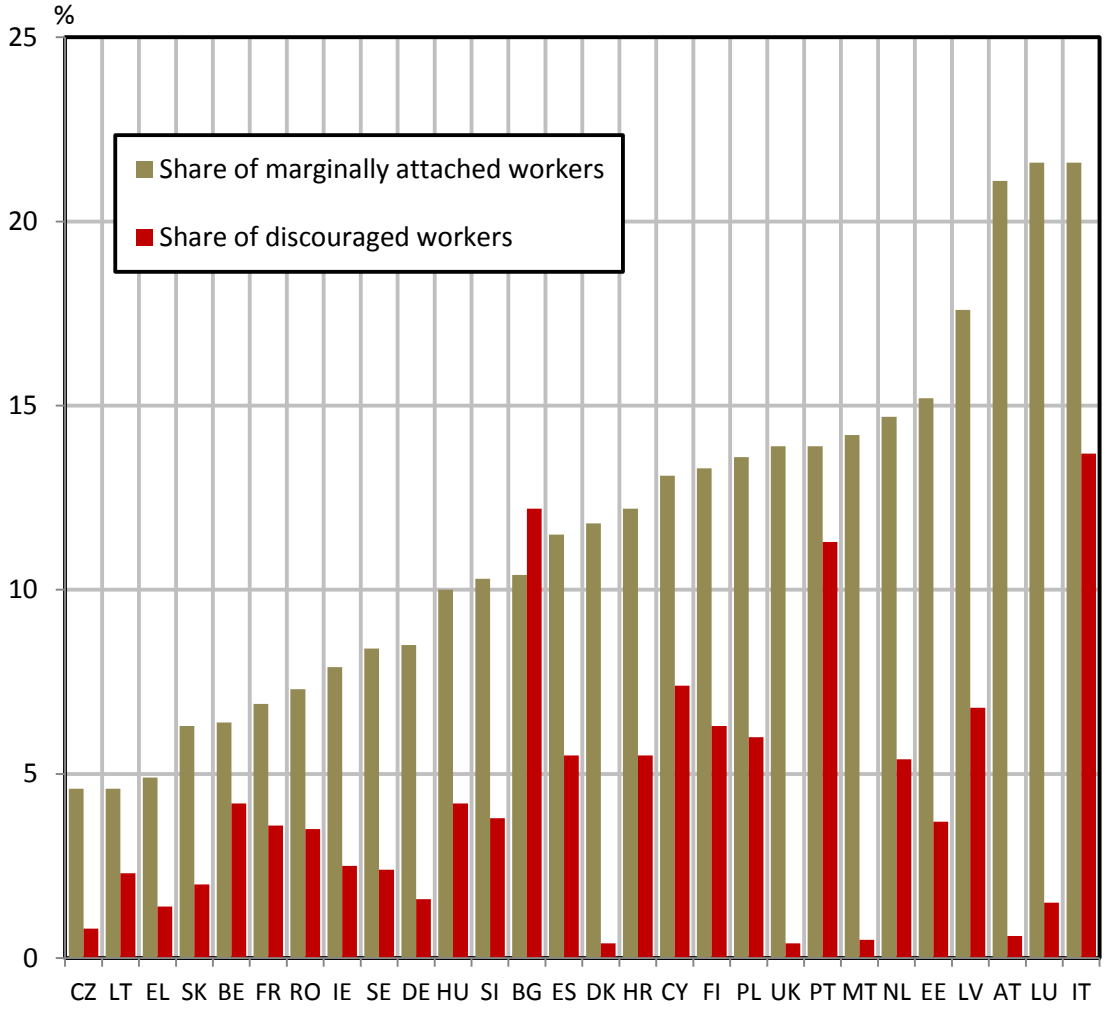
Note: Employment rate for age group 15-64, quarterly data. Index 2008.1=1.

Source: www.oecd-ilibrary.org

The Finnish performance has thus been comparatively poor, and in particular the slow recovery rate after 2011 indicating strong persistence is a concern.

It is well established that high and persistent unemployment may increase structural unemployment. The key mechanism is that more people become long-term unemployed and therefore risk depreciating their human capital and social skills, which in turn reduces their employability. A number of indicators suggest that this is happening, see also Chapter 3. The duration of unemployment spells is increasing. While about 50% of all unemployment spells in 2008 where below three months, the share of short spells is only 40% in 2015. There are also indications that a larger share of individuals is marginalized in the labour market, and not even searching for jobs, see Figure 6.1.3. While the crisis was associated with a peak in job separations, it is more striking that in recent years there has been a downward trend in job-finding rates (see European Commission (2016)). An increase in structural unemployment after a prolonged downturn implies that an increase in aggregate demand would not automatically bring employment and unemployment rates back to the levels observed before the crisis. More directed or structural initiatives would be needed.

Figure 6.1.3: Marginally attached and discouraged workers, EU countries 2015

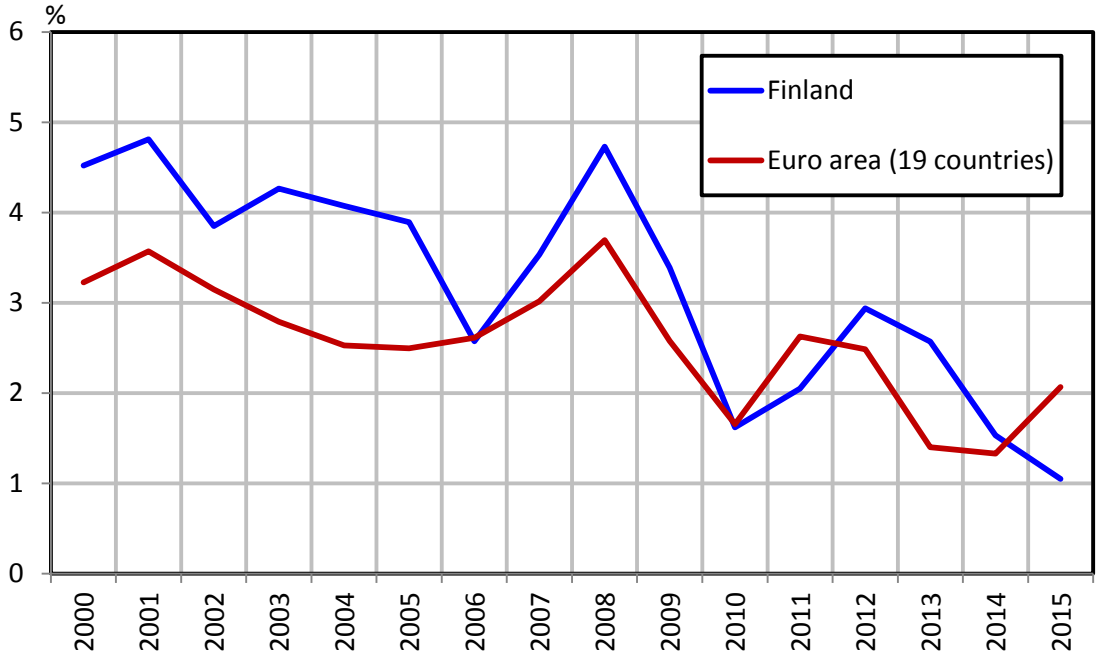


Note: Marginally attached workers are defined as inactive persons (aged 15-74) who are available for work but are not actively searching for a job, expressed as a share of the total inactive population. Discouraged workers are marginally attached workers who are not seeking employment because they think that no work is available (survey data).

Source: Eurostat (LFS).

Several factors contribute to explain the current situation. But one critical issue is the adjustment capability, the ability of the economy to adjust and recover from negative events. A key adjustment mechanism from a labour market perspective is the wage rate, this applies especially in an economy with a fixed exchange rate. It is striking that although wage growth has declined it remains high compared to other countries in the Eurozone, see Figure 6.1.4, despite a comparatively larger drop in employment. Wage competitiveness has thus not improved since 2009 if measured in terms of e.g. unit labour costs, cf discussion in the Economic Council (2016).

Figure 6.1.4: Wage increases, Finland and Eurozone, 2000-2015



Note: Annual increase in hourly earnings in manufacturing.

Source: www.OECD-ilibrary.org

6.2 Wage-setting

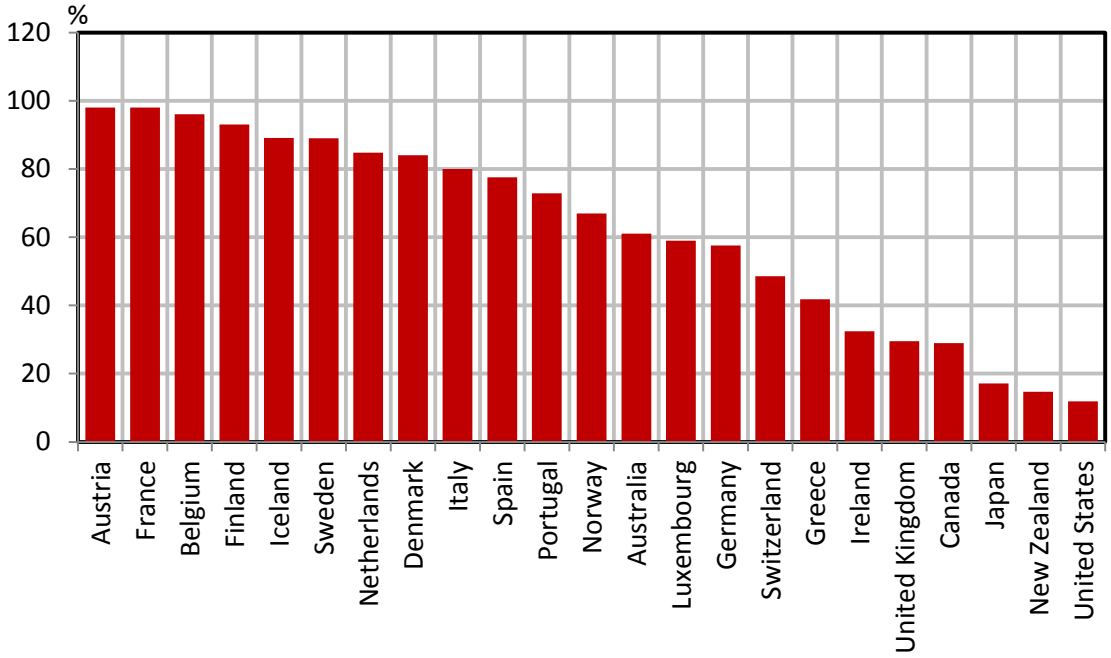
These developments bring the wage-setting system to the fore, especially since Finland has not followed the common trend in the OECD countries towards more decentralized wage-setting systems, but has maintained a highly centralized/coordinated system, see e.g. Visser (2016a). The Finnish wage-setting system has been based on a tripartite system with extensive cooperation between the social partners and the government on wages and working life but also often social and tax policies, see e.g. Asplund (2007).

Until now, the system has had a three-layer structure. The central organizations negotiate a comprehensive collective settlement, after which collective agreements are made at the sectoral level, and finally some issues may be settled in company-specific agreements. The general principles settled in the comprehensive agreements regarding wage increases and other aspects related to work serve as guidelines for the sectoral negotiations[22]. The agree-

[22] If a comprehensive agreement cannot be reached - even with government intervention – negotiations proceed at the sectoral level. However, even in this case there is some degree of coordination,

ments determine general pay increases (often a lump-sum increase combined with a percentage increase) but allow for further increases at the sectoral level as well as wage drift.

Figure 6.2.1: Bargaining coverage, 2013



Note: Percentage of employees in employment covered by collective agreements.

Source: Visser (2016b)

The sectoral agreements determine legally enforceable[23] minimum standards and conditions for the respective sector and companies in it. Collective agreements are considered automatically binding for all firms and workers in their domain, if they are considered representative. In practice, this means that the coverage of collective agreements applies to most employed workers (93%), which is among the highest by European comparison, see Figure 6.2.1. Finland and Belgium stand out as two of the countries with the most centralized systems of wage bargaining, see Figure 6.2.2. In most other countries there has been a trend towards more decentralized wage-setting

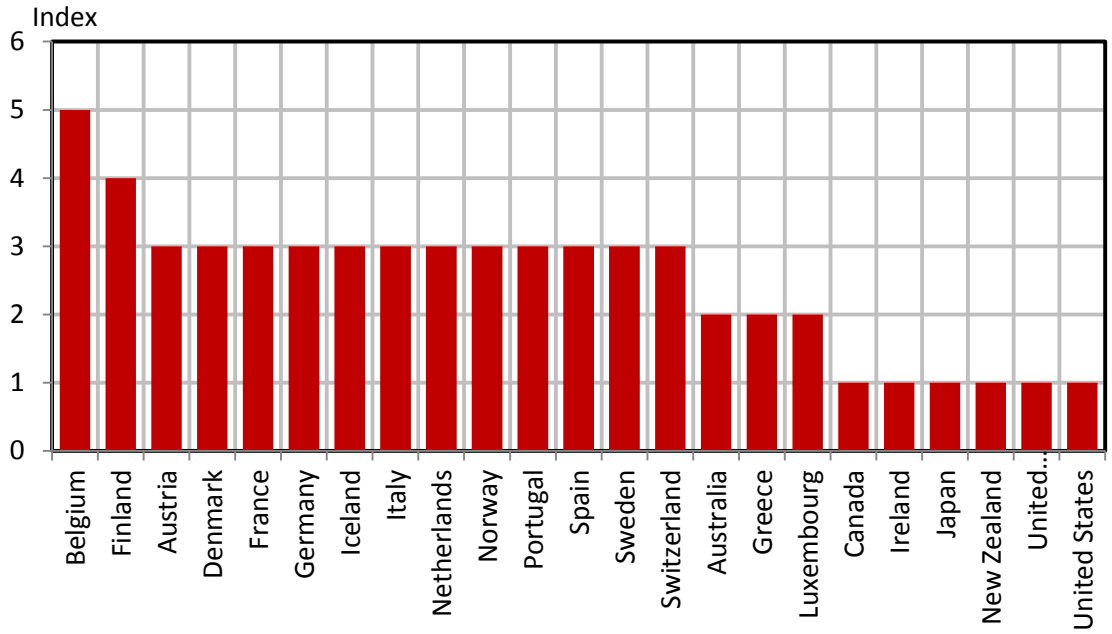
since agreements made by larger organizations serve as a benchmark for other negotiations, see Asplund (2007).

[23] It is worth noting that some union contracts include so-called escape clauses allowing local wage reductions if the firm is in financial problems. These escape clauses have rarely been used in the past. In the negotiations related to the competitiveness package, escape clauses were added to most union contracts. It remains to be seen whether this will increase the use of escape clauses in the future.

(cf. Visser 2016). This may reflect both political trends and changes in the labour market which make it more important to leave freedom to adjust wages at a more decentralized level to take account of both changing economic conditions for the firm and the individual characteristics of workers.

While the Finnish wage system may have worked reasonably well in the past assessed in terms of the overall performance of the labour market, the question is whether it has facilitated or hindered the adjustment of wages in response to the recent recession.

Figure 6.2.2: Centralization - dominant level of bargaining, 2014



Note: The predominant level at which wage bargaining takes place, index between 1 and 5; 1: Bargaining predominantly takes place at the local or company level, 2: Intermediate or alternating between sector and company bargaining, 3: Bargaining predominantly takes place at the sector or industry level, 4: Intermediate or alternating between central and industry bargaining, 5: Bargaining predominantly takes place at the central or cross-industry level with binding norms for lower-level agreements.

Source: Visser (2016b)

BOX 6.1. Wage bargaining systems and economic performance

The issue of how various labour market institutions and, in particular, how wage-setting systems affect economic performance has been extensively researched. While the organization of employers and employees creates room for market power to be exercised to affect the distribution between labour and capital, recent research acknowledges that the contracting system can also have beneficial efficiency effects via the internalization of externalities, insurance mechanisms etc. Wage-setting systems are multifaceted, which makes cross-country comparisons difficult, and their structure reflects historical facts, economic structures and political objectives. It is generally recognized that various wage-setting systems have both pros and cons, and that there is no uniquely one best system for all times and circumstances.

The degree of centralization of wage-setting is an essential element of the wage-setting system. Calmfors and Driffill (1988) launched the influential idea that there is a hump-shaped relation between unemployment and the degree of centralization of wage-setting, i.e. (structural) unemployment is higher with an intermediate level of centralization than either complete centralization or decentralization. Intermediate levels of bargaining are problematic from a macroeconomic perspective since wage-setters expect that wage increases can partly be shifted into prices, and this makes wage increases less costly in terms of employment and thus leads to more aggressive wage demands. In a fully centralized system, bargainers would take into account the fact that price increases erode real wages, and in a very decentralized system prices are taken as given. The empirical support for the hump-shaped relationship is debated. One reason is that it may be problematic to characterize wage-setting systems solely in terms of the degree of centralization (the vertical dimension), see e.g. Visser (2016a) and Addison (2016).

Another important dimension is the degree of coordination (important when wage setting is not fully centralized) across bargaining unit (the horizontal dimension). Even with sectoral wage bargaining or firm-level bargaining, bargaining may be coordinated, e.g. if some central employers' or employees' organizations negotiate at the decentralized level, or if central negotiations stipulate some general conditions leaving some room for decentralized decisions. A particular form of coordination – pattern bargaining – arises in a system with sectoral/industry bargaining (intermediated

centralization) in which "tradeable" sectors most directly in international competition decide on wages before "non-tradeable" sectors, so that "competitiveness" concerns are internalized in the bargaining process. This is related to the so-called Scandinavian model of inflation, and the wage-setting systems in Denmark, Norway and Sweden can to some extent be said to fit into this classification, see e.g. Visser (2016a).

In the wake of the high and persistent unemployment in the 1980s and 1990s there was an increasing focus on the impact of institutions (broadly interpreted) on labour market performance. Empirical analyses attempted to assess the role of institutions and policies like unemployment benefit generosity, employment protection legislation, active labour market policies, union density, bargaining coverage and their role in both the structural level of unemployment and adjustments to shocks (shocks and institutions), for surveys and references see Arpaia and Mourre (2005) and Bertola (2016). While most studies did find that e.g. the generosity of unemployment benefits tends to increase unemployment, there are no consensus findings on the role of institutions. Empirical research suffers from serious measurement problems, since it is difficult to measure and compare institutions across countries and difficult to control for background factors to identify the "causal" effect of a given institutional structure, for instance. An important lesson to be drawn from this literature is complementarity (the "package") between different institutions and policies as well as the non-static nature of institutions. Institutions should not only be assessed along one dimension, e.g. unemployment, but many other dimensions like the distributional dimension should be included as well.

Comparing wage-setting systems across countries is extremely difficult because such systems have many institutional specificities and details, and the various characteristics serve different purposes and objectives. Much of the research has attempted to clarify the role of the institutional setting both for the unemployment level (structural unemployment) and the adjustment capabilities, see Box 6.1. The research literature clearly indicates that there is no single best model of wage-setting, various models have pros and cons. It is dangerous to single out a specific element as being good or bad, since the complementarity (the "package") is important. Obviously some models have performed better than others, and there has been some focus on the system of pattern bargaining seen e.g. in Denmark, Norway and Sweden. These

countries have sectoral bargaining but with strong coordination across areas and have a bargaining sequence in which sectors most affected by international integration become "wage leaders", implying that the concern for competitiveness is internalized in wage setting .[24]

A move to localized wage-setting has recently been seen as a promising way to combine macroeconomic stability and micro-level flexibility. In principle, centralized wage setting should be well equipped to respond to macro shocks (Blanchard et al. 2013), but in practice multi-level systems have not delivered wage moderation during crises (European Central Bank 2009). Local bargaining can accommodate firm-level shocks in a more flexible manner, opening up a way for firms to adjust to difficulties using other means than firings alone. The findings from the ECB's Wage Dynamics Network, summarized by Addison (2016), do support the view that wages are more flexible in a decentralized set-up.

However, local wage-setting has been criticized on the grounds that it helps unproductive firms to survive, which would be against the idea of promoting creative destruction: in a centralized system, wages diverge less across firms and individuals, making high value-added firms more productive than in the case of localized bargaining. As a counterargument to this claim, less wage variation reduces the incentives of workers to improve their pay via development in their work. Empirical evidence on the links between local wage-setting and productivity is also inconclusive (Obstbaum and Vanhala 2016). Obstbaum and Vanhala (2016) also point out that more inter-firm wage moderation would ease the creation of new firms, as they are typically less productive in the beginning. Finland has currently (too) few growing firms (Vanhala and Virén 2015) , and more flexible wage-setting would be a partial remedy for this issue.

It is worth stressing that wages are only one dimension of labour market institutions and structures. Other aspects may be equally important for labour demand and the scope for adjustment. One example is employment protection legislation (EPL) and thus the scope for firms to adjust labour input. A strict EPL may make it more difficult or costly to lay off workers in

[24] Boeri (2015) warns that two-tier wage-setting could lead to overly high wage increases if the upper tier in the coordination process serves just to give a fallback clause which guarantees minimum wage increases for all. As a partial response to this, Addison (2016) recommends a system where the upper tier just sets the rules of bargaining, rather than minimum wage increases.

case of declining production, but this may in turn reduce labour demand or make firms hesitant to hire workers on permanent contracts subject to EPL regulation. The background report by Böckerman et al. (2017) compares Finnish employment policies to those of other OECD countries using OECD indicators of employment protection legislation. Both the level of regulation of temporary contracts and the protection of permanent workers against individual and collective dismissals of individuals are below the OECD mean[25]. EPL is also an important example of the complementarity between different policy elements, since it depends on the design of the wage bargaining system but also the unemployment insurance scheme and active labour market policies.

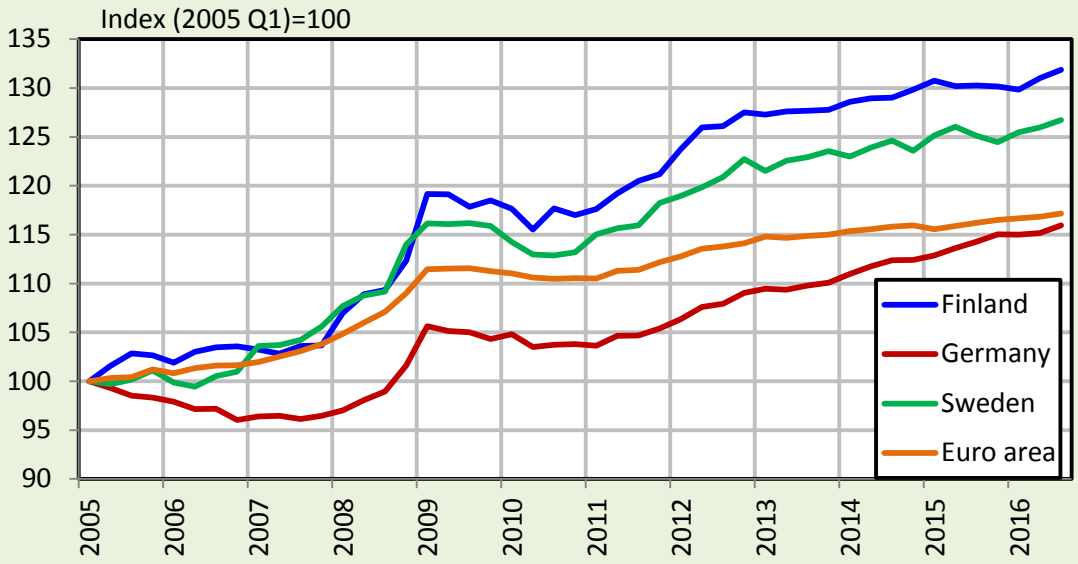
In policy discussions there is often a focus on "best practice" as identified by favourable recent performance. Recently Germany has experienced a rather good employment development, and has therefore been considered as a model example, see Box 6.2. While increased wage flexibility is part of the German story, it also points to the complementarity between different types of policies and the importance of institutional factors. This underlines that a simple "copy and paste" discussion is not helpful.

[25] This index does not take into account the strictness of enforcing legislation. However, according to Venn (2009), collective bargaining agreements do not add to the strictness of EPL in Finland in a meaningful way and have only a minor effect on the OECD indicator in countries where collective bargaining agreements are judged to add to the strictness of EPL (e.g. Denmark, Iceland or Italy).

Box 6.2 German labour market reforms

In recent years Germany has experienced a rather good development in employment (see also Chapter 3). A distinctive feature is the considerable wage moderation associated with this development, which in turn has led to an improvement in competitiveness via low growth in unit labour costs, see Figure below.

Figure 6.7: Unit labour costs in selected countries, quarterly 2005 Q1 – 2016 Q3



Source: OECD

Notes: Seasonally adjusted

The German experience has led to a vivid debate on the causes and policy lessons to be learned. Several factors have contributed to the successful employment outcomes, as made clear in surveys of the German labour market miracle by e.g. Dustmann et al. (2014), the OECD (2012) and Burda (2016). Below we comment on those effects most directly related to wage formation.

Hartz reforms: According to Burda (2016), "The Hartz reforms were primarily about labour supply but there are aspects of Hartz I and Hartz II legislation as well as Agenda 2010 that affected wage bargaining or even the structure of labour demand". The possibility to allow mini-jobs removed hours restrictions and also removed the wage floor to support job creation. The possibility to use "leased" temporary workers also reduced the fallback position of unions, as management could threaten to increase the use of mini-jobs and outsourced temporary workers, and this again helped to keep

wage growth in check for a decade. Job placement services were also improved.

In the Hartz IV reforms, unemployment insurance replacement rates and the duration of unemployment insurance payments were reduced and work requirement legislation was made more stringent via sanctions for those who repeatedly refuse offers of work from employment offices. In addition, in-work benefits to top up low earnings were introduced. All these measures contribute to wage restraint and an increase in the labour supply.

Opening / hardship clauses and collective agreements: Sectoral level wage agreements have become less common and union membership has fallen at the same time as job agreements became more flexible, leaving more leeway for company-level agreements. This has led to increased use of opening or hardship clauses that allow exemptions from working time and wage agreements. Company-level pacts have been accompanied by employment guarantees, which has made it possible for the unions to agree on these measures.

Dustmann et al. (2014) argue that the supply-side part of the Hartz reforms was not decisive for the German labour market success, rather the main reason is in the institutions governing relations and mutual agreements between the three main labour market parties: trade unions, employer associations, and works councils (the worker representatives who are typically present in medium-sized and large companies). "Works councils accommodated wage-setting decentralization to secure jobs in Germany, which also strengthened their role in industrial relations. Another response was that the trade unions and employers' associations agreed on an increasing number of opening clauses. While initially intended to be temporary to avoid bankruptcy, they were later maintained to ensure competitiveness in more general terms.

Increased working time flexibility at the firm level. One factor that contributed to the benign labour market developments in Germany after the financial crisis has been the Kurzarbeit (short work week) system. This system has meant that when a firm faces a temporary crisis, workers work less than normally and get compensation from the government. The firms' incentives not to overuse the system have been mitigated by the fact that they have needed to pay the social security contributions also for hours not worked. As a response to the crisis, the generosity of and eligibility for the

system were extended and at its peak on average 3% of employees were on short working weeks. According to estimates by Hijzen and Venn (2011), around 235,000 jobs (equivalent to 0.6% of employment) were saved because of the presence of the system.

A downside of the labour market reforms has been an increase in wage dispersion (See Dustmann et al., 2014).

Although the German progressive income tax and safety net have cushioned some of the impacts of these gross earnings changes on the disposable income of households, the Gini coefficient has increased from 27 in 2001 to 29 in 2014 (Source: OECD).

6.3 Wage adjustment during the crisis

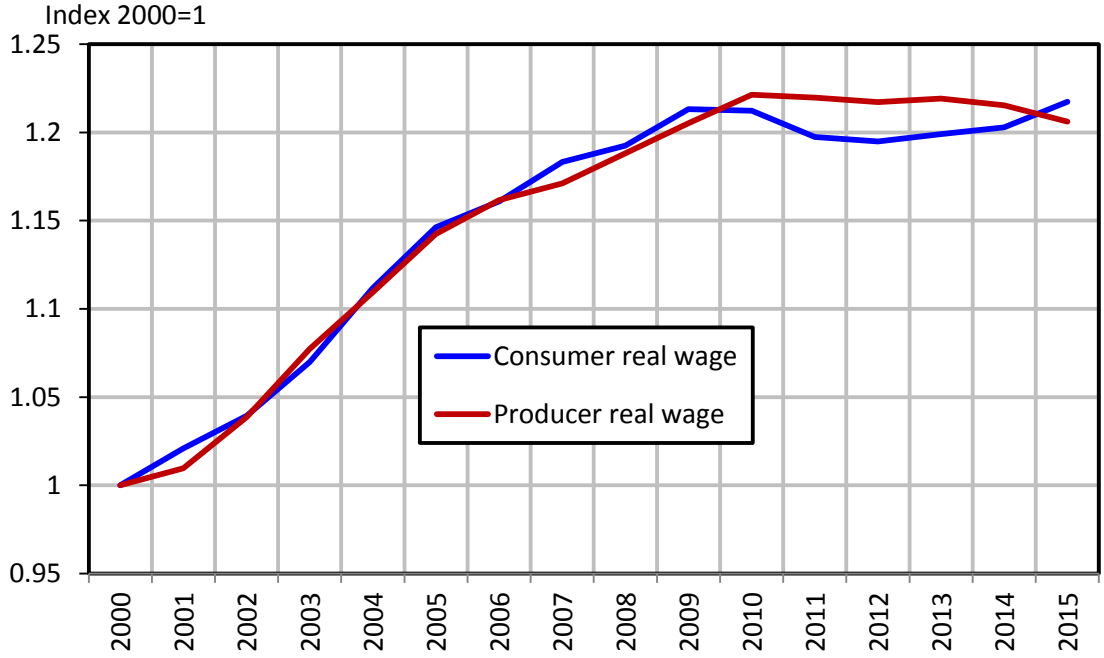
Wage adjustment is a key adjustment mechanism to changes in labour demand or supply. While the source of changes in labour demand and supply is of importance for understanding why unemployment deviates from its structural level, it is less important for the adjustment mechanism. The question here is the extent to which wage adjustments contribute to bringing unemployment back to its structural level, and the speed of this proces.

Interpreting wage developments requires a distinction to be made between consumer and producer real wages, the former being relevant for employees and the latter for employers. Employees see wages relative to consumer prices (consumption real wage) and employers relative to producer prices (producer real wages). The two real wage concepts are of relevance for labour supply and demand, respectively. If nominal wages increase by more than consumer prices, the consumption real wage increases to the benefit of employees, and if nominal wages increase more than producer prices then the profitability of production declines, affecting employers adversely. Since consumers consume a basket of goods and employers only produce a few goods, there can be significant differences, especially in an open economy, between the development in consumer and producer prices. In a situation with low employment, the crucial question is whether the producer real wage adjusts to support labour demand.

The developments in consumer and producer real wages are displayed in Figure 6.3.1. While the two developed reasonably similarly along an upward

trend up to the crisis in 2009[26], they have since followed different paths. Consumer real wages first decreased and later increased, while producer real wages first stagnated and later decreased slightly.

Figure 6.3.1: Consumer and producer real wages, 2000-2015



Source. Own calculations based on data from www.oecd-ilibrary.org

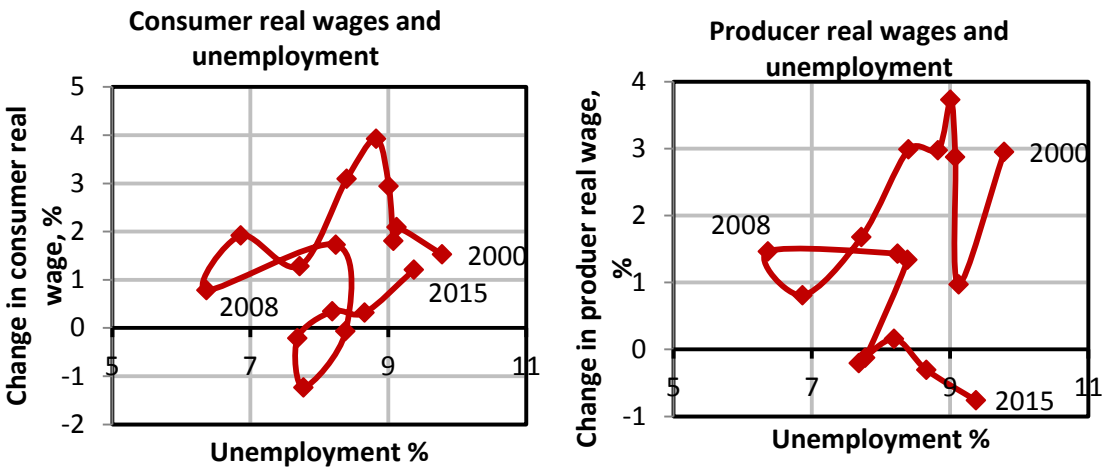
Note: Hourly wages in manufacturing deflated by consumer price index (consumer real wage) and implicit deflator for gross domestic product in manufacturing (producer real wage), respectively.

While consumer wage growth – both nominal and real wages – declined in response to the crisis, it is not clear that the adjustment has been sufficient. Figure 6.3.2 shows the relation between annual changes in consumer and producer real wages, respectively, and the unemployment rate. In general one would expect wage increases to be larger (smaller) when unemployment is low (high), as is well known from the Phillips curve. It is seen that consumer real wage changes in recent years have tended to move alongside unemployment, i.e. higher consumer real wage growth when unemployment is higher. For the producer real wage, there is the expected relation that real wage growth is declining when unemployment is higher. In either case, the

[26] As is the case in most countries since productivity increases allow increases in real wages for unchanged employment levels.

development does not indicate that wage adjustments have been very responsive to the increase in unemployment, see also e.g. European Commission (2016).

Figure 6.3.2: Unemployment and increases in consumer and producer real wages, 2000-2015



Note: Wage and prices as in Figure 6.3.1, unemployment rate is the OECD harmonized unemployment rate

Source: Own calculations based on data from ww.oecd-ilibrary.org.

Aggregate wage developments can also be considered by analysing unit labour costs, where wages are seen in relation to developments in productivity. Developments in unit labour costs were discussed in the Economic Policy Council (2015), and it was concluded that competitiveness measured in terms of unit labour costs has deteriorated since 2009.

The adjustment of (producer) real wages in recent years may have been hampered by low inflation. When inflation is higher, real wages can be adjusted downwards by ensuring that nominal wage growth is below price growth. However, in periods of low inflation a reduction in the producer real wage may require a decrease in nominal wages. It may be easier to settle a bargaining process by agreeing on low or possibly zero nominal wage increases than on a reduction in the nominal pay level. Such nominal rigidities may thus be a source of a more sluggish adjustment process. This is one reason why the adjustment during the current crisis may be different and possibly more prolonged than in past crises.

The preceeding discussion has taken an aggregate approach, considering overall developments in the labour market. However, this may give an im-

precise picture since there are important differences across sectors and firms and thus workers. While aggregate nominal wages have been increasing, some have experienced nominal wage cuts; likewise real consumption wages have been falling for some even though aggregate real consumption wages have been increasing in most years. In the following we consider in more detail the adjustment of nominal and real wages, see Box 6.3. on the method and data.

Box 6.3 Method and data

The analyses reported in the text are based on the harmonized wage structure statistics of Statistics Finland for the years 1995-2013. The wage structure statistics are representative of the population of firms with at least five employees (when sampling weights are used), and are harmonized across the years for differences in industry and occupation classifications as well as different wage concepts. Workers' earnings are exactly matched with the employer firm.

These data include four wage concepts or measures. First, regular hourly wages for regular working time and the corresponding monthly earnings for regular working time. These include basic contractual wages as well as supplementary pay for shift work, working conditions, and performance pay and bonuses paid regularly for regular hours worked and based on individual performance. Annual bonuses, often based on group performance or the profitability of the firm, are NOT included. Second, hourly wages and monthly earnings for total working time, which also include overtime pay. Finally, monthly working time for regular time and total time are available, the difference being overtime hours.

Due to some outlying observations, the data are trimmed by dropping persons whose hourly wages for regular working time are below the 0.1 percentile value or above the 99.9 percentile value each year (calculated for non-zero non-missing wages). After this we checked that there were no outlying values for monthly earnings requiring further trimming.

Real consumption wages are found by deflating by the consumer price index (1951=100). The contract wage index (1995=100) is obtained from the time series database (Astika) of Statistics Finland. The index for all forms of pay for the private sector is used. Since the HWSS wage data are for the last quarter of each year, the last (4th) quarter values of the contract wage index each year are used to construct the average contract wage rise annually. Producer prices are measured by the implicit price indices for two-digit industries from the national accounts (Astika)..

The method, data and results are detailed in Vainiomäki (2016) and prepared for the Economic Policy Council.

We first consider nominal wages and the issue of nominal rigidities, i.e. are negative changes in nominal wages unusual, implying a concentration or spike in wage changes at zero nominal wage changes. The incidence of zero nominal wage increases rose in the years following the financial crisis, after not having been an issue since the late 1990s[27], cf. Figure 6.3.3. This may suggest that nominal rigidies play some role.

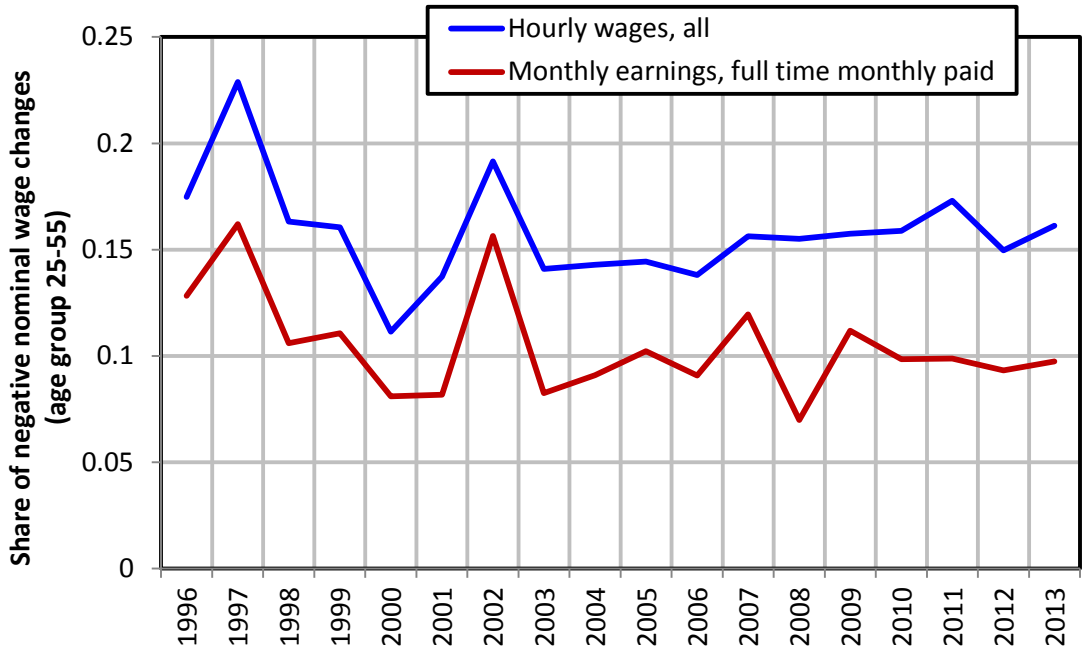
Figure 6.3.3: Incidence of zero nominal wage changes, 1996-2013

Source: Vainiomäki (2017).

However, a fraction of workers have experienced nominal wage decreases, cf. Figure 6.3.4. Somewhat surprisingly, this fraction has been relatively constant over time. For those experiencing decreases, the average size of nominal wage decreases is about 8% for both hourly wages and monthly earnings. Negative wage adjustment has thus not been more prevalent or larger during the crisis.

[27] The zero spike in 1997 is due to the postponement of contract wage rises in 1997 to the next year in response to an economic slowdown that started in 1996.

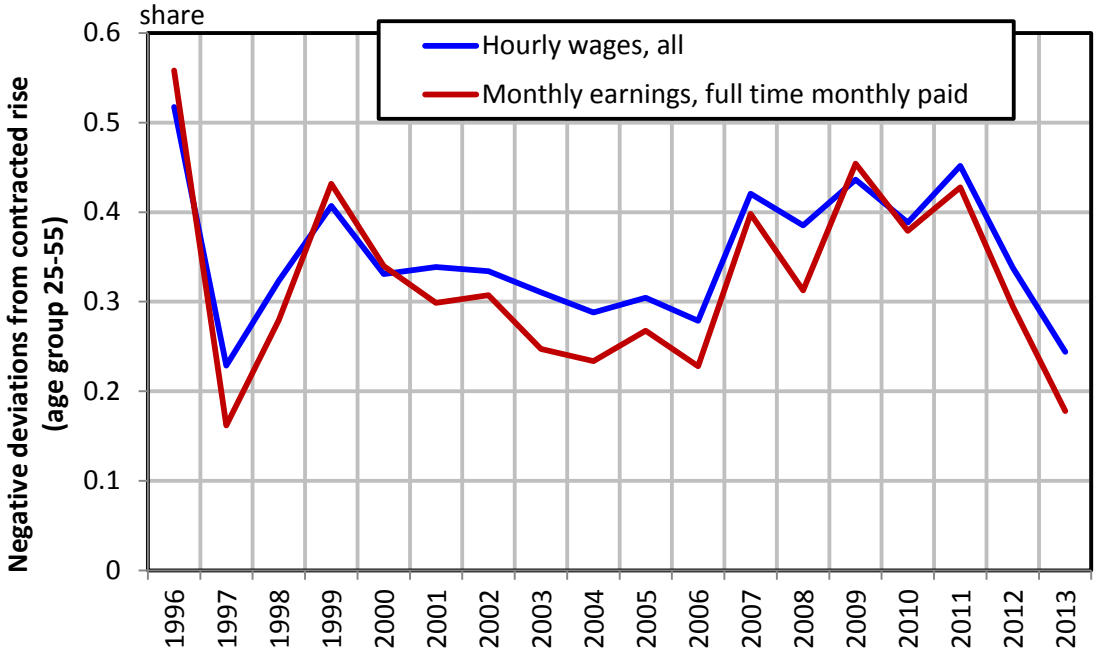
Figure 6.3.4: Incidence of negative nominal wage changes, 1996-2013



Source: Vainiomäki (2017).

Given the structure of wage-setting, it is interesting to consider whether negative deviations from contracted wages do occur. Contract wage rises in 2009-2013 were between 1.1 % in 2013 and 2.5% in 2009, which is lower than in the two previous years - 3.6% in 2007 and 3.9% in 2008. A larger moderation in contracted wage increases occurred after our data period. In 2014-2015 contract wage rises were about 0.6% each year. In the years immediately after the financial crisis, the incidence of negative deviations from contractual changes increased and reached 40%, but later declines to about 20%, which may be attributed to the fact that contractual wage increases became lower. This suggests that there is some flexibility in wages relative to contracted wages, and thus scope for adjustment to firm- and sector-specific factors. However, given the absence of any improvement in employment, it is striking that the incidence of negative deviations has declined.

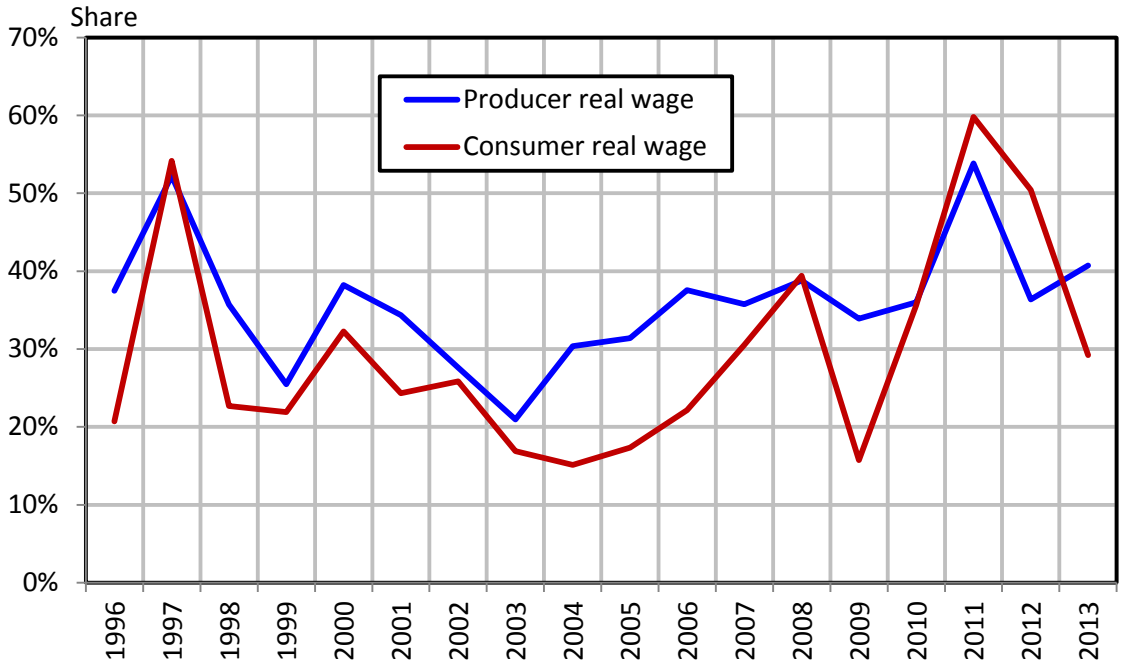
Figure 6.3.5: Incidence of negative deviations from contracted wage increases, 1996-2013



Source: Vainiomäki (2017).

The development of real consumption wages depends both on nominal wages and price developments. With positive consumer price inflation the incidence of real wage decreases is higher than the incidence of nominal wage decreases. In the aftermath of the financial crisis the fraction of workers experiencing declining real consumption wages has increased, topping at about 60% in 2011, consistent with the decline in the aggregate consumption real wage, cf. Figure 6.3.1. The average decrease in real consumption wages for those experiencing a cut has been about 5-6%. The incidence of decreases in real producer wages also spiked right after the crisis, and the average size has been about 6-7%.

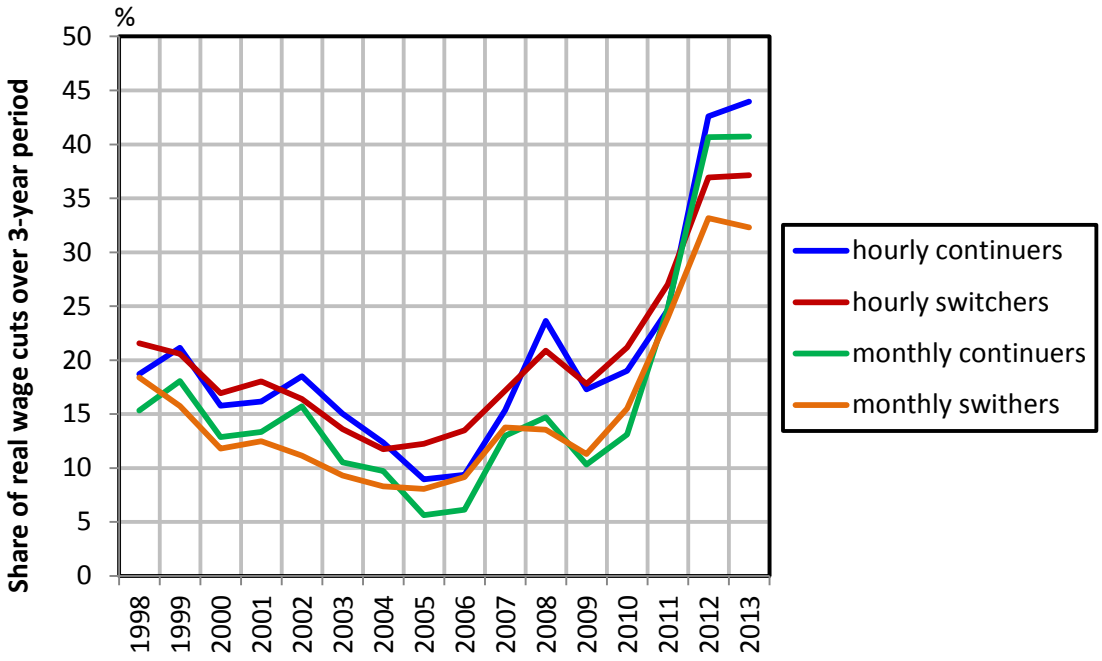
Figure 6.3.6: Incidence of decreases in real consumption and producer wages, 1996-2013



Source: Vainiomäki (2017).

Real wage changes in a single year may be affected by various factors, and a clearer picture of the prevalence of declining real consumption wages is seen by considering three-year periods, cf. Figure 6.3.7. During the crisis years about 40% of workers have experienced declining real consumption wages over a three-year period. The Figure includes both individuals continuing in a given employment and individuals who have shifted employer or occupation within the same firm (or both). The average decline in consumer real wages for continuing workers – for those experiencing a decline - has in recent years been about 5-6 per cent of earnings. Although the share of real wage cuts is similar for continuers and switchers, the average size of the cut is larger for switchers than for continuers. Thus, among persons experiencing a real wage cut, those who switch jobs lose more than those who keep their jobs. The average difference is about one percentage point for hourly wages and about 0.5 percentage points for monthly earnings, with the difference increasing during the financial crisis years.

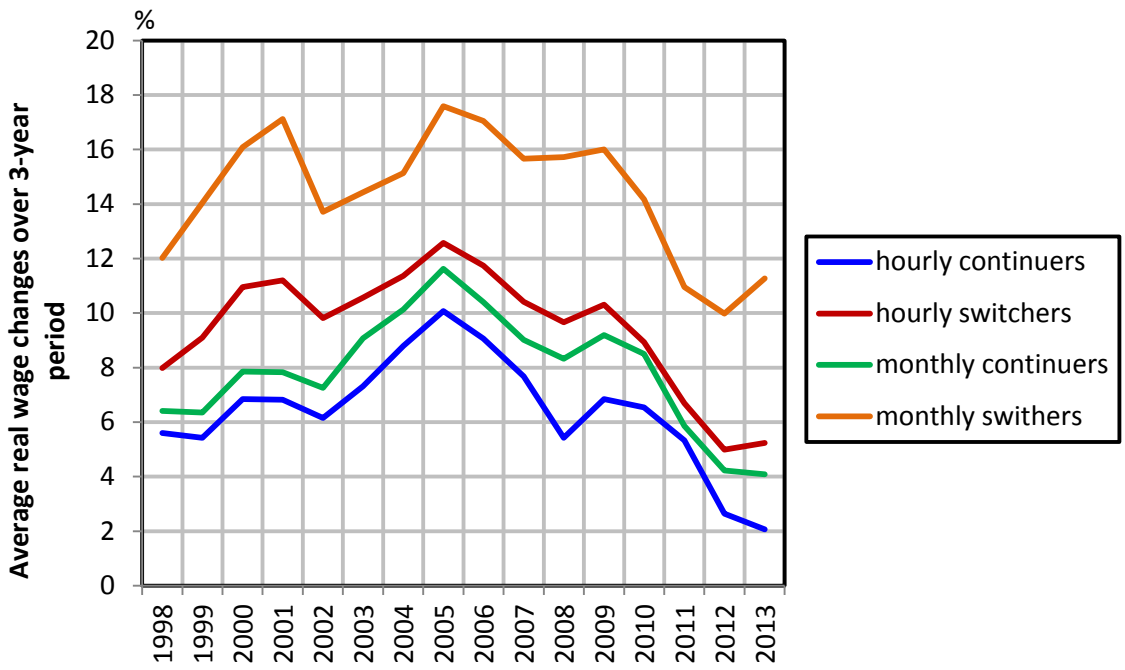
Figure 6.3.7: Incidence of declining real consumption wages over 3-year period, %,1998-2013



Source: Vainiomäki (2017).

The data reported above focus on those having experienced declines in either nominal and/or real consumption real wages. Returning to the overall developments, Figure 6.3.8 shows the average growth in real consumption wages for all workers over 3-year periods, also split between continuers and switchers. This is essentially a decomposition of the aggregate development shown in Figure 6.3.1. Real wage growth for job switchers is systematically larger than for those continuing in the same job. This implies that, in general, job switches are towards better-paying jobs. This is in contrast to the experience of those experiencing a decline in the real consumption wage. This suggests that job switches that lead to real wage cuts are likely to be involuntary. The decline in overall real wage growth over three-year periods is considerable: from 10% in 2005 to 2% in 2013 for the hourly wages of continuers, and 12% to 4% for the monthly earnings of continuers.

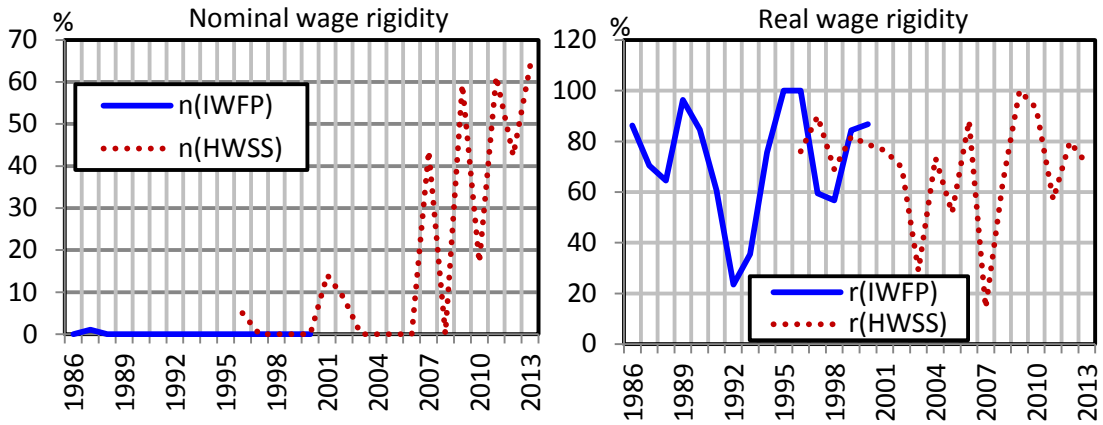
Figure 6.3.8: Average real wage changes over 3-year periods, %, 1998-2013



Source: Vainiomäki (2017).

Wage adjustments may be asymmetric, i.e. wages increase more swiftly in an upward than in a downward direction. Whether this is the case can be assessed by considering the incidence of wage adjustments around the mean. If adjustment is equally easy in an upward and a downward direction, one would expect to see a relatively symmetrical distribution of wage changes around the mean. Asymmetries reflecting nominal rigidities would imply that the distribution of wage changes is skewed such that there is a lower incidence of wage decreases below the mean than corresponding increases above the mean. This reasoning can be used to assess asymmetries in the adjustment of both nominal and real wages. Figure 6.3.9 reports the share of those affected by such rigidities among those who potentially could be affected. This gives a measure of how many should have had an even lower wage than the actual wage, if wage-setting was not affected by rigidities. As expected, nominal rigidity is only an issue when the labour market is in dire circumstances and inflation is low, and therefore nominal rigidities only mattered after the onset of the financial crisis. Real rigidities have prevailed more consistently, and thus are also important during the present crisis. In interpreting these numbers it is important to recall that they pertain to those workers where rigidities may constrain adjustment and thus not to the entire workforce.

Figure 6.3.9: Incidence of nominal and real wage rigidity % 1986-2013



Source: Vainiomäki (2017).

Note: The estimates for the period 1986-2000 are for blue-collar workers from Böckerman et al. (2010).

As expected, the fraction affected by rigidities rises during (severe) recessions, with about 20% of the workforce being affected by nominal rigidities and 48% by real rigidities during the crisis years 2009-2013. Assessing the importance of these rigidities indicates that annual nominal wage growth would on average have been about 1.5% lower in 2009-2013 in the absence of nominal rigidities, and annual real wage growth would on average have been 2.4% lower in the absence of real rigidities. These numbers are only indicative, since they are based on a simple method not taking possible responses to changes in wage formation into account. Nor does the method say anything about how to make wage formation more flexible and the consequences hereof, also meaning that the implied increase in employment may work to increase wage growth. The quantitative importance is thus assessed with some uncertainty and should be interpreted with care, but the numbers suggest that rigidities in wage formation have impaired wage adjustment after the onset of the financial crisis.

In a comparative study of 14 countries, Dickens et al. (2006) found Finland (and Sweden) to have the strongest real rigidities, see also Böckerman et al. (2010). The new analysis commissioned by the Council suggests that the level of rigidities in Finland has remained fairly constant, and if the situation in other countries has not changed, Finland can still be regarded as a country with marked wage rigidities.

In conclusion, the evidence does point to some rigidity in wage formation both when looking at developments on a comparative perspective, and the more detailed disaggregate evidence. When wages do not adjust swiftly enough, the consequence is that employment would have to adjust. Empirical evidence reported in Vainiomäki shows that employment has to adjust more when wages are relatively inflexible, and that wages respond only slowly to higher unemployment.

6.4 Regional mobility

With regional differences in unemployment, geographical or regional mobility is another key aspect of labour market adjustment and thus flexibility. If there are open vacancies in growing regions at the same time as there is unemployment in regions with declining economic activity, there is a geographical mismatch problem. Swift intra-country migration could be a solution to elements of such mismatches, and this could be relatively more important for Finland than for more densely populated countries.

Incentives to move

It goes without saying that migration decisions are only partly based on economic determinants. Yet it is worth considering the economic incentives to move from stagnant to growing regions. Kärkkäinen (2016) provides such calculations based on the SISU microsimulation model for both hypothetical sample households and for parts of the whole population.

Calculating the incentive effects of regional mobility is not straightforward and one of the most important determinants is the assumption regarding housing decisions. Kärkkäinen (2016) makes the assumption that people choose rented accommodation in their destination. Given the housing price differences between urban areas, notably the Helsinki region, and remoter origin regions, movers need typically to pay more for housing but most likely choose to live in smaller flats/houses. However, this is compensated by higher wages in the destination regions and possibly also by increased housing allowance.

Kärkkäinen combines information on housing prices in different regions and data on regional wage levels with the SISU model and calculates incentives

for the unemployed to either take up a job in their home region or in possible destination regions elsewhere in Finland.

Table 6.4.1 depicts his results for two examples. The first is a case where a single person living in Salla (in Lapland) takes up a job in Oulu as restaurant worker. The second case refers to a family of four living in Forssa. Both parents are unemployed, one is on earnings-based UI benefit and the other is on unemployment assistance. The example is for the case where the adult on UI benefit finds a job as a sales person. Both cases demonstrate that the individuals would be better off taking up a job elsewhere rather than staying unemployed in their home region.

Table 6.4.1: Examples of the impact of moving on disposable income. A single unemployed person moving from Salla to work to Oulu (left) and a family of four moving from Forssa to Helsinki (right).

	Single person, EUR Salla-Oulu	Family, EUR Forssa-Helsinki
Net income when unemployed	880	2290
Salary	2400	2840
Net income when employed	1840	3200
Rent	470	1260
Change in net income after housing costs	880	390

Source: Kärkkäinen (2016).

However, these are hypothetical examples and unlikely to be representative. For these reasons, Kärkkäinen conducts similar calculations for all unemployed persons who are single and may have children or not. Their wages when employed are determined by a wage regression taking into account the characteristics of the unemployed.

When assuming that housing choices in terms of floor space are on average the same as in the destination, he finds that 52% of unemployed single people who move from their home region to take up a job in Helsinki gain as opposed to taking up a job in their home region. This means that almost 50% of unemployed persons would benefit more from finding a job in their home region. What determines the net gain from a migration decision is to a large extent current housing costs. The mean losses or gains from migration are in the ballpark of EUR 100 a month. In comparison to staying unemployed in one's home region, a work-related decision to move to the Helsinki area increases net income for people from all origin locations.

For single parents, the incentives to move are better on average: more than 80% of single parents would obtain an increase in net income after housing costs if they took up a job in the Helsinki area instead of their home region. The reason is that their housing costs are higher everywhere than for singles, and the intra-country difference in rental prices for family dwellings is smaller than for smaller dwellings. Another contributing factor is that an increase in housing subsidy offsets 47% of the increase in housing costs for single parents, whereas the corresponding number for singles is less than 10%.

Policies that can affect migration naturally include increasing housing supply in growing regions and making the requirement for persons to accept work outside their home area more stringent.[28] As of 2017, unemployed persons who take up a job to which the daily commute exceeds three hours can apply for mobility assistance, amounting to roughly EUR 700 a month for a maximum duration of two months. Tax policies matter as well: stamp duties payable on the purchase of property probably reduce the incentives to move.

It is conceivable that intra-country migration incentives are much more complicated for families with two adults. One would need to consider cases where the entire family moves versus situations where one of the spouses chooses to live in the working destination and the rest of the family stays in their home area. Most likely the incentives to move would on average be worse for families with two adults. But at least the moving incentives seem to be reasonable for singles and single parents relative to remaining unemployed in their home region. We now turn to examining the actual realized mobility of unemployed persons in Finland.

Statistical analysis of regional mobility

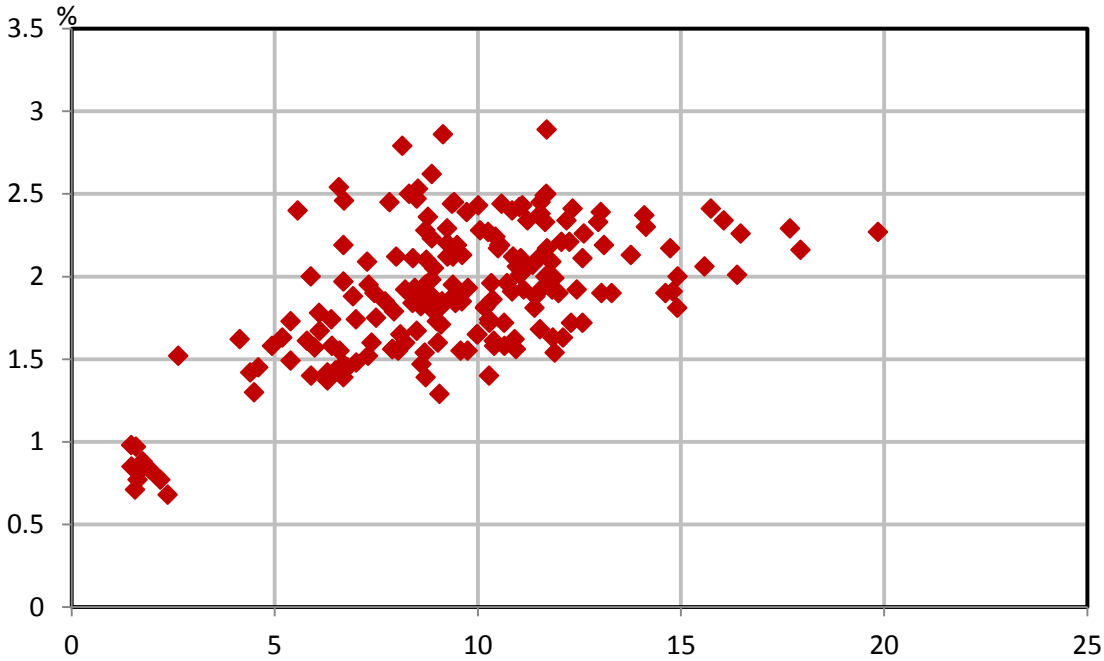
Böckerman et al. (2017) study regional mobility in Finland using Longitudinal Employer-Employee Data (FLEED) from Statistics Finland from 2000 to 2012. Migration seems to be somewhat responsive to changes in the unemployment rate. There is a statistically and economically significant relationship between unemployment and emigration between regions.

[28] Currently the unemployed are expected to accept job offers within 80 kilometres of their home.

Figure 6.4.1 depicts a relationship between unemployment and the emigration rate by NUTS-3 level region ('maakunta'/county) and year (from 2001 to 2010) The regression coefficient from the OLS (ordinary least squares) model between the two variables is 0.36 and is statistically significant at least at the 1% significance level. These aggregate analyses suggest that there is higher emigration from regions with higher unemployment, although this analysis does not reveal whether or not unemployment causes emigration.

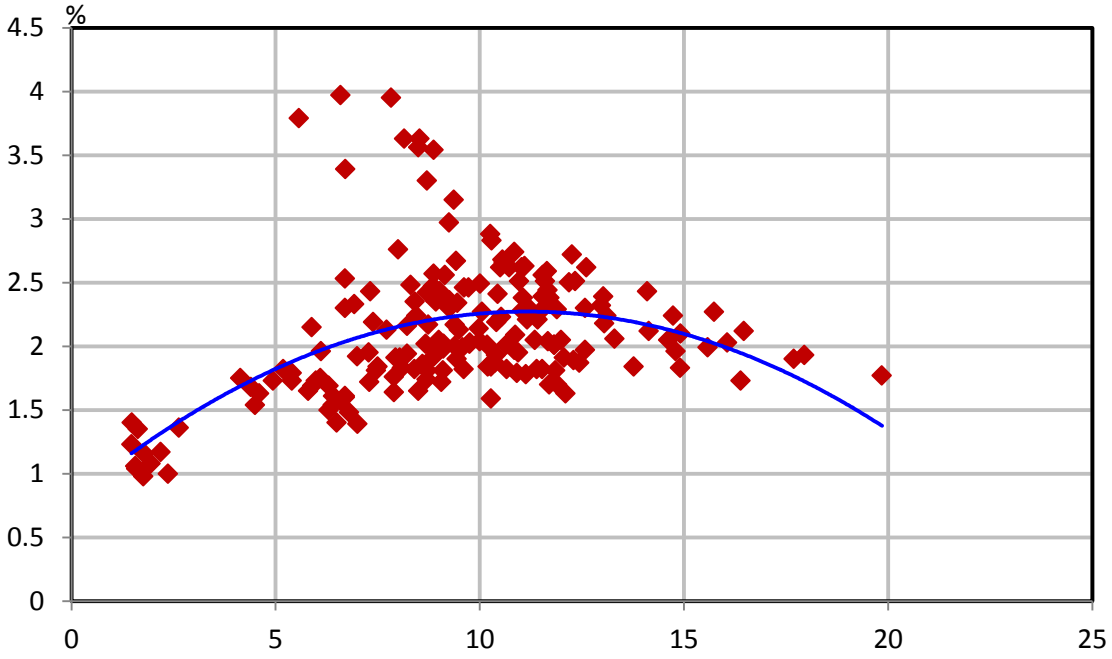
Figure 6.4.2 shows the relationship between unemployment and immigration by region and year. The correlation coefficient from the OLS model shows a much weaker linear relationship at 0.08. As can be seen from Figure 7, the region-year unemployment and immigration rate relationship has an inverse u-shape.

Figure 6.4.1: The relationship between emigration intensity and the share of unemployed persons by NUTS 3-level region and by year, 2001-2010



Source: Böckerman et al. (2017).

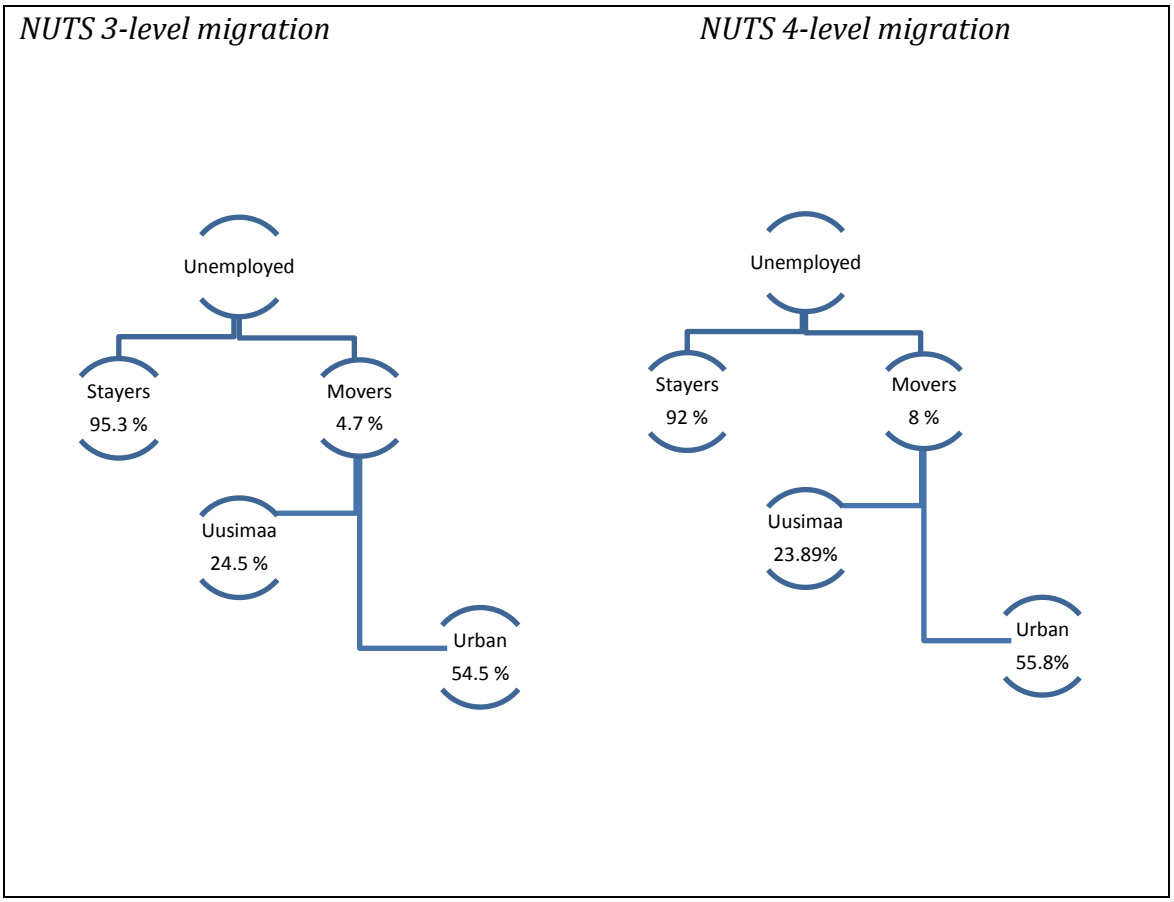
Figure 6.4.2: The relationship between immigration intensity and the share of unemployed persons by NUTS 3-level region and by year, 2001-2010



Source: Böckerman et al. (2017).

Figure 6.4.3 depicts the migration status and destination of internal migrants at time t+2 for those individuals who became unemployed at time t. It is striking that only approximately 5% (8%) of individuals who ended up unemployed have migrated to another region (sub-region or 'seutukunta') within two years after a job loss. Approximately 29% of movers and 34% of non-movers are still unemployed two years after a job loss (not shown in the figure). A quarter of them have moved to the Uusimaa region.

Figure 6.4.3: The pathway of internal migration of unemployed persons



Source: Böckerman et al. (2017).

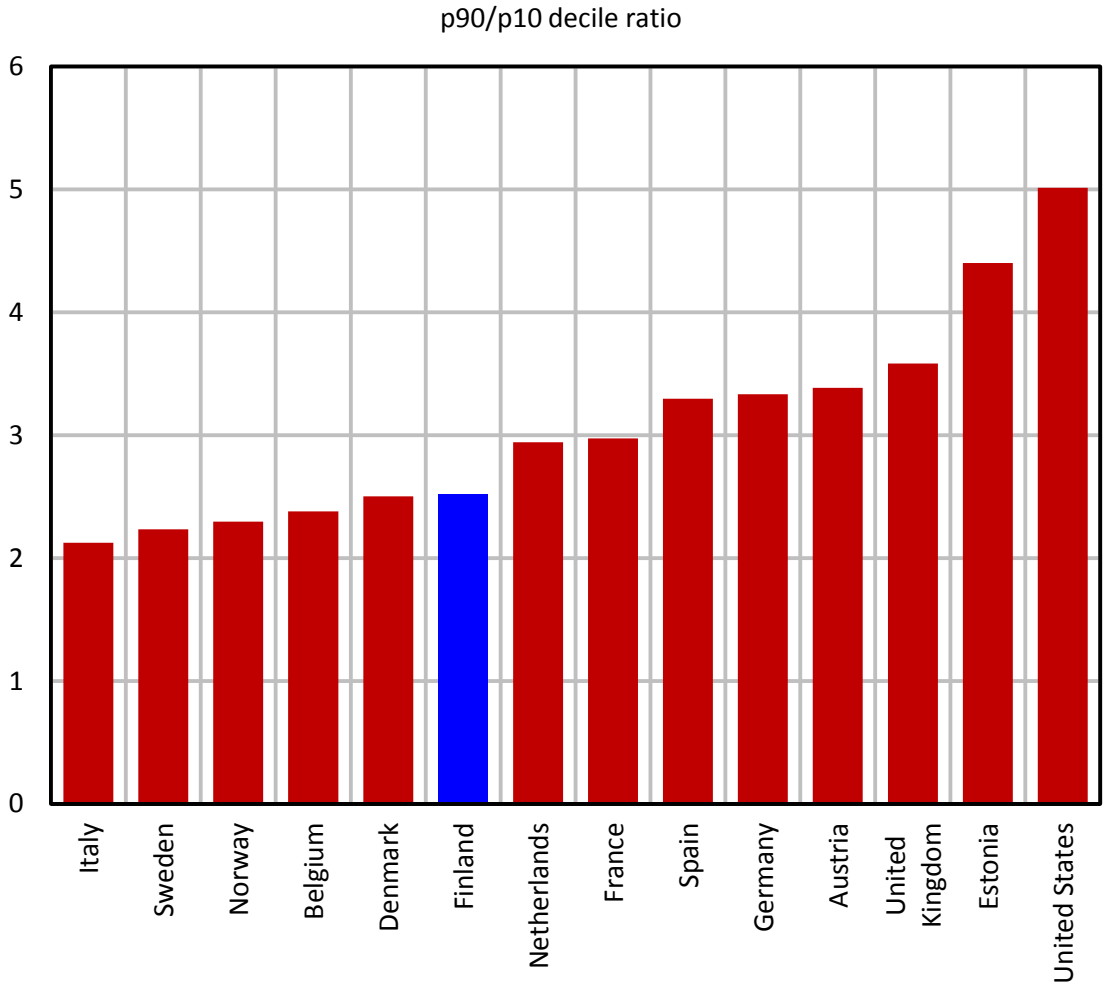
Using the same data, Böckerman et al. (2017) also study the causal impacts of becoming unemployed on the migration decision. To this end, they concentrate on individuals who have lost their job due to plant closures, i.e. for reasons beyond their own control. They find that when unemployment follows from an exogenous job loss, the individual's probability to move to another region increases by 0.5 percentage points. While the effect is small, since the baseline migration probabilities are also small, the impact appears larger in relative terms, representing an increase in the migration probability of around 43% for men and 59% for women.

6.5 Relative wages

Finland is a country with a comparatively equal disposable income distribution. Much of that is achieved via redistributive taxes and transfers, but relatively low wage differences are the basis of the country's low income inequality. Wage differences are still relatively small by international com-

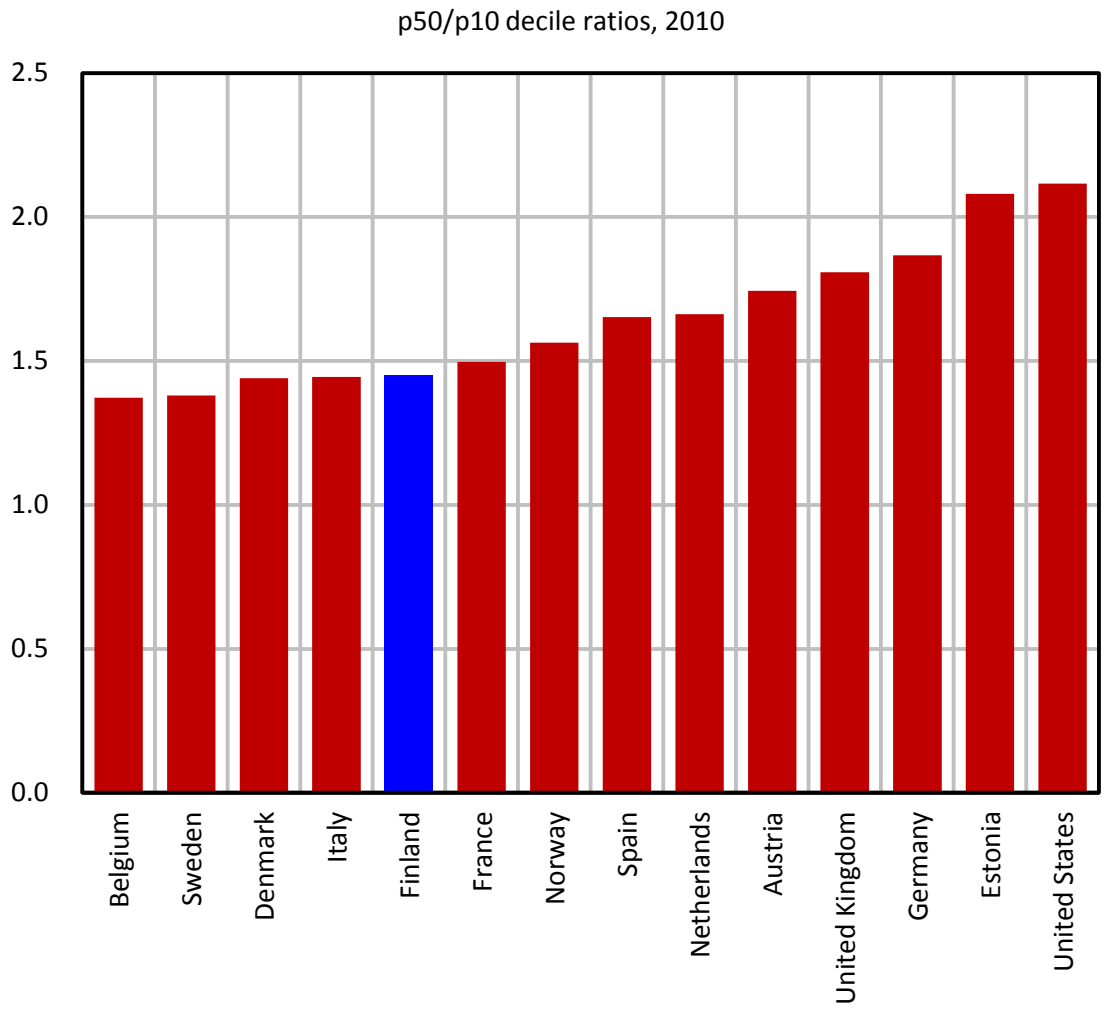
parison at the lower end of the income distribution, as revealed both by the p90/p10 and p50/p10 ratio, cf Figure 6.5.1 and 6.5.2

Figure 6.5.1: p90/p10 decile ratio for gross earnings in selected OECD countries



Source: OECD labour statistics.

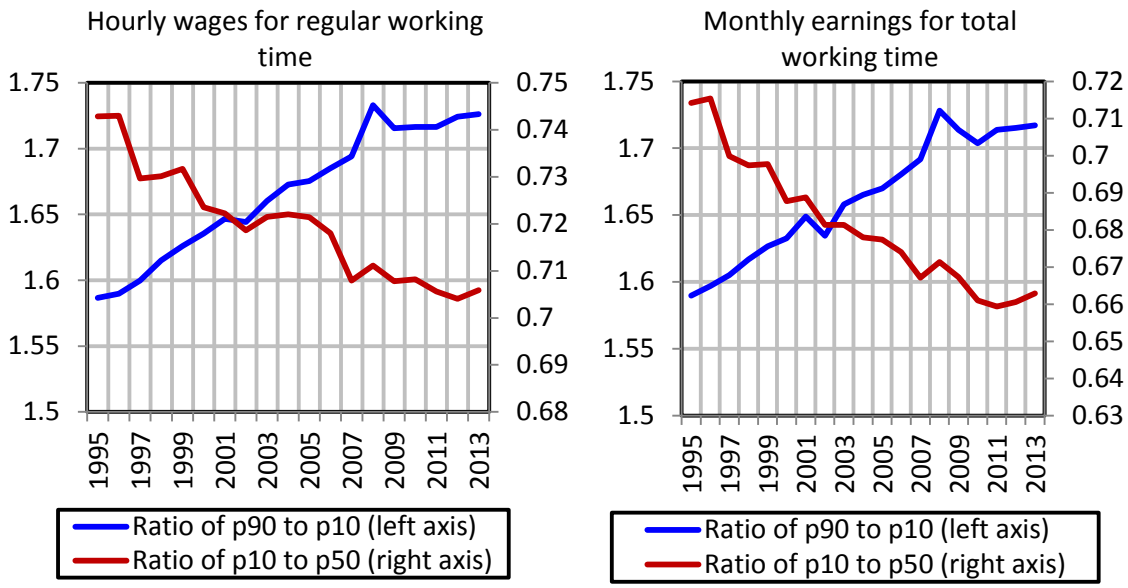
Figure 6.5.2: p50/p10 decile ratio for gross earnings in selected OECD countries



Source: OECD labour statistics.

Using Finnish data alone (from Vainiomäki 2016), we get a more detailed picture of developments in the wage distribution. The graph below shows that regular hourly and monthly earnings in the 90th percentile relative to wages in the 50th percentile have risen somewhat from 1995 to around 2008 but has stabilized since. The ratio of the median wage (p50) to the wage in the 10th percentile has, in turn, declined over the same period. Wage differences as measured by the p90/p10 differential have widened by about 15% from 1995 to the late 2000s. However, during the recent crisis years (from 2008-2010 onwards) this increase has levelled off.

Figure 6.5.3: Percentile ratios. Percentile ratios (p90/p50 and p50/p10) for hourly (left) and monthly (right) wages in Finland, 1995-2014



Source: Vainiomäki (2017).

The role of minimum wages

Since unemployment is still relatively high for those with low education or immigrant status, it is worth investigating what the potential role is of minimum wages for employment and how Finnish minimum wages compare internationally.

Theoretically speaking, the impacts of minimum wages depend on conceptual views regarding how the labour market operates. In a perfectly competitive labour market, a minimum wage that is set above the market clearing wage leads to unemployment, but the magnitude of the impact depends on the elasticity of labour demand. Most studies find that labour demand is on average quite inelastic (see also the material in Ch. 2), but it may be higher for some special groups. In a monopsony model, in turn, minimum wages could lead to an increase in employment, and in a bargaining model the impact is in general ambiguous. Within those models, minimum wages negatively affect the surplus available to employers, but they may also increase job search effort. In a dynamic context, minimum wages may affect incentives to invest in human capital, since they effectively work as an entry barrier, requiring a sufficiently high level of human capital to qualify for a job.

A large literature has estimated the impacts of minimum wages on employment empirically. According to the survey by Böckerman et al. (2017), most

studies that have a credible strategy for isolating a causal impact from minimum wages on employment find either non-existent or small negative impacts. However, there is some evidence that minimum wages lead to an increase in the rigidity of the labour market in the sense that the extent of worker flows is reduced. It is also conceivable, and this is supported by empirical evidence, that minimum wages could lead to lower employment for particularly disadvantaged groups.

Böckerman and Uusitalo (2009) study a temporary exemption to collectively agreed minimum wages in the Finnish retail sector. For a period in the early 1990s, firms could pay workers below the age of 25 wages below the standard minimum wage for two years. They find no significant effect on employment and only a small effect on actual wages during the period.

Skedinger (2015) studied increases in the collectively agreed minimum wages of manual workers in the Swedish retail sector and found an increase in separations for workers directly affected by the minimum wage, while separations decline for those who are initially paid slightly more than the new minimum. When examining the adjustment at the intensive margin, Stewart and Swaffield (2008) find some evidence in support of reduced working hours for low-wage workers in the UK.

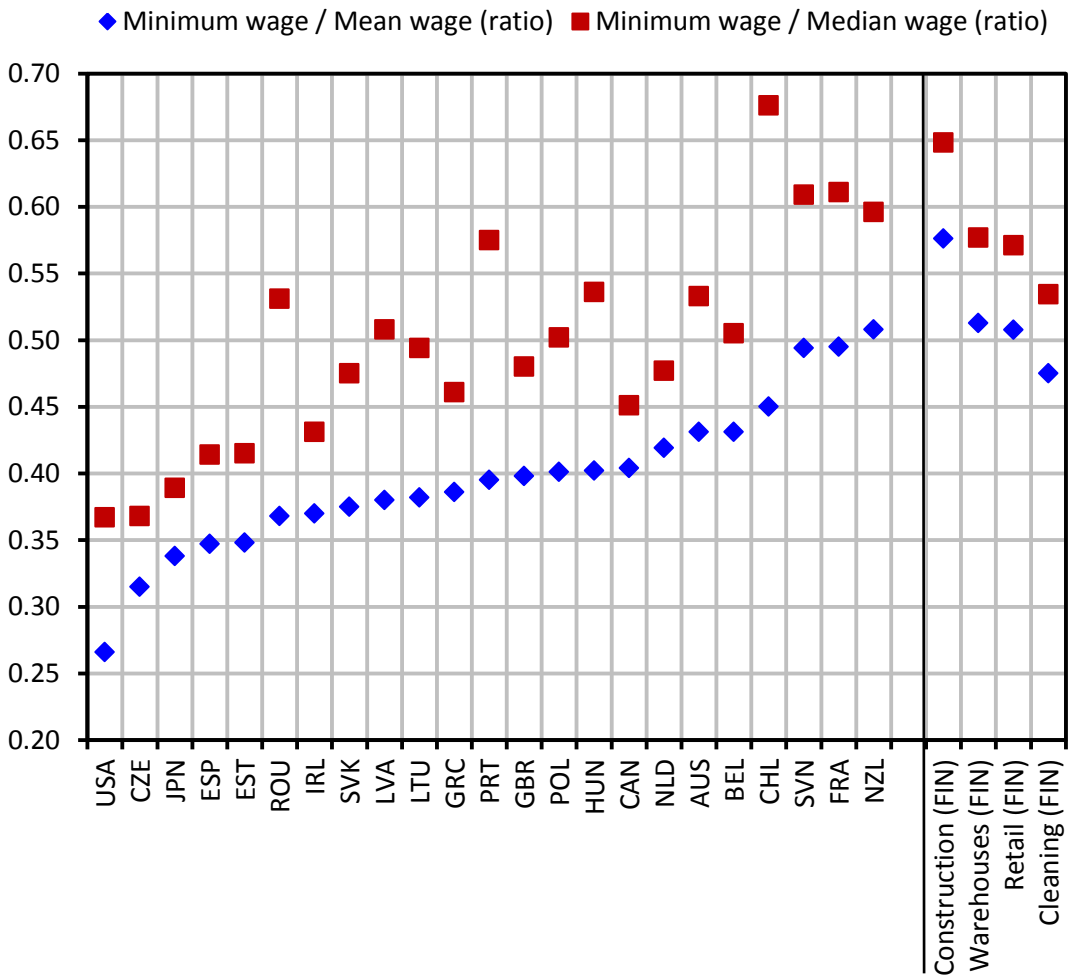
The coverage of collective labour agreements is a key factor in determining how binding the minimum wages set by collective bargaining effectively are. It is commonplace that collective agreements are extended to cover whole industries even though not all firms were party to the initial agreement. In Finland, for example, collective agreements are extended if they are deemed representative enough, and given Finland's high trade union membership this is typically the case, see above. It is also challenging here to find empirical studies proving causal relationships. Collective bargaining extensions in Portugal are studied by Martins (2014), who finds them to be negatively associated with employment, especially in small firms which are typically less likely to be represented in negotiations for collective labour agreements. Similar findings are reported in Hijzen and Martins (2016).

When interpreting these results, one should bear in mind that if the impact of minimum wages is derived from quasi-experimental studies focusing on particular reforms, the estimates are not necessarily valid for different setups. Notably, the level of the minimum wage is certainly a key factor determining its impact on employment. While small changes may not lead to neg-

ative employment effects if the initial level of the minimum wage is low, this does not rule out negative impacts from a much higher minimum wage. The length of the assessment period also matters. Due to rigidities, firms may not necessarily adjust their employment over the short term, but in the long term the elasticities could be higher.

We now turn to describe the level of the lowest wages in Finland. Since Finland does not have a legally binding minimum wage, one needs to look at the wage levels in particular sectors.

Figure 6.5.4: Sources: OECD, Statistics Finland, collective agreements. Year 2014



Source: Böckerman et al. (2017)

The figure above (from Böckerman et al. 2017) depicts the ratio of minimum wages to mean and median wages in various OECD countries and in four low-wage sectors in Finland. The Finnish numbers are derived by relating

the minimum wages in these sectors to the overall wage distribution to make them more comparable with data from other countries. The graphs shows that the lowest wages in Finland are at the upper end, but not dramatically higher than in other countries on average.

The ratios for the four Finnish sectors can be compared to the Swedish AER (2016) report, cf the Appendix of Böckerman et al. (2017). It seems that minimum wages relative to median wages are higher in the reported Swedish sectors than the four sectors considered above for Finland, but the sectors are different.

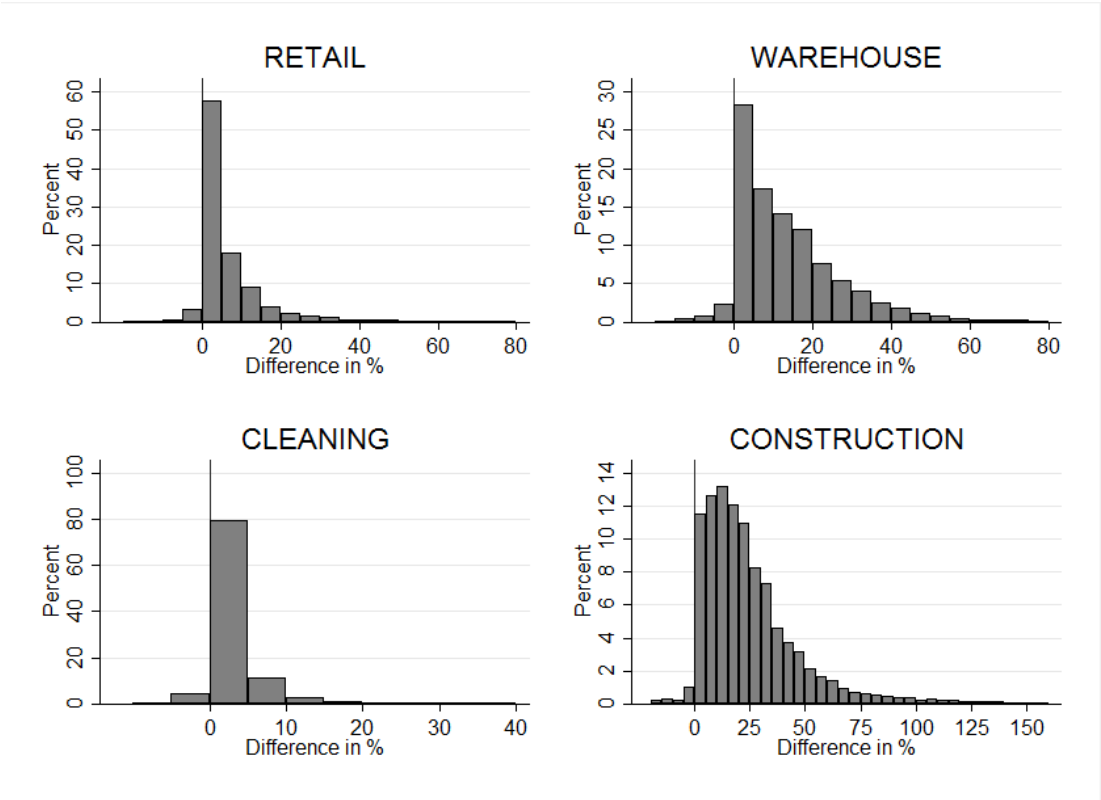
Another way to calculate the ratio for the Finnish sectors would be to calculate the ratio of the sector-specific minimum wage to the mean and median wages in the same sector.[29] In the cleaning sector the minimum wage to mean wage ratio is 0.95, and the minimum wage to median wage ratio is 0.98 in our sample of the same payroll data used in Figure 6.5.4. These ratios can be compared to those reported in the National minimum wage report by the Low Pay Commission (2014) in the UK. According to the report, the ratio of the national adult minimum wage to the median wage in the UK cleaning sector was over 0.9 in 2013, which is somewhat less than we get with this method for the Finnish cleaning sector. The ratio of the UK national adult minimum wage to the median wage in all low-paying sectors was roughly 0.8 in 2013 (Low Pay Commission, 2014). In our sample, the ratios are 0.65 (minimum wage to median wage) and 0.63 (minimum wage to mean wage) in the Finnish construction sector.

To understand how binding minimum wages are in certain sectors (the retail, construction, cleaning and warehouse sectors), Böckerman et al. (2017) carried out two set of calculations. Because minimum wages in Finland depend not only on the sector, but also on the experience of the worker in the sector, the location and other individual specific characteristics, the first method is to compare the wage received by each worker to the minimum wage that is relevant for that worker. From the point of view of the worker, this is the lowest possible wage she or he would be able to receive.

[29] It is important to note that the economy-wide ratios are not comparable to the ratios that contain only selected low-wage sectors because examining only low-wage sectors in any country would yield higher ratios than looking at the economy-wide ratios including all sectors, also those where minimum wages are not a relevant constraint.

However, this minimum wage is not necessarily binding from the perspective of the firm, because in principle the firm could lay off workers whose personal minimum wage is high, and hire new workers whose specific minimum wage is lower. There are many restrictions on firms being able to do this systematically. For example, the experience part of the minimum wage depends on the experience in that sector, meaning that a worker takes the experience with him or her when switching jobs. The second is employment protection legislation, which prevents firms laying off employees and immediately hiring new workers to the same jobs. Nevertheless, in some sense the lower bound to whether minimum wages are binding is the lowest minimum wage in a given sector. Thus the second measure we relate the wage distribution to is the lowest industry-specific minimum wage. These two measures, person-specific and industry-specific minimum wages, can be thought of as the lower and upper bounds.

Figure 6.5.5: Difference in % of wage received compared to minimum wage specific to each worker shown for four different industries



Source: Böckerman et al. (2017)

Notes: The bin width is 5% in all panels.

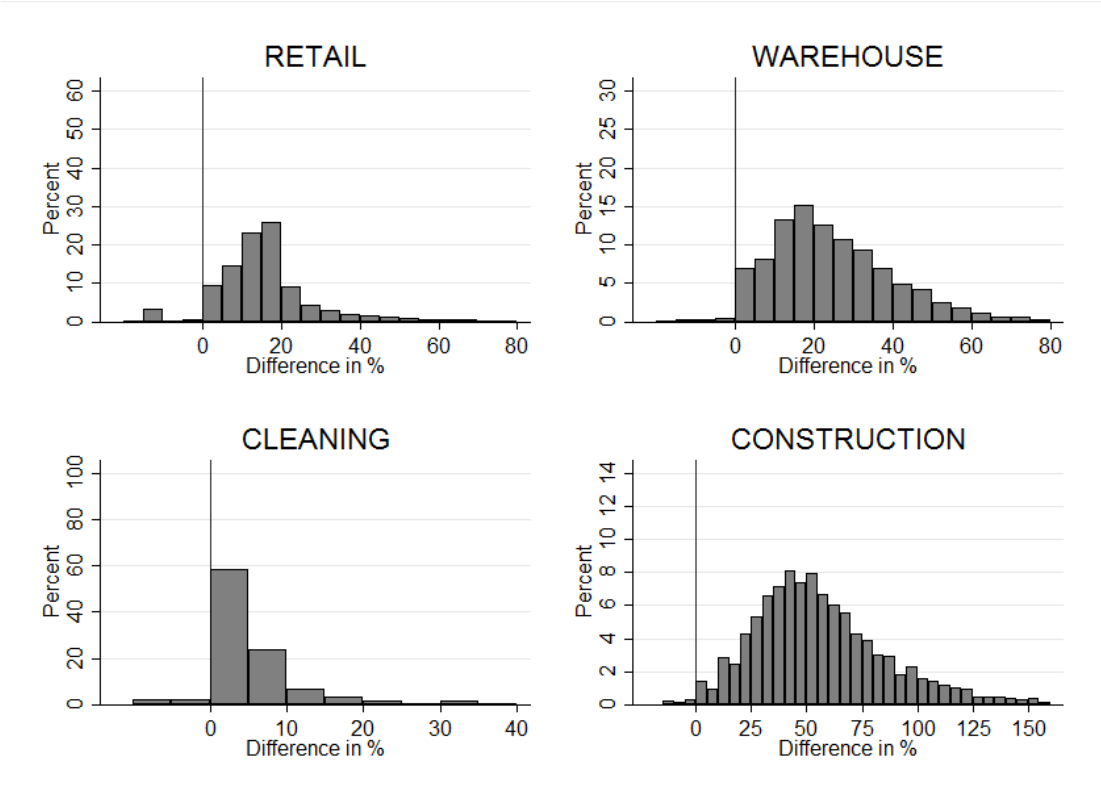
Figure 6.5.5 compares each worker's actual pay to the minimum wage that applies to him/her. In the retail sector, the focus is solely on sales persons.

Most sales persons earn actual wages at or just above their individual specific minimum wage; almost 60% of observations are between 0% and 5% above the minimum wage set by the binding collective agreement.[30] In the warehouse and retail sector, minimum wages are set in the same agreement. Despite this, wages are not as concentrated in the warehouse as in the retail sector. Of these four sectors, wages are most concentrated at the minimum wage in the cleaning sector; 80%of workers earn wages that are 0 to 5% above the minimum wage and the rest of the wage distribution is concentrated close to the minimum wage. In the construction sector wages are less concentrated at individual-specific minimum wages; less than 12% of workers earn wages within 5% of the minimum wage.

Figure 6.5.6 presents minimum wages in the same four sectors relative to the lowest possible wages in that sector rather than individual-specific minimum wages. In the retail sector, only 10%of workers are now in the interval between 0% and 5% above the sectoral minimum wage. This indicates that the individual component of minimum wages is highly significant for retail sales persons. In the warehouse sector, the fraction of workers at the minimum wage declines from 28% to 7% when one moves from worker-specific to industry-specific minimum wages. The comparable figures in the cleaning sector range from 80% to 59% and in the construction sector from under 12% to under 2%. Both Figures 6.5.5 and 6.5.6 indicate that the wage structure is most concentrated in the cleaning sector and least concentrated in the construction sector, with the retail and warehouse sectors in between.

[30] The bin width is 5% in all histograms in Figures 6.5.5 and 6.5.6.

Figure 6.5.6: Difference in % of wages received compared to lowest possible minimum wage in the same industry shown for four different industries



Source: Böckerman et al. (2017)

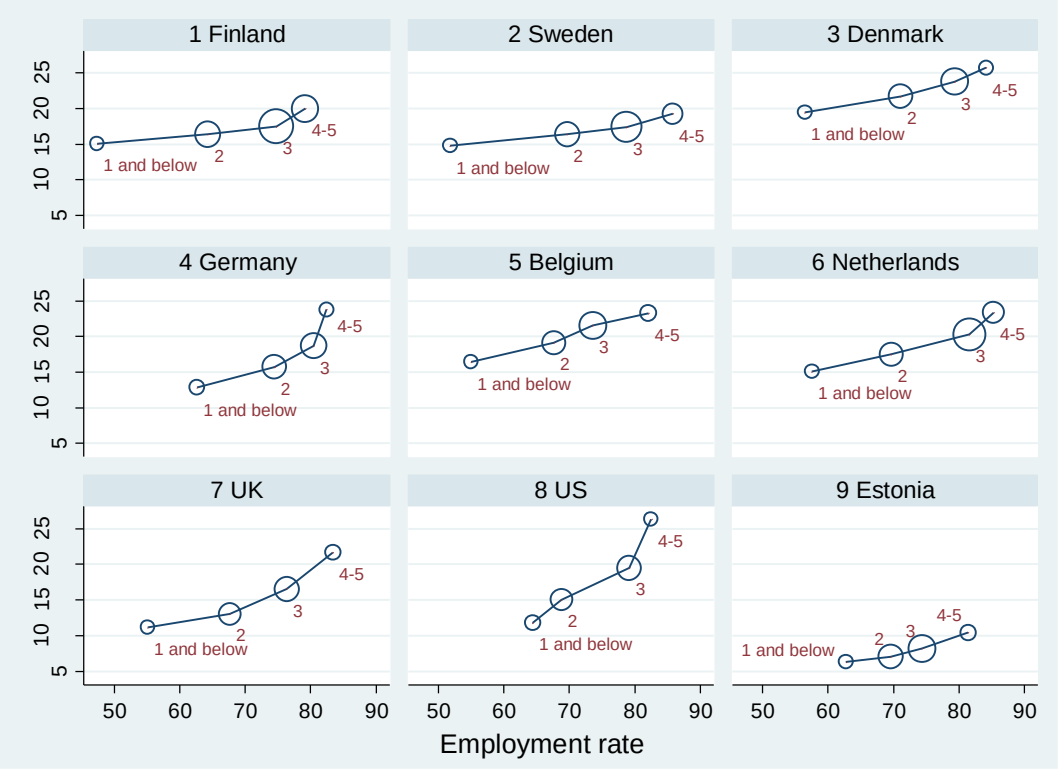
Notes: The bin width is 5% in all panels.

Most countries have special rules that allow wages to be set at a lower level for certain groups. The table below gives information on these arrangements.

In Finland, as discussed above, minimum wages are sector- and individual-specific taking into account attributes of the worker or the job. Therefore they include special treatment e.g. for trainees, where wages can be 85-90%of the lowest wages for others in the sectors covered by the analysis of Böckerman et al. (2016).

An alternative way to look at the impacts of wage-setting on different groups is depicted in the figure below.

Figure 6.5.7: Hourly median wages (measured as PPP-adjusted USD) and employment rates for different skill groups in selected countries



Source: Calculations using PIAAC data published in OECD Skills Outlook 2013, First Results from the Survey of Adult Skills.

Notes: Size of the circle is proportionate to the size of the group.

Figure 6.5.7 uses data from the PIAAC (Programme for International Assessment of Adult Competencies) of 2012, which is an internationally standardized survey of the skills of the adult population. Skills are ordered from groups 1 to 5 (1 being the lowest) and the advantage of using these groupings rather than e.g. education levels is that skill groups are comparable whereas education levels are not necessarily so.

The analysis shows that in a cross-section, low-skill groups face a much lower employment rate in countries such as Sweden and Finland, whereas the wage differences between groups are much higher in Anglo-Saxon countries. It seems that persons with poor skills do particularly badly in the Finnish labour market in terms of their employment rate. On the other hand, in Finland this group is small, at only 7%. Even in Denmark the figure is 12%, in Sweden 9% and in the US 16%.

Further analysis reported by the AER (2016) shows that the relative wages for people in skill group 1 are among the highest in Finland, but somewhat below that level in Sweden.

The above shows that minimum wages have implications both for employment levels and for the income distribution. In structural terms, this stresses the importance of education as a way of supporting high employment and an equal distribution of income.

6.6 Council's views

The Finnish labour market was put to its first severe test under the euro monetary arrangement during the recession that started in 2008. The crisis has been deep and prolonged. The share of long-term unemployment is increasing, and it appears that structural unemployment will remain high. While the labour market has slowly started to recover from the recession, the employment rate is still too low.

Wage-setting remains highly centralized in Finland, in contrast to a move towards more decentralized wage-setting in many countries. Wages have adjusted sluggishly to declining employment and productivity. Wage competitiveness has only gradually started to improve, implying that weak cost competitiveness has harmed exports for many years. On the whole, the Finnish labour market institutions did not pass the test well.

Empirical evidence shows that wage-setting has been affected by a considerable degree of real-wage and also nominal-wage rigidities. Nominal rigidities have become more common as inflation has dropped to near-zero figures. In combination with falling productivity growth, nominal downwards rigidity has slowed wage adjustment. At the firm level, firms that have experienced low profits have mainly adjusted their overall wage bill through job cuts, rather than decreases in workers' compensation.

While it is hard to offer a thorough and timely international comparative perspective, wage rigidities in Finland have remained fairly stable compared to earlier periods, and also more rigid by cross-country comparison. German-style opening clauses of collective agreements have been exceptional in Finland, but they have now been introduced – at least in principle – into many industrial agreements.

While there is evidence that intra-country migration decisions have reacted to the incidence of unemployment, a large majority of those who are unemployed do not move from their home region to find jobs elsewhere. Insufficient regional mobility is therefore a contributing factor to the sluggish recovery of employment.

The risk of unemployment is particularly high for people with low education and skills. Their employment prospects may have been hampered by a relatively high and fairly binding wage floor – in the sense that the earnings of a large fraction of workers are close to their minimum wage level. On the other hand, this helps to support the income of those in employment. This stresses the importance of education, particularly vocational secondary education, as a way of supporting high employment and a more equal distribution of income.

These observations point to a number of potential ways to reform the situation. Making wage determination more decentralized in the form of pattern negotiations as seen in the other Nordic countries is likely to increase wage flexibility[31]. A much wider adoption of hardship clauses, especially if combined with employment guarantees by employers, would work in the same direction.[32] It has been argued that such moves would shift part of the entrepreneurial risk to employees, but this risk is also present in the current system; it materializes via the unemployment risk and collective risk-sharing materializes via the welfare arrangements and thus public finances. While many aspects are of importance in determining the proper way to diversify risk, the present situation with a "corner" solution making labour input bear the brunt of adjustment does not seem appropriate.

The Council notes that the prospects of actually achieving the government's targets are still very uncertain, because the so-called "Finnish model" of wage-setting is very vague in terms of concrete context and its implementation is still a rather open question. The recent "competitiveness pact" is an attempt to revitalize social pacts, and it remains to be seen whether it is successful in putting the "Finnish model" back on track. As discussed in Chapter 2, the package has some shortcomings, and would not in itself be sufficient

[31] In Denmark there are indications that wages respond more to the cycle and also of more relative wage flexibility, for a discussion see Andersen (2015).

[32] Escape clauses are also seen as a useful element mitigating the negative consequences of automatic extension of labour contracts (Blanchard et al, 2013).

to reach the stipulated targets for employment rates, fiscal sustainability etc. It is now time for the social partners to deliver a workable solution that improves labour market performance both in terms of macroeconomic stability and more firm-level flexibility.

Improving the regional mobility of unemployed persons is also important but likely to remain a long-term goal – because successes in this sphere are also contingent on improvements in access to affordable housing in growing areas – but some additional measures could be taken already now. One avenue could be a further extension of the job-search area so unemployed persons would be required to accept job offers over a wider geographical area. To balance job market and family policy goals, one could envisage a system where the job-search area would be larger for young job applicants and/or workers without a family.

We acknowledge that lowering the effective minimum wage is not a panacea for improving the employment rates of low-skilled groups. However, the labour market prospects for such groups are particularly weak in Finland, which means that measures should be considered in this area too. The Swedish Labour Market Committee (AER, 2016) recommended lowering wages temporarily for groups with limited skills (such as those with an immigrant background) in Sweden. The Council considers that extending current Finnish exemption arrangements from minimum pay in a similar way would be an avenue worth pursuing.

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