Economic Policy Council Report
2015

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Economic Policy Council

VATT Institute for Economic Research

Arkadiankatu 7, 00100 Helsinki, Finland

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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 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 the Finnish universities and by 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 has a part-time secretary. The Council is hosted by the VATT Institute for Economic Research but works independently from the Institute.

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

In this report we discuss in detail the fiscal policy rules that were set in the General Government Fiscal Plan for 2016–2019 issued in September 2015. We also evaluate the government's fiscal consolidation policies. Motivated by the government's decision that consolidation should be achieved without increasing the tax-to-GDP ratio, we provide a rather detailed discussion on the effects of the size of the public sector on economic performance. Relatedly, we also discuss the effects of income taxation on employment and tax revenue, with a special focus on top income tax rates. The government's proposals for policy measures to improve competitiveness are also evaluated.

Some major policy issues such as changes in the unemployment benefit system are left to be discussed in the next report. The effects of the planned social and health care reform are not discussed in this report despite their obvious importance. In addition to limited resources of the Council, this is due to, for example, the lack of details about the implementation of the reform.

The government has allocated resources for the Economic Policy Council to commission research projects that support the work of the Council. A report on labour supply responses to tax policy by Jarkko Harju, Tuomas Kosonen and Tuomas Matikka, a report on fiscal consolidation by Henri Keränen and Tero Kuusi, and a report on the strategic government programme by Juri Mykkänen are published simultaneously with this report. In addition, calculations on the sustainability of the pension system by Risto Vaittinen, Reijo Vanne and Mauri Kotamäki are published as an appendix to the report. We have already commissioned a background report on the unemployment benefit system that will be completed in autumn 2016 and a report on innovation policy that will also appear with the next report.

Several experts have visited Council meetings. We would like to thank the Director General of the Economics Department of the Ministry of Finance, Markus Sovala and the chief economic adviser of the Prime Minister Juha Sipilä, Markus Lahtinen for sharing their views with the Council.

The Council's report is based on sources that are publicly available but not always published. Help from Risto Vaittinen from the Finnish Center of Pensions, Veli Laine from European Commission DG ECFIN, Mauri Kotamäki, Filip Kjellberg, Veliarvo Tamminen, Jonna Berghäll, Veli Auvinen and Reetta Varjonen-Ollus from the Ministry of Finance, Reijo Vanne from The Finnish

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The Council has made an unusual decision to publish its report in English only. We do recognize the need to promote domestic economic policy discussion in Finnish. However, not all Council members are fluent in Finnish, and therefore English is the working language of the Council. Given the limited resources of the Council, we have decided to allocate all available resources to analysis rather than trying to produce separate reports in English and Finnish.

Helsinki, 26th of January 2016

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1.1 Summary

Economic outlook

The Finnish economic situation remains severe. 2014 was the third consecutive year with negative GDP growth, and the forecasts for 2015 growth rate are only slightly above zero. The unemployment rate has been increasing since 2013, and the seasonally adjusted unemployment rate is already over 9%. There is also a substantial risk that the unemployment problem will become more persistent.

The export sector has suffered from a decrease in demand in the main export markets, and from more permanent problems in the electronics and forest industries that constitute a large share of Finland's exports. As Finnish exports are mainly manufacturing goods, the poor performance of the export sector is reflected in declining output and employment in the entire manufacturing sector. Both value added and employment in the manufacturing sector have decreased by over 20% between 2007 and 2014.

Public debt is forecast to exceed 60% of GDP by the end of 2015. Even though the debt-to-GDP ratio is still lower than in most EU-countries, its growth is among the highest. The public deficit exceeded 3% of GDP in 2014, and according to the Ministry of Finance this limit will also be exceeded in 2015. Both public debt and the public deficit thus exceed the thresholds set in the Stability and Growth Pact. However, according to the European Commission report published in November 2015, the deficit remains close to the limit, and the deviation from the 3% limit is considered temporary. Also, the debt criterion has been violated, but according to the European Commission, Finland is expected to broadly comply with the required

adjustment path towards the medium-term fiscal objective, ensuring that debt eventually decreases at a sufficient pace.

Still, the main problem with public finances is the lack of long-term sustainability rather than short-to-medium-term debt or deficit levels. Population ageing causes cost pressures in pensions and health care, while a decrease in the share of the working-age population will reduce tax revenues in the long term. With the current expenditure structure and tax rates, the expected future public revenues will not be sufficient to cover the expected future public expenses. Hence, current policies are not viable in the long run, and will have to be adjusted at some point in time.

The government announced in its programme that it is committed to implementing policies that will close the sustainability gap by 2030. The pension reform approved by the Parliament in November 2015 is an important part of this policy package. However, according to the Ministry of Finance estimates, permanent improvements in the public budget amounting to 3.5% of GDP are still needed to ensure sustainability even after accounting for the expected effects of the pension reform. The planned reform of the social and health care system is expected to significantly reduce the sustainability gap, but the specific contents of the reform are still open and its effects highly uncertain. Additional consolidation measures or structural reforms that improve public sector fiscal position are probably needed.

Fiscal policy rules

In the General Government Fiscal Plan for 2016–2019, the government has set targets for medium-term fiscal policy. In addition to setting targets for the general government structural deficit as required in the Stability and Growth Pact, the government has now for the first time also set separate targets for the subsectors: central and local government and the social security funds.

In its previous report, the Economic Policy Council proposed setting subsector targets in structural terms and making these subsector targets consistent with the overall general government structural target. Introducing subsector targets is a move in the right direction, but the subsector targets in the fiscal plan are neither consistent with the medium term fiscal objective for the whole public sector nor cyclically adjusted.

Adding up subsector targets yields a tighter policy target than the overall target, although the comparison gets difficult as only the overall target is cyclically adjusted. In addition, defining the subsector fiscal targets without cyclical adjustment does not take into account the need for fiscal space to allow automatic stabilizers to operate, and increases the risk of pro-cyclical policies that exacerbate cyclical fluctuations.

While there are good reasons to adopt tougher fiscal policy targets than the minimum medium-term objective required in EU agreements, the fiscal targets should be consistent with each other. As the overall medium-term fiscal objective is set in cyclically adjusted terms, the subsector targets should also be cyclically adjusted. And if the government sets a balanced budget goal for the general government as implied by summing up its subsector policy targets, it should revise the medium-term objective accordingly. At present, the fiscal targets are neither internally consistent nor transparent, which makes monitoring the policy targets difficult.

Medium-term objectives are intermediate targets while the overall goal should be to make public finances sustainable in the long term. To make the medium-term targets consistent with the long-term policy goal, the government should derive its medium-term target for the public deficit (or rather a future path for the deficit) from these long-term policy objectives. The current medium-term objectives have no direct link with the long-term target, and the budget surplus that would guarantee fiscal sustainability would be larger than the current medium-term objective.

A particular problem with the medium-term fiscal policy targets is that the surplus in the social security funds (mainly pension funds) hides large deficits in central and local government sectors. In a situation where some subsector has significant net assets, reaching the current medium-term objective does not ensure long-term sustainability of public finances. The reason is that the surplus in the pension system is required to cover future pension expenditures, and cannot be used to finance deficits in other government sectors. To keep the gross government debt at sustainable levels, the fiscal policy targets for each sector should be set so that – accounting for the expected ageing related cost increases and the expected effects of the structural reforms in the social and health care system – they will be consistent with long-term fiscal sustainability.

Fiscal policy and consolidation of public finances

The fiscal policy of the new government aims at consolidating public finances. The government programme contains consolidation measures amounting to approximately EUR 4 billion by 2019. In its last report, the Economic Policy Council advocated a credible consolidation programme that would gradually reduce the deficits to sustainable levels. The government programme will reduce the general government deficit, but according to the Ministry of Finance autumn 2015 forecast, the structural deficit will still be 1.4% of GDP in 2019. The forecast takes into account only measures that have been specified with sufficient detail so that their budget effects can be estimated but even this number contains some uncertainty, since in some cases detailed proposals of how the expenditure cuts listed in the government programme will in fact be implemented have not yet been drafted. As the structural deficit is expected to remain above the medium-term fiscal objective, reaching fiscal policy targets would require additional consolidation efforts in addition to those included in the Ministry of Finance forecast.

As public finances are on an unsustainable path, consolidation is inevitable at some point in time. Therefore, the appropriate question is when to undertake consolidation, not whether consolidation is needed. This involves a trade-off between immediate and later consequences. Consolidation efforts are particularly costly in terms of output and employment in a downturn when fiscal multipliers are large. Postponing consolidation to better times with smaller fiscal policy multipliers would lead to smaller losses in output. However, the optimal timing of consolidation policies is difficult since the business cycle situation is highly uncertain, and output growth is likely to remain low at least for the next few years. In addition, postponing consolidation implies that debt continues to increase, and therefore the adjustment burden would be larger in the future.

The government programme will tighten the fiscal policy stance gradually over the parliamentary term. The net effect of the proposed tax changes and expenditure cuts is to reduce the general government deficit by 0.7% of GDP in 2016. This effect is somewhat reduced by the government's cost-competitiveness programme, where the proposed payroll tax cuts reduce revenue in 2016, while the cost-cutting measures will have a full impact only in a longer term. The projected overall effect of the consolidation measures is to reduce the deficit by 1.9% of GDP in 2019. Simulation results presented

in the background report commissioned by the Council and the Audit Office of Finland (Keränen and Kuusi 2016) indicate that the benefits of postponing consolidation in terms of the present value of output would even be slightly negative. On the other hand, larger expenditure cuts in the present situation would be harmful for output and employment. The timing of the consolidation programme therefore appears to be rather well balanced between the concern for current economic activity and the need to address the sustainability problem.

The potential conflict between the short-run concerns for unemployment and the medium to long-term concerns for public finances can be muted by formulating credible plans for how to achieve consolidation. This cannot be done by means of vaguely formulated targets as what can be achieved in the future and as yet unspecified policy actions. What is needed is a formulation and adoption of *specific* structural reforms – in particular for the social and health care system as well as for the local government sector – that have clear and well-defined targets by which to monitor whether the reforms result in the intended effect. The budget effects do not have to be immediate as long as the plan is credible.

The consolidation package is likely to have non-negligible effects on inequality, but no comprehensive analysis of the overall distributive effects of the proposed policies has been carried out. Conducting an evaluation of redistributive effects would be important in itself, and the lack of such an evaluation further increases uncertainty about the actual implementation of the proposed measures.

Structure of consolidation and tax policy

Also the structure of the consolidation programme – that is, the specific measures that are chosen as part of the consolidation package – matter for how consolidation affects economic performance. Cutting expenditures on public investments is particularly harmful for economic performance. In general, empirical evidence also suggests that fiscal multipliers for government spending are higher than multipliers for taxation. That is, consolidation carried out through expenditure cuts has stronger negative effects on output and employment than a consolidation carried out through tax increases. Given this evidence, the government's decision to entirely avoid consolidation on the tax revenue side can be questioned. A commitment to conduct the required consolidation entirely through

expenditure cuts or cuts to social benefits puts an unnecessary constraint on available policy options. Fiscal discipline is better achieved through well-defined targets that are explicitly geared towards ensuring sustainability of public finances.

Even if the tax-to-GDP ratio in Finland is high, a decision to avoid all increases in taxation is an oversimplified policy principle. First, the tax-to-GDP ratio is not a clear-cut way of measuring the size of the public sector, as it is misleading to compare the size of the public sector between different countries using the tax-to-GDP ratio. Second, it is not the overall size of the public sector, but rather the structure of tax and expenditure policies that matters for economic performance. When talking about the effects of the public sector on economic performance, the relevant questions relate to what are the tasks carried out in the public sector, and how they are financed. On the one hand, the public sector can mitigate market failures. On the other hand, taxes used to finance public sector acitivities distort economic incentives. Neither the tax-to-GDP-ratio nor the expenditure-to-GDP ratio are good measures of these distortions. A third problem with such targets is that they are affected by developments in GDP that are outside the control of policy-makers.

Expenditure reductions that, for example, reduce the quality of education and research or affect public investments in infrastructure, have in general detrimental effects on future productivity and income. Consolidations via such instruments are therefore not advisable. It is important to note that fiscal consolidation packages are also structural reforms, and these structural implications need to be taken into account when designing consolidation policies.

Even though the government has proposed only minor changes to the overall level of taxation, the changes to the tax structure are well motivated in terms of efficiency effects: The government proposes increasing taxes on harmful activities and the property tax. These are among the least distortionary ways of increasing government revenue. Income taxes for low incomes decrease due to an increase in the earned income tax credit (EITC). This improves incentives to work. On the other hand, the government has also chosen to forego possibilitites to increase tax revenue in ways that would have not reduced, or even improved, the efficiency of the tax system. This relates to, for instance, reductions in inheritance taxes. Also, a move towards a more uniform value-added tax (VAT) system by increasing the

reduced VAT rates would generate significant amounts of revenue, and would simultaneously improve the efficiency of the tax system.

We also carry out an examination of the effects of taxation on the labour market, and evaluate government policy in light of the available evidence. For example, income taxes distort economic incentives. However, according to typical empirical estimates from recent literature, the negative effects of income taxes on employment, working hours and taxable income are only modest on average. Taxes matter most at the lower end of the income distribution, and for particular groups with low labour market participation (such as mothers of young children). Targeting income tax reductions at lower incomes can be justified both on equity and efficiency grounds, even though the implications of proposed increases of EITC for aggregate employment are likely to remain fairly small.

High quality public services such as child care form an integral part of the Nordic model, and evidence shows that public provision of such services further mitigates the negative incentive effects of taxes on employment. Providing public services that encourage labour supply in part explains why high taxes and high employment can coexist.

In general, modest tax distortions also imply that tax cuts reduce tax revenue and tax hikes increase revenue. Due to the high tax progression in Finland, however, the relationship between top tax rates and tax revenue warrants a closer examination. We present calculations where the current top earned income tax rate in Finland is compared to the revenue-maximizing top tax rate. The calculations are subject to considerable uncertainty, and the conclusions that can be drawn depend, for example, on the relationship between earned income and capital income taxation, and the extent of income-shifting among top income earners. According to the calculations, it appears likely that the current top earned income tax rate is below the revenue-maximizing tax rate. It is important to note that the optimal income tax rate is in most cases below, and never exceeds the revenue-maximizing tax rate. Cutting taxes or avoiding tax increases can be a legitimate policy goal, but its justification purely on efficiency grounds is problematic.

Policies to improve competitiveness

In addition to consolidation measures, the government has decided to implement a policy package aiming at improving Finland's external competitiveness. The government aims to improve competitiveness by 10–15%. The means to achieve this goal are wage restraint, improvements in productivity and cutting labour costs.

Wages have grown faster in Finland than in competitor countries for the last 15 years. Rapid growth in productivity in the early 2000's made this possible without loss of competitiveness. After 2008 productivity declined, and as wages did not adjust to this decline, the cost-competitiveness of Finnish companies deteriorated compared to the level prevailing in the early 2000's.

Measurement of changes in wage costs is reasonably straightforward, but measuring the level of competitiveness difficult. According to estimates by the Bank of Finland, the government's target of a 10–15% reduction in relative unit labour costs is consistent with reaching a one percent surplus in the current account. While a current account surplus is a decent indicator for the external balance, it is not directly related to welfare and is therefore an unclear policy objective. Still, improving competitiveness could increase exports and eventually employment, and could therefore lead to welfare improvements. The question is whether the adopted measures are likely to reach this goal.

The policy options for improving cost-competitiveness are limited. The currency union makes devaluation impossible. Rapid productivity growth would solve the problem, but improving productivity by policy decisions is difficult particularly in the short term. Moderate wage agreements improve cost-competiveness slowly, as wage growth is also slow in the competitor countries. If wages cannot be adjusted downwards, the remaining option is to reduce non-wage costs such as the payroll tax.

Still, the government's measures aimed at cutting labour costs constitute a high-risk strategy. The government proposes to implement a reduction in payroll taxes and to finance the resulting loss in public sector revenue by cutting costs and reducing employment in the public sector. Restrictions in sick pay, extensions to working hours and reductions in holiday bonuses are designed to both reduce the labour costs in the private sector and to reduce

expenditures in the public sector. However, the effectiveness of these measures crucially depends on, for example, how wages react to these policies.

In the government's calculations, the wage level is unaffected by these policy changes, even in the long term. This assumption seems unrealistic: in the long term, wages are likely to adjust as workers or their unions demand compensation for the reduction in non-wage benefits. This assumption may be more realistic in the short term. If wages are downward rigid, a cut in the non-wage components of labour costs may speed the adjustment towards equilibrium in the labour market (i.e. lower unemployment), and the reduction in labour costs may therefore have positive short-term effects on employment. However, these effects are temporary and largely vanish after wages have adjusted, so that long-term employment effects are likely to be substantially smaller than the government estimates. Even in the short term, the assumption of no wage adjustment is questionable given the tensions that the government policies are creating in the labour market. If wages increase in response to cuts in non-wage components, even the short-term employment effects may be small.

In addition to the assumptions related to wage setting, the government's estimates of employment effects include other assumptions that seem to be biased towards unrealistically large increases in employment. The government's calculations are based on large labour demand elasticity estimates, impying that a given reduction in unit labour costs is assumed to produce a large increase in labour demand. More recent estimates based on changes in payroll taxes typically produce much lower elasticity estimates and hence smaller employment effects.

Uncertainty related to whether the competitiveness package will reduce employment and therefore the wage bill of the public sector also implies that there is considerable uncertainty related to financing the package. Costs of the package will be higher than estimated also if reductions in public sector employment leave some former public sector workers unemployed. One policy option could have been to finance the package partly through increasing the reduced VAT rates. This would resemble a fiscal devaluation, but instead of general VAT increase involves a change in the VAT structure.

1.2 Yhteenveto

Talouden näkymät

Suomen kansantalouden tila on edelleen vaikea. Vuosi 2014 oli kolmas peräkkäinen negatiivisen talouskasvun vuosi. Kasvuennusteet vuodelle 2015 ovat vain hiukan nollan yläpuolella, ja hitaan kasvun ennustetaan jatkuvan myös lähivuosina. Työttömyys on lisääntynyt vuodesta 2013 lähtien. Kausitasoitettu työttömyysaste on jo yli 9 prosenttia, ja työttömyysongelma uhkaa pitkittyä.

Vientisektori on kärsinyt kysynnän laskusta päävientimarkkinoilla sekä pitkäaikaisista ongelmista vientisektorin keskeisillä toimialoilla sähkö-, elektroniikka- ja metsäteollisuudessa. Koska pääosa Suomen viennistä koostuu teollisuustuotteista, sen heikko kehitys vaikuttaa koko teollisuuden tuotantoon ja työllisyyteen. Teollisuuden arvonlisäys ja työllisyys pienenivät yli 20 prosettia vuosien 2007 ja 2014 välillä.

Julkisen velan ennustetaan ylittävän 60 prosettia bruttokansantuotteesta vuoden 2015 loppuun mennessä. Vaikka velan suhde kokonaistuotantoon on pienempi kuin useimmissa EU-maissa, sen kasvuvauhti on ollut nopeaa. Julkisen sektorin alijäämä ylitti kolme prosettia bruttokansantuotteesta vuonna 2014. Valtiovarainministeriön mukaan tämä raja ylittyy myös vuonna 2015. Sekä velka että vaje siis ylittävät EU:n vakaus- ja kasvusopimuksessa määritellyt rajat. Marraskuussa 2015 julkaisemassaan raportissa Euroopan komissio piti silti vajeen poikkeamaa kolmen prosentin rajasta väliaikaisena. Myös velkakriteeri rikkoutuu, mutta Komission raportin mukaan Suomen rakenteellinen alijäämä supistuu laveasti tulkittuna kohti keskipitkän aikavälin tavoitetta, minkä pitäisi lopulta johtaa velan pienenemiseen riittävän nopeasti.

Suurin ongelma julkisen sektorin rahoitusasemassa ei kuitenkaan ole velan ja vajeiden kehitys lyhyellä ja keskipitkällä aikavälillä, vaan julkisen talouden kestävyys pitkällä aikavälillä. Väestön ikääntyminen lisää eläke- ja terveydenhuollon menoja. Samaan aikaan työssäkäyvän väestön osuus pienenee, mikä vähentää verotuloja pidemmällä tähtäimellä. Odotettavissa olevat verotulot eivät siis riitä kattamaan tulevia julkisia menoja. Näin ollen nykyinen finanssipoltiikka ei ole kestävällä pohjalla.

Hallitus on sitoutunut ohjelmassaan tekemään vaalikauden aikana päätöksiä, jotka kurovat julkisen talouden kestävyysvajeen umpeen vuoteen 2030 mennessä. Eduskunnan marraskuussa 2015 hyväksymä eläkeuudistus on tärkeä osa tätä politiikkaa. Valtiovarainministeriön arvion mukaan julkista taloutta on kuitenkin edelleen tasapainotettava pysyvästi toimenpiteillä, jotka vastaavat 3,5 prosenttia kokonaistuotannosta. Sosiaali- ja terveydenhuollon palvelurakenneuudistuksen (SOTE) odotetaan pienentävän kestävyysvajetta merkittävästi. Koska uudistuksen täsmällinen sisältö ei ole vielä tiedossa, sen vaikutukset ovat epävarmoja. Näin ollen muita sopeutustoimia ja julkisen talouden tilaa parantavia rakenteellisia uudistuksia tarvitaan todennäköisesti edelleen lisää.

Finanssipolitiikan säännöt

Hallitus on asettanut keskipitkän aikavälin finanssipolitiikan tavoitteet julkisen talouden suunnitelmassaan vuosille 2016–2019. Tavoitteet sisältävät vakaus- ja kasvusopimuksen mukaisen keskipitkän aikavälin tavoitteen koko julkisen sektorin rakenteelliselle alijäämälle, ja lisäksi erilliset rahoitusasematavoitteet kullekin julkisen talouden sektorille eli valtiolle, kunnille sekä työeläke- ja sosiaaliturvarahastoille.

Edellisessä raportissaan talouspolitiikan arviointineuvosto ehdotti erillisten tavoitteiden asettamista eri sektoreiden rakenteellisille alijäämille. Julkisen talouden suunnitelmassa tällaiset tavoitteet asetetaan, mutta ne eivät ole sopusoinussa koko julkista sektoria koskevan tavoitteen kanssa: Sektorikohtaisten tavoitteiden yhteenlaskeminen tuottaa tiukemman tavoitteen koko julkiselle sektorille kuin vakaus- ja kasvusopimuksen mukainen keskipitkän aikavälin tavoite. Vertailu on tosin hankalaa, koska koko julkista sektoria koskeva tavoite on esitetty suhdannekorjatussa muodossa, mutta sektorikohtaiset tavoitteet ilman suhdannekorjausta. Sektorikohtaisten tavoitteiden asettaminen ilman suhdannekorjausta aiheuttaa myös muita ongelmia. Suhdannekorjaamattomat tavoitteet eivät jätä tilaa automaattisten vakauttajien toiminnalle, mikä lisää myötäsyklisen suhdannevaihteluita voimistavan finanssipolitiikan riskiä.

Vaikka EU:n vaatimia minimitavoitteita tiukemmalle finanssipolitiikalle on hyviä perusteita, tulisi finanssipoliittisten tavoitteiden olla sopusoinnussa keskenään. Koska koko julkista sektoria koskevat keskipitkän aikavälin tavoitteet ovat suhdannekorjattuja, myös julkisen talouden eri sektoreiden tavoitteiden tulisi olla suhdannekorjattuja. Jos hallituksen tavoite on

tasapainoinen budjetti koko julkisen sektorin tasolla, kuten eri sektoreiden tavoitteet antavat ymmärtää, niin sen tulisi muuttaa koko julkista sektoria koskevaa keskipitkän aikavälin tavoitetta vastaavasti. Keskenään ristiriitaiset tavoitteet heikentävät politiikan läpinäkyvyyttä ja vaikeuttavat niiden saavuttamisen arviointia.

Keskipitkän aikavälin tavoitteet ovat kuitenkin vain välitavoitteita. Varsinaisen tavoitteen tulisi olla julkisen talouden kestävyys pitkällä tähtäimellä. Jotta keskipitkän aikavälin tavoite olisi sopusoinnussa pitkän tähtäimen tavoitteen kanssa, hallituksen tulisi johtaa keskipitkän aikavälin tavoite budjettivajeelle, tai sen tulevalle kehitykselle, pitkän tähtäimen tavoitteista. Nykyisillä keskipitkän aikavälin tavoitteilla ei kuitenkaan ole suoraa yhteyttä pitkän tähtäimen tavoitteisiin. Kestävyyden turvaava ylijäämä on selvästi hallituksen asettamaa keskipitkän tähtäimen tavoitetta suurempi.

Yksi erityinen keskipitkän aikavälin tavoitteiden asettamiseen liittyvä ongelma on se, että sosiaaliturvarahastot (lähinnä eläkerahastot) ovat ylijäämäisiä, kun taas muu julkinen sektori on alijäämäinen. Tilanteessa, jossa vain jollain sektorilla on merkittävää nettovarallisuutta, keskipitkän aikavälin tavoitteiden saavuttaminen ei takaa koko julkisen talouden pitkän aikavälin kestävyyttä. Tämä johtuu siitä, että eläkerahastojen ylijäämää tarvitaan tulevien eläkemenojen kattamiseen, eikä sillä voida kattaa muiden sektorien alijäämää. Jotta koko julkisen sektorin velka pysyisi kestävällä pohjalla, kunkin alasektorin tavoitteiden tulisi olla sopusoinnussa pitkän tähtäimen kestävyystavoitteen kanssa, ottaen huomioon ikääntymisestä seuraavat menojen kasvupaineet ja arvioit erityisesti sosiaali- ja terveys-sektorin rakenteellisten uudistusten vaikutuksesta menokehitykseen.

Finanssipolitiikka ja julkisen talouden tasapainottaminen

Hallituksen keskeisenä tavoitteena on julkisen talouden tasapainottaminen. Hallitusohjelma sisältää suuruudeltaan noin neljän miljardin euron sopeutustoimet vuoteen 2019 mennessä. Edellisessä raportissaan myös talouspolitiikan arviointineuvosto kannatti tällaista asteittaista sopeutuspolitiikkaa. Hallituksen politiikka pienentää julkisen talouden alijäämää, mutta valtiovarainministeriön syksyn 2015 ennusteen mukaan rakenteellinen alijäämä on vielä vuonna 2019 1,4 prosenttia kokonais-tuotannosta. Tässä ennusteessa otetaan huomioon vain ne toimenpiteet, jotka on määritelty riittävän yksityiskohtaisesti, jotta niiden

budjettivaikutukset voidaan luotettavasti arvioida. Lukuun sisältyy silti epävarmuutta, koska joidenkin menovähennysten täytäntöönpanosta ei ole vielä yksityiskohtaista tietoa. Toimenpiteiden vaikutusarviot tarkentuvat vielä lainvalmistelun yhteydessä. Joka tapauksessa rakenteellisen vajeen odotetaan pysyvän keskipitkän aikavälin tavoitetta suurempana, joten finanssipolitiikan tavoitteiden saavuttaminen edellyttäisi siis lisätoimenpiteitä ennusteessa huomioon otettujen lisäksi.

Koska julkisen talouden rahoitus ei ole kestävällä pohjalla, sen tasapainottaminen on välttämätöntä. Kysymys on lähinnä sopeutustoimenpiteiden ajoituksesta, mikä luonnollisesti vaikuttaa myös sopetutuksen kustannusten ajoittumiseen. Erityisesti laskusuhdanteessa, jolloin finanssipolitiikan kerroinvaikutukset ovat suurimmillaan, sopeutustoimenpiteiden haitalliset vaikutukset tuotantoon ja työllisyyteen ovat suuria. Jos sopeuttamista voidaan lykätä parempaan taloustilanteeseen, jolloin kerroinvaikutukset ovat pienempiä, sopetutuksen kokonaistaloudelliset kustannukset olisivat pienemmät. Sopeutustoimenpiteiden optimaalinen ajoittaminen on kuitenkin hankalaa, koska suhdannetilanteen kehitykseen liittyy paljon epävarmuutta. Lisäksi Suomen talouden kasvuvauhdin ennustetaan pysyvän matalana ainakin muutaman seuraavan vuoden ajan. Sopeutustoimenpiteiden siirtäminen tulevaisuuteen merkitsisi myös suurempaa sopeutustarvetta, koska velka kasvaa edelleen mikäli toimenpiteitä lykätään.

Hallitusohjelman mukaan finanssipoliikka kiristyy asteittain hallituskauden aikana. Menojen vähentämisen ja veromuutosten nettovaikutusten arvioidaan olevan 0,7 prosenttia kokonaistuotannosta vuonna 2016. Tätä vaikutusta pienentää hallituksen kilpailukykypaketti, jossa työnantajamaksujen alennus pienentää verotuloja jo vuonna 2016, kun taas kustannuksia alentavien muiden toimenpiteiden arvioidaan vaikuttavan vasta pidemmällä tähtäimellä. Lisäksi kilpailukykypakettiin liittyvien julkisen talouden kustannussäästöjen toteutuminen odotetun suuruisena on hyvin epävarmaa. Sopeutustoimenpiteiden kokonaisvaikutuksen arvioidaan pienentävän vajetta 1,9 prosenttia kokonaistuotannosta hallituskauden aikana.

Sopeutuksen lykkäämisellä hallitusohjelmassa esitettyyn aikatauluun verrattuna ei ole saavutettavissa merkittävää hyötyä. Talouspolitiikan arviointineuvoston ja Valtiontalouden tarkastusviraston teettämän taustaraportin (Keränen ja Kuusi 2016) mukaan sopeutuksen lykkäyksen vaikutus

tulevien vuosien bruttokansantuotteen nykyarvoon olisi jopa lievästi negatiivinen. Toisaalta suunniteltua suuremmat menoleikkaukset vaikuttaisivat haitallisesti tuotantoon ja työllisyyteen nykyisessä taloustilanteessa. Ottaen huomioon toisaalta sopeutuksen lyhyen aikavälin negatiiviset vaikutukset ja toisaalta julkisen talouden pitkän aikavälin kustannuspaineet, hallitusohjelman mukainen sopeutustoimenpiteiden aikataulutus näyttää olevan melko hyvin tasapainossa.

Yllä mainittua ristiriitaa lyhyen aikavälin suhdannetilanteen ja pidemmän aikavälin julkisen talouden rahoitusaseman välillä voidaan lieventää uskottavalla suunnitelmalla julkisen talouden tasapainottamisesta. Tällaisen suunnitelman pitää sisältää konkreettisia politiikkatoimenpiteitä ja niille asetettuja selkeitä tavoitteita. Epätäsmälliset, mahdollisesti tulevaisuudessa saavutettavat tavoitteet, joihin tarvittavia keinoja ei ole eritelty, eivät ole tässä suhteessa yhtä hyödyllisiä. Erityisen oleellisia konkreettiset suunnitelmat ovat sosiaali- ja terveydenhuollon uudistuksessa ja kuntasektorin tehtävien määrittelyssä. Jos suunnitelmat ovat uskottavia, budjettiin kohdistuvien vaikutusten ei tarvitse olla välittömiä.

Sopeutustoimenpiteet vaikuttavat myös tulonjakoon, mutta kattavia laskelmia tästä ei ole tehty. Laskelmat olisivat sinälläänkin tarpeellisia. Lisäksi tulonjakoarvioiden puuttuminen kasvattaa epävarmuutta ohjelman toteuttamisesta.

Julkisen talouden sopeutustoimien rakenne ja veropolitiikka

Myös sopeutuspolitiikan rakenne on oleellinen sen vaikutusten kannalta. Julkisten investointien leikkaaminen vaikuttaa talouskasvuun erityisen haitallisesti. Useimpien empiiristen tutkimusten mukaan julkisten menojen muutoksilla on suurempi finanssipoliittinen kerroin, eli suurempi vaikutus talouskasvuun kuin verotuksen muutoksilla. Tämän tutkimustiedon valossa hallituksen päätös olla puuttumatta verotuksen tasoon voidaan kyseenalaistaa. Sitoutuminen vaadittavan sopeutuksen toteuttamisen pelkästään menojen ja sosiaaliturvan leikkauksilla rajoittaa tarpeettomasti finanssipolitiikan vaihtoehtoja.

Finanssipolitiikan kurinalaisuus voidaan saavuttaa keskittymällä tavoitteisiin, jotka tähtäävät suoremmin julkisen talouden rahoitusaseman kestävyyden varmistamiseen. Vaikka veroaste on Suomessa kansainvälisesti verrattuna korkea, tiukka sitoutuminen veroasteen pitämiseen jollain

tietyllä tasolla ei ole perusteltua. Veroaste, eli verotulojen suhde kokonaistuotantoon, ei ole hyvä tapa mitata julkisen sektorin kokoa. Se antaa harhaanjohtavan kuvan eri maiden julkisten sektorien suhteellisesta koosta. Lisäksi taloudelliseen aktiviteettiin vaikuttaa julkisten menojen ja verojen rakenne – ei niinkään julkisen sektorin koko. Kun tarkastellaan julkisen sektorin vaikutusta talouteen, oleellista on se millaisia tehtäviä julkisella sektorilla on ja miten ne rahoitetaan. Yhtäältä julkinen sektori voi korjata markkinoiden epäonnistumisia ja siten edistää talouden toimintaa, mutta toisaalta sen rahoitus (verotus) vääristää talouden toimijoiden kannustimia. Esimerkiksi verotulojen ja kokonaistuotannon välinen suhde ei ole hyvä mittari näille vääristymille. Kolmas tällaiseen tavoitteeseen liittyvä ongelma on se, että tavoitteen toteutuminen riippuu voimakkaasti kokonaistuotannon kehityksestä, mitä taas ei voida poliittisin keinoin hallita.

Esimerkiksi koulutuksen laatuun ja tutkimukseen sekä julkiseen infrastruktuuriin kohdistuvat menojen vähennykset vaikuttavat negatiivisesti tuottavuuteen ja tulevaan talouskasvuun. Tällaisia leikkauksia pitäisikin siksi välttää. Sopeutuspolitiikka vaikuttaa usein myös talouden rakenteisiin. Sopeutustoimenpiteet voidaankin usein nähdä myös rakenteellisina uudistuksina, joiden seuraukset olisi tärkeää ottaa huomioon politiikkatoimenpiteiden valinnassa.

Hallitus on ehdottanut kokonaisuudessan vain vähäisiä muutoksia verotuksen tasoon. Hallituksen veropolitiikka sisältää kuitenkin joitain muutoksia verotuksen rakenteeseen, jotka ovat tehokkuusnäkökohtien kannalta perusteltuja. Hallitus esittää esimerkiksi joidenkin haittaverojen ja kiinteistöveron korotuksia. Ne kuuluvat veroihin, joiden taloudellista toimintaa vääristävä vaikutus on suhteellisen pieni. Siten ne ovat hyvä tapa kerätä tuloja julkiselle sektorille. Työtulovähennyksen korottaminen pienentää pienituloisten tuloveroja, mikä kannustaa työntekoon. Toisaalta hallitus ei ole halunnut lisätä verotuloja sellaisillakaan tavoilla, jotka eivät heikentäisi tai voisivat jopa parantaa verojärjestelmän tehokkuutta. Esimerkiksi perintövero pienenee. Myös alennetut arvonlisäverokannat säilyvät ennallaan, vaikka siirtyminen tasaisempaan arvonlisäveroon lisäisi merkittävästi verotuloja ja samalla tehostaisi verojärjestelmää.

Raportissa tarkastellaan työn verotusta ja arvioidaan hallituksen veropolitiikkaa tuoreen tutkimustiedon valossa. Esimerkiksi tuloverot vääristävät taloudellisia kannustimia ja niillä on siksi negatiivisia vaikutuksia taloudelliseen toimeliaisuuteen. Viimeaikaisen empiirisen

tutkimuksen mukaan tuloverojen negatiivinen vaikutus työllisyyteen, työtunteihin ja verotettavaan tuloon on kuitenkin keskimäärin melko pieni. Verojen vaikutus työntekoon on suurimmillaan tulojakauman alapäässä, erityisesti niissä ryhmissä joissa työhön osallistumisaste on verrattain alhainen. Veronalennusten kohdistamista pienituloisille voidaankin perustella sekä tasa-arvo- että tehokkusnäkökohdilla. Työtulovähennyksen korottaminen vaikuttaa kuitenkin kokonaistyöllisyyteen todennäköisesti melko vähän.

Korkeatasoiset julkiset palvelut kuten lasten päivähoito ovat oleellinen osa pohjoismaista mallia. Tällaiset julkiset palvelut vähentävät verotuksen negatiivisia vaikutuksia työllisyyteen. Työn tarjontaa tukevat julkiset palvelut selittävät osaltaan sen, miksi korkea työllisyys ja korkea verotus ovat yhteensopivia keskenään.

Verotuksen aiheuttamien vääristymien pienuus tarkoittaa yleisesti ottaen sitä, että veronalennukset vähentävät verotuloja ja veronkorotukset lisäävät verotuloja. Suomen korkean veroprogression vuoksi tätä kysymystä on kuitenkin hyvä tarkastella ylimpien tulojen verotuksen osalta erikseen. Esitämme raportissa laskelmia, joissa Suomen korkeinta ansiotulojen rajaveroastetta verrataan verotulot maksimoivaan veroasteeseen. Laskelmiin liittyy huomattavaa epävarmuutta ja niiden perusteella tehtävät johtopäätökset riippuvat oleellisesti esimerkiksi ansiotuloverotuksen ja pääomatuloverotuksen suhteesta ja tulonmuunnon määrästä ylimmissä tuloissa. Laskelmien perusteella vaikuttaa todennäköiseltä, että ansiotuloverotuksen korkein rajaveroaste on edelleen matalampi kuin verotulot maksimoiva veroaste. Verojen alentaminen tai veronkorotusten välttäminen on looginen poliittinen tavoite, mutta veronalennusten perusteleminen puhtaasti tehokkuusnäkökulmasta on ongelmallista.

Kustannuskilpailukyvyn parantaminen

Budjettisopeutuksen lisäksi hallitus pyrkii parantamaan suomalaisten yritysten kilpailukykyä. Tavoitteena on 10–15 prosentin parannus kustannuskilpailukykyyn. Tähän pyritään maltillisilla palkankorotuksilla, työn tuottavuuden kasvattamisella sekä työvoimakustannusten pienentämisellä.

Viimeisen 15 vuoden aikana palkat ovat kasvaneet Suomessa nopeammin kuin kilpailijamaissa. Nopea työn tuottavuuden kasvu 2000-luvun alussa mahdollisti palkkojen kasvun ilman kilpailukyvyn heikkenemistä. Vuoden

2008 jälkeen työn tuottavuus aleni. Koska palkat eivät sopeutuneet tuottavuuden alenemiseen, suomalaisten yritysten kilpailukyky heikkeni verrattuna 2000-luvun alkupuolen tilanteeseen.

Kilpailukyvyn muutosten mittaaminen on suhteellisen suoraviivaista, mutta kilpailukyvyn tason arvioiminen vaikeaa. Suomen Pankin esittämien arvioiden mukaan hallituksen tavoite alentaa suhteellisia yksikkötyökustannuksia 10–15 prosenttia riittäisi ulkoisen tasapainon saavuttamiseen ja tuottaisi lievästi ylijäämäisen vaihtotaseen. Vaihtotaseen ylijäämä on sopiva mittari maan ulkoiselle tasapainolle, mutta se ei suoraan mittaa taloudellista hyvinvointia, ja on siksi politiikkatavoitteena erikoinen. Tästä huolimatta kustannuskilpailukyvyn kohentaminen voisi vaikuttaa positiivisesti vientiin ja lopulta myös työllisyyteen, sekä johtaa parempaan taloudelliseen hyvinvointiin. Keskeinen kysymys on, voidaanko nämä tavoitteet saavuttaa esitetyillä politiikkatoimenpiteillä.

Mahdollisia toimenpiteitä kilpailukyvyn parantamiseksi ei ole paljon. Devalvaatio ei ole mahdollista rahaliitossa. Nopea tuottavuuden kohoaminen ratkaisisi kilpailukykyongelman, mutta tuottavuuden parantaminen politiikkatoimenpiteiden avulla on hankalaa erityisesti lyhyellä tähtäimella. Maltilliset palkkaratkaisut parantavat kilpailukykyä hitaasti, koska myös kilpailijamaissa palkat nousevat hitaasti. Jos palkkoja ei voida alentaa, ainoaksi vaihtoehdoksi jää muiden kuin palkkakustannusten, esimerkiksi työnantajien sosiaaliturvamaksun, alentaminen

Hallituksen työvoimakustannusten alentamispolitiikka on kuitenkin riskialtista. Hallitus esittää työnantajien sosiaaliturvamaksun alentamista, ja tämän rahoittamista pienentämällä julkisen sektorin kustannuksia ja työllisyyttä. Sairausajan omavastuun kasvattamisella, loppiaisen ja helatorstain muuttamisella palkattomiksi vapaapäiviksi ja lomarahojen leikkauksella pyritään vähentämään sekä yksityisen sektorin työvoimakustannuksia että julkisen sektorin menoja. Näiden uudistusten vaikutus riippuu kuitenkin oleellisesti muun muassa siitä, miten palkat reagoivat ehdotettuihin muutoksiin.

Hallituksen laskelmissa kustannuskilpailukypaketin toimet eivät vaikuttaisi palkkoihin edes pitkällä tähtäimellä. Tällainen oletus on epärealistinen: pitkällä tähtäimellä palkat sopeutuvat, kun työntekijät ja ammattiliitot vaativat kompensaatioita menettämistään muista kuin palkkaa koskevista eduista. Lyhyellä tähtäimellä hallituksen tekemä oletus saattaa olla

realistisempi. Jos palkat eivät jousta alaspäin, muiden kuin palkkaa koskevien työvoimakustannusten alentaminen voi nopeuttaa sopeutumista työmarkkinoiden tasapainoon. Kustannusten alentamisella saattaa siten olla positiivinen vaikutus työllisyyteen lyhyellä tähtäimellä. Nämä vaikutukset ovat kuitenkin väliaikaisia ja pitkälti katoavat, kun palkat ovat ehtineet sopeutua. Näin ollen pidemmän aikavälin työllisyysvaikutukset ovat hyvin todennäköisesti selvästi pienemmät kuin hallituksen laskelmissa oletetaan. Myös lyhyellä tähtäimellä oletus palkkojen muuttumattomuudesta voidaan kyseenalaistaa. Kilpailukykypaketti näyttää luovan jännitteitä työmarkkinoille. Jos palkat nousevat nopeasti, niin jopa lyhyen tähtäimen työllisyysvaikutukset voivat olla pienet.

Palkanasetantaan liittyvien oletusten lisäksi kilpailukykypaketin taustalaskelmiin liittyy myös muita oletuksia, joiden vuoksi hallituksen arviot työllisyysvaikutuksista ovat epärealistisen suuria. Hallituksen laskelmat perustuvat oletuksiin työvoiman suuresta kysyntäjoustoista, eli yksikkötyökustannusten laskun oletetaan vaikuttavan työvoiman kysyntään melko paljon. Uudemmat tutkimukset tuottavat paljon pienempiä arvioita kysyntäjouston koosta, mikä myös tarkoittaa pienempiä työllisyysvaikutuksia.

Koska kilpailukykypaketin työllisyysvaikutuksiin ja siten myös julkisen sektorin palkkakustannusten laskuun liittyy paljon epävarmuutta, paketin rahoitus on epävarmalla pohjalla. Lisäksi paketin arvioidut kustannukset nousevat ainakin lyhyellä aikavälillä, jos osa julkiselta sektorilta vähennetyistä työntekijöistä jää työttömiksi. Yksi vaihtoehto hallituksen politiikalle olisi ollut fiskaalinen devalvaatio, jossa työnantajien sosiaaliturvamaksujen alennus olisi rahoitettu arvonlisäveroa korottamalla. Tämä vaatisi kuitenkin suuren korotuksen yleiseen arvonlisäveroon. Mahdollisesti parempi vaihtoehto olisi ollut rahoittaa kilpailukykypaketti ainakin osittain korottamalla alennettuja arvonlisäverokantoja.

2 Recent economic developments

Finland is currently suffering from a prolonged recession, which has had a negative effect on public sector financial balance. In addition, recovery from the crisis is predicted to be slow due to sluggish productivity growth related to the significant structural change in manufacturing. In this chapter, we first present a brief overview of the current economic situation in Finland and some past developments. We then discuss the development of key indicators for public finances such as the budget balance and debt. In addition, we present an overview of the forecasts for future economic development, and discuss long-term economic forecasts for the Finnish economy.

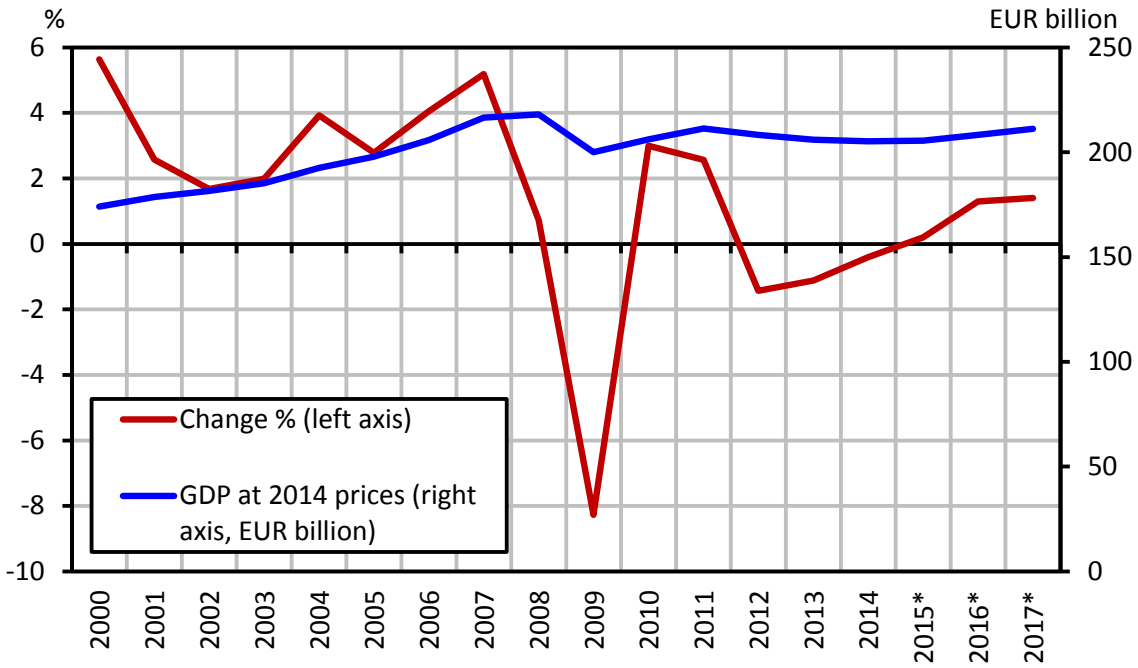
2.1 The business cycle

Finland remains in a difficult situation with a longlasting economic crisis. Figure 2.1.1 presents real GDP and its growth rate for the period 2000–2014. In addition, the figure includes recent GDP forecasts by the Ministry of Finance for 2015–2017, published in September 2015 (Ministry of Finance 2015b).

After a period of steady growth before 2008, Finland is currently suffering from a prolonged recession. The Finnish economy has experienced several years of negative GDP growth after the financial crisis of 2008. 2014 was the third consecutive year with negative GDP growth. The growth rate is gradually increasing, but GDP is still almost 6% below its peak in 2008 before the beginning of the economic downturn. Moreover, forecasts predict only slow positive growth for the near future, pointing to a slow recovery

from the crisis. We discuss GDP forecasts in more detail at the end of the chapter.

Figure 2.1.1 Development of GDP, 2000-2014

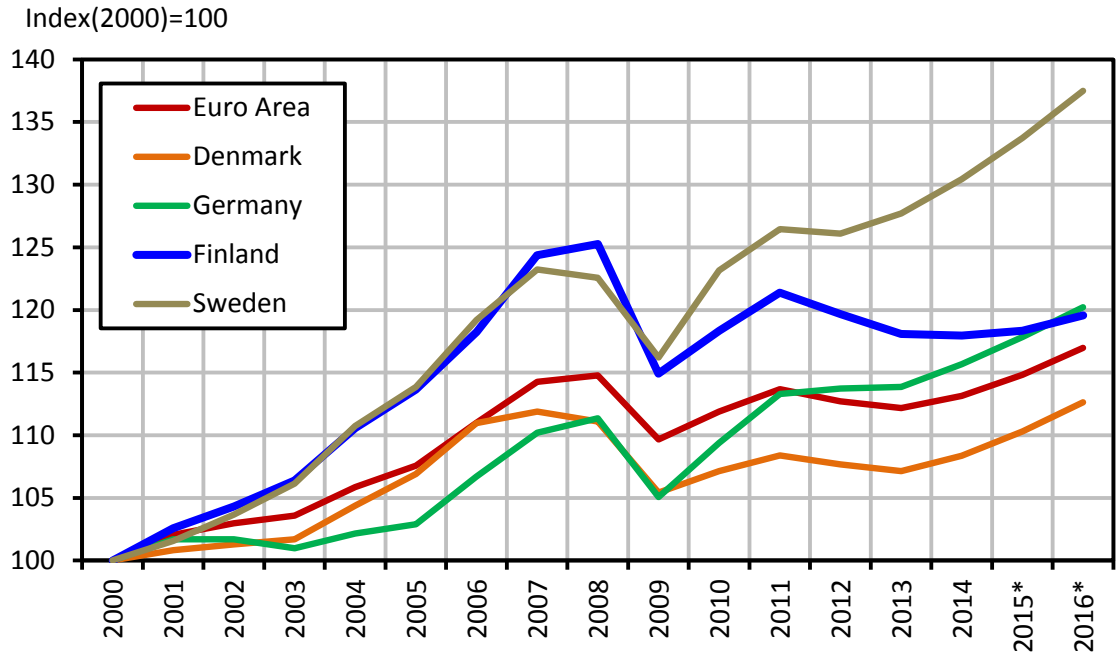


Source: Statistics Finland, National Accounts (2015*–2017* Ministry of Finance forecast, September 2015)

Figure 2.1.2 compares the development in GDP in Finland with selected other countries (Sweden, Denmark and Germany) and the Euro Area aggregate over the period 2000–2014. The figure also includes European Commission forecasts for 2015–2016.

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 Euro Area seem to have begun their recovery from the recession, GDP growth is still slow in Finland. Thus Finland has not been able to benefit from the gradual recovery in Europe. Also, the European Commission predicts that GDP growth in Finland will turn positive in 2015–2016, but the growth rate is predicted to be lower than in the comparison countries and the Euro Area.

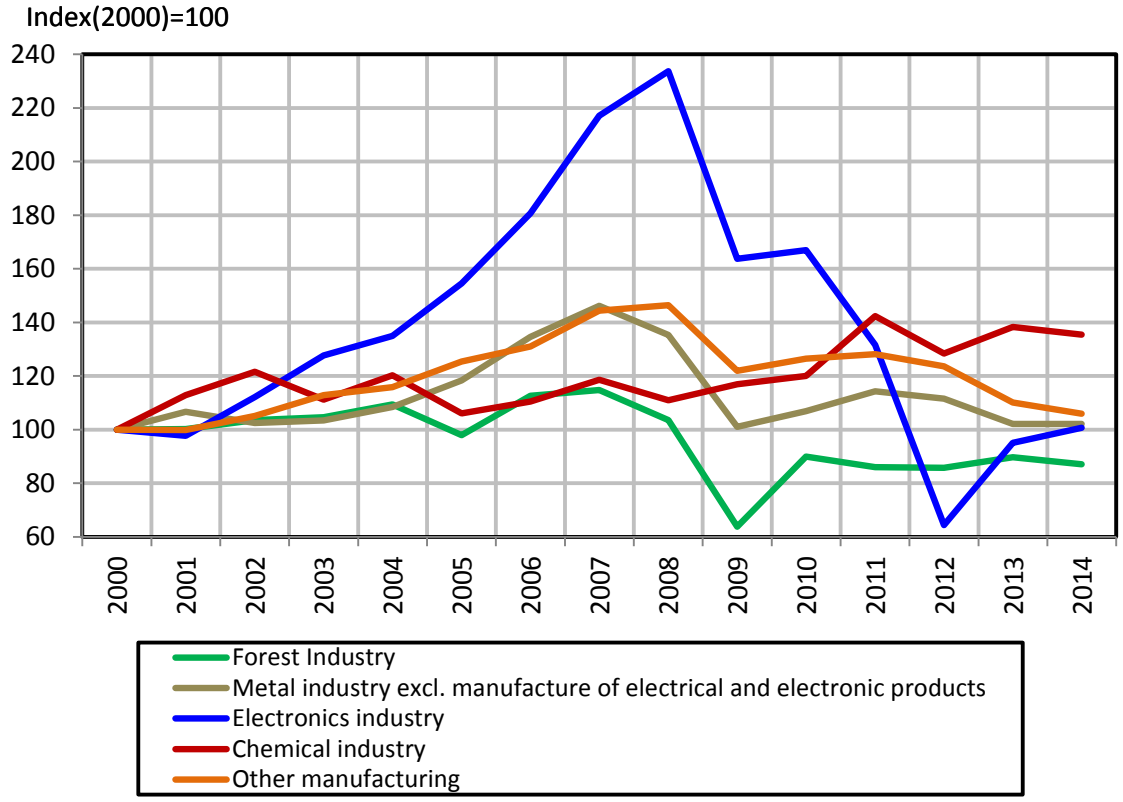
Figure 2.1.2 GDP at constant prices in selected countries and the Euro Area, 2000–2014 (index, 2000=100)



Source: European Commission, AMECO database (2015*–2016* European Commission forecast)

Even though the economic downturn affected all sectors in Finland, the decline in GDP can be largely explained by a significant drop in manufacturing. The overall drop in manufacturing is to a large extent due to the decline of the electronics industry after the boom of the 2000s, see Figure 2.1.3. The annual gross value added of the electronics industry increased by EUR 5 billion from 2000 to 2008, and fell by over EUR 6 billion between 2009 and 2013. The metal industry also experienced rapid growth between 2002 and 2007, which was followed by a decline after the beginning of the financial crisis. Growth in the forest industry has been slow throughout the period 2000–2008, and thus its long-run negative development cannot be only explained by the recent recession. In contrast, the chemical industry is one of the few sectors that has been able to grow in recent years despite the recession in the aggregate economy.

Figure 2.1.3 Gross value added in various industries, 2000–2014 (index, 2000=100)

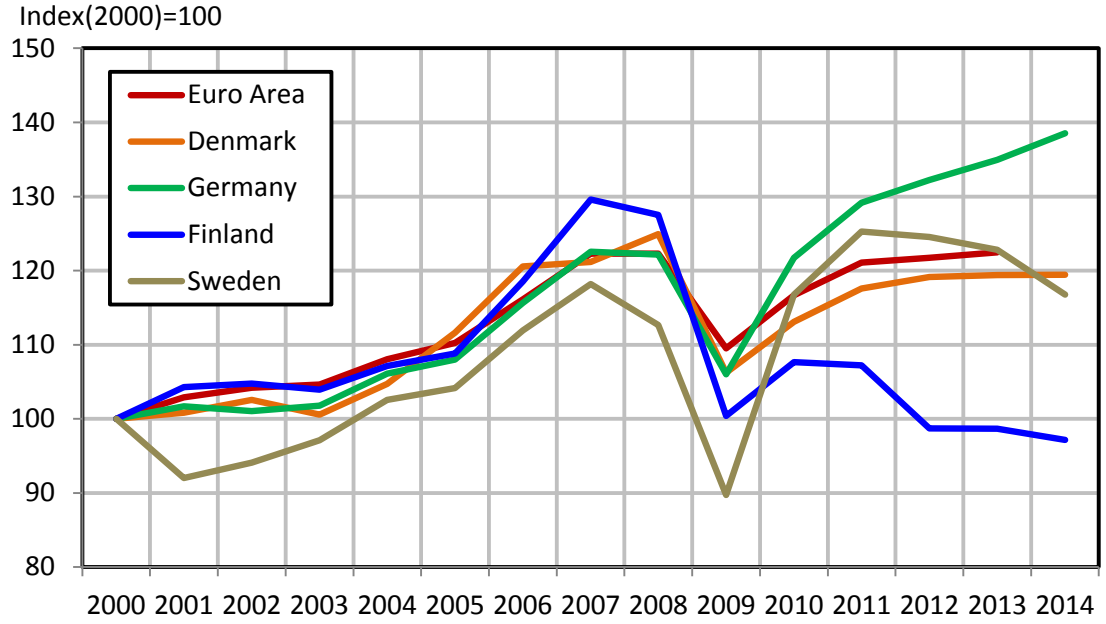


Source: Statistics Finland, National Accounts

Figure 2.1.4 shows the gross value added in the industry sector[1] in the Euro Area and selected comparison countries (Germany, Denmark, Sweden). The gross value added dropped in all of the countries in 2009. In contrast to the comparison countries, industrial output in Finland has not recovered from the 2009 level. The fact that the Finnish manufacturing has not been able to recover, even though the gross value added in the Euro Area is slowly increasing, can be considered to be an indicator of structural problems.

[1] Includes manufacturing (C), electricity, gas, steam and airconditioning supply (D) and water supply, waste management and remediation activities (E).

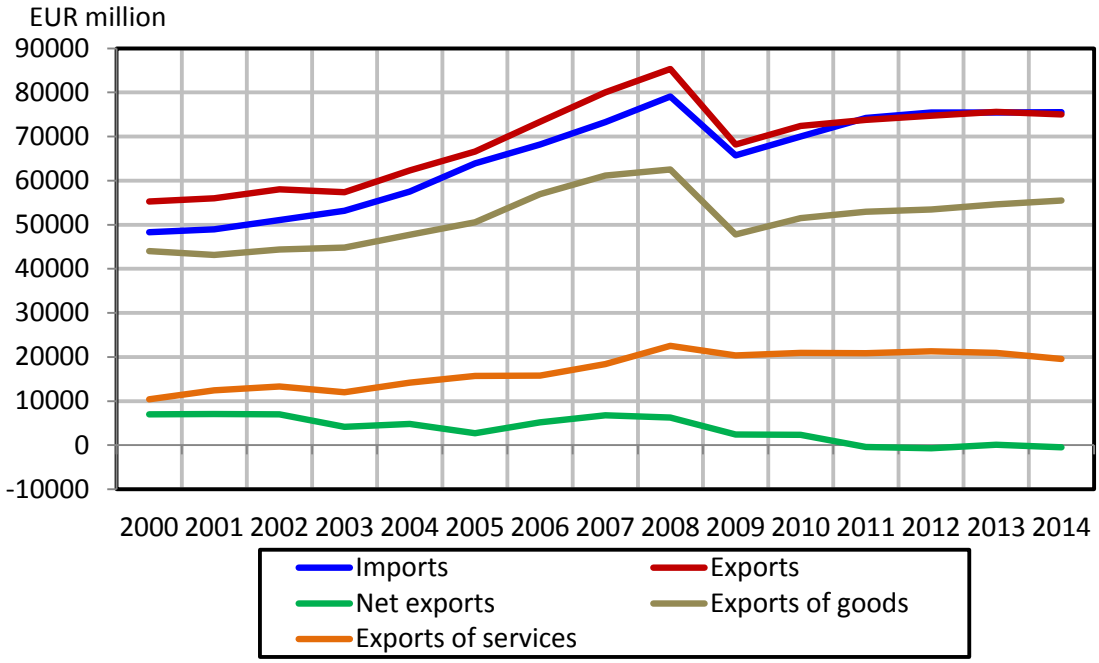
Figure 2.1.4 Industry gross value added (excl. building and construction) in selected countries and the Euro Area, 2000–2014 (index, 2000=100)



Source: European Commission, Ameco database

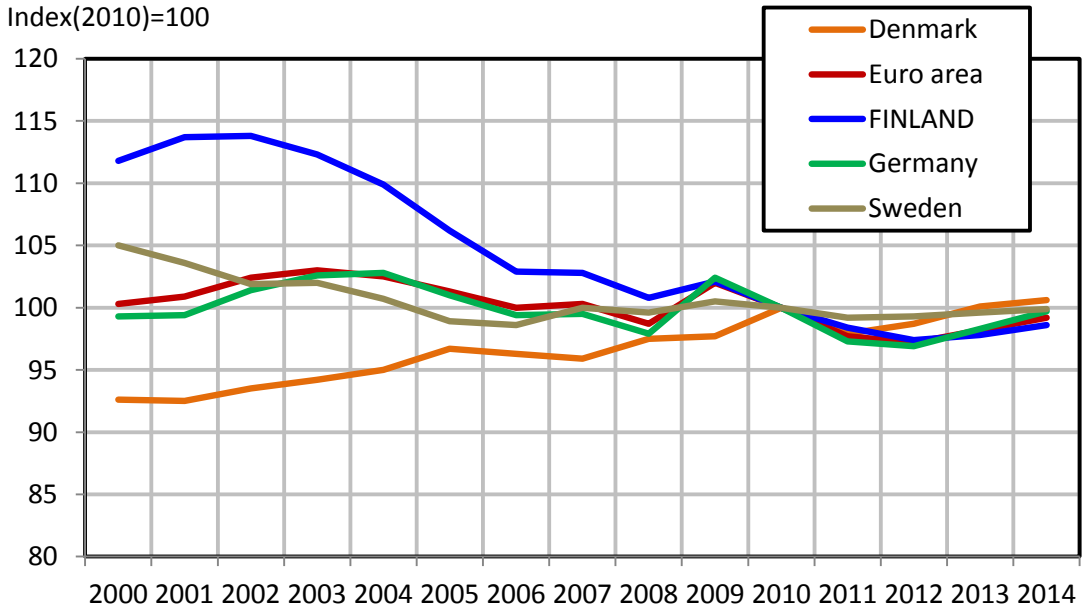
Both imports and exports have declined markedly in Finland after 2008, but the decrease in exports has been larger (Figure 2.1.5). Consequently, net exports started to decline after 2008. In the last four years net exports were positive only in 2013. In line with the large and long-lasting drop in industrial output, the aggregate decline in exports is mainly due to decreased exports of goods. In contrast, exports of services did not experience a large drop in 2008. Nevertheless, according to Statistics Finland, the growth in exports of services stalled after 2008. The terms of trade, which measures how many units of foreign goods can be purchased with one unit of domestic output, have declined since 2002 (see Figure 2.1.6). This is another indicator of problems in the Finnish export sector. The deterioration of the terms of trade has slowed down from 2006 onwards, with a slight improvement in 2013 and 2014.

Figure 2.1.5 Imports and exports of goods and services, 2000–2014 (2010 prices, EUR million)



Source: Statistics Finland, National accounts

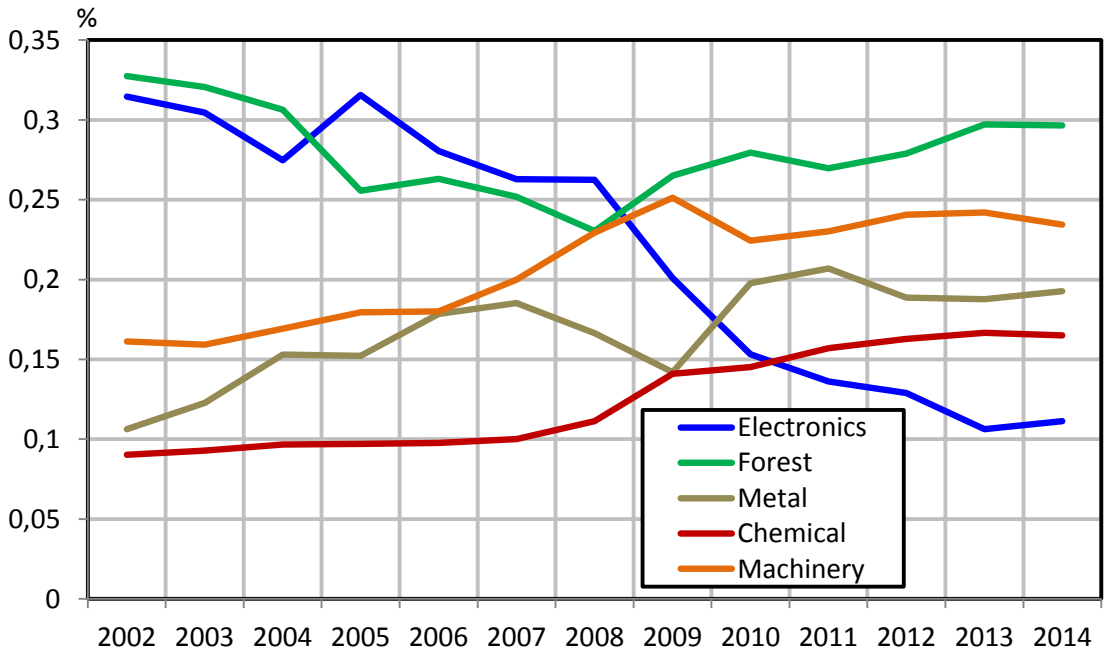
Figure 2.1.6 Terms of trade in Finland and in selected countries and the Euro Area, 2000–2014 (index, 2010=100)



Source: OECD Data. The terms of trade are defined as the ratio between the index of export prices and the index of import prices

The structure of exports has changed significantly since 2005. The share of the electronics industry relative to other key industries in Figure 2.1.7 has plunged from 32% in 2005 to 11% in 2014. Meanwhile, the share of other key export categories (forest, metal, machinery and chemical industries) has stayed constant or increased. However, the figure only shows the export share of each industry, and it is also noteworthy that within these sectors only the chemical industry has a higher value of exports in 2014 than in 2008. Overall, significant changes in the industrial structure and export shares stemming from the rapid decline of value added in the electronics industry indicate that the Finnish economy is undergoing a considerable structural change.

Figure 2.1.7 Export shares in various industries, 2002–2014

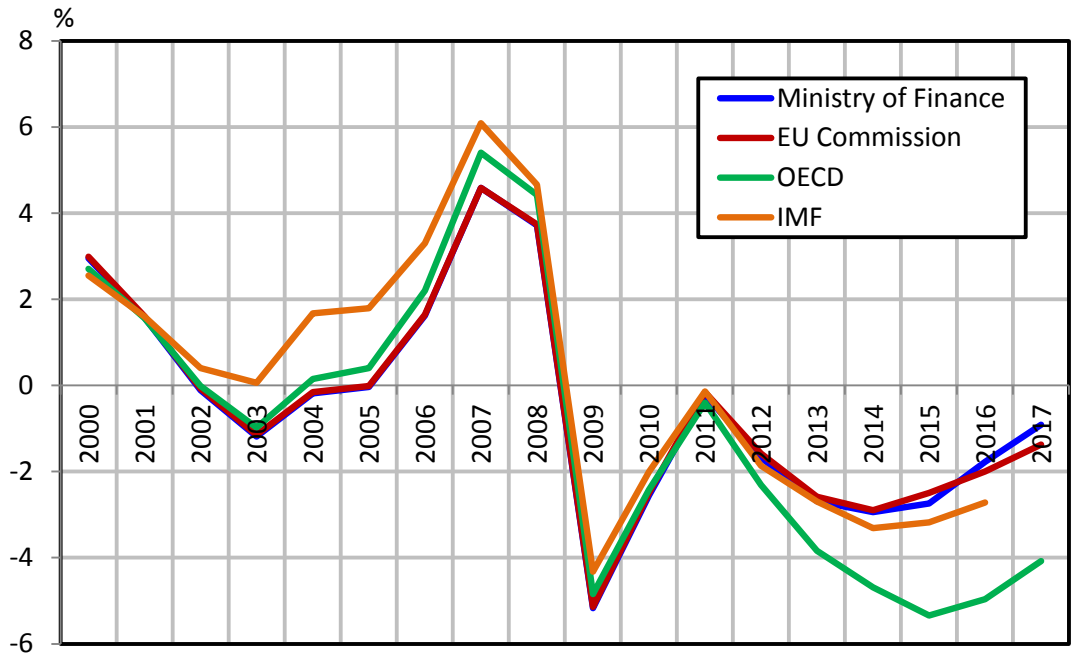


Source: Customs Finland, Foreign trade statistics

Figure 2.1.8 depicts the estimates of the output gap in Finland as calculated by various institutions (Ministry of Finance, European Commission, OECD and IMF). 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. In addition, deviations from zero indicate changes in the cyclical position of the economy, as by definition actual GDP equals the potential output in the long-run.

The output gap has been negative from 2008 onward, implying that the aggregate output has been below its potential for a long period of time. This indicates that cyclical factors have also had an effect on the recent economic development. However, the simultaneous structural change has made the recovery from the cyclical downturn difficult and slow. This is due to relatively low diversification in the export sector and the manufacturing sector value added, which made Finnish economic performance vulnerable to the rapid decline of the electronics industry. This is also indicated by the slow recovery of the manufacturing sector relative to comparison countries such as Sweden and Denmark (Figure 2.1.4). It should be noted that structural changes imply larger uncertainty in the calculations of the output gap, since such estimates rely on an assessment of full-capacity (potential) output.

Figure 2.1.8 Estimates of the output gap, 2000–2017 (%)

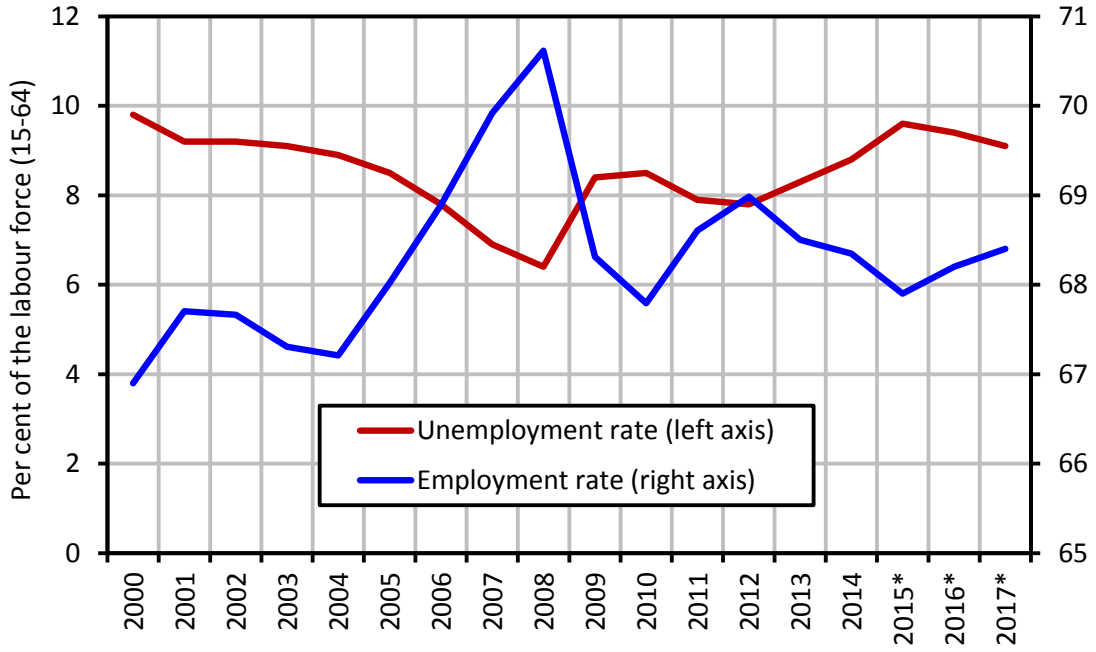


Sources: Ministry of Finance (September 2015), European Commission AMECO database, OECD Economic Outlook (November 2015), IMF World Economic Outlook Database (October 2015)

2.2 Employment, unemployment and productivity

Employment has decreased and unemployment increased as a result of the crisis, see Figure 2.2.1. The unemployment rate increased by 2 percentage points to 8.4% between 2008 and 2009. The unemployment rate remained relatively stable at around 8% until recently. Since 2012 the unemployment rate has increased by one percentage point. Furthermore, according to the recent MoF forecast, the unemployment rate will further increase and the employment rate decrease in 2015–2017.[2]

Figure 2.2.1 Unemployment rate and employment rate according to Statistics Finland, 2000-2014



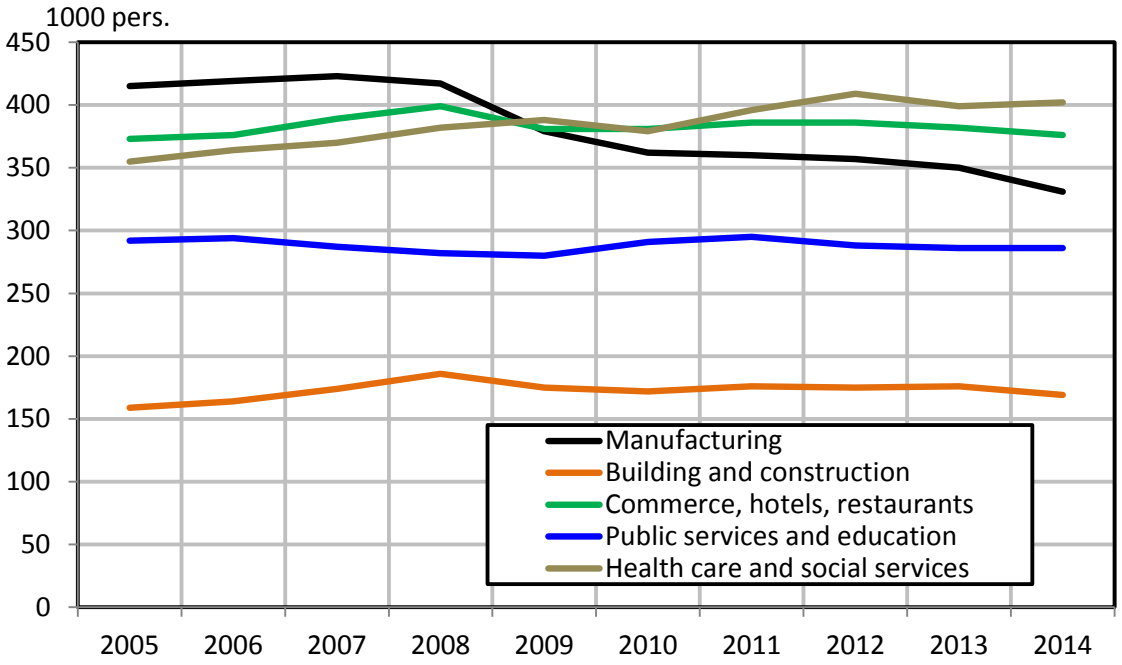
Source: Statistics Finland, Labour Force Survey (2015*–2017* Ministry of Finance forecast, September 2015)

[2] Prime Minister Sipilä's government has proposed cuts to the unemployment benefit system. This together with the increasing unemployment rate and the increasing number of long-term unemployed discussed in the previous Economic Policy Council Report (Economic Policy Council, 2015) make labour market development an important topic to discuss. The Economic Policy Council will provide a detailed analysis of issues related to unemployment and employment in the next annual report.

The development in employment across sectors in 2005–2014 is shown in Figure 2.2.2. The number of individuals working in manufacturing decreased notably relative to other sectors, such as construction and services. In particular, employment in health care and social services has increased by 50,000 individuals in 2005–2014. This implies a change in the overall structure of employment from manufacturing towards the service sector.

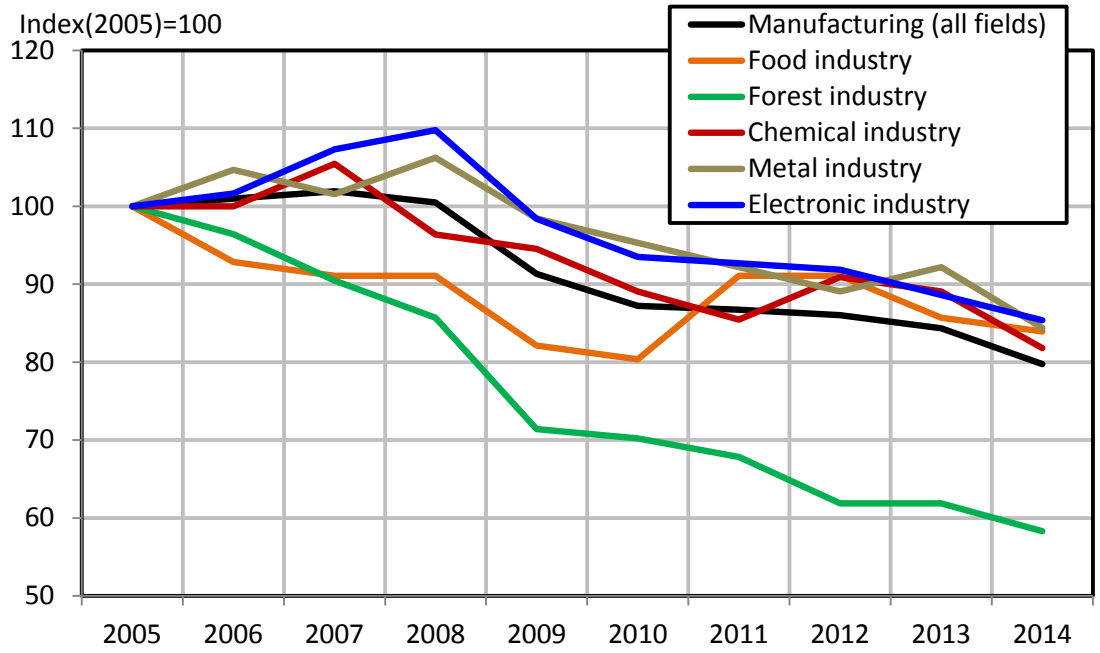
Figure 2.2.3 displays employment in various industries in 2005–2014. Employment has declined in all sectors despite the somewhat different development in gross value added between these sectors (Figure 2.1.3). Declining employment in the forest industry followed the stagnant growth of gross value added throughout the first decade of the 2000s, and employment in the electronics industry dropped by nearly 25% after 2008. These follow the pattern of structural change in the Finnish economy discussed above.

Figure 2.2.2 Employment in various sectors, 2005–2014 (1000 pers.)



Source: Statistics Finland, Labour Force Survey

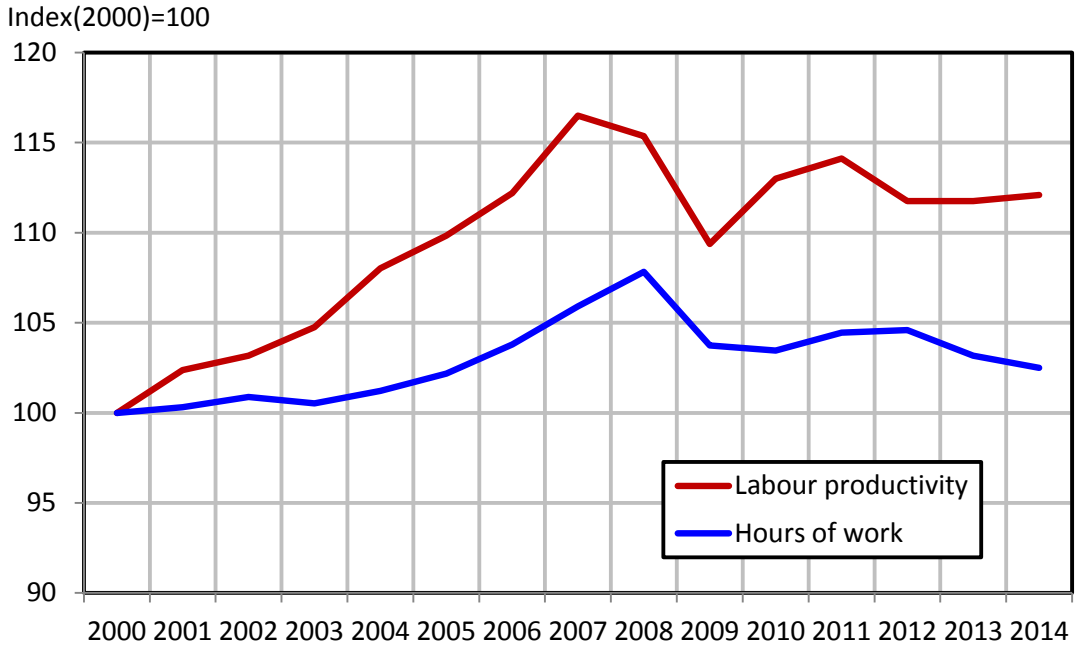
Figure 2.2.3 Employment in various industries, 2005-2014 (index, 2005=100)



Source: Statistics Finland, Labour Force Survey

While GDP has decreased in recent years, employment has not followed this development closely, which would indicate a drop in aggregate productivity. Indeed, labour productivity (real GDP per hours of work) stalled in 2007, and dropped by 5% in 2009 (Figure 2.2.4). This type of development is highly exceptional in Finland. Since 1975, aggregate labour productivity has fallen only in three years: 2008, 2009 and 2012. The long-run average growth rate in labour productivity was 2.7% between 1975 and 2008.

Figure 2.2.4 Hours of work and productivity (GDP per hours of work), 2000-2014 (index, 2000=100)



Source: Statistics Finland, productivity surveys

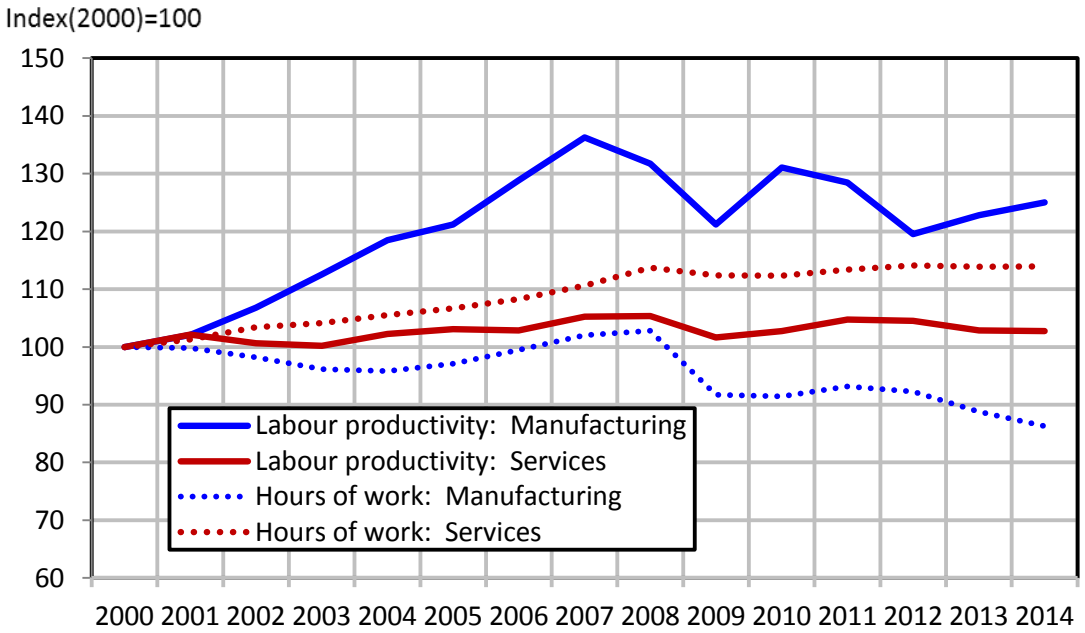
Aggregate hours of work have decreased since the recession started (Figure 2.2.4). The decrease in working hours has been larger than the drop in employment, implying that overall labour input has decreased more than would be implied solely by the development of the employment rate.

In particular, working hours and employment decreased in 2012–2014. At the same time labour productivity has increased slightly. However, it seems that it is decreased aggregate working hours that has driven the positive turn in aggregate productivity development, not an increase in the value of production.

Figure 2.2.5 shows labour productivity and hours of work separately for services and manufacturing. First, hours of work decreased in the manufacturing but increased in services. There has thus been a shift of labour input from the manufacturing to services within the Finnish economy. Second, productivity growth has been very different in different sectors. Labour productivity growth in the service sector has been relatively low, while before 2007 productivity growth was rapid in manufacturing. However, despite a clear drop in hours of work, labour productivity has also decreased significantly in manufacturing after 2007. This indicates that the

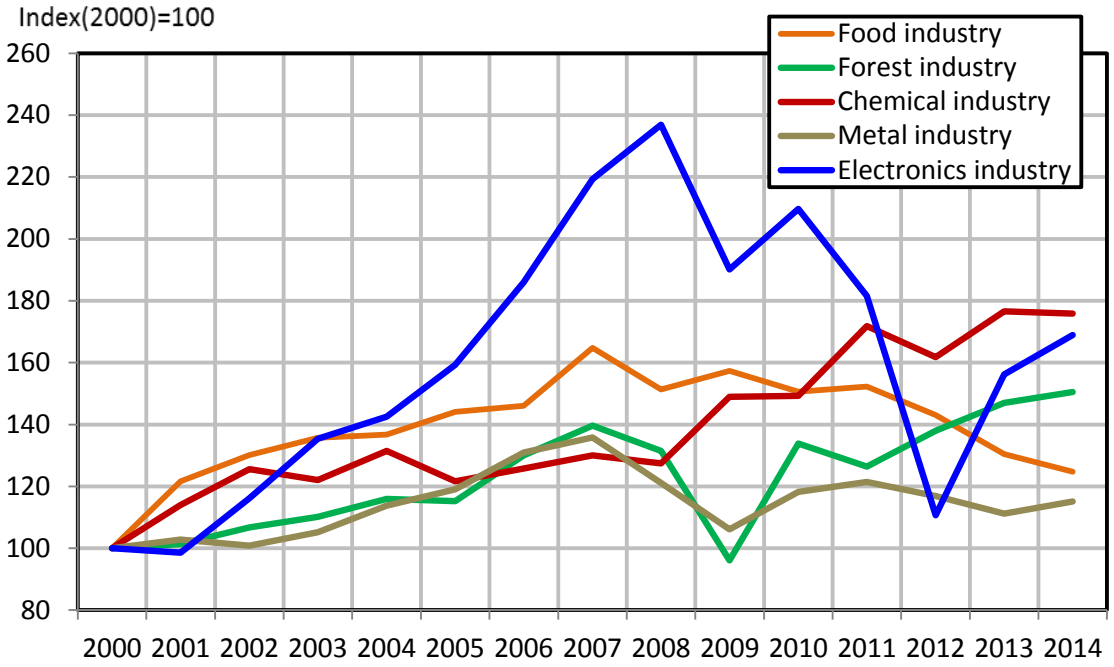
shift of labour input between the sectors does not fully explain the downturn in labour productivity, and that a large part of the decline in overall productivity has occurred within the manufacturing sector. However, productivity in the manufacuring sector has increased again in recent years, but this is likely to have been caused by decreased aggregate working hours.

Figure 2.2.5 Hours of work and productivity (GDP per hours of work) in various sectors, 2000-2014 (index, 2000=100)



Source: Statistics Finland, productivity surveys

Figure 2.2.6 Productivity in different industries, 2000-2014 (index, 2000=100)

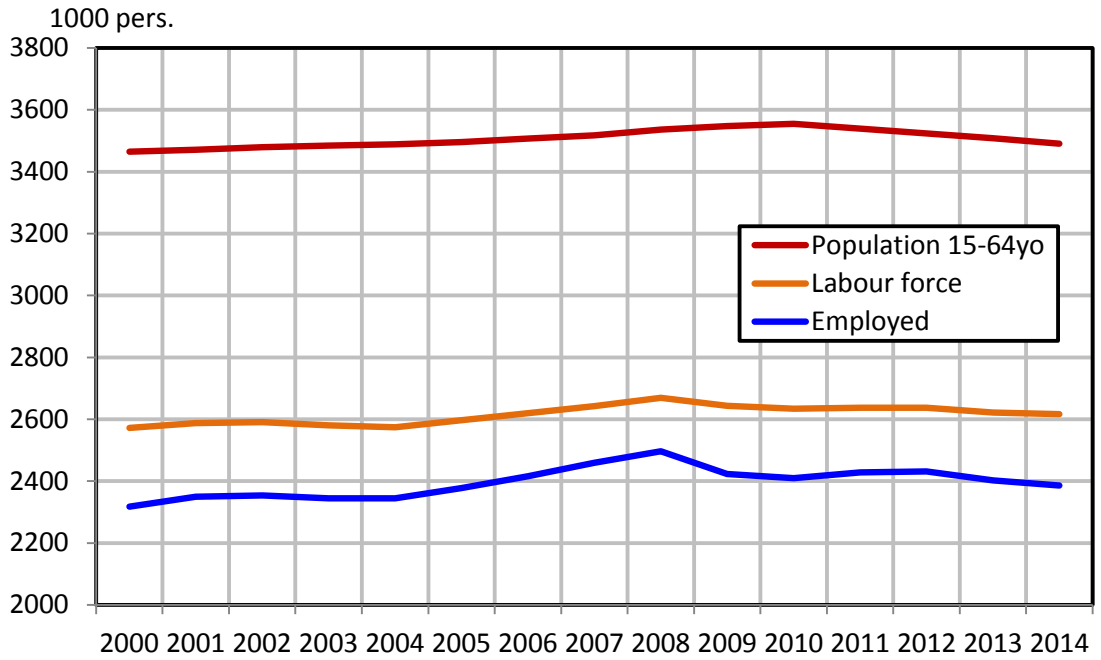


Source: Statistics Finland, productivity surveys

Figure 2.2.6 shows that productivity development in manufacturing follows the development of the electronics industry, whose productivity grew very strongly in 2000–2008, and then decreased rapidly after 2008. In addition, the metal and forest industries also experienced a notable drop in productivity in 2009. In contrast, productivity in the chemical industy has grown steadily troughout the period 2000–2014. We discuss developments in productivity, labour costs and industry sector competitiveness in more detail in Chapter 4.

Finally, Figure 2.2.7 depicts the development in the working age population, labour force and employment. Employment dropped after 2008. This was mainly due to decreased labour force participation. Note that the working age population has started to decline compared to its peak in 2010, and this is reflected in smaller labour force. The decreasing working-age population and labour force combined with the downturn in productivity imply difficult challenges for the Finnish economy.

Figure 2.2.7 Working age population, labour force and employment, 2000-2014 (1000 pers.)



Source: Statistics Finland, Labour Force Survey

2.3 Public sector deficit and debt

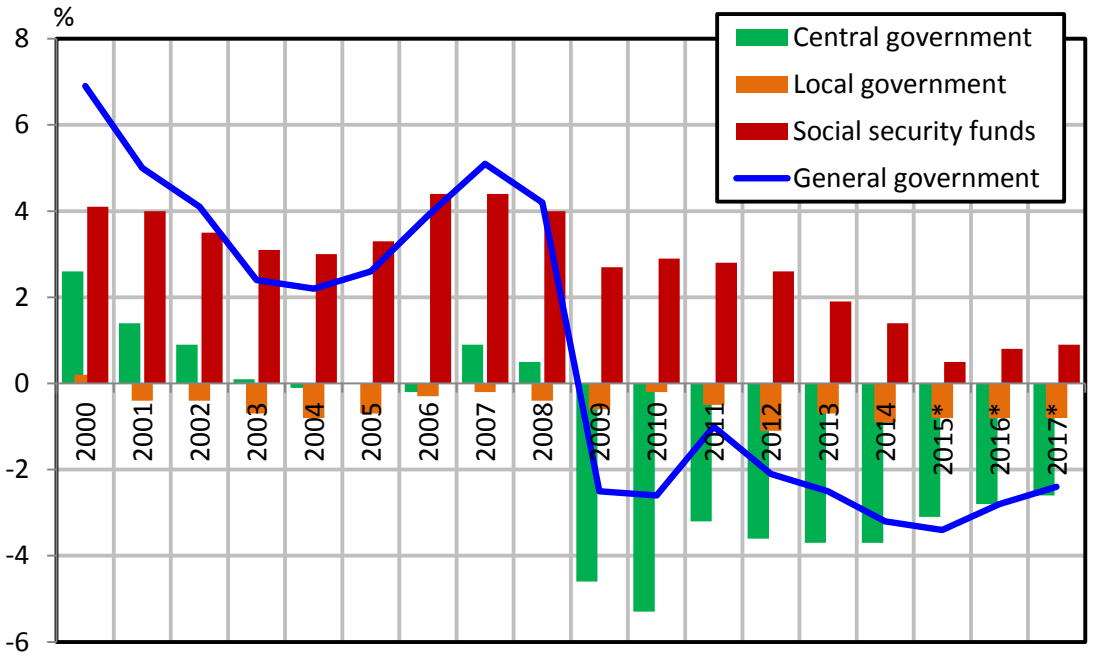
In Finland, general government consists of central government, local government (municipalities) and social security funds (including private sector pension funds). Figure 2.3.1 describes the general government surplus/deficit (difference between total revenue and total expenditure) and its components between 2000 and 2014, and the Ministry of Finance forecast for the general government deficit in 2015–2017.

Until 2009, the general government had a surplus. This was mainly due to a large surplus in pension funds that has been built up to prepare for the forthcoming increase in pension payments. Municipalities had a deficit in all of the years except 2000. The central government had a surplus in the early 2000s, but after that the deficit/surplus was close to zero before 2009.

After 2009, general government has had a deficit driven by large annual central government deficits. In addition, the local government deficit has increased, and the surplus of the social security funds has shrinked. In 2014, the general government deficit exceeded 3% of GDP. The Ministry of Finance

forecasts the general government deficit to increase in 2015, and after that gradually decrease below 3%, but still to remain considerable.

Figure 2.3.1 General government surplus/deficit, 2000-2014 (relative to GDP, %)

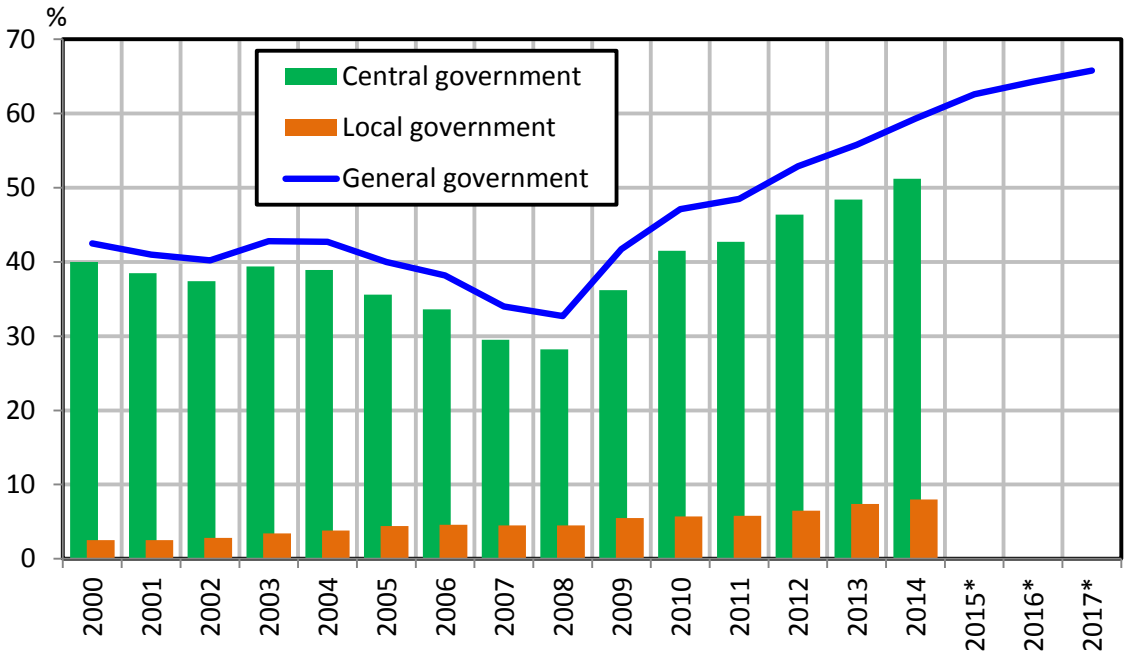


Source: Statistics Finland, General government deficit and debt (2015*–2017* Ministry of Finance forecast, September 2015)

Figure 2.3.2 describes the general government debt and its subcomponents in 2000–2014, and the Ministry of Finance forecast of general government debt for 2015–2017. The general government indebtedness gradually decreased before 2008, and was at a relatively low level of 33% of GDP in 2008. However, after the financial crisis in 2008, general government debt relative to GDP started to increase rapidly. The increase was mainly due to higher central government debt relative to GDP. However, municipal relative indebtedness has also steadily increased over the last 14 years.[3] The general government debt-to-GDP ratio was close to 60% in 2014, and it is forecasted by the MoF to increase further in 2015–2017.

[3] Social security funds have no debt and instead have substantial assets (not included in the figure). We discuss this issue in Chapter 5.

Figure 2.3.2 General government indebtedness, 2000-2014 (relative to GDP, %)



Source: Statistics Finland, General government deficit and debt (2015*–2017* Ministry of Finance forecast, September 2015)

The 60% of GDP ceiling on general government debt, and the 3% ceiling for the general government fiscal deficit, are among the key EU fiscal targets. In addition, governments are required to set medium-term objectives (MTO) in terms of the cyclically adjusted budget balance (structural budget balance), which we will discuss in Chapters 3 and 5. Based on the figures above, Finland will break the deficit ceiling in 2014 and 2015, but is forecasted to return below the 3% limit in 2016. In addition, the debt-to-GDP ratio is currently increasing and will break the 60% limit in 2015.

A debt-to-GDP ratio slightly above 60% is not necessarily a problem as such. Many other EU-countries, such as the Netherlands (68.8%), Germany (74.7%) and Austria (84.5%) had debt-to-GDP ratios well above 60% in 2014. However, the increasing trend in indebtedness and the forecast poor GDP development in Finland imply further increases in debt levels in the near future (without further discretionary policy changes). We will discuss the fiscal rules and their implications in more detail in Chapter 5.

The general government budget balance depends both on active fiscal policy decisions and the overall economic development. To arrive at a measure

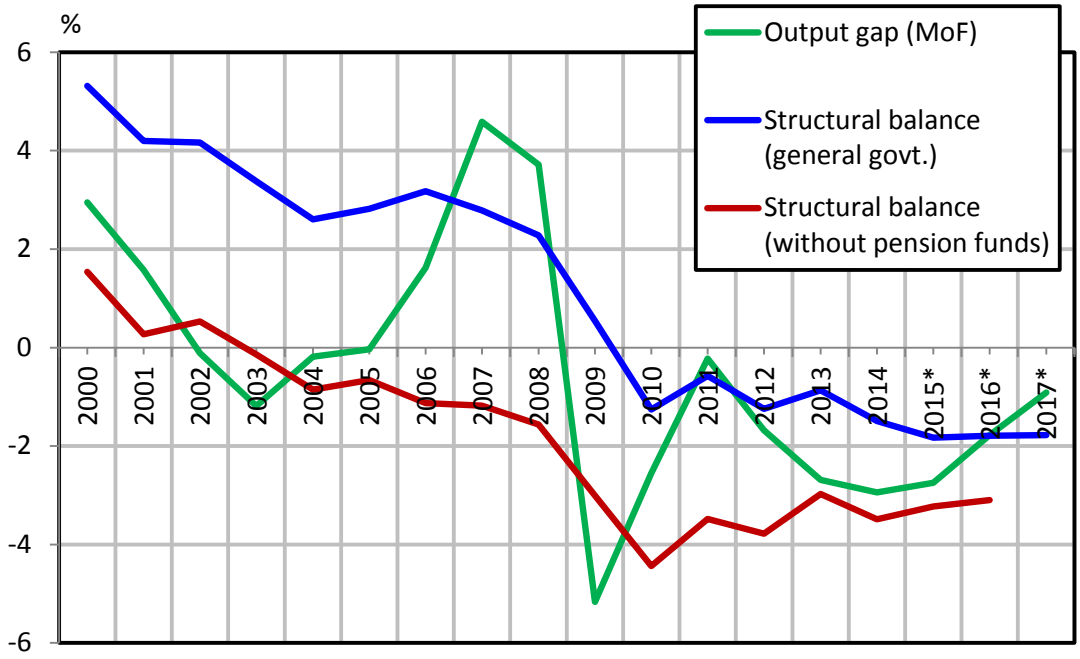
more closely related to the effects of discretionary fiscal policy on the fiscal balance, business cycle effects need to be removed. A widely used indicator for characterizing the effect of fiscal policy is the general government structural budget balance.

The structural budget balance is calculated by subtracting the estimated cyclical component and one-off effects from the overall general government budget balance. The cyclical component is calculated based on the estimated output gap and an estimate of the semi-elasticity of net lending with respect to the output gap. The output gap measures the deviation of output from its potential level, which is the highest sustainable long-run level of output. The semi-elasticity is a measure of the sensitivity of the budget balance to the business cycle, and it provides the expected change in general government budget balance in percentage points when the output gap increases by one percentage point. A more detailed discussion of the calculation of the structural budget balance can be found in last year's Economic Policy Council report (Economic Policy Council, 2015).

Figure 2.3.3 shows the structural deficit in 2000–2014. In addition to general government structural deficit, we present our own estimates of the structural deficit for the general government excluding pension funds. The methods for these calculations are described in more detail in the previous Council report.[4]

[4] Box 2.2.1 on pages 40–41 in last year's report describes the calculation of the structural deficit and separating pension funds from the general government structural deficit. The semi-elasticities used in the calculation are 0.57 for the general government and 0.49 for central government, local government and social security funds excluding pension funds. The results and conclusions are not sensitive to small changes in the elasticity parameters.

Figure 2.3.3 Structural surplus/deficit and the output gap, 2000–2015 (relative to GDP, %)



Source: Data from Ministry of Finance (September 2015) and Statistics Finland National Accounts, calculations by the Economic Policy Council

The Finnish public sector had a significant structural surplus before 2009. However, after 2009 the structural balance weakened rapidly, and has remained negative since then. In 2014, the structural deficit was around 1.5% of GDP, and according to the MoF's forecast it will slightly increase in 2015.

Looking solely at the development of the structural deficit, it appears that fiscal policy has been countercyclical in 2000–2014. During the economic expansion period, the structural balance was positive, and it turned negative at the start of the recession in 2009. However, it is important to note that the structural budget balance is also affected by many other factors than purely discretionary policy changes. For example, population ageing increases pension expenditures, and therefore worsens the structural budget balance even if no changes in fiscal policy are implemented. Thus, judging by the magnitude of the structural balance, fiscal policy may appear more expansionary than it actually is if judged only by discretionary fiscal policy measures when the population is ageing. Last year's Economic Policy Council report provides alternative approaches to evaluating the past fiscal

policy stance. The fiscal policy proposals of the current government are discussed in Chapter 3.

In Finland, the general government structural balance also includes pension funds. Pension funds have had a considerable surplus in order to prepare for increasing pension expenditures due to population aging. In addition, private pension funds cannot in principle be used to cover deficits in other sectors. Therefore, including pension funds when calculating the structural balance understates the need for balancing central government and local government finances.

Figure 2.3.3 shows that when excluding pension funds, the structural balance was negative already before the recession. In other words, the general government structural surplus was due to the large surplus in pension funds, and therefore including them hides a notable structural deficit in the rest of the public sector. The structural deficit excluding pension funds exceeded 4% of GDP in 2010. Improvements in the central government fiscal balance have moderately reduced the structural deficit in recent years, but it will still remain above 3% of GDP in 2015.

An important implication of separating pension funds from other sectors is that fiscal policy targets based on the entire public sector provide an overly optimistic view of the magnitude of fiscal adjustment needed to attain structural balance. Therefore, it is more straightforward and useful to set medium-term structural fiscal policy targets separately for different subsectors. Also, it is important to set separate fiscal policy targets such that they are consistent with long-term fiscal sustainability, taking into account, for example, the expected future increases in pension payments and other age-related expenses. We discuss fiscal rules in more detail in Chapter 5.

2.4 Economic outlook and long-term forecasts

Table 2.4.1 lists the latest forecasts for real GDP growth for 2015, 2016 and 2017 by the Ministry of Finance (MoF), the Bank of Finland (BoF), and three Finnish research institutes (the Research Institute of the Finnish Economy (ETLA), the Labour Institute for Economic Research (PT) and Pellervo Economic Research (PTT)). The forecasts of the European Commission, the OECD and the IMF are also reported.

The forecasts of the various institutes are very much in line with each other. GDP growth is forecast to be 0.2–0.4% in 2015. For 2016–2017, the forecasts predict GDP growth to turn positive, but the growth rates are moderate.

The MoF forecast is particularly important for economic policy, as the government's fiscal policy is mainly based on these numbers. The comparison of recent forecasts in Table 2.4.1 shows no signs of the MoF forecast diverging systematically from the other forecasts.

However, it is important to note that forecasting economic growth is currently difficult even for the short run. All institutions, including the MoF, emphasize that GDP forecasts include a lot of uncertainty related to international developments such as the future economic development in China and Russia, and also in Europe. As an export-driven economy, the Finnish business cycle is highly dependent on international economic conditions.

Table 2.4.1 Forecast GDP (change in volume, %)

	2015	2016	2017
Ministry of Finance (18.12.2015)	0.2	1.2	1.2
Bank of Finland (10.12.2015)	-0.1	0.7	1.0
European Commission (6.11.2015)	0.3	1	1.1
IMF (October 2015)	0.4	0.9	1.2
OECD (9.11.2015)	-0.1	1.1	1.6
ETLA (23.9.2015)	0.2	1	1.3
PT (17.9.2015)	0.4	1.2	
PTT (29.9.2015)	0.2	1.1	

Figure 2.2.1 above shows that the MoF predicts the unemployment rate to increase in 2015–2017. This forecast is also in line with those of the other institutions. They all predict the unemployment rate to rise to 9–10% in coming years.

In June 2015, the Economic Policy Council and Jyväskylä University School of Business and Economics requested several Finnish research institutes (the Research Institute of the Finnish Economy (ETLA), the Labour Institute for

Economic Research (PT), Pellervo Economic Research (PTT) and the VATT Institute for Economic Research (VATT)), the Bank of Finland and the Ministry of Finance to produce their forecast for the long-term economic development in Finland. In addition, these institutes were asked to provide their forecast of long-run labour productivity growth in Finland.

Table 2.4.2 presents the long-term forecasts of the various institutions. The forecasts along with the institutions' views on the determinants of long-run economic development were published in the Finnish Economic Journal in October 2015.

Table 2.4.2 Long-run forecast GDP per capita and productivity (%)

	GDP per capita growth		Labour productivity growth	
	2016–2025	*2026–2035*	*2016–2025*	*2026–2035*
Ministry of Finance	0.7	1.2	0.9	1.4
Bank of Finland	0.5	1	0.8	1.1
VATT	1.1	1.2	0.9	1.4
ETLA	1	1.4	1.4	1.6
PT	1.2	1	1.4	1.1
PTT	1.3	1.6	2	2
Average	*0.97*	*1.23*	*1.23*	*1.43*

All the institutions predict that GDP per capita will grow slowly over the next 20 years in Finland. GDP growth is forecasted to be slightly faster in 2026–2035 (on average 1.2%) compared to 2016–2025 (1%). The MoF predictions for long-run economic growth are in line with the other institutions, although they are at the lower end for the next 10 years.

The main determinant behind the slow GDP growth rate is sluggish productivity growth. In 1970–2008, the growth rate of GDP per hours of work was slightly below 3%. In comparison, the average forecast productivity growth is only 1.2% in 2016–2025 and 1.4% in 2026–2035. The decreasing labour productivity growth forecast is in line with the

predicted overall decrease in labour productivity growth in developed countries over coming decades.

However, it is very difficult to predict labour productivity growth rates for the next 10–20 years. Nevertheless, the long-run forecasts highlight that under the current knowledge, future growth trends tend to be lower than what we have seen during the last 20–30 years.

2.5 Concluding remarks

The Finnish economy is experiencing a prolonged economic downturn with negative or minor positive GDP growth rates, and unemployment has also been increasing. In addition, short-run forecasts rather unanimously predict slow GDP growth and increasing unemployment rates also in coming years.

The recent trend is characterized by a considerable downturn in manufacturing since 2008. This can be partly explained by the overall recession in the world economy. As an indication of this business cycle effect, the output gap has been negative in Finland since 2008. However, the downturn is also partly explained by the structural change in the Finnish manufacturing sector, caused mainly by the sharp decline in the electronics industry after 2008. Consequently, productivity in the manufacturing sector has considerably decreased after its peak in 2008. Significant structural changes combined with the cyclical downturn have made economic recovery difficult, and even seven years after the onset of the crisis the economic prospects are rather dim.

Due to recent economic development, public sector deficits and debt relative to GDP have increased sharply during the last seven years. However, it is important to note that the general government surplus before 2009 was mainly due to a large surplus in social security and pension funds. Local government has had a deficit since 2001, and the central government surplus/deficit was relatively small before 2009. Consequently, the structural balance of the general government exluding pension funds has been negative since 2004. This implies that central and local government have had a large combined cumulative structural deficit for the last 10 years.

This development together with increasing age-related expenditures are critical for the long-run financial sustainability of the public sector.

Long-term economic forecasts predict slow GDP growth for the next 10–20 years. This implies that the long-run economic growth rate is clearly below what has been observed during the last 20–30 years. Lower future growth rates are mainly due to a sharp decline in labour productivity.

3 The government's fiscal policy

The government has launched an extensive consolidation programme to reduce public sector deficits. The consolidation measures mainly include cuts to various public sector expenditures such as social benefits. The magnitude of the proposed policy measures is insufficient to achieve the medium-term objective for the structural deficit, or to close the sustainability gap. Moreover, as the details of some of the proposed policy measures are not yet fully specified, considerable uncertainty still remains on the effect of the government programme on public finances. Reaching fiscal policy targets would therefore require implementing further consolidation measures and/or structural reforms.

This chapter describes and discusses the government's proposed fiscal policy measures. We begin by summarizing the main policy proposals of Prime Minister Juha Sipilä's government, and then describe the magnitude and composition of the proposed consolidation measures and their effect on the public sector budget balances. In addition to an assessment of the magnitude of the consolidation efforts, we also provide some comments on reforms to the structure of taxation. A more detailed discussion on the timing and structure of the consolidation measures is deferred until Chapter 6. In addition, we discuss the process of formulating the government programme after the parliamentary election in spring 2015.

3.1 Overview of the fiscal policy plan for 2016–2019

A key fiscal policy objective of Prime Minister Sipilä's government is to reduce public sector deficits by cutting the general government deficit and thereby stopping the growth in public sector debt over the next

parliamentary term. In order to reach these objectives, the government has launched a consolidation programme.

Consolidation will be mainly implemented by cutting public expenditure. The measures are phased in so that annual expenditure cuts will increase from approximately EUR 1.3 billion in 2016 to EUR 3.5 billion in 2019. (Note that these are cumulative numbers, meaning that expenditures in 2019 will be EUR 3.5 billion lower compared to the 2015 level. That is, the annual expdenditure cuts should not be added together.) On the other hand, the government has committed to not increasing the tax-to-GDP ratio in 2016–2019. This target limits the scope for adjusting the fiscal stance with active tax policy measures. Therefore, the proposed changes in tax policy mainly include changes in the structure of taxation without significant changes in overall tax revenue. However, the government has decided to increase both unemployment and pension insurance contribution rates, which are similar to increasing the income tax rate as they are levied on (gross) wage income. Including changes in social security funds, the total magnitude of this consolidation will be approximately EUR 4 billion in 2019.

In addition to spending cuts, the government will increase public investment in selected key policy areas by a total of EUR 1.6 billion in 2016–2018. (It should be noted that the logic behind this number is different to the one behind the numbers for the expenditure cuts. Here, the annual investment increases between 2016 and 2018 have been added together. Therefore, the average annual increase in investment amounts to about a third of this number.) These investments include new investment in e.g. education, health care, clean technology and biotechnology, and improvements to existing public infrastructure. These investments are small in magnitude compared to the expenditure cuts. They are also temporary one-off measures, whereas the cuts to public expenditures are permanent in nature. Thus the long-run effects of these investments on public expenditure are likely to be minor compared to the proposed permanent expenditure cuts. In addition, these investments are spread over several different functions, which implies only minor expenditure increases in each separate function. In this chapter we focus on the proposals that have a permanent effect on the fiscal stance.

Another key aim of the government is to improve cost-competitiveness by cutting unit labour costs by 5%. This competitiveness package would also affect public finances through reduced unit labour costs in public services

and lower income tax and payroll tax revenue, and temporarily increase the general government deficit by approximately 0.3% of GDP in 2016. These figures are not included in the calculations of the fiscal plan for 2016–2019 nor in the economic forecasts of the Ministry of Finance, and also not included in the total magnitude of the consolidation discussed in this chapter. We discuss the government's competitiveness policy and its potential employment effects separately in Chapter 4.

The policy measures discussed in this chapter are based on the Government Programme published in May 2015 and the General Government Fiscal Plan for 2016–2019 published in September 2015.[5] The Government Programme is said to be the first strategically composed government programme in Finland. The Economic Policy Council commissioned an overview of the writing of the programme by docent in political science Juri Mykkänen (University of Helsinki). The report is published on the Economic Policy Council's website (Mykkänen, 2016).

Box 3.1.1 Strategic government programme

To a large extent the writing of the programme followed the recommendations of the government's OHRA project (Valtion ohjausjärjestelmän kehittämishanke, 9 January 2015). Compared to previous government programmes, the text is more strategic in terms of being shorter and including only a few fixed policy measures if the list of budget cuts is excluded. There are five main objectives: 1) improving employment and competitiveness, 2) reforming skills and education, 3) promoting wellbeing and health, 4) facilitating the bioeconomy and clean solutions, and 5) reforming ways of working through digitalisation, experimentation and deregulation. These are specified for 10 year perspective and a government term perspective with 26 key projects and an expenditure of approximately one billion in total. Thus they represent less than 1% of the annual state budget.

Under the heading of structural reforms, the listed savings total at least to EUR 4 billion. These include the reform of social welfare and health care

[5] In addition, the Economic Policy Council has received additional background information regarding the calculations in the above mentioned documents from the Ministry of Finance.

(SOTE) inherited from the previous government.

The strategic approach entailed providing details for the exact timing of the implementation of the strategy. For instance, the government promised to make a proposal to social partners on measures to reduce labour costs by July 30, 2015, and it expected the partners to commit comprehensively to this ”social contract” by August 21, 2015, which proved to be unrealistic.

Interviews conducted by Mykkänen with politicians and civil servants who took part in the government negotiations (many of whom had been involved also in the previous government negotiations) confirmed that the process itself was conducted in a new way. The prime minister-to-be, Center Party leader Juha Sipilä started the negotiations on April 19, 2015 by asking the parties to set out their strategic goals. The Center Party had drafted its programme on the levels of action (vision, long-term objectives, objectives for the electoral term, and implementation through policy packages) proposed by the Finnish Innovation Fund, Sitra, which had provided backing also for the OHRA project. The Coalition Party had also presented its strategic programme in early February. The Social Democratic Party, which in the end went into the opposition only published its strategic programme draft only in March. According to the interviews, the social democrats were doubtful about the strategic goals, and approached the government programme along ministerial sectors as in the previous negotiations.

Soon after the coalition between the Center Party, the Coalition Party and the Finns Party was formed, Prime Minister Sipilä wanted to see an agreement on approaches to the EU, foreign policy and immigration policies, which were regarded as the most difficult political issues for the coalition. After that politicians themselves were mainly writing the programme with technical support provided by Sitra. According to Mykkänen’s interviews unlike in the earlier government talks, interest groups were excluded, which might explain the difficulties the government had to implement those parts of the programme that require the consent of the social partners.

Discussions on economic and fiscal policies were framed by the MoF’s estimate for required fiscal consolidation of EUR 6 billion (Ministry of Finance, 2015a). At the beginning of the negotiations Sipilä asked all the parties if they accepted the MoF’s estimate. Thus the consolidation of public finances dominated the agenda and cuts became the cornerstone of the government programme. These were listed in a separate appendix.

Furthermore, the MoF spending review (April 29, 2015) that was made available to the coalition partners during the negotiations, affected the decisions on tax allowances.

In accordance with the OHRA project's recommendations, the Prime Minister's Office and the MoF should have set up a secretariat to coordinate the writing of the implementation plan and policy packages and then monitor their implementation. The idea was to start the work immediately after the government took office. At the beginning of June the ministers set up a joint office, but their schedules were too tight to follow an intensely collective mode of planning. Unlike OHRA suggested, the MoF remained in the background and did not engage in active preparation of the implementation plan over the summer.

However, Mykkänen's interviews revealed that a certain "air of collegiality" was created. The government appointed ministerial working groups for the five main objectives and the structural reforms at the end of June. Responsibilities for key projects were divided between ministers, which ensured political control of the strategy process.

The ministerial working groups received hundreds of project proposals from the ministries. Assisted by the PM's Office, they selected the fundable proposals. At the end of August, the EUR 1 billion strategic allocation was divided between the objectives and the individual projects were prioritized. It was only then that the MoF again took part in the process by making appropriate allocations into the budget. The implementation plan was finalized by the end of September.

One of the reasons for the OHRA project was to clarify the roles of politicians and civil servants. This included a reduction in the number of politically appointed state secretaries, which according to the interviews conducted by Mykkänen, was welcomed by the civil service leadership. On the other hand, the interviewees also pointed out problems in the preparation of decisions due to deficiencies in policy experience and legal expertise, which were exacerbated by the tight time schedules.

3.1.1 Expenditure cuts

Figure 3.1.1 describes the structure and timing of the proposed expenditure cuts.[6] The expenditure cuts total EUR 3.5 billion by 2019, which is EUR 0.5 billion less than originally proposed in the Government Programme in May 2015. First, the Ministry of Finance has revised downwards its estimate of the budgetary effects of freezing indices.[7] Second, the calculations in the fiscal plan for 2016–2019 do not include measures for which accurate budget effects cannot yet be defined.[8] Moreover, the timing of some policy measures have been revised since the publication of the government programme, implying that some of the measures have been brought forward.

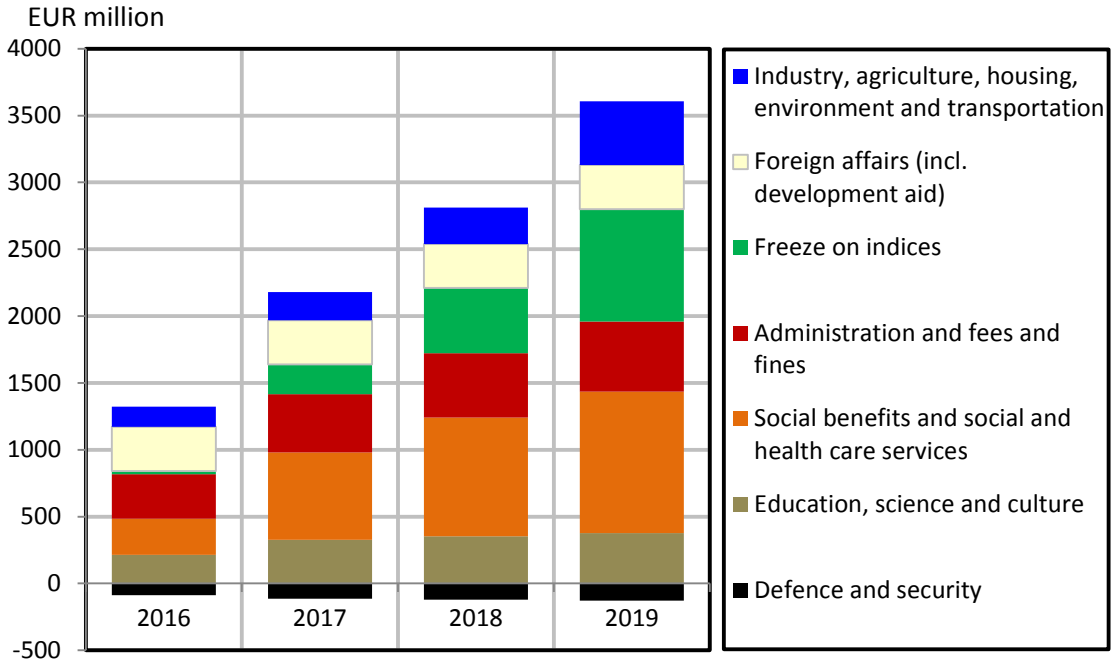
According to the MoF, the budgetary effects of the proposed policy changes, such as freezing indices, will be specified in more detail along with more detailed policy preparation. Therefore, Figure 3.1.1 gives an overall picture of the scale, structure and timing of the expenditure cuts, but should not be viewed as a final estimate of the effects of implemented policy.

[6] The magnitude of the expenditure cuts in different sectors is based on the figures presented in Appendix 6 of the Government Programme published in May 2015, and additional information provided by the Ministry of Finance. The figure includes the same numbers used in the calculations of the General Government Fiscal Plan for 2016–2019.

[7] In the Finnish system, many social benefits such as pensions and central government grants are tied to a price index. The government's proposition freezes indices on these benefits and government grants to universities, and additionally abolishes price indexing of child benefits and the student aid.

[8] These include e.g. the uncertain budgetary effects of expenditure cuts on secondary education and special health care (approximately EUR 400 million in total according to the MoF).

Figure 3.1.1 Structure and timing of proposed expenditure cuts in 2016–2019, general government (EUR million)



Source: Appendix 6 of the Government Programme (May 2015) and additional information provided by the Ministry of Finance

Figure 3.1.1 shows that the government will cut public expenditures gradually over the parliamentary term, increasing from EUR 1.3 billion in 2016 to EUR 3.5 billion in 2019. In other words, overall public sector expenditure will be EUR 3.5 billion lower in 2019 than in 2015.

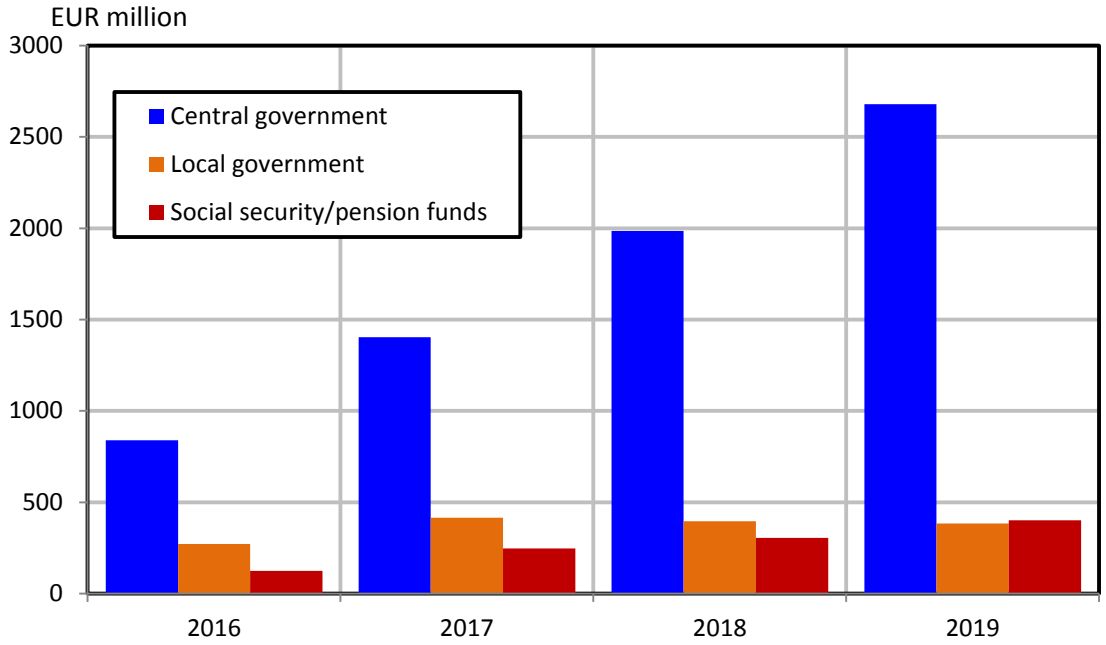
The main components of the consolidation measures are cuts in social benefits and social and health care services of approximately EUR 1.1 billion in 2019, and index freezes of EUR 850 million. Index freezes affect a variety of sectors from social benefits to university funding. A majority of index freezes affect social benefits (approximately EUR 650 million in 2019).

In addition, expenditure cuts of approximately EUR 375 million in 2019 are allocated to education, science and culture, and a combined EUR 480 million cuts in industry, agriculture, housing, environment and transport. Furthermore, the government will increase public service user fees and fines, and aims to reduce administrative expenditure with a total effect of EUR 525 million in 2019, and proposes to reduce foreign affairs expenditure and development aid by a total of EUR 330 million. In contrast to

expenditure cuts in other sectors, the government proposes an increase of EUR 130 million on defence and security.

Figure 3.1.2 shows the consolidation measures by sector. Most of the expenditure cuts are in central government functions (EUR 2.7 billion in 2019). The share of local government is EUR 380 million in 2019, and social security funds EUR 400 million.

Figure 3.1.2 Expenditure cuts by sector, 2016–2019 (EUR million)



Source: Appendix 6 of the Government Programme (May 2015) and additional information provided by the Ministry of Finance

The government programme also includes major structural reforms related to duties of the local government sector. The success of these policies is of key importance for reaching the government's objectives related to the sustainability of public finances. First, the government plans to execute a nationwide public health care reform that is designed to reduce public health expenditure by EUR 3 billion. However, this reform and its potential effects have not been specified in a manner that would enable us to evaluate whether or not this figure is realistic. Second, the government plans to reduce the general government deficit by cutting as yet unspecified statutory duties of municipalities by EUR 1 billion. This would considerably increase the share of local government expenditure cuts in Figure 3.1.2. However, it is reasonable to argue that reaching the EUR 1 billion target is

very optimistic, at least within the next 4 years. The process of cutting the statutory duties of municipalities began in the last government's term, but no significant progress has been made so far. Recent changes appeared rather to increase the expenditures of municipalities than to decrease them (see Hiironniemi 2015).

Due to the uncertainty related to both the actual implementation and the budgetary effects of the public health care reform and the cuts to the statutory duties of municipalities, these measures were not included in the calculations of the fiscal plan for 2016–2019, and are therefore also not included in the above figures.

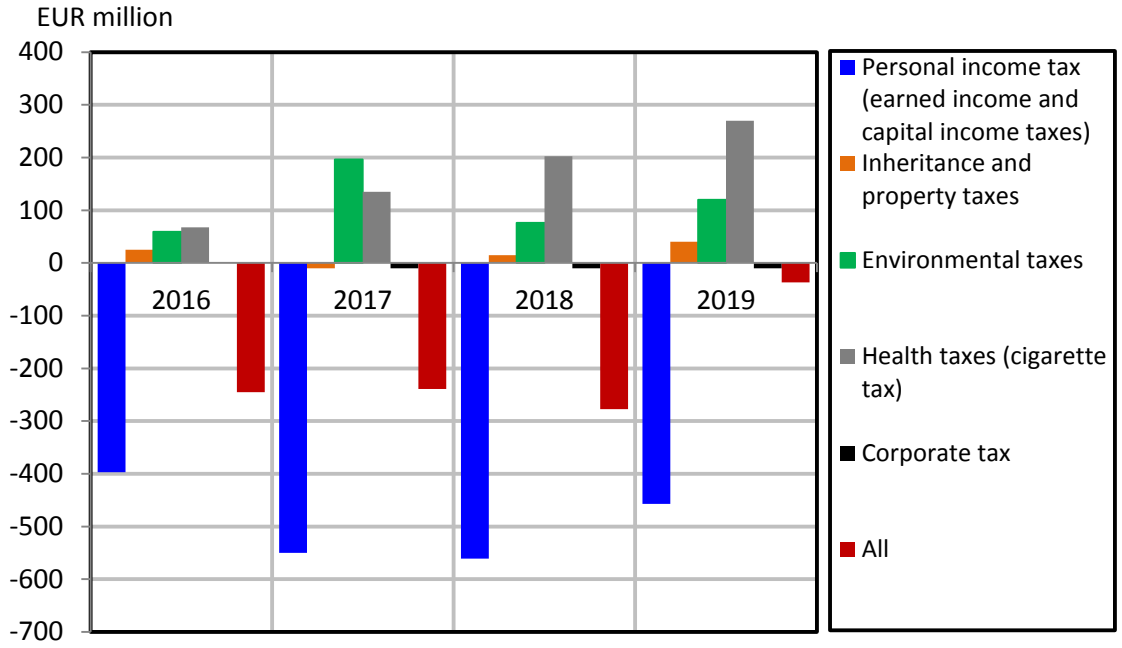
The details of some of the policy proposals included in the consolidation programme and Figure 3.1.1 are also not yet fully specified. That is, some of the proposals are stated more as targets than actual detailed policy measures. This induces some uncertainty regarding the effects of the government programme on public finances.

3.1.2 Tax policy

Figure 3.1.3 presents the discretionary tax policy changes in different categories. For most taxes, the figure shows the projected static effects of the tax changes on tax revenue. That is, for most taxes the figure takes into account only the direct effect of the change on revenue, assuming that the behaviour of firms and individuals is unchanged. If behavior is affected by the tax changes, the actual effects on revenue will typically be smaller than the static effects. For some taxes, however (notably cigarette tax and car tax), the revenue effects shown in the figure include also an estimate of the indirect revenue effects due to changes in behaviour.

The figure shows changes in tax revenue so that a negative number indicates a tax cut, and a positive number a tax increase. The figure does not include inflation adjustments to the income tax rate schedule as a discretionary policy change, as this adjustment has been implemented every year since 1993 except in 2013. In addition, the figure does not include the temporary one-off timing effects related to rearranging the collection of value-added tax (VAT) in 2017 and 2018.

Figure 3.1.3 Discretionary tax policy changes, 2016-2019 (EUR million)



Source: General Government Fiscal Plan for 2016–2019 (September 2015) and additional information provided by the Ministry of Finance

The figure displays the effect of tax policy changes on general government revenue compared to 2015. For example, personal income tax changes implemented by 2019 will reduce overall tax revenue by approximately EUR 450 million compared to 2015.

Personal income taxes include changes in personal earned income and capital income taxes.[9] The main changes in terms of the effects on public sector finances are the increase in the earned income tax credit (EUR 450 million) and the introduction of an additional entrepreneur tax deduction[10] in 2017 (EUR 130 million). In addition, the government proposes to reduce the mortgage interest tax deduction by a total of EUR 104 million in 2019, to increase the top capital income tax rate (EUR 34 million) and to extend the (temporary) solidarity income tax on high earned income to 2019 (EUR 60 million).

[9] Earned income tax includes changes in the public broadcasting tax (YLE-vero).

[10] The entrepreneur tax deduction means that for sole proprietors and partners of partnership firms only 95% of business income is taxable.

Inheritance and property tax changes include further reductions in inheritance taxes in cases of transfers of ownership of family firms, and an increase in property taxes. In terms of environmental taxation, there will be e.g. an overall reduction in car and other vehicle taxes (EUR 130 million), an increase in car usage taxes (EUR 100 million), and increases in fuel and energy taxes (EUR 150 million). Proposed changes to health taxes comprise a significant increase in cigarette taxes (EUR 270 million). Finally, the proposed changes to corporate taxes include a minor increase in the deductability of losses.

Discretionary tax policy changes do not significantly affect the general government budget balance, especially compared to the expenditure cuts discussed above. Compared to 2015, the tax policy changes listed in Figure 3.1.3 would reduce general government revenue by approximately EUR 40 million.

Despite the small effect on public sector balances, the effects on the structure of taxation are more prominent. The government proposes a fairly large reduction in personal income taxation driven by the increase in the earned income tax credit and the entrepreneur tax deduction. Simultaneously, cigarette taxes and environmental taxes will increase. This implies a shift from taxing labour and capital inputs towards taxing activities that have potential negative externalities, such as pollution, and/or negative health effects.

The general motivation for reducing personal income taxes is to reduce potential distortions on labour supply and thereby improve economic efficiency. These issues are discussed in Chapter 6 where we discuss the relationship between taxation and macroeconomic performance, and in Chapter 7, where we turn to a more detailed review of empirical evidence of the effects of taxation on the labour market.

In general, shifting the burden of taxation towards taxing harmful activities is well motivated by efficiency considerations: taxes on such activities have the rare property that, in contrast to most other taxes, they actually enhance economic efficiency. The main arguments related to environmental and health taxes were discussed in our previous report (Economic Policy Council, 2015) and to the extent that the harm from these activities still exceeds the current level of taxation, it would be advisable to consider further tax increases also on other goods/activities in this domain.

Furthermore, in Chapter 6 we discuss the relative distortions caused on economic activity by different types of taxes, and note that in this respect property taxes have favourable properties compared to many other taxes. This evidence provides support for the government's proposal to increase property taxes.

However, the government will reduce inheritance taxes. According to the economic literature, the inheritance tax is an efficient way of raising revenue because it causes fewer distortions to economic activity than many other taxes. The arguments behind this claim were reviewed in some detail in our previous report (Economic Policy Council, 2015). In the report, we also noted that the case for lenient tax treatment of transfer of ownership of family firms is very weak. The rationale behind cutting inheritance taxes can therefore be questioned, in particular in a time when consolidating the public budget is one of the most pressing issues on the economic policy agenda.

The government has chosen not to propose any changes to VAT rates. However, the efficiency of the tax structure could be improved by making the VAT more uniform through increasing the reduced rates. The reduced VAT rates consitute the largest single tax expenditure item in the Finnish tax code, and increasing them would therefore potentially have very large revenue effects, and can also be justified on efficiency grounds. (On the other hand, concerns for equality are in general better addressed through the income tax system.) The justification for increasing the reduced VAT rates was discussed in detail in our previous report (Economic Policy Council, 2015). We return to this issue also in Chapter 4 of the current report, where we discuss the alternatives of financing the government's competitiveness package (partially) through changes in the strucuture of the value added tax.

It is important to note that in addition to tax instruments, the government has made propositions that affect the total tax wedge of labour input, including changes in unemployment insurance contributions, pension contributions and payroll taxes (employer social security conrtibutions). In addition to effects on government revenue, these decisions also have potential distortionary effects on employment, since they are collected on the basis of wage income. To follow the categorization of taxes in the fiscal plan, the revenue effects of these changes are however not included in Figure 3.1.3 above.

The government proposes to increase the mandatory unemployment insurance contribution rate for both employees and employers by 0.5 percentage points. This increase is implemented due to high unemployment expenditure especially in 2015 and 2016, the unemployment insurance buffer fund is forecast to hit its limit in 2016. Therefore insurance payments need to be increased unless the size of the unemployment insurance buffer fund is increased.[11] The increase in unemployment insurance contributions will increase general government net revenue by approximately EUR 600 million (HE 95/2015). In addition, the government proposes to increase the employer pension contribution rate by 0.4 percentage points in 2017, which will increase general government net revenue by approximately EUR 200 million.[12] Therefore, the increases in unemployment and pension insurance contributions increase the general government revenue by approximately EUR 800 million.

As part of the competitiveness package, the government also proposes to reduce the employers' payroll tax rate (employer social security contributions) by 1.7%. In contrast to the pension and unemployment contribution increases, the payroll tax cut will reduce general government revenue by approximately EUR 850 million.

Altogether, changes in unemployment insurance contributions, pension contributions and payroll taxes are approximately revenue neutral in general government terms. The budgetary effects of the employers' payroll tax cut, proposed as part of the government's competitiveness package, were however not included in the fiscal plan. The government aims to finance the payroll tax cut by reduced public sector unit labour costs, stemming from other policies included in the competitiveness package. We will discuss the government's competitiveness package in detail in the next chapter.

[11] In Finland, the unemployment insurance system includes a buffer fund. The maximum size of the buffer (in either direction) corresponds to the annual amount of unemployment expenditure when the unemployment rate is 5%.

[12] This number is an unofficial preliminary estimate received from the Ministry of Finance.

3.1.3 Distributive effects

The government's tax and expenditure policies are likely to have non-negligible effects on the income distribution over the parliamentary term 2016–2019. The redistributive effects of the government programme were assessed by the research service of the parliament in early summer 2016. According to these calculations, the combined effect of the government's proposed tax and expenditure policies would be a slight increase in inequality (measured by the Gini coefficient) and the poverty rate, and a somewhat more marked increase in pensioner poverty. The effects on pensioners were also calculated by the Social Insurance Institution of Finland (Ahola, Honkanen and Sirviö 2015). However, some of the policies have been revised since then. For example, the pensioner housing benefit reform was abolished; this reform would have reduced disposable income among many low-income pensioners. Revised calculations of the overall distributional effects are not available (nor does the Council have the resources to carry out such an exercise).

Assessing the redistributive effects of government policies over the entire parliamentary term is further hindered by a number of factors. First, there is still considerable uncertainty associated with the exact timing as well as the details of many proposed policies. Second, there is uncertainty about forecasts of the levels of indices that affect the evolution of benefits. Third, some of the most important redistributive effects of the government's decisions are associated with policies whose effects cannot be evaluated using existing microsimulation models of the tax and benefit system (for example increases in health care fees and changes to compensation for drug purchases). These do not affect disposable income as such but may still be important for the distribution of welfare.

On the other hand, calculating the redistributive effects of policies implemented in a single year (2016) would be subject to less uncertainty, but is also much less informative, as changes in any given year are fairly small.[13] Furthermore, due to the back-loaded nature of the proposed expenditure cuts, the effects on equality stemming from the expenditure side will mainly materialize towards the end of the parliamentary term. For

[13] The Ministry of Finance calculated the effects of new tax policies to be implemented in 2016. The tax changes are slightly progressive, but the effect is tiny (www.vm.fi/dms-portlet/document/387401).

these reasons, we are currently unable to provide a thorough assessment of the redistributive effects of the government's policies.

Finally, proposing an extensive consolidation programme without knowing its distributional effects is questionable. The government should have thoroughly analyzed the aggregate distributional aspects of the proposed consolidation measures. The consolidation programme is likely to increase inequality which, among other issues, will presumably trigger further political debate and uncertainty about actual implementation of various expenditure cuts. For example, the pensioner housing benefit reform has already been abandoned due to the undesired increase in pensioner poverty rates.

3.2 Public sector balances and evaluation of consolidation policy

Table 3.2.1 shows the overall effect of expenditure and tax policy measures on the general government net budget position. In the table, measures that increase the net budget position have a positive sign, and vice versa. For example, a reduction in net public expenditure and investment has a positive sign in various categories and sectors, and reductions in tax revenue have a negative sign. The figures are based on the General Government Fiscal Plan for 2016–2019.

As discussed above, the majority of consolidation measures consist of central government expenditure cuts and index freezes, while changes in tax policy have a smaller effect. Overall, these measures will affect the financial position of central government by EUR 2.4 billion in 2019. In addition, government policy decisions will affect local government finances by EUR 500 million in 2019. According to the Government Programme, the discretionary effects of tax policy changes on municipal tax revenue will be compensated to the municipalities. This will increase municipal revenue and reduces central government revenue by the same amount.

In addition, increases in social insurance payments will significantly affect the general government financial position. For example, changes in social insurance payments include both increases in pension contributions and

unemployment insurance due to increased pension and unemployment expenditure. Overall, the measures presented in the fiscal plan will have an approximately EUR 4.2 billion effect on general government net budget, which translates roughly to 2% of GDP in 2019.

Table 3.2.1 The net budget effect of the government's revenue and expenditure measures (EUR million)

	2016	*2017*	*2018*	*2019*
Changes in central government appropriations, net	700	1000	1200	1500
Index freezes	100	300	700	1100
Additional investments	-300	-500	-400	0
Changes in central government tax revenue, net	-100	-100	-300	0
Compensations of tax changes to local government	-200	-300	-300	-300
Other revenue	100	100	300	100
Net effect on central government financial position	**300**	**500**	**1200**	**2400**
Municipal revenue changes (central government decisions)	200	200	200	200
Municipal tax revenue, net (excluding potential municipal income tax changes)	-200	-200	-200	-200
Compensations of tax changes from central government	200	300	300	300
Other revenue	100	200	200	200
Net effect on local government financial position	**300**	**500**	**500**	**500**
Social security funds, net	**800**	**1200**	**1200**	**1300**
Total general government	***1400***	***2200***	***2900***	***4200***
Per cent of GDP	***0,7***	***1***	***1,3***	***1,9***

Source: General Government Fiscal Plan (September 2015)

The impact of fiscal policies on economic performance is a key issue in fiscal policy design. For example, cuts in public expenditure and investments may decelerate aggregate economic growth, and vice versa. In addition, the timing of fiscal consolidation in terms of the business cycle could be important because fiscal multipliers (change in output resulting from a unit change in the fiscal variable) can be different in recessions compared to expansion periods. We discuss the fiscal multipliers in more detail in Chapter 6.

In terms of evaluating the government's consolidation policy, there are three issues that warrant discussion: 1) overall magnitude 2) timing, and 3) structure and content of consolidation policies. Below we discuss the first

question, and the timing and structure of consolidation measures are discussed in Chapter 6.

In order to evaluate the proposed consolidation policies, the Economic Policy Council together with the National Audit Office of Finland requested Henri Keränen and Tero Kuusi (Research Institute of the Finnish Economy, ETLA) to analyze the effects of fiscal policy consolidation in the Finnish context. In their macroeconomic simulation model, fiscal multipliers are allowed to vary between different fiscal policy measures, and in different states of the business cycle. This allows a comparison of various types of fiscal policy measures relative to a benchmark of no policy changes, and a more thourough analysis of the current fiscal policy proposals. The research paper is published on the Economic Policy Council's website (Keränen and Kuusi 2016).

Box 3.2.1 Description of the model by Keränen and Kuusi (2016)

We briefly introduce the main details of the macroeconomic simulation model by Keränen and Kuusi (2016). A detailed description can be found in the research paper which is available on the Economic Policy Council's website.

The framework of Keränen and Kuusi (2016) follows the Auerbach and Gorodnichenko (2012) model. Keränen and Kuusi (2016) estimate a smooth-transition vector autoregression (STVAR) model in which fiscal multipliers can vary across different business cycle regimes and between different types of consolidation policies (e.g. revenue vs. expenditure measures).

In the first stage, time-varying fiscal multipliers for different types of fiscal policy measures are estimated. In the estimation approach, the authors extend the Blanchard and Perotti (2002) framework to allow for time-varying fiscal multipliers, and expectations concerning future fiscal policy measures. Institutional information on tax, transfer and spending programmes are used to estimate the fiscal multipliers.

The model is estimated using Finnish data from 1975 to 2015 (second quarter). The main variables include government spending (consumption and investment), tax revenue (net of income transfers and subsidies to the private sector) and real GDP, as well as forecasts of the relevant fiscal

variables.

The model enables an analysis of how much existing fiscal and economic forecasts would be affected by different types of fiscal adjustment. This analysis is carried out by comparing various measures to a benchmark scenario that is built on a calibrated model with no policy changes. The no-policy-change benchmark corresponds to the former government's fiscal plan in spring 2015. In terms of analyzing the new government's fiscal policy propositions, the paper focuses on analysing the magnitude, timing and structure of consolidation.

Various objectives and guidelines need to be considered when evaluatiang the magnitude of the proposed consolidation policy. First, as a member of the EU, Finland is required to follow EU agreements on the level of public sector gross debt and fiscal deficits. The debt-to-GDP ratio should not exceed 60%, and the general government fiscal deficit should remain below 3%. In the current fiscal situation, consolidation is needed to reach these targets.

The European Commission released its report in November 2015 regarding Finland's fiscal stance (European Commission 2015). The EC states that the current fiscal deficit will be above 3% in 2015, but will fall below this limit in 2016. The EC considers the excess over 3% to be close and temporary, and thus the EC does not require further measures from the Finnish government (in addition to the proposed consolidation programme).

As for the general government debt-to-GDP ratio, the EC considers that this criterion is currently complied with, even though the debt-to-GDP ratio is reaching 60% and is forecast to increase further. In addition, taking into account the recent economic development, the EC views that Finland is broadly complying with the required progress towards the medium-term objective (MTO) for the general government structural balance, -0.5% of GDP. Therefore, according to the EC, the magnitude of the proposed consolidation measures, as listed in the Government Programme, are sufficient in terms of complying with EU agreements.

Second, the government has set its own fiscal targets for 2016–2019. In addition to the structural deficit objective of 0.5% of GDP, the government has set stricter deficit targets separately for different sectors of the general

government. The central government and local government deficits should not exceed 0.5% of GDP. Pension funds should have a surplus of 1% of GDP, and social security funds should be balanced.

In terms of reaching these deficit targets, the proposed consolidation package is estimated to be insufficient under the current economic forecasts. According to the MoF, the central government deficit will be 1.7% of GDP and the local government deficit 0.8% of GDP in 2019 (Ministry of Finance 2015b). Thus the central government deficit would be much higher than the target of 0.5% set by the government. In order to reach this nominal deficit target, central government would need additional consolidation of approximately EUR 2.5 billion. Furthermore, the structural deficit will exceed the MTO in 2019. According to the MoF forecast, the structural balance under the current consolidation measures presented above will be -1.4% of GDP in 2019.

Keränen and Kuusi (2016) reach a similar conclusion when using their simulation model. According to their estimation, the overall consolidation measures necessary to reach the MTO by 2019 would be approximately EUR 5.5 billion. However, it is important to bear in mind that the estimates of the magnitude of the consolidation needed to reach the MTO are very uncertain. Keränen and Kuusi (2016) note that the 90% confidence interval for the necessary consolidation to reach the MTO in 2019 is EUR 3.5 to 9 billion. This also implies that the current consolidation programme will be unlikely to meet the MTO in 2019 unless further measures are implemented.

The government programme included a list of provisional consolidation measures (in total EUR 1.5 billion) that would be implemented if the labour unions were not able to negotiate a so-called social compact that would result in a 5% reduction in unit labour costs. The social compact negotiations failed, and have been replaced by the government's own competitiveness package. We discuss uncertainties related to achieving the objectives of the competitiveness package in Chapter 4. However, even if the competitiveness package is successful in reducing unit labour costs and providing a boost to employment and output, this would not directly affect the structural deficit and hence would not directly help with reaching the MTO.

Finally, contractionary fiscal policy decreases GDP, and thus there is a trade-off between decreasing deficits by discretionary fiscal policy and enhancing

economic activity. This implies that consolidation policies should be planned carefully to balance these two concerns. This is especially important when consolidating public finances in a period when economic activity and employment are below their potential levels. However, the government's proposal to improve cost competitiveness by cutting wages and payroll taxes will induce a temporary reduction in fiscal consolidation until the measures for financing the payroll tax cut take effect in 2017. In contrast to expenditure cuts, this will thus create a stimulating effect that is not included in the analysis above.

3.3 Council's views

The consolidation of public finances dominated the negotiations for the government programme led by Center Party leader Juha Sipilä. While the government programme is strategic in the sense of including only five main objectives, the appendix of the programme is very detailed providing a list of budget cuts that are not justified by the main objecives, but focus mainly on the consolidation programme.

The consolidation measures in the governent programme amount to approximately EUR 4 billion by 2019. The aim is to reduce public sector deficits and to stop the growth of public sector debt. The consolidation will mainly be conducted by cutting social benefits and income transfers. The government has committed not to increase the tax/GDP ratio, but both pension and unemployment insurance contributions will be raised.

Consolidation measures are necessary to reduce the public sector deficits to sustainable levels. The European Commission has judged the proposed policy measures to be sufficient to comply with EU rules, but the government has set its own tighter objectives for the budget balance. It appears that the proposed consolidation package is not sufficient to meet these additional objectives, nor the medium-term objective (MTO) for the structural deficit by 2019. We will discuss fiscal rules in more detail in Chapter 5.

Consolidation involves a trade-off between a concern for the sustainability of public finances on the one hand, and current economic activity on the other. The proposed expenditure cuts will be phased in, so that the largest cuts will take effect towards the end of the parliamentary term. The Council

finds this appropriate, but it is also important to make sure that consolidation plans are credible, and that sufficient measures end up being implemented by the end of the parliamentary term. The timing of the consolidation will be discussed in more detail in Chapter 6.

More consolidation measures are needed in the future to balance public sector finances and to ensure long-term fiscal sustainability. The proposed nationwide reform of social and health care systems and reducing municipal expenditures are expected to significantly reduce the sustainability gap, but the specific content and thus the effects of these reforms are still highly uncertain. In addition, some of the policy proposals included in the consolidation programme are not yet accurately specified, which makes evaluation difficult and increases uncertainty on their actual implementation.

The government has decided to conduct consolidation to a large extent through expenditure and benefit cuts; there are only minor consolidation measures on the tax revenue side. Some of the proposed changes to the tax structure, such as increased reliance on taxing harmful activities and increasing property tax, can be welcomed. However, the government has also chosen to forego possibilitites to increase tax revenue in ways that would improve the efficiency of the tax system (inheritance tax, reduced VAT rates). The structure of the consolidation will be discussed in more detail in Chapter 6.

The consolidation package is likely to have non-negligible effects on equality, but no comprehensive analysis of the overall distributive effects of the proposed policies has been carried out. Conducting an evaluation of the redistributive effects would be important in itself, and the lack of such an evaluation further increases uncertainty about the actual implementation of the proposed measures, and casts significant doubts on reaching the policy targets. The current government has already withdrawn various policy proposals after a more careful policy preparation.

Finally, we note that it is difficult to understand and interpret the effects of proposed fiscal policy measures using the official documents produced by the government (the Government Programme and the General Government Fiscal Plan for 2016–2019). For example, it is challenging to ascertain what policy measures are included when the budgetary effects are calculated in different tables and figures in these documents, and it is hard to be sure

whether the numbers are to be interpreted as cumulative policy measures or not. The Ministry of Finance willingly provided us additional information on the calculations, but this should not be required in order to understand the estimated effects of the proposed fiscal policy measures in the official documents.

4 The government's proposals to improve cost-competitiveness

In addition to fiscal consolidation, the government adopted the goal of improving competitiveness by 10–15%. The government plans to achieve this goal by promoting moderate wage agreements, by so far unspecified improvements in productivity and by a policy package aiming to improve cost-competitiveness by reducing labour costs by 5%. (Valtioneuvoston tiedonanto eduskunnalle kustannuskilpailukykyä vahvista toimista, 30.9.2015.[14])

The most concrete of these plans, the cost-competitiveness package (HE 2015, Hallituksen esitys kustannuskilpailukykyä vahvistavista toimista 11.11.2015), is expected to improve the cost-competitiveness of the export sector and thereby eventually to increase output and employment. While the overall aim is well motivated, cost-competiveness is a problematic policy target as it depends on variables beyond policy control. Moreover, the effects of many specific initiatives to reduce unit labour costs are highly uncertain.

In this chapter we first review the recent development of the components of cost-competitiveness, i.e. labour costs and labour productivity, in Finland. After this we will discuss in more detail the government's measures to improve cost-competitiveness and comment on estimates of their potential effects.

[14] https://www.eduskunta.fi/FI/vaski/JulkaisuMetatieto/Documents/VNT_2+2015.pdf

4.1 Cost-competitiveness in Finland

Unit labour costs in Finland have risen faster than in comparison countries during the last 15 years. This increase is partly due to faster growth in average wages than in the comparison countries, but to a larger extent to the recent decline in productivity. Real unit labour costs in manufacturing have risen even faster than unit labour costs due to a decline in relative prices especially in the paper industry and a rapid decline in (constant quality) prices in the electronics industry.

Box 4.1.1 International competitiveness and its measurement

The most commonly used measures of cost competitiveness are unit labour costs (ULC), real unit labour costs (RULC), and the real exchange rate. The first two measures can also be computed at the industry level.

ULC is the gross hourly wage divided by labour productivity. The concept of ULC is thus used to measure wage costs relative to productivity. RULC is the gross real hourly wage divided by labour productivity. We can write the ULC and RULC as $ULC = W/(Y/H)$ and $RULC = WH/PY$. W is the average hourly gross wage in the economy (industry), Y is real GDP (at the industry level PY is the industry value added), H is the total hours worked in the economy, and P is the price level (the appropriate price index for an industry). Y/H is the labour productivity of the aggregate economy or industry (the amount of output divided by the labour input). On the aggregate level, the RULC measures the ratio of labour income to the value of GDP, i.e. the wage share which is a measure of the functional income distribution.

To be able to compare competitiveness between nations, measures must be expressed in the same currency. Thus competitiveness between, say the U.S. and Finland, is measured with the following ratio: $z_{FU} = EULC_{Fin}/ULC_{US}$, where E is the nominal exchange rate (dollars per euro). When z_{FU} goes up, Finland's competitiveness deteriorates. The analogous measure can be written for the RULC.

The real exchange rate (REER) between the dollar and the euro from the Finnish perspective is $e = EP_{Fin}/P_{US}$. One can think that e measures the price of a standard basket of goods in Finland (expressed in dollars) compared to

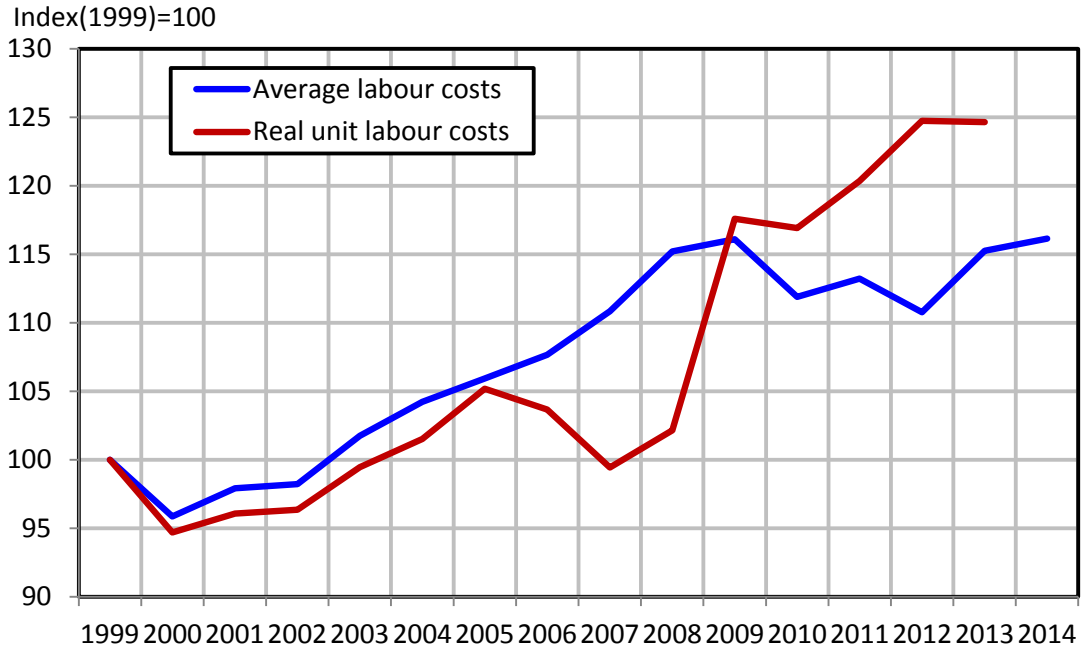
the same basket in the U.S., i.e. how many U.S. baskets can one buy with one Finnish basket?

The International Monetary Fund (IMF) uses the real exchange rate as the measure of competitiveness. The precise measure of the real exchange rate for a particular country follows the measure above, but goes into much more detail by including the trade shares and corresponding exchange rates in the formula.

The European Commission (2015) publishes a collection of time series data, which use different price and cost deflators to transform the nominal exchange rates into the REERs. Using these measures, the basic message of Finland's competitive position is about the same as that obtained from unit labour costs (see e.g. tables for Finland and Germany in EC 2015). In the remainder of this chapter, we mainly use labour costs when discussing the competitiveness issue, since these are also emphasized by the government.

The development of average labour costs (labour cost per worker) and real unit labour cost (labour cost per value added) of the Finnish industry sector between 1999–2014 is described in Figure 4.1.1. All the numbers are relative to comparison countries weighted by their relative share of foreign trade with Finland.

Figure 4.1.1 Average labour costs and real unit labour costs, 1999-2014 (index, 1999=100)



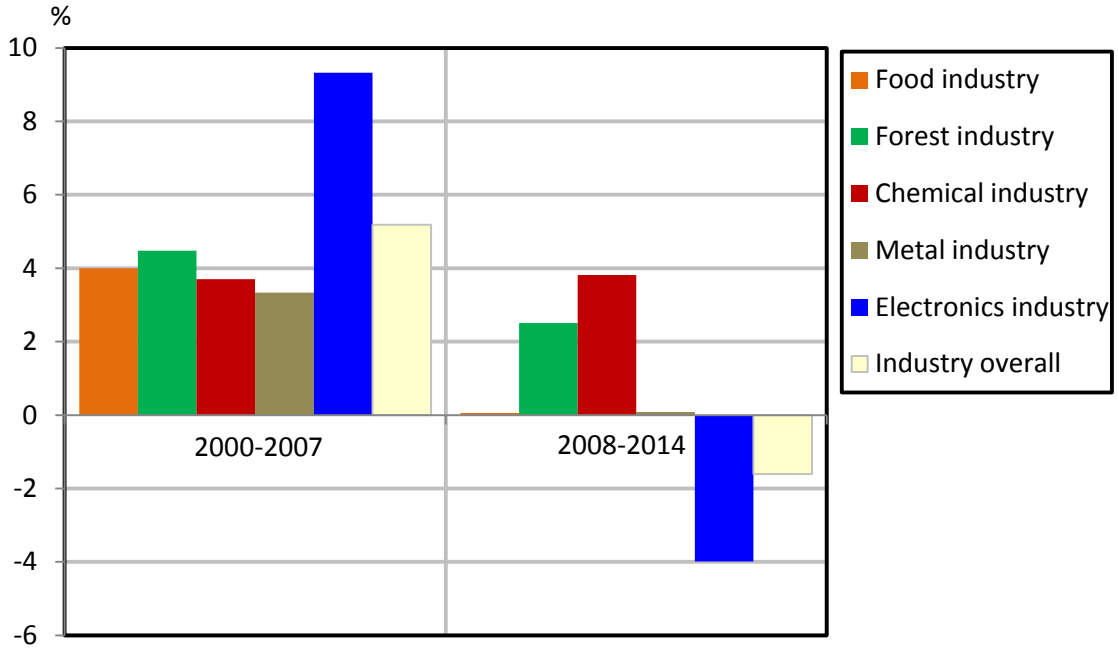
Relative to comparison country average (weighted by share of foreign trade with Finland). The comparison countries for average labour costs are: AT, DK, DE, IE, EL, ES, FR, IT, NL, SE, UK, US, JP and NO, and for real unit labour costs: AT, BE, DE, DK, ES, FR, EL, IE, IT, NL, PT, SE, UK, and US. Data source: Kajanoja (2015)

Average labour costs in Finland, relative to its trading partners, increased by 16% between 1999 and 2014. The relative increase in average labour costs was particularly rapid just before the financial crisis in 2008. The increase in average labour costs relative to the competitor countries ended in 2009, but relative real unit labour costs continued to increase. This was largely due to the rapid decline in labour productivity that was discussed in more detail in Chapter 2.

The decline in productivity growth was widespread in the entire manufacturing sector, but particularly strong in the electronics industry. In the period 2000–2007, the average growth in labour productivity in the electronics industry was extremely rapid, approximately 9%, but during 2008–2014 productivity declined by about 4% (Figure 4.1.2). The only sectors where productivity grew also between 2008 and 2014 were the forest and chemical industries with average productivity growth rates of slightly more than 2% and almost 4%, respectively. The whole industrial sector had an average productivity growth rate of about 5% between 2000

and 2007, and about -1.7% in 2008–2014. The adverse development in productivity since 2007 has contributed to the rise in real unit labour costs from 2007 onward.

Figure 4.1.2 Average labour productivity growth in different industries in 2000-2007 and 2008-2014



Source: Statistics Finland, Productivity surveys

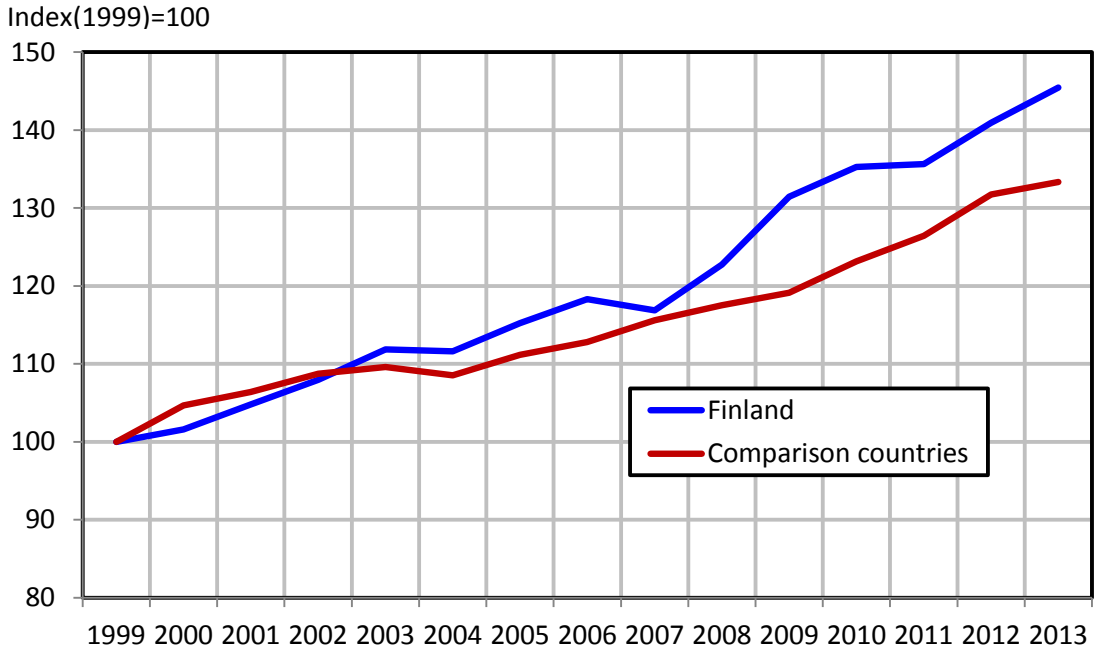
In addition to the decline in productivity and increase in relative wages, a crucial factor affecting real cost competitiveness was the decline in export prices. The terms of trade started to deteriorate already in 2002 (Figure 2.1.6). The paper industry has a large weight in Finland's manufacturing sector and its price development has been weak for a long time. Also, prices in the electronics industry have declined rapidly when prices are measured by keeping quality constant. Hence, even if the average prices of mobile phones were unchanged, the quality improvements led to a decline in prices per quality unit.

In addition, the cost-competitiveness of a sector is affected by the prices of the intermediate products and services used by the sector. Figure 4.1.3 shows that unit labour costs in sectors that provide intermediate goods for the Finnish manufacturing sector increased at roughly the same pace as in

the competititor countries up to 2007. But the cost increase in Finland has been more rapid than in the competitor countries since 2008.

The Information Committee on Cost and Income Developments notes that the cost increases in the intermediate products may have been even more important for cost-competitiveness than direct labour costs. According to its December report (TUKUSETO 2015), intermediate products consitute about 75% of the value of the manufacturing output. To the extent that intermediate products are domestically produced goods or services, cutting labour costs affects the prices of intermediate products and therefore improve the cost-competitiveness of the export sector.

Figure 4.1.3 Unit labour costs in sectors that provide intermediate goods for the industry sector, Finland and comparison countries, 1999-2014 (index, 1999=100)



Source: Kajanoja (2015)

Even if changes in competitiveness may be reasonably straightforward to measure, the level of competitiveness and therefore the need to improve competitiveness is much more difficult to evaluate. Variation in relative unit labour costs has been very large in the past 30 years, and an assessment of

the magnitude of the current competitiveness problem depends on which period the current situation is compared to.

Cost-competitiveness improved after the 1990s recession first due to currency depreciation and then due to rapid productivity growth. Wage growth was faster than in most countries, but rapid improvements in productivity, particularly in the electronics industry, maintained cost-competitiveness.

Measured by relative real unit labour costs, cost-competitiveness has declined since around 2002 (Maliranta 2014). However, cost-competiveness became a real problem only when productivity growth halted and productivity started to decline after 2008. Wage growth did not adjust to this decline in productivity. The OECD (Chapter 2 in Employment Outlook, 2014, p. 48, 77) reports that real wages in Finland have been growing more rapidly than the average growth in the countries of the Eurosystem and the OECD in 2007–2009 and 2009–2013. Even during the recession period 2009–2013, real wages in Finland were increasing. Thus real wages have been less responsive to economic conditions, suggesting perhaps that real wages in Finland are more rigid than in many other countries. Improving cost-competitiveness by real wage adjustment has also become more difficult, as inflation is low and nominal wage increases are low also in other countries.

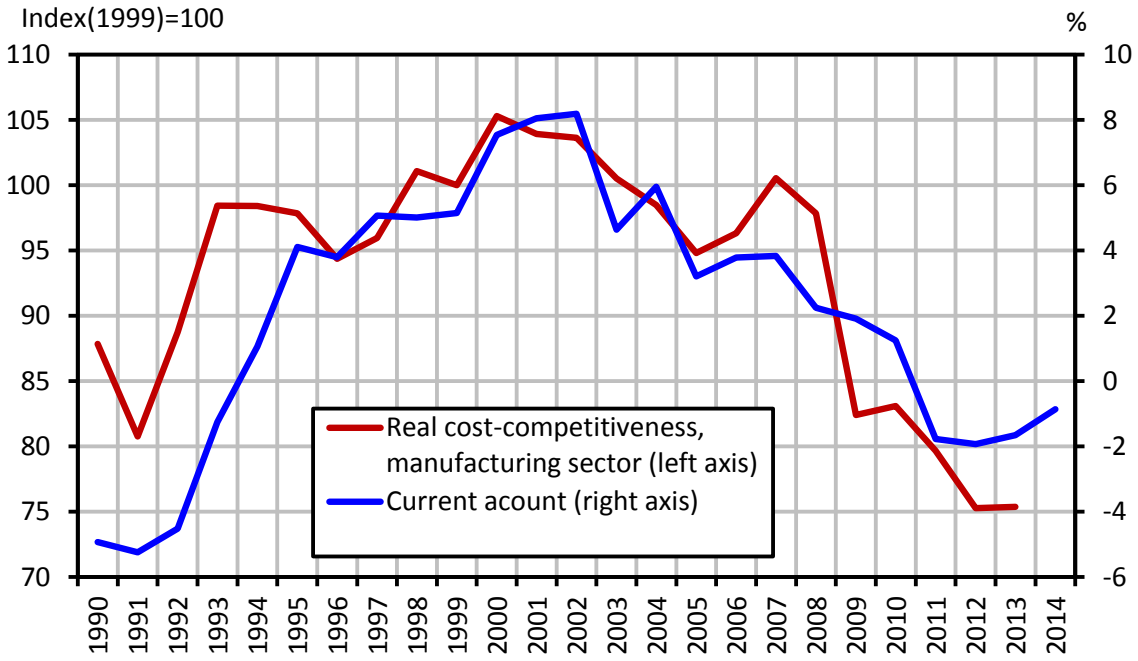
There is little disagreement on these aggeregate developments among Finnish economists. However, interpretations and therefore opinions regarding the required policy action differ widely. For example, Sauramo (2015) notes that a comparison with the situation in the early 2000s is misleading, because this period was an exceptionally good one in terms of productivity growth and firm profitability. He also notes that developments in real cost-competitiveness are heavily influenced by a single company, Nokia. Calculating the competitiveness measures (eg. labour share) in manufacturing without the electronics industry would show almost unchanged development from 1993 to 2009. After this the labour share has also increased in other manufacturing industries, but much less than in the entire manufacturing sector with the electronics industry included.

Kajanoja (2015) linked developments in cost-competitiveness directly to export performance. He notes that Finnish exports have declined after 2008 by more than in any other developed country. As a consequence, the current

account is currently in deficit. According to his argument, the competitiveness problem is not restricted to the electronics and forest industries, as exports have declined also in other industries.

Kajanoja (2015) uses the current account deficit and the deviation of employment in the manufacturing sector from its trend to calculate how large improvement in competitiveness would be required for restoring external balance of the Finnish economy. In a figure reproduced below (Figure 4.1.4), he compares the development in the current account balance to that in real cost competitiveness of the Finnish manufacturing sector. There is a strong correlation between the current account and cost-competitiveness, as shown in the figure. Naturally, this does not imply a causal relationship between cost-competitiveness and the current account surplus. For example, an increase in export prices would – everything else being constant – increase both cost competitiveness and the current account surplus.

Figure 4.1.4 Cost-competitiveness relative to comparison countries (index, 1999=100) and the current account balance (%), 1990-2014



Comparison countries: AT, BE, DE, DK, ES, FR, EL, IE, IT, NL, PT, SE, UK, and US.
Source: Kajanoja (2015)

Despite the difficulties in making causal inferences from correlations, the figures in Kajanoja's paper have been used to assess the magnitude of the required improvement in cost competitiveness. Kajanoja himself infers from the figure that a 10–15% improvement in competitiveness could create a 1% surplus in the current account, and notes that it would be an adequate target given the need to build up foreign assets to prepare for the expected cost pressures caused by population ageing.

Overall, the government's goal of improving competitiveness is well-grounded in the sense that wage growth has exceeded productivity growth, and wage adjustment to slower productivity growth has been sluggish. However, unit labour costs are a problematic measure of competitiveness, and therefore a problematic policy target. Firms will adjust their use of production factors depending on their costs. For example, if wage costs go up, employment will be reduced until the (value) of the productivity of workers matches the higher costs. In this situation, there may not be much variation in unit labour costs (since both wages and productivity are increased), but the higher wage costs will have made the products more expensive, and employment will have fallen.

This is perhaps more than a hypothetical situation. After the financial crisis employment declined, but less than what might have been expected given the fall in output. Over time, the production factors are adjusted, which will improve the measured productivity (and cost-competitiveness), but reinforce the fall in employment.

4.2 Options for improving cost-competitiveness

Unit labour costs depend on productivity and wages. Improving productivity is difficult, particularly in the short term, and therefore the only alternative to improve cost-competitiveness is to lower wage costs - irrespective of whether the competiveness problem has been created by excessive wage growth or a drop in productivity.

If Finland still had its own currency, a quick solution to deteriorating external competitiveness would be a devaluation. For a member of the Euro Area this option is not available.

The remaining options include a fiscal devaluation, i.e. lowering payroll taxes and financing it by increasing the value added tax (VAT), or an internal devaluation that implies cutting wage costs or achieving lower wage increases than in the competitor countries.

The option of fiscal devaluation was discussed in the government documents published in August 2015 (Ministry of Finance 2015c, Työnantajamaksualennuksen rahoitusvaihtoehtoja). A reduction in payroll taxes would reduce wage costs and lower the price of domestically produced goods. If the payroll tax cuts were financed by increases in the VAT, the prices of all domestically sold goods would increase. As VAT is paid on imports but not on exports, such a shift would increase taxes on imports and lower taxes on exports. Thus the overall effect would resemble the effects of devaluing the currency. Similarly to a currency devaluation, also the effects of fiscal devaluation tend to be temporary and largely disappear once wages and prices have been fully adjusted.[15]

However, the government argued that increasing the VAT would be problematic in the current stage of the business cycle because it would reduce domestic demand and increase the tax burden for groups receiving social transfers, which are simultaneously affected by public spending cuts. Also, a significant improvement in competitiveness (payroll tax reduction) would require a very large VAT increase that would raise the VAT rate to a level exceeding the top rates in other OECD countries.

Perhaps a better option would have been to raise reduced VAT rates, as discussed in the earlier government documents (Ministry of Finance 2015c). This option was suggested by, for example, de Mooij and Keen (2013). The benefits of a more uniform VAT structure were also discussed in the

[15] The effects of fiscal devaluation differ from actual devaluation as the domestic value of assets and debts denominated in a foreign currency do not change. A fiscal devaluation also affects relative producer prices, depending on the labour intensity of production. In terms of the trade balance the effects should be similar. The effects of fiscal devaluation are temporary but may nevertheless be long-lasting. The effects on output and employment are greatest if wages are sticky but prices adjust to the cost changes. Eventually prices and wages adjust to the new equilibrium levels, and the permanent effect only depends on whether consumption taxes are less distortive than income taxes. According to de Mooij and Keen (2013) "the case for fiscal devaluation may be especially strong when the economy, owing to downward rigidities in nominal wages, is initially in marked disequilibrium, with a highly overvalued real exchange rate and extensive involuntary unemployment. A fiscal devaluation could then accelerate needed adjustments. The end result—the point to which the real exchange rate and the unemployment rate converge in the long run—may not be much affected by the fiscal devaluation but the convergence could be much faster".

previous report of the Council (Economic Policy Council 2015). Eventually, however, the government decided to finance the payroll tax cuts with savings in the public sector labour costs (discussed in more detail below).

The Central Organization of the Finnish Trade Unions (SAK) suggested an alternative to the government's package in September 2015. SAK's own proposal included a wage freeze for 2017 and an agreement where wage increases in 2018 would be based on the competitiveness of the export sector as well as a partial shifting of employer unemployment insurance contributions to employees.

Even though this did not meet all the requirements that the government had set for cost-cutting meassures, it was at least a promising starting point for negotiations. Compared to a two-year wage freeze, the government's strategy to reduce unit labour costs by legislative changes seems risky. As we discuss below, workers and the unions are likely to demand compensations for legislative cuts in holiday bonuses and increases in working hours. Therefore, the reduction of labour costs and the overall effects on employment are likely to be smaller than estimated by the government. Obtaining union support for wage adjustments would have been a more certain way of achieving such adjustments. Admittedly, the government made several attempts to reach a social contract (an agreement aimed at ensuring wage restraint) between the labour market organizations, but negotiations so far have failed.

4.3 The government's measures to improve cost-competitiveness

The government is trying to achieve its target, a 5% reduction in unit labour costs, by a package of measures. It will lower the payroll tax (employer's social security contributions), cut sick leave compensation rates and holiday bonuses, and increase hours of work by abolishing long holidays and making two religious holidays unpaid holidays. The government's aim is to finance the payroll tax reduction by a reduction in public sector labour costs.

Table 4.2.1 lists the proposed policy measures and their estimated effects on labour costs. The estimates of the effects are from the draft of the Government proposal (HE 2015, Hallituksen esitys kustannuskilpailu-kykyä vahvistavista toimista, 11.11.2015).

Table 4.2.1 Proposed measures to decrease unit labour costs

Measure	Government's estimate for the effect on unit labour cost
Payroll tax (employer's social security contributions) will be lowered by 1.7 percentage points	1.4%
Compensation for sick leave will be lowered such that the first sick leave day is unpaid, and for the next 2-8 days the compensation rate is 80% of salary	1.4%
Two bank holidays (Epiphany, Ascension day) will be unpaid holidays without any decrease in annual working hours	0.8%
Holiday bonuses will be lowered by 30%	1.3%
Annual holidays exceeding six weeks will be cut	0.1%
TOTAL	5%

Source: Draft Government Proposal (HE 2015), November 2015

The government estimates that the increased hours of work and lower wage payments will considerably reduce labour costs in the public sector. The proposed measures, excluding the payroll tax cut, are estimated to increase general government net revenue by approximately EUR 770 million (reduced public sector labour costs of EUR 1 538 million – reduced income tax revenue of EUR 765 million). The payroll tax cut will reduce public sector revenue by approximately EUR 847 million. Including the indirect effects and the changes in tax revenue but assuming that there are no employment or wage responses, the proposed measures will increase the general government budget deficit by EUR 74 million. Thus, based on the government's calculations, the lower labour costs in the public sector will approximately finance the payroll tax cut.

The direct effects on the general government budget follow from mechanical reductions in labour costs due to reductions in wage compensations and in tax revenues (due to a smaller income tax base). However, a significant part of the estimated increase in general government revenue comes through indirect channels where the budget effects can only be assessed with considerable uncertainty. The indirect savings account for EUR 856 million of the total labour cost reduction (EUR 1 538 million). The indirect effects

mainly stem from the assumption that increased working hours via holiday and sick leave compensation cuts[16] will reduce the number of employees in the public sector. Total hours are assumed to stay constant, so that when hours per worker increase the number of workers will decrease. As the increase in hours per worker is not compensated with higher wages, a reduction in the number of workers will eventually reduces the public sector wage bill.

4.4 The government's estimates of the effects of improving cost-competitiveness

The government estimates that the proposed cut in unit labour costs will have a considerable effect on employment. According to the estimates, a 5% reduction in unit labour costs will increase private sector employment by 52,000 individuals. This would also ultimately reduce the long-run sustainability gap by an estimated 0.5 percentage points (HE 2015).

The government's estimate of the effects of the cost-competiveness measures on employment contains several problematic features. First, the calculations are based on an assumption that wages do not react to these policy measures after they have been implemented. Second, the estimate for the elasticity of labour demand (i.e. how a relative change in labour costs affects the demand for labour) used in the calculations is exceptionally high. Third, aggregate labour productivity is assumed to stay constant. Fourth, the reduction in public sector employment is assumed not to affect total employment. And finally, the effects of wage cuts on domestic demand are ignored in the calculations. All of these assumptions tend to increase the estimates for the employment effects, and therefore lead to overstating the effects of the policy package.

[16] The effects of changes in sick leave policies are particularly difficult to evaluate, as data on short sickness absences that are not compensated by Social Insurance Institution (KELA) are of poor quality. In addition to data problems, the behavioral effects are difficult to estimate. In the government calculations, sickness absences are highly responsive to the level of the sickness absence compensation. However, the estimates that are used in these calculations are based on the duration of long sickness absences, and it is far from clear that these estimates could be used to form reliable predictions of the effects of restricting compensation for short sickness absences.

Wage adjustment

Perhaps the main reason why the estimates of the employment effects are confusing is that they make no distinction between long-run and short-run effects. In the long run, wages and prices adjust. In standard labour market models, workers or their unions are mainly interested in net wages, no matter whether they are paid as holiday bonuses or hourly wages. In the long run it is expected that wages adjust to cuts in e.g. holiday bonuses such that these measures will lead to higher hourly wages with very little effect on total wage compensation.

In the long run, wages will also adjust to the reduction in payroll taxes. The usual estimates regarding tax incidence imply that the effects of tax cuts fall partially, or in many cases, entirely on wages. An increase in the payroll tax leads to a decrease in wages and a reduction in payroll taxes to an increase in wages, implying that payroll taxes have little effect on labour costs.

In the long run, employment is determined mainly by labour supply. Therefore, it may be realistic to assume that, for example, cutting public sector employment has no effect on aggregate employment. However, if the wage costs remain unchanged, equilibrium employment will also remain unchanged in the long-run.

By contrast, the situation may be quite different in the short run. If wages are downwards sticky, and the decrease in productivity has increased relative wages above the market clearing level, then employment may be restricted by labour demand. A policy package that lowers wage costs may speed up the adjustment towards the equilibrium and thus increase employment. The short-run effect on employment then depends on the magnitude of the reduction in labour costs and the labour demand elasticity.

However, even in this case it is unrealistic to assume that wages in all sectors would fall by the full amount of the proposed labour cost reduction. More realistically, the proposed measures would lead to wage increases at least in some sectors such that the average labour cost reduction would be substantially below 5%. Note also that if the employment response is determined by labour demand, then the reduction in public sector employment will have direct effects on aggregate employment. This implies that reduced employment in the public sector will reduce the overall employment rate.

Demand elasticity

Government uses in its calculations an estimate of labour demand elasticity of -0.7.[17] This is a high estimate even compared to the somewhat selective survey that the MoF presents in the background draft published on September 29th, 2015 (Ministry of Finance 2015d, Hallitusohjelman mukaisen palkkamaltin ja yksikkötyökustannusten alentamisen vaikutuksista). The key source in the MoF draft is a meta-study by Lichter et al. (2014). In that study, the authors conclude that their preferred estimate for the average own-price elasticity of labour demand is -0.246. This estimate is a constant-output elasticity, and therefore not directly applicable for the current purpose, but it is still an order of magnitude smaller than the elasticity of -0.7 used in the government calculations.

Other studies cited by the MoF mainly estimate demand elasticities using aggregate data, explaining employment changes at the industry or firm level by changes in labour costs. A common problem in these types of studies is that they lack exogenous variation in labour costs. Wages and employment are both endogeneous variables, and changes in the relationship between these variables can have a causal interpretation only if there is exogenous variation in either of these variables. For policy analysis and for predicting the effects of changes in labour costs, we would need to measure the causal impacts of labour costs on employment, which is impossible without exogenous variation in labour costs.

More recent labour economics literature provides several examples of labour cost changes that can be used to make causal inferences. Most often they are based on payroll tax changes that affect some firms or some workers while leaving other similar firms or workers unaffected. In such situations it is possible to compare groups that are affected by a tax change to similar comparison groups that are unaffected by the policy change.

[17] The government's proposal is not clear on this point. It states that the wage elasticity of demand for the entire economy is -0.4 and that the average elasticity in the private sector is -0.7. In its response to the Council's inquiry, the Ministry of Finance explained that it used an elasticity estimate of -0.7 in calculating the employment effects. In addition, the MoF takes into account the price response so that the reduction in real labour costs observed by the employers is only 80% of the nominal decrease. The employment effect in the MoF calculations is then obtained simply by multiplying the change in the real labour costs by the elasticity estimate, and by increasing *private sector* employment by this fraction.

Finnish examples of such studies include an evaluation of payroll tax cuts in Lapland in 2003 (Korkeamäki and Uusitalo 2009) and an evaluation of payroll tax subsidies for older workers (Huttunen et al. 2013). The effects of payroll tax cuts have also been evaluated in Sweden based on regional tax cuts (Bohm and Lind 1993, Bennmarker et al. 2009) and payroll tax cuts for young workers (Egebark and Kauniz 2014, Skedinger 2014). Naturally, the elasticity of labour demand may be context or time-specific, implying that the estimates based on responses in a particular group at a specific point in time may not be generalizable to other groups and other time periods. However, the direction of the bias is not obvious. Typically, the policies evaluated in these studies are targeted to groups for which the demand elasticity should be higher than average. On the other hand, some of these policies are temporary, and may have a smaller impact than permanent changes because of e.g. adjustment costs.

Overall, these studies tend to produce much lower estimates of labour demand elasticity than earlier studies based on aggregate data. Also, the estimates typically have wide confidence intervals, implying that it is often impossible to exclude the possibility that the payroll tax cuts have had a zero effect on employment – or that they have moderate positive effects. Even in cases where the estimates are statistically significantly different from zero, the magnitudes tend to be substantially lower than what is assumed by the MoF. In cost-benefit analysis, this implies that the drop in public sector revenue from creating jobs with payroll tax cuts is rather large.

Productivity

The government's assumption that the cost-competitiveness package will have no effect on the average labour productivity is inconsistent with both economic theory and empirical observations. In standard labour demand models, employers hire workers as long as their marginal product exceeds the cost of hiring, i.e. as long as the last worker hired generates enough profits for the firm to make hiring profitable. Reducing the costs of hiring lowers the productivity threshold, and therefore makes it profitable to hire workers even if they are slightly less productive. Thus, if lowering labour costs increases employment, it will simultaneously lower average productivity.

This relationship is also visible in the data. For example, productivity has slightly increased in the Finnish manufacturing sector over the past two

years – compared to e.g. Germany. However, at the same time employment (working hours) has decreased. Thus it might be possible to increase employment towards the level of the previous years by lowering wages, but the aggregate productivity must fall if this implies hiring less productive workers.

Effects on aggregate demand

As noted above, the government's calculations of the employment effects of its cost-competitiveness measures are questionable and even internally inconsistent. Some of these problems would have been solved if the government had based its estimates of the employment effects on a macroeconomic model of the Ministry of Finance.

Naturally, the accuracy of predictions derived using macroeconomic models depends on the quality of its parameters. In most cases, the parameters of these models are calibrated rather than estimated. Even when the parameters are estimated, identification of macro-level estimates is often more difficult compared to micro estimates. However, a key benefit of using a macro model is that it "forces" the underlying assumptions to be internally consistent. Also, the short-term and long-term responses can be separated.

In addition, macro model analysis would have taken into account the effects on aggeragate demand. For example, the cuts in holiday bonuses, as well as reductions in public expenditures, reduce disposable incomes and hence domestic demand and employment – at least in the short term. A macro model would have also given predictions on the effects of the cost-competitiveness measures on exports – presumably one of the the main motives for implementing this policy.

However, macroeconomic models have limitations that make evaluating the government's cost-competitiveness package difficult. Wages is an endogeneous variable in macro models, and thus the effects of wage reductions are difficult to model. The models are typically not detailed enough so that one could directly simulate the effects of proposed changes in, for example, holiday bonuses. Thus to estimate the effects of policies that reduce wages, one needs to modify some other parameters of the model, e.g. changing the degree of competitiveness in the labour markets or worker preferences in a way that wages will be reduced by a sufficient amount. However, as the wage response to the government's policy proposal is

uncertain, assuming that wages actually are reduced is naturally a problematic starting point in macro models.

Labour Institute for Economic Research (PT), Research Institute of Finnish Economy (ETLA) and the Bank of Finland (BOF) have all used their macroeconomic models in evaluating the government's cost-competitiveness package. Predictions by PT and ETLA can be found in the government's website as a part of compiled statemets on the government's draft proposal for improving cost-competitiveness.[18] The predictions by the Bank of Finland are based on an intermal memo that was made public on January 15, 2016 (Kilponen et al 2016).

PT simulated the effect of decreasing the average wage in the private sector by 3.6% using their EMMA-model. PT estimates that these wage cuts would increase employment by 12,000 individuals. Compared to the net employment effect in the government proposal of 23,000 individuals (38,000 increase in private employment – 15,000 decrease in public employment), estimates calculated by PT are much smaller.

ETLA and BOF both simulate the effects of a 5% reduction in unit labour costs, including also the effects of the payroll tax reduction. According to ETLA, this would increase employment by 30,000 individuals – or by 20,000 if one uses smaller price elasticities for exports. BOF does not calculate the effect on the the number of employed individuals, but instead estimates that the improvement in cost-competitiveness would increase working hours cumulatively by 5.2% comparted to the baseline forecast in 2022. BOF notes that typically the changes in hours of work reflect changes in the number of employed individuals, rather than changes in working hours per an employed individual.

Especially the estimates calculated by BOF are very large. However, as BOF emphasizes several times in the report, they calculate the implications of a 5% unit labour cost reduction while taking no stand on the likelihood that the unit labour costs would be reduced by this much. They note that the improvement in competitiveness depends crucially on how wages respond to the cost-competitiveness measures. The estimates are also conditional on the government's estimates of the static effects of the cost-competitiveness

[18] http://valtioneuvosto.fi/artikkeli/-/asset_publisher/lausunnot-yritysten-kilpailukykya-kohentavasta-lakipaketista-julkaistu (in Finnish, accessed 18.1.2016)

measures on unit labour costs. As also the average labour productivity changes in the Bank of Finland's calculations, reaching a 5% improvement in cost-competitiveness requires a 7.1% decrease in avereage wages.

Large employment effects in the BOF report are partially due to a quick price response. In their calculations, a reduction in labour costs leads to an almost immediate decrease in producer prices. Therefore export prices decrease by 2.8% and exports increase by 3.7%, already in 2017, both compared to the baseline forecast. The decrease in domestic prices is even larger, as consumer prices will decrease by 5.6% in 2017.

The estimates by ETLA are somewhere in the middle of PT and BOF – and smaller than those calculated by the government. ETLA estimates the effects of a 5% reduction in the unit labour costs but, unlike BOF, explicitly notes that the reduction in unit labour costs is likely to be smaller and that there is a risk that the actual cost reduction will be substantially smaller than the proposed measures would directly imply. ETLA concludes that the competitiveness package is likely to have small, possibly in some years even negative, short-term effects on employment, but clearly positive effects in the long-run.

4.5 Council's views

The declining cost-competitiveness of the Finnish manufacturing firms after 2007 is largely due to a drastic fall in productivity. However, wages have also grown faster than in the comparison countries, and have not adjusted to a decrease in productivity. Even though excessive wage growth was not the main reason for the decline in cost-competitiveness, reducing labour costs is probably the only way of improving cost-competitiveness in the short term.

The government has adopted a risky strategy of improving cost-competitiveness with legislative changes in non-wage components of pay. The effects of government policies on labour costs are uncertain, and depend on how wages respond to the proposed policy package. The most likely outcome is that the labour cost reduction will end up being smaller than what is assumed in the government's calculations. Particularly, long-term wages and prices are likely to adjust so that the effect of government policies on wages and therefore on employment are likely to be smaller than what is estimated by the government.

Even if labour costs would be reduced by the full amount, the government's estimate of the employment effect seems overly optimistic – also in the short term. According to most empirical estimates in the economics literature, employment is less responsive to labour costs than what is assumed in the government's calculations. Also, factors ignored in the government's estimation – the decrease in public sector employment and the effect of wage cuts on domestic demand – affect to the same direction, leading to an overestimate of the employment effects.

5 Fiscal rules

The current fiscal framework involves a considerable number of different targets concerning the levels of public sector debt and deficits. Some of the targets relate to the entire public sector, and some to its subsectors. In this chapter we evaluate the consistency between the various fiscal targets adopted by the government.

A key reason for adopting fiscal rules is to increase transparency and accountability. Mutually inconsistent targets would threaten the credibility of the entire fiscal framework, as it becomes less clear which targets the government should be held accountable for.

5.1 Description of the fiscal framework

The Finnish fiscal policy framework consists of EU-level treaties on fiscal policy rules and national decisions incorporating these agreements into domestic legislation. In addition, several domestic fiscal policy goals have been set in the Government Programme and in the General Government Fiscal Plan for 2016–2019. In this chapter we review these rules and policy goals, discuss whether these rules are consistent with each other and make some remarks on the appropriate way of deriving medium-term fiscal policy objectives.

The key elements of the EU-level agreements are the 60% of GDP ceiling on the gross public debt and the 3% ceiling for the general government fiscal deficit. These rules were set already in 1997 in the Stability and Growth Pact (SGP). In 2005, these rules were amended by introducing a requirement that countries set a medium-term objective for the public sector balance covering

all sectors of government and defined in structural – cyclically corrected – terms.

EU agreements are binding for the countries that have ratified the agreements. The rules defined in the Treaty on Stability, Coordination and Governance (Fiscal Compact) are now included also in the Finnish Fiscal Policy Act (869/2012) that came into force in 2013. According to this act the government sets a medium-term objective for the structural balance for the entire public sector (central government, local governments and social security funds combined). The Act on the General Government Fiscal Plan (120/2014) further specifies that the government will set separate numerical fiscal targets for the subsectors of government and that these targets need to be consistent with the overall structural budget target.

The current medium-term budgetary objectives were set in 2013 and last confirmed in the General Government Fiscal Plan issued in September 2015. The medium-term fiscal policy objective for the general government is a structural deficit of at most 0.5% of GDP. Fiscal targets for the subsectors are also explicitly defined for the first time in the General Government Fiscal Plan. The target for both the central government and the local government sectors is a deficit of at most 0.5%, the target for the pension funds is a 1% surplus and the target for other social security funds is a balanced budget.

The new government's programme also discusses fiscal policy targets, though in less formal fashion. The Strategic Programme of Prime Minister Juha Sipilä's Government (29 May 2015) states that "*Under the Government's economic programme, the debt-to-GDP ratio will level off by the end of the government term and living on debt will be brought to an end in 2021.*" The formulation is not entirely clear, but according to a common interpretation it implies that the debt-to-GDP ratio should stabilize by 2019 and that the real value of debt should stabilize by 2021. The programme does not specify whether these debt and deficit targets refer to the entire public sector (including the social security funds that are in surplus) or also separately for central and local governments.

The government programme also sets targets for long-term fiscal sustainability. In its spring forecast, the Ministry of Finance estimated that the sustainability gap was 5% of GDP, which implies that there is a need to improve the budget balance permanently by the equivalent of EUR 10 billion (in 2019 prices). In its programme, the government has committed to make

decisions that eventually lead to closing of sustainability gap in public finances by 2030. The consolidation measures listed in the government programme were estimated to reduce government expenditures permanently and reduce the deficit by approximately EUR 4 billion by 2021. Taking into account the consolidation measures listed in the government programme, the Ministry of Finance has updated its calculations and in its autumn 2015 forecast, the MoF estimates that the sustainability gap is about 3.5% of GDP if these measures will be implemented. According to the government programme, the rest of the sustainability gap will be closed by measures that increase employment and growth or – if these fail – by additional adjustment measures (EUR 1.5 billion), reducing the mandatory tasks of local government (EUR 1 billion) and by implementing health care reform and improving productivity of public services (EUR 3 billion). Whether the goals related to savings due to social and health care reform or cuts in municipal spending are realistic is an issue that needs to be evaluated separately.

The fiscal policy stance in the government programme was largely based on a report by the Ministry of Finance issued in March 2015 (Ministry of Finance 2015a). In its report the MoF proposed that fiscal policy should aim at lowering central government gross debt from the current level of 50% to 40% of GDP. It also proposed stabilizing the local government debt to 10% of GDP. This would reduce public sector gross debt to 50% of GDP. The debt targets proposed in the MoF report were never formally adopted by the government, but consolidation requirements derived from these debt targets were. Therefore these debt targets should probably be viewed as equally important fiscal policy targets as the targets listed in the government programme or in the fiscal plan.

The Ministry of Finance does not elaborate why exactly 50% of GDP would be a reasonable debt target but discusses the need to create a safety margin with respect to the 60% debt limit of the Stability and Growth Pact so that in the event of unexpected events there would be some fiscal space left for automatic stabilizers to work. The MoF further argues that adjustment should be achieved through spending cuts and by reducing the tasks of the municipalities because the tax-to-GDP ratio should not be increased.

An important part of the fiscal framework is central government spending limits, i.e. the ceiling on central government budget expenditures. These limits cover around four fifths of central government budget appropriations,

leaving out expenditures that are affected by cyclical fluctuations, such as expenditures on unemployment insurance and social assistance and interest on government debt. The limits are set at the beginning of the parliamentary term and are binding for the whole four-year parliamentary term, and serve as a guide to the preparation of annual central government budgets. The spending limits are now included in the General Government Fiscal Plan. The current government reduced the spending limits for 2019 by EUR 1.2 billion compared to the "technical spending limits" decision before the government entered office (General Government Fiscal Plan)

5.2 Consistency between medium-term targets

As the number of fiscal policy targets in the government documents is large, a natural question is whether these targets are consistent with each other.

The fiscal targets listed in Table 5.2.1 are not mutually consistent. The clearest example of inconsistency between the different targets is that the subsector targets do not add up to the overall target for general government. Summing up the subsector targets (targets for central and local government and the social security funds) in the General Government Fiscal Plan (-0.5 + -0.5 + 1 = 0) would yield a balanced budget target for general government. However, the overall target for the entire general government, the medium-term objective (MTO) defined according to the rules of the Stability and Growth Pact, is -0.5% of GDP, not 0% of GDP. In addition, the subsector targets are set without cyclical adjustment while the medium-term objective is set in structural – cyclically adjusted – terms.

Table 5.2.1 Medium-term fiscal policy targets

Target	Origin	Cyclically adjusted
Gross debt ≤ 60% of GDP	SGP	no
Deficit ≤ 3% of GDP	SGP	no
Structural deficit ≤ 0.5% of GDP	TSCG	yes
Subsector deficit targets: Central government ≤ 0.5% of GDP Local government ≤ 0.5% of GDP Pension funds surplus ≥ 1% of GDP	General Government Fiscal Plan	no
Debt-to-GDP ratio growth = 0 in 2019	Government programme	no
Gross debt growth = 0 in 2021	Government programme	no
Gross debt ≤ 50% of GDP	The MoF	no

Abbreviations: SGP = Stability and Growth Pact, TSCG = Treaty on Stability, Coordination and Governance (Fiscal Compact)

The government notes that the subsector targets can be tighter than the combined target for general government. In the Act on the General Government Fiscal Policy Plan, the government is required to set the subsector targets so that they are sufficient for reaching the medium-term fiscal policy objective for general government *or* yield a stronger fiscal position than required by the MTO. Hence, reaching subsector targets would make the general government target redundant – or as the Ministry of Finance stated in its pre-election report – the overall target would form a backup target for fiscal policy.

Assuming that the government takes the subsector targets seriously, it would be logical and more transparent to set these so that they would be consistent with the overall target for the general government. This would imply that both the subsector targets and the overall target should be defined in cyclically adjusted terms, and that the subsector targets should add up to the overall target. The government may have good reasons to set fiscal targets that are tighter than the minimum requirements in the Stability and the Growth Pact. However, such goals should then be used in setting both the overall target for general government and the subsector targets.

Having some fiscal policy targets defined in cyclically adjusted terms and some without adjustments is bound to create confusion. The EU fiscal framework also has this structure but in the EU rules there is a clear rationale for having both cyclically adjusted and nominal targets. The medium-term objective is defined in cyclically adjusted terms so that it allows smoothing of the business cycles with fiscal policy (automatic stabilizers) and still keeps the headline deficit below the 3% limit in all stages of the normal business cycle. Cyclically adjusted targets promote fiscal discipline also in booms.

No such rationale exists for defining the domestic subsector targets without cyclical adjustments when the overall target, the MTO, is specified in cyclically adjusted terms. Presumably the targets are set to the 2019 level under the assumption that the output gap will be closed by then. Therefore, in calculations related to the magnitude of the consolidation measures required for reaching the targets, it is not relevant whether the targets are set in cyclically corrected terms or unadjusted in the 2019 level under the assumption of a normal cyclical position in 2019. However, the difference is crucial for ex-post monitoring. Whether the government manages to reach its fiscal policy targets depends on the state of the business cycle in 2019.

A more fundamental question is whether all the fiscal policy targets should be defined in cyclically adjusted terms or without such adjustments. Calculating the cyclically adjusted deficit requires estimates of potential output, the output gap and the sensitivity of the budget balance with respect to the output gap. Estimates of the output gap are often revised so that cyclically adjusted deficits may ironically be more volatile than headline deficits (Andersen, 2013). On the other hand, abandoning cyclical adjustments entirely as the government is doing in setting its domestic fiscal policy goals increases the risk of pro-cyclical fiscal policy that would exacerbate business cycle fluctuations and make monitoring fiscal policy more difficult. Setting all fiscal targets in cyclically adjusted terms would create a more consistent and transparent fiscal framework that would promote fiscal discipline while still allowing automatic stabilizers to play their full role in mitigating economic shocks.

The structural budget balance is a computed metric that aims to correct for the business cycle situation and other temporary factors so as to get a better assessment of the underlying position of public finances. Various methods exists to compute the structural budget balance (see e.g. Bornhorst et al. 2011). A top-down-procedure starts off with the actual budget balance and corrects for the effects of the cyclical position of the economy and one-off items. This method is applied by the Ministry of Finance. This method is relatively straightforward to apply, but it suffers from the problem that all measurement problems, errors and noise end up in the measure of the structural budget balance which is then a key input to the discussion of public finances.

Alternative methods are bottom-up in nature, and work with disaggregate measures of revenues and expenditures and determines a structural level for these. The advantage is that they allow a more detailed account of public finances, but are clearly sensitive to how structural levels are determined. Given the importance of the metric for the structural budget balance, the methods are intensively discussed and various institutions and governments have taken initiatives to improve the methods. This includes statistical methods, the level of aggregation, and using asset prices to supplement the output gap as indicators of the business cycle situation (see e.g. Bornhorst et al. 2011, Kuusi 2015).

5.3 Consistency between the medium-term targets and long-term targets

Perhaps an even more serious issue is the possible inconsistency between the medium term and the long-term fiscal policy targets. If the ultimate target is to guarantee fiscal sustainability in the long term, the medium-term targets should be derived from the long-term targets so that the medium-term targets – or rather their future paths – would be consistent with the long-term targets.

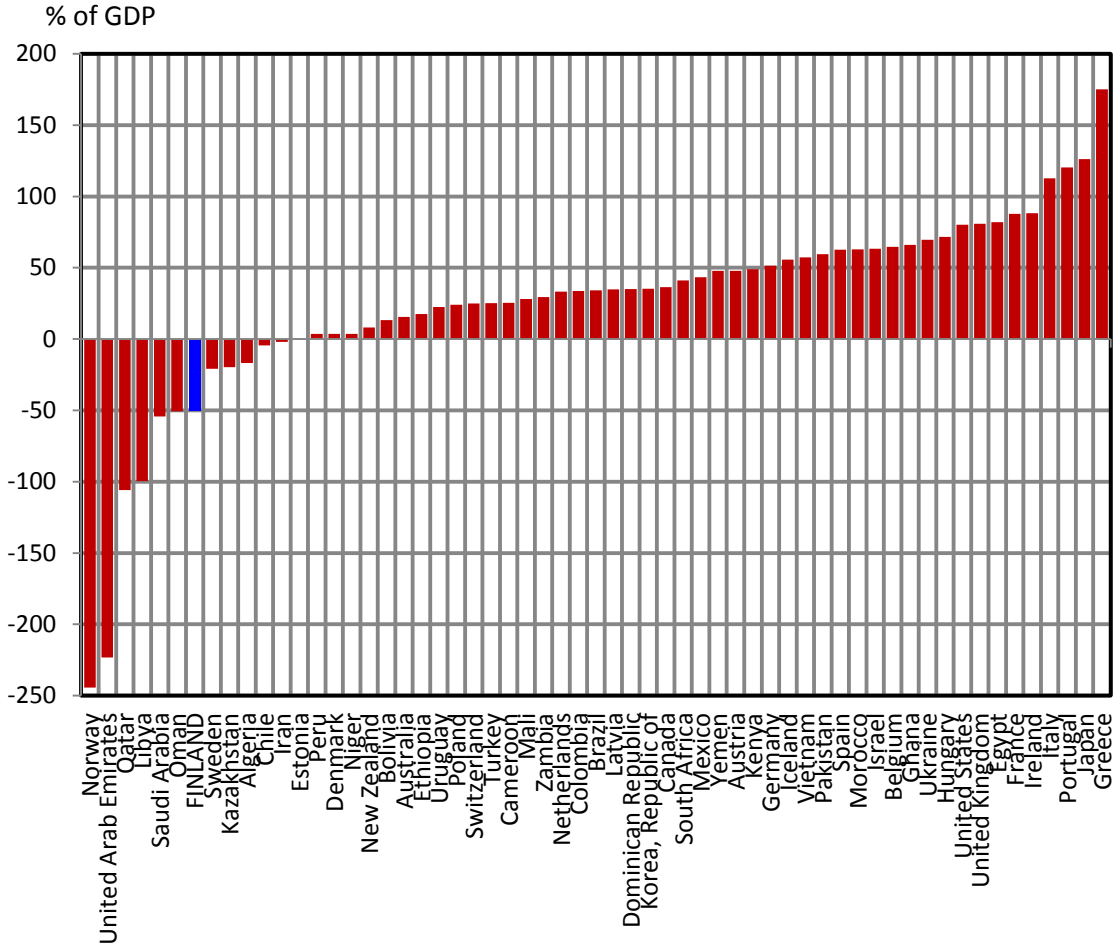
In principle, the EU-level medium-term objectives for structural deficits are defined so that debt converges to the 60% limit of the Stability and Growth Pact (see Box 5.3.1). However, in the Finnish case, it is not clear that reaching the medium-term fiscal policy targets would guarantee sustainability in the long term. The problem is the simultaneous surplus in the pension funds and deficit in other sectors.

The pension funds have a surplus that is currently about 1% of GDP (Ministry of Finance 2015b). The other sectors of government have substantial deficits. In 2015, the central government was estimated to have a deficit of 3.1% of GDP and the local government a deficit of 0.8% of GDP. As pension wealth is not used to pay off the debt of other government sectors, reaching deficit targets set for the general government balance is not a sufficient requirement for keeping general government gross debt stable. Pension funds continue accumulating assets while debt keeps growing in other government sectors. If the long-term goal of the government is to stabilize gross debt, a separate deficit targets for subsectors of the government – not only for the general government - are required.

The debt limits in the Stability and Growth Pact are set for (consolidated) gross government debt. For most EU-countries this makes little difference, as the public sector holds relatively little financial assets so that net and gross debts are roughly equal. Finland is a notable exception among EU-countries. Mainly due to the inclusion of private pension funds in the public sector, the Finnish public sector holds substantial assets. Gross government debt is around 60% of GDP, but the government assets are substantially larger. Even if only financial assets are taken into account, the net public debt is negative. In fact, according to the most recent IMF data the financial position of the Finnish general government is one of the strongest in the world (see Figure 5.3.1). Only in some oil-producing countries, such as

Norway and the Arab Emirates, the public sector net asset position is stronger than in Finland.

Figure 5.3.1 Net financial asset position of general government (relative to GDP, %)



Source: IMF Fiscal Monitor, October 2015 World Economic Outlook database

A positive net asset position creates several problems related to the appropriate choice of the MTO. First, as can be seen from equation (4) in Box 5.3.1, a country with net debt can maintain a permanent budget deficit while still keeping its debt-to-GDP ratio constant. If a country with no assets and 60% gross debt grows at an average nominal rate of 3.5% per year, it can have a permanent 2% budget deficit and still keep its debt constant. However, a country like Finland that also has 60% gross debt but large fiscal assets so that its net debt equals -50% of GDP, needs to maintain a 1.7%

budget surplus to keep its net asset to GDP ratio constant under the forecast 3.5% growth rate (naturally income from assets contributes to this surplus).

Box 5.3.1 Deriving the medium-term objective

In principle, the deficit target can be derived from either long term sustainability or debt targets. A simple debt-dynamics equation shows how net debt evolves over time

$$Net\ debt_t = Net\ debt_{t-1} + Budget\ deficit_t \qquad (1)$$

Expressed as a ratio to GDP this becomes

$$\left(\frac{Net\ debt}{GDP}\right)_t = \frac{\left({}^{Net\ debt}/_{GDP}\right)_{t-1}}{1+g_t} + \left(\frac{Deficit}{GDP}\right)_t \qquad (2)$$

where g_t is the nominal growth rate of GDP in year t. Note also that the deficit in equation (2) is measured including interest expenditure, i.e. it refers to the total deficit and not to the primary deficit. Equation (2) also implies that the change in the net debt to GDP ratio is

$$\left(\Delta\frac{Net\ debt}{GDP}\right)_t = -\frac{g_t}{1+g_t}\left(\frac{Net\ debt}{GDP}\right)_{t-1} + \left(\frac{Deficit}{GDP}\right)_t \qquad (3)$$

and that the budget balance required to stabilize the debt to GDP ratio to the current level is

$$b_t = -\frac{g_t}{1+g_t}\left(\frac{Net\ debt}{GDP}\right)_{t-1} \qquad (4)$$

The relationships described in equations (1) - (4) hold as identities for net debt. However, both the 60% debt limit in the Stability and Growth Pact and the debt target in the government programme are defined in gross terms. In a country which has substantial financial assets and where some sectors of government are in deficit while other sectors have a surplus, reaching the deficit target does not guarantee reaching the debt target.

The Vade Mecum of the Stability and Growth Pact presents guidelines for calculating country-specific MTOs. According to these guidelines the country-specific MTO's (defined in cyclically adjusted terms) should fulfill three criteria. They should 1) provide a safety margin to keep the headline deficit under 3% of GDP 2) ensure progress towards sustainability of public

finances by ensuring the convergence of debt ratios towards prudent levels and 3) allow flexibility, in particular taking into account the needs for public investment.

Of these the second requirement is crucial. According to the Vade Mecum, the medium-term objectives should be set at a level that stabilizes gross government debt at 60% of the GDP under assumptions regarding the long-term growth rate and expected budgetary costs due to population ageing. An explicit formula is also provided. According to the Vade Mecum, the minimum MTO is a sum of three terms

$$MTO = -(60 \times g) / (1+g) + \alpha \times \text{ageing costs} + k\,(d-60) \qquad (5)$$

The first term comes from simple debt dynamics and follows from equation (4) by replacing current debt-to-GDP ratio with the 60% target. Keeping the debt-to-GDP ratio at 60% in a growing economy allows a constant deficit as long as the debt accumulates at a rate that is less than the 60% of the nominal GDP growth rate. If the economy grows at a nominal rate of 3.5% per year, the first term is approximately 2%. Note again that this refers to the public sector deficit, including the interest on public debt.

The second term reflects front loading of ageing expenditures. Population ageing will increase health care and pension expenditures in all EU countries and the medium term objectives partially take this into account. In the Vade Mecum of the Stability and Growth Pact, alpha is set to 0.33 so that one third of the future cost increases due to ageing are covered by early tightening of fiscal policy.

The third term reflects supplementary debt reduction effort requirements for countries that have debt-to-GDP ratios over the 60% target. This currently has little significance for Finland, as the Finnish general government debt is close to the 60% benchmark.

Under current projections by the Finnish Center for Pensions (ETK), the pension funds are currently about 95% of GDP and their size will remain roughly constant with respect to GDP despite the growth in the pension-aged population. Building a strong asset position to prepare for increasing pension costs in the future is naturally a prudent policy. Due to the accumulation of assets, the Finnish pension system is currently sustainable

in the sense that current contribution rates are sufficient to pay future pensions. The public pension system even has a sustainability surplus (see Box 5.3.2). However, a strong asset position makes defining medium-term fiscal objectives more challenging. If the aim is to maintain the size of the pension funds constant with respect to GDP and simultaneously stay within the gross debt ceiling of the SGP, the government needs to set substantially tighter medium-term fiscal objectives for the general government deficit.

Box 5.3.2 Sustainability of the pension system

Sustainability indicators are routinely calculated for the entire public sector, but calculations can be performed using a similar methodology to the subsectors of the government. The Finnish pension sector is particularly interesting due to its large amount of assets and equally large implicit liabilities (pension rights that are already earned). The pension sector is also affected by changes in mortality and the resulting changes in pension expenditures. Sustainability calculation takes all these factors into account.

We present below a simple sustainability calculation for the pension system. The results are based on several assumptions reported in more detail in the appendix. The basic approach is to use the long-term budget constraint of the pension sector to solve the required permanent change in the pension contributions that makes the expected future pension expenditures equal to the expected future revenues from the pension contributions.

All calculations are based on an assumption of no-policy change. This implies that the pension contribution rate is kept at the current level including only changes that have already been decided upon. The growth in pension expenditure is calculated using the long-term planning model (PTS) of Finnish Center for Pensions. The changes due to pension reform approved by the parliament in 2015 are already included in expenditure projections.

Assets are included in the calculations. In 2019, which is the base year in the calculations, financial assets are estimated to be 95% of GDP. In contrast to calculations by the the European Commission, pension wealth is not assumed to diminish over time but is assumed to eventually converge to the initial level with respect to GDP. This assumption is probably more realistic than the assumption used by the Commission but mainly affects the long-

term path of capital income.

Other key assumptions include the long-term productivity growth rate of 1.6% and real return to assets of 3.5%. Given the large positive asset position, asset returns are important for sustainability. Interestingly productivity growth has a limited effect on sustainability calculations. While slower growth increases expenditures with respect to GDP due to incomplete indexation it also reduces future pension accruals and increases the present value of current wealth compared to future expenditures. Therefore, the net effect of slower productivity growth is close to zero.

The baseline results of the calculations are given in Table 5.3.1 The first column displays the contribution of the base year financial assets to the sustainability gap and the second column gives the present value of future annual deficits discounted to 2019. The third column then reports their sum i.e. the sustainability gap. A positive gap would indicate that pension contributions would need to be permanently increased and a negative gap that they could be lowered and still keep the system sustainable.

Table 5.3.1. Sustainability of the pension system

	Contribution of current assets	*Contribution of future deficits*	S2 sustainability gap
Private	– 1.1	+1.0	– 0.0
Public	– 0.6	– 0.0	– 0.6
Total	– 1.6	+1.0	– 0.6

According to the results in Table 5.3.1, there is a sustainability surplus of 0.6% of GDP in the pension system. This surplus is in the public pension system, and the private pension system is essentially balanced. Initial assets make a larger contribution to the private pension systems because of their larger assets. The private pension system will have a deficit which will grow rapidly until 2025 before it then starts to decline. Due to capital income from current wealth, the private pension system is sustainable. In the public sector expected future pension contributions equal expected pension

expenditures. Accounting for the current wealth in the public sector pension system creates a sustainability surplus.

Detailed calculations of the sustainability of the pension system are published as an appendix to this report. The appendix report was compiled in December 2015 by Mauri Kotamäki of the Ministry of Finance, Risto Vaittinen of the Finnish Center for Pensions and Reijo Vanne of the Finnish Pension Alliance, TELA.

Excluding the pension funds from the calculation of medium-term fiscal objectives would simplify the calculations for appropriate medium-term fiscal objectives. This was partially done in Sweden in 2007 (see Box 5.3.3), but might be difficult to combine with the objective of monitoring the performance of the entire public sector. Another alternative would be to derive medium-term fiscal objectives separately for each of the subsectors of government. These subsector targets should then be consistent with the long-term debt or sustainability targets. A simple way to define such targets would be to use the guidelines for deriving the MTO for general government in the Vade Mecum of the Stability and Growth Pact, and to apply that separately for the sectors of government that are in net debt. Alternatively, the government could carry out sustainability calculations for the subsectors by deriving appropriate budget balances that would guarantee fiscal sustainability for each subsector.

Box 5.3.3 Pension systems and fiscal targets, the Swedish case

Pension systems are included in the public sector to a varying extent in the EU countries. In Sweden, part of the pension system was moved from public sector to private savings in 2007.

The mandated Swedish public pension system has three elements: the guarantee pension, the income pension and the premium pension. The guarantee pension is tax financed, and the other are two financed by mandatory contributions. For the income and premium pension the contribution rate is 18.5% of earnings, which is split between 16% for the income pension and 2.5% for the premium pension. The contribution rate has an employer and employee component. The income pension system is a

PAYG-type scheme termed a notional defined contribution scheme, and the premium pension is an individualized defined contribution system (funded scheme).

Until 2007 premium pension savings were counted as part of public finances (contributing to the surplus of public finances by approximately 1% of GDP), and the surplus target was set accordingly. From 2007 the savings in the premium pension system are no longer included in public finances but attributed to the household sector, and the surplus target has been adjusted accordingly. (Finansdepartementet, Budgetpropositionen 2008).

If the pension system is financially robust and independent, there is no obvious reason to include the savings in public finances and thus the public savings target. Including the pension system may lead to less transparency, since variations in the surplus in the pension system affects the savings requirement for the state and the municipalities so that there is a risk that savings in the state (and municipalities) are determined residually (Swedish Fiscal Policy Council 2008, Riksrevision 2007). If the system is not autonomous, there is an argument to include it in total public savings, but to record the separate components clearly and to decompose sustainability calculations in calculations for the pension system and for the state/municipalities, see Finansdepartementet (2010).

A final point related to the appropriate MTO given the expected increase in the age-related expenditures has to do with the degree of front-loading. As described in Box 5.3.1 (equation (4)), the MTO is chosen so that one third of age-related expenditures are taken into account when setting the country-specific MTO. Again, this seems problematic in the Finnish case where the pension system is already balanced. For other sectors of government, the adjustment needs are substantial, but the options for structural reforms are more limited. Still the equation would be a useful tool for national government to design its fiscal policy. The government could set explicit (and hopefully realistic) targets for the budgetary effects of structural reforms, particularly in health care, and then adjust the medium-term objective so that its future path would lead to long-term sustainability after accounting for the expected effects of the structural reforms.

5.4 Council's views

A key goal of fiscal policy rules is to ensure fiscal sustainability in the long-term. Therefore, the medium-term targets should be derived from the long-term targets to make the medium-term targets – or rather their future paths – consistent with the long-term targets. The intermediate targets are there to ensure consistency, transparency and accountability. Therefore only a few and well-defined and mutually consistent targets should be applied. Currently, the different medium-term fiscal targets adopted by the government are mutually inconsistent.

A particular problem in the Finnish case has to do with the pension funds. The surplus in the pension funds hides the deficits in the other government sectors. The new General Government Fiscal Plan solves the problem by introducing separate fiscal policy rules for the subsectors of general government. To create a consistent framework these targets should be defined using similar cyclical adjustments as when setting the general government fiscal target. In addition these rules should be derived from the long-term sustainability targets.

6 Fiscal policy and economic performance

Public expenditures and taxes (fiscal policy) affect economic performance through a multitude of channels. It is useful to distinguish between the implications of the design and size of the public sector, and short-run stabilization policies.[19] The former is a medium/long-run question, which addresses the (permanent) consequences of changes in the size or structure of public expenditures and their financing under the constraint that public budgets balance. Stabilization policy refers to temporary changes in specific expenditures or tax rates to counteract business cycle fluctuations. For such changes, there is no requirement for the budget balances, and this is crucial for their effects. If stabilization policies are temporary and symmetric[20] across the business cycle, they will have no long-run effects on public finances.[21]

The financial crisis has revived the discussion on the role and scope of fiscal stabilization policy. At the same time public finances are under pressure due to an ageing population, which challenges the fiscal sustainability of welfare arrangements, that is, with unchanged policies systematic imbalances arise between revenues and expenditures, making these trajectories unsustainable. Related to this, the public discussion often focuses on the

[19] It is often difficult to make a sharp distinction since fiscal policies may affect the structural levels of e.g. employment and unemployment around which the economy may fluctuate. Likewise an extended welfare state implies large automatic stabilizers, which reduces the need for discretionary fiscal policies.

[20] Various political economy arguments may induce biases in economic policy violating the symmetry assumption, i.e. via deficit biases or pro-cyclical fiscal policies.

[21] Except if such policies interact with persistence creating mechanisms, cf. discussion in Section 6.4.

burden – or economic distortions – caused by having a large public sector and high taxation. This raises the question of how to ensure the financial viability of welfare arrangements (fiscal sustainability), but also whether the timing of necessary reforms should be influenced by the business cycle situation.

This chapter discusses these aspects in the light of findings from the empirical literature on the topic. In Section 6.1, we discuss the implications of the size and structure of the welfare state for macroeconomic performance. In Section 6.2, fiscal stabilization policies are discussed and in Section 6.3, the specific aspects related to consolidation policies are addressed. Section 6.4 turns to an assessment of the structure and timing of the government's consolidation policies. The assessment draws on the discussion in Sections 6.1–6.3 as well as findings from the background report by Keränen and Kuusi (2016). The contents and magnitude of the consolidation policies were described in Chapter 3.

A closer examination of the effects of tax policy on the labour market is undertaken in Chapter 7. Both chapters 6 and 7 mainly focus on issues of economic efficiency. Fiscal policy also has important distributional implications, as briefly discussed in Chapter 3.

6.1 The welfare state and economic performance

How does the size and structure of the public sector affect economic performance? Does an extended welfare state come at a cost in terms of lower growth or per capita income? These are widely debated questions with obvious policy implications, and they have therefore been extensively researched.

The answer to such questions is complex. Although taxes distort economic incentives, public activities may overcome market failures through various routes, or improve economic performance in other ways. Most schemes with distributional consequences also provide insurance[22] that goes beyond the insurance possibilities provided by the private sector, see e.g. Varian (1980)

[22] Schemes that redistribute income based on ex-post observed outcomes like market income, employment status, health status etc. provide ex ante insurance when it is uncertain for individuals in which situation they will end up.

and Eaton and Rosen (1980). The interdependence between the size and structure of the public sector and economic performance is thus multifaceted. It is beyond the scope of this chapter to discuss the theoretical mechanisms[23] in great detail, and the focus is primarily on the empirical evidence. Box 6.1.1 discusses some measurement issues and problems in cross-country comparisons that tend to exaggerate the size of the public sector in the Nordic countries, including Finland.

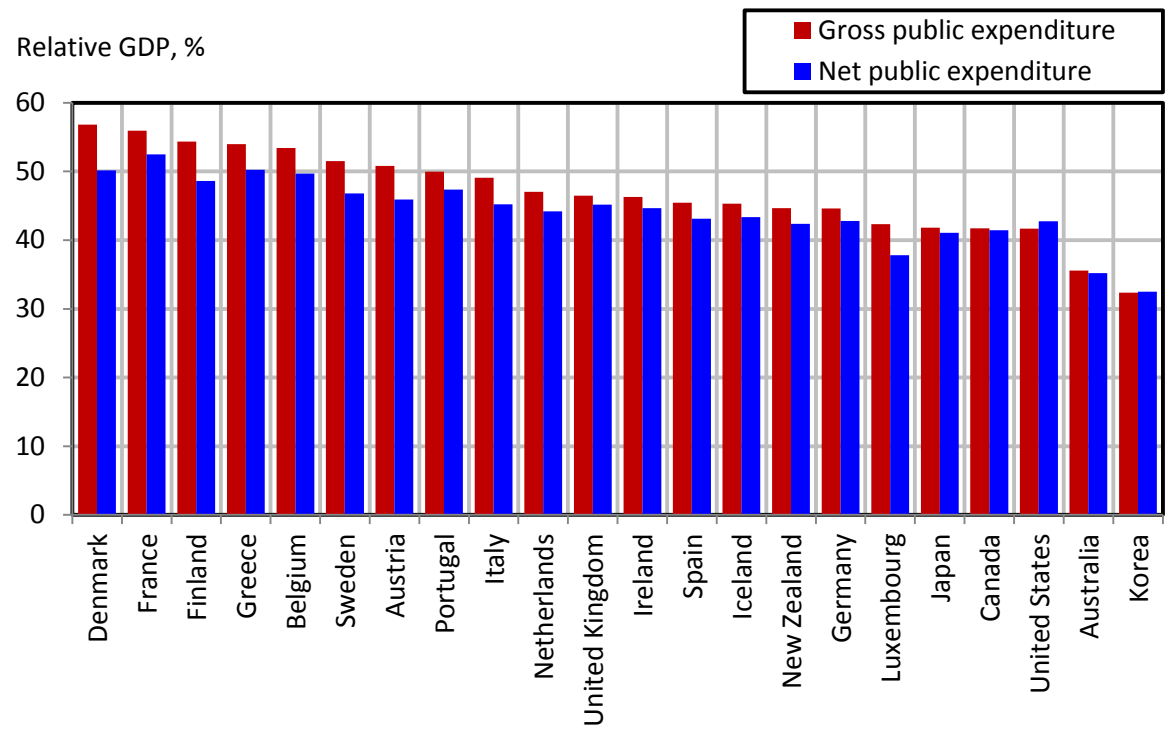
Box 6.1.1 Measurement issues

Cross-country comparisons of public sectors commonly use gross expenditure or revenue measures as a share of GDP. This approach is problematic since it neglects important institutional differences, see Adema et al. (2011). Some countries pursue a gross principle where as a rule social transfers are taxable income, while others follow a net-principle according to which transfers are not taxable income. Obviously, recorded expenditures are larger under the gross principle for the same net transfers and thus net expenditures, but net expenditures are what matter for fiscal sustainability and individual welfare. Such differences must be taken into account in cross-country comparisons.

The OECD produces statistics for net and gross social public expenditures. In 2011, gross public social expenditures as a % of GDP were 28.3% in Finland, 30.1 % in Denmark, 27.2 % in Sweden, and 22.7% in the UK. Considering net expenditures narrows the differences considerably. The share was 22.6% in Finland, 23.4 % in Denmark, 22.5 % in Sweden, and 22.1% in the UK. In short, the usual procedure exaggerates differences in the size of welfare arrangements and thus the size of the public sector. To illustrate the implications for public sector size, Figure 6.1.1 corrects the gross expenditure share by the difference between gross and net public mandated social expenditures. Measured in this way the public sector is still large in Finland – and the other Nordic countries – but not much larger than in many other countries.

[23] See e.g. Andersen (2015a) for a discussion and references.

Figure 6.1.1 Public sector size, selected OECD countries



Note: Public sector size is measured as total general government expenditures as a share of GDP. The adjusted expenditure share measures transfers net of taxes to make the numbers comparable since transfers follow a gross (taxable income) and a net (non-taxable income) principle in various countries. The data apply to 2011 to allow for this adjustment.
Source: OECD Data

There is a large empirical literature exploring how the size of the public sector and its composition affect economic performance, usually measured either by per capita income levels or growth rates. Growth effects imply level effects, but not vice versa. Therefore, growth effects are potentially of larger importance due to their cumulative effects.

The level versus growth effects of the public sector are related to the differences between exogenous and endogenous growth models. In the former, growth is driven by population growth and technological change (assumed exogenous), while the latter stresses external effects and spill-overs, and growth may be affected by policies. Obvious examples include public investments in infrastructure that may increase the marginal product of private capital, and therefore release the endogenous growth mechanism (see e.g. Agénor 2008). A similar mechanism may arise via investments in

human capital (Barro 1990 and Barro and Sala-i-Martin 1992). Since the public sector is heavily involved in the accumulation of human capital via education and research, it follows that the size and structure of public the sector may matter for growth rates (for a survey see e.g. Zagler and Dürnecker 2003). The effects of policy may be direct via e.g. human capital or infrastructure that enter the production function, but also indirect via influences on capital accumulation and labour supply.[24] These effects must be weighed against the distortionary effects of the taxes financing such activities. Both the level and structure of government expenditures are thus of importance. This opens up a variety of channels through which public sector activities and their financing can affect growth rates in an upward or downward direction both on the expenditure and revenue side.

This reasoning suggests a distinction between active/productive and passive/non-productive expenditures, and distortionary and non/less-distortionary forms of revenue. In the simple form, productive expenditures directly affect production possibilities, while non-productive expenditures do not. In the growth context, distortionary forms of taxation affect savings-investment decisions[25], while non or less-distortionary taxes do not, or do so to a significantly lesser extent (see e.g. Barro 1990). While the distinction between the two forms of expenditures and revenues helps explain the mechanisms, it is model-specific and there are substantial measurement problems. Still it makes the point that one cannot make inferences on how economic performance depends on the public sector from aggregate measures of revenues and expenditures. The composition of both sides of the budget matters. Productive expenditures may thus enhance growth if financed by less-distortionary taxes, and distortionary taxes may reduce growth if they finance non-productive expenditures, see Table 6.1.1. If productive expenditures are financed by distortionary taxes, a non-linear relation may arise where growth is at first increasing and later decreasing in the level of productive expenditures. The reason is that the initial marginal positive impact of such expenditures on activity may be large and the

[24] See Chapter 7 for the effects of taxes and expenditures on labour supply. An example from the expenditure side could be publicly provided day care which expands the labour supply of females both in the quantitative and qualitative (using acquired human capital) dimension.

[25] These are the "dynamic" distortions affecting the growth rate, in addition there are the "static" distortions affecting e.g. labour supply, see also Chapter 7. Taxes which do not affect investment/savings decisions may release static distortions, hence the terminology "less distortionary" taxes.

distortions small, but increasing them reduces their marginal effect while the distortions increase. This produces a so-called "growth hill" (see e.g. Bania, Gray and Stone 2007).

Table 6.1.1 Growth effects of public expenditures and revenues

		Expenditures	
		Productive	Non-productive
Taxation	Distortionary	Ambiguous – possible non-linear effect (Growth hill)	Growth-retarding
	Less distortionary	Growth-enhancing	Growth-neutral

The empirical challenge in disentangling these effects is formidable. The basic question is how the entire economy performs given the size and composition of public activities. Clearly, this depends on a multitude of other factors characterizing the economy and its institutions. Microeconometric evidence cannot provide a full answer since it addresses partial questions; that is, what is the effect of a change in a specific tax or expenditure item given that all other aspects of the public sector are unchanged. The question here is a systemic or a general equilibrium question as to how the entire economy would perform in a hypothetical counterfactual situation with a public sector of different size or composition. The literature has mainly resorted to cross-country studies in an attempt to make inferences from variations in performance and public sector structure across countries. This requires that it is possible to control for all other relevant factors beyond the public sector structure for cross-country differences. This is very hard to achieve in empirical work, and the results should thus be interpreted with caution.

There is a vast literature exploring the empirical relationship between fiscal policy and economic growth. A first wave of analyses peaking in the late 1990s relied mainly on cross-country studies. The studies did not yield clear-cut results. In a meta-study based on close to 100 published studies, Nijkamp and Poot (2004, p. 93) concluded: "we find broad support for the view that the empirical evidence on the effect of conventional fiscal policies is rather fragile, although the commonly identified importance of education

and infrastructure is confirmed". These studies suffered, however, from a number of methodological problems (see e.g. Bergh and Henrekson 2011).

Recent empirical work has made two important advances by building on the above theoretical insights and using panel studies combining cross-country and time series data. These studies thus disaggregate expenditures and revenues in an attempt to disentangle the separate effects of these instruments.

A particularly severe problem is that such empirical work often does not take proper account of the public sector budget constraint, which implies that the interpretation of coefficient estimates is at best unclear and often confused. Regressions often include either some aggregate measure (public expenditures or tax burden) or some specific components of the two. However, these various components are related via the budget constraint, and a change in an expenditure component has to be matched by a change in a revenue component (otherwise debt accumulates/decumulates). Since the mode of financing is critical, it follows that the effect of say a change in expenditures cannot be assessed independently of how they are financed (Helms 1985). At best a regression where e.g. output growth depends on an aggregate expenditure or revenue measure tells us something about how a proportional scaling of all expenditures would affect growth if financed by a proportional scaling of all revenue components. Therefore, regressions that do not take the budget constraint explicitly into account are hard to interpret (Kneller et al. 1999).

There are some studies overcoming these problems and they 1) utilize panel estimation methods (pooled mean group analyses), 2) disaggregate expenditures and revenues, and 3) explicitly take into account the public sector budget constraint, see e.g. Kneller et al. (1999), Bleaney et al. (2001), Bania et al. (2007), Gemmell et al. (2011, 2013). These studies find support for the distinctions introduced[26] in Table 6.1.1, that is, distortionary taxation reduces growth while productive expenditures enhance growth. As an example, Gemmell et al. (2011) find that productive expenditures increase growth if financed either by decreasing unproductive expenditures or

[26] It is an open question whether this evidence supports endogenous growth mechanisms. The results may suggest that there are endogenous growth mechanisms at work. However, the sample periods underlying the estimations are rather short, and it is very difficult to separate transitional dynamics from long-run or steady-state effects.

increasing less-distortionary taxes. Reductions in distortionary taxes financed in the same way increase growth. There is thus empirical evidence supporting the notion that the composition of both expenditures and revenues matter for growth. This may explain why the earlier literature obtained less conclusive results. If e.g. expansion of the public sector in the form of productive expenditures is financed by distortionary taxation, one would tend to find a negligible net effect on observed growth rates, see e.g. Gemmell et al. (2011). It also contributes to explaining why the Nordic countries, with large public sectors, have achieved a position among high-income countries, since expenditures are relatively more oriented towards active/productive spending than in most other OECD countries, see Andersen (2015a). How expenditure policies may counteract the possible negative incentive effects of taxation is further discussed in Chapter 7.

Using the same methodology[27], some studies have considered the more specific role of various forms of taxation. Arnold et al. (2011) consider the effects of various taxes on per capita GDP for a given overall tax burden (see also Arnold 2008). They find that the long-run elasticity of per capita GDP to an increase in (distortionary) income taxes financed by reduced (less distortionary) consumption and property taxes is close to minus one, suggesting that the tax structure matters for GDP levels in the long run. According to these results, a shift from income taxes to property and consumption taxes for an unchanged overall tax revenue may thus have a sizeable positive effect on GDP. In Arnold et al. (2011), the following ranking is made of various taxes in terms of GDP levels in the long run: corporate income taxes have the strongest adverse effect, followed by personal income taxes. Consumption taxes have less negative effects, while property taxes and in particular recurrent taxes on immovable property appear to be the least harmful. These results yield empirical support to the theoretical argument that property taxes are less distortionary than other forms of taxation, whereas in the light of most recent empirical evidence and also from a theoretical point of view, it is less clear whether personal income taxes and general consumption taxes have different effects. Some of the Arnold et al. (2011) results have been qualified by Xing (2012), who uses an otherwise similar methodology to Arnold et al. (2011), but also allows for

[27] A different methodological approach is taken by e.g. Yagan (2015) in exploiting the 2003 dividend tax reform in the US as a quasi-experimental design. This study does not find any evidence that the tax cut affected corporate investments.

heterogeneous long-run effects across countries. Xing (2012) finds no differences in the growth effects of personal income taxation, corporate income taxation or consumption taxes.[28]

The evidence reported above is directly relevant for a discussion of the design and structure of the welfare state. It is, however, also relevant for reforms aiming at consolidating public finances and ensuring fiscal sustainability. Such discussions tend to focus on the budget implications and business cycle effects of such reforms (see discussion below). Reforms affecting either the expenditure or financing side of the welfare state will in general have structural effects that work themselves out in a medium/long-run perspective. Consolidation achieved via a reduction in active expenditures and/or highly distortionary taxation would thus have a potential negative effect on long-run growth.

Finally, one clear conclusion that can be drawn from this discussion is that keeping the tax/GDP ratio at some given level is not a sensible policy target from the point of view of promoting good economic performance. First, the tax/GDP ratio is not a clear-cut way of measuring the size of the public sector. Second, it is not the overall size of the public sector but rather the structure of tax/expenditure policies that may matter for economic performance. When talking about the effects of the public sector on economic performance, a more specific focus on both distortions and possible repair of market failures is called for. Neither the tax/GDP ratio nor the expenditure/GDP ratio are good measures of either of these. A third problem with these types of targets is that they are affected by developments in GDP beyond the control of the government.

6.2 Fiscal stabilization policy

Fiscal stabilization policy has two key components: so-called automatic budget effects (automatic stabilizers) and discretionary policies.

[28] Arachi et al. (2015) also question the robustness of earlier findings on the long-run effects of different types of taxes. Their analysis has some attractive features in that they use more accurate measures of the tax structure (based on implicit tax rates instead of relying solely on tax revenue/GDP ratios) and account for possible interdependencies between countries. However, the results are somewhat hard to compare with earlier literature since they use a different classification of tax instruments, e.g. classifying property taxes under capital taxation.

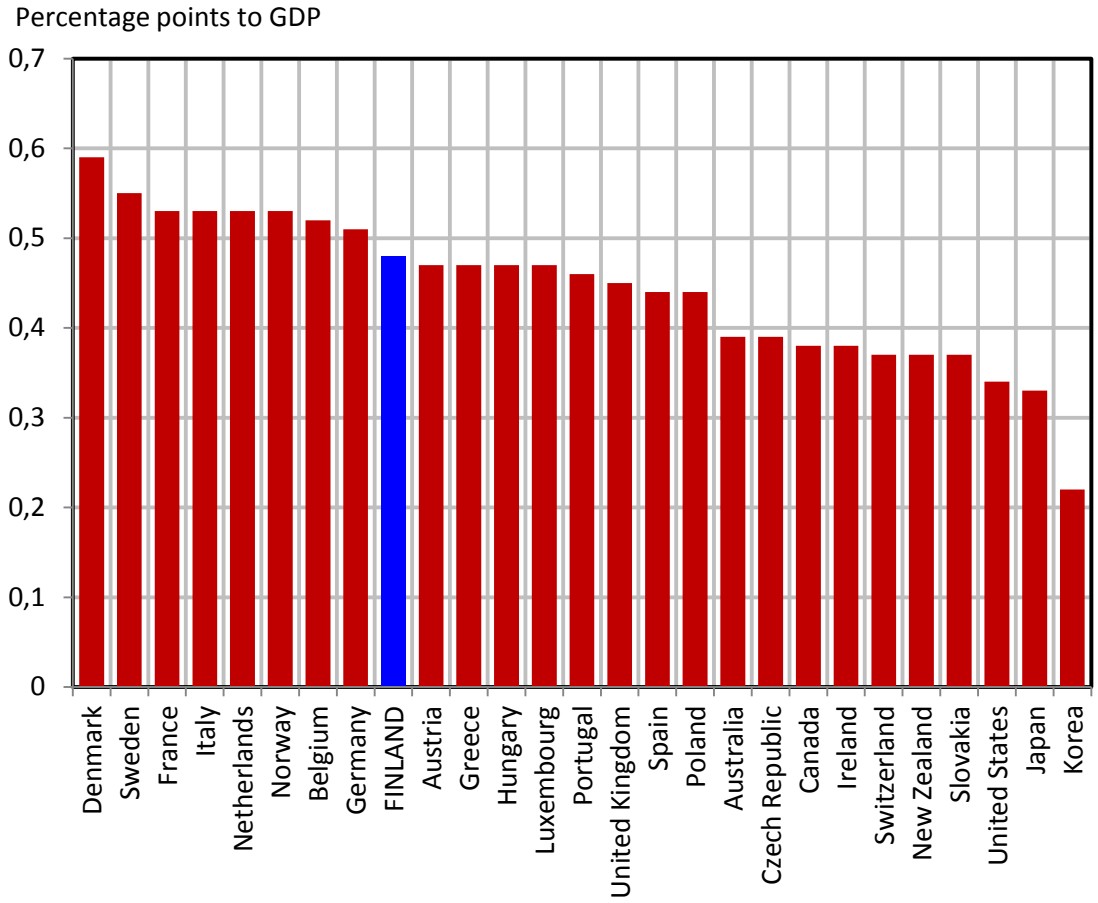
Automatic stabilizers refer to the fact that tax revenue and some expenditures items (e.g. unemployment insurance) automatically change with the business cycle. In a downturn revenue declines and expenditures increase, and vice versa in an upturn, and this contributes to stabilizing disposable income and therefore aggregate demand.[29] Automatic stabilizers are rule based and do not require any political decisions to be taken in the specific situation, i.e. there are no decision and implementation lags. It is the consensus view that automatic stabilizers do indeed stabilize the economy, see e.g. IMF (2015) for recent evidence. There is also recent evidence that automatic stabilizers may, in addition to their mecahnical effects, reduce volatility through effects on consumer expectations (Eggers and Fouirnaies 2015). Since automatic stabilizers are rule-based, there is also consensus that they should constitute the backbone of fiscal stabilization policy.

While automatic stabilizers are useful, they are a by-product of the design of the social safety net and the taxation scheme, and not the result of policy design to reach a given size of these stabilizers. A key source of the automatic stabilizers is the budget effects of variations in employment leading to changes in both tax revenue and social transfers (unemployment benefits). The higher the taxes and the social transfers, the larger the automatic budget response released by a change in (private) employment. A more extensive welfare state is thus generally associated with stronger automatic stabilizers. The policy dilemma is that if job losses should have minor economic consequences for the individual (high insurance) and the automatic stabilizers are thus strong, the incentive to search for work may be smaller, see Andersen (2015b).

Figure 6.2.1 plots a metric for the size of automatic stabilizers in the OECD countries. Automatic stabilizers in Finland are slightly stronger than the OECD average and slighly weaker than in other Nordic countries. It should be added that the potential favorable effects of automatic stabilizers presuppose the presence of fiscal space allowing the budget to deteriorate in bad times without conflicting with fiscal targets for the public budget (see discussion in Chapters 3 and 5).

[29] This may be particularly important in a downturn if more households become liquidity-constrained.

Figure 6.2.1 Automatic stabilizers, OECD countries



Note: The metric shows how much the public budget balance as a share of GDP changes if GDP changes by 1%. Source: Girouard and André (2005)

Discretionary fiscal policy changes refer to explicit political decisions to change some expenditure or revenue item to affect economic activity in a particular direction. Since information, decision and implementation lags are involved, it is the consensus view that discretionary fiscal policy decisions should be reserved for situations where the economy is exposed to "large" shocks. Fine-tuning of economic development by discretionary fiscal policy is a demanding task, and experience shows that it is hard to time such policies properly to the business cycle situation. Moreover, discretionary changes often suffer from a pro-cyclical bias.

The financial crisis has brought discretionary fiscal policy back on the scene. In the first round a number of countries pursued discretionary fiscal policies to mitigate the consequences of the crisis, and in a second round the focus

has beeen on consolidation concerns. This has renewed interest in the question of the size of fiscal multipliers[30], i.e. what is the impact on aggregate activity of a given change in fiscal policy? Do the effects differ significantly between expenditure and revenue changes? How does the sign and size of the multiplier depend on the position of the country (business cycle situation; public sector deficits/debts; monetary policy/exchange rate regime; degree of financial leverage; coordinated/non-coordinated etc.)?

There is a fundamental problem in empirical identification of the multiplier effects of fiscal policy changes. Simultaneously with policy changes there may be other changes affecting the economy, and it is important to control for such confounding factors. This is complicated by the fact that the effect of fiscal policy may also depend on the specific economic situation. In the literature, fiscal multipliers are assessed both based on models[31] and specific econometric estimations of the effects of fiscal policy. It is beyond the scope of this chapter to discuss the methodological approaches[32] and problems[33] and the following summarizes some key findings in the literature.

The common findings[34] are that fiscal multipliers are 1) larger for spending than tax changes, 2) lower in economies more open to trade, 3) higher under fixed than floating exchange rates, 4) generally higher in downturns than upturns, and 5) significantly different across expenditure and tax categories.

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[30] Termed multipliers since the net effect on output depends on interdependencies in the economy, i.e. higher income, leads to higher consumption and thus demand, which in turn may affects income/production. See also Economic Policy Council (2015).

[31] Using an aggregate model for the economy, it is possible to isolate the effects of a temporary change in an expenditure component or a tax rate, see e.g. Hemming et al. (2002). The advantage of this approach is that it allows a "controlled" experiment by which to isolate the effect of the policy change. For a survey of the effects of fiscal policy in DSGE models see Coenen et al. (2012).

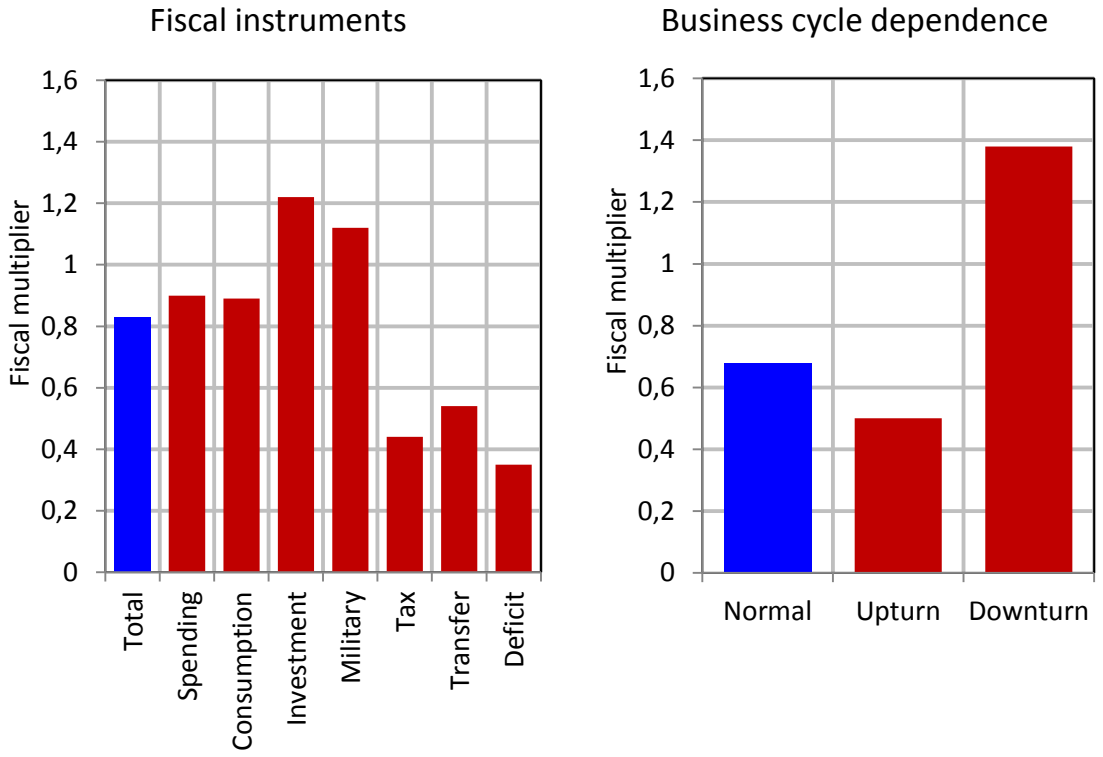
[32] One approach is so-called structural VAR-models where the identification strategy is to consider innovations in fiscal policy unrelated to cyclical conditions, see. e.g. Blanchard and Perotti (2002). This identification strategy may be useful for assessing policy reforms with fiscal consequences, but the question is whether this captures stabilization policies responding to the state of the economy.

[33] Measurement problems have prompted the so-called narrative approach, which carefully considers policy documents etc. to clarify the motive for policy changes. To control for confounding factors, this literature considers fiscal policy changes that are not motivated by cyclical concerns, see e.g. Alesina et al. (2015) and Ramey (2011). It is a question whether this approach captures stabilization policies responding to the cyclical position of the economy.

[34] See Gechert (2015), Gechert and Rannenberg (2015), Gechert et al. (2015), and Corsetti and Müller (2015). See also the earlier surveys in Hemming et al. (2002) and Ramey (2011) finding similarly sized multipliers

The finding that fiscal multipliers depend on the specific instrument (type of expenditure or tax changed) is a standard insight from macroeconomic theory[35], and the differences are illustrated in Figure 6.2.2 This is based on a meta study by Gechert and Rannenberg (2015) (see also Gechert et al. 2015) based on 98 studies reporting reduced-form empirical estimates published between 1992 and 2013 (providing a sample of 1,882 observations on multipliers). Expenditure multipliers are generally higher than tax and transfer multipliers, and the multiplier is larger than one for e.g. public investments. Changes in transfers have a slightly higher multiplier than changes in taxes.

Figure 6.2.2 Fiscal multipliers



Note: The multiplier gives the change in GDP from a one currency unit change in the respective instrument. The reported values are the median values of the respective multipliers in the studies included. Source: Gechert and Rannenberg (2015)

[35] Assessing discretionary changes in fiscal policy by changes in the structural budget deficit is also problematic both because such changes can be driven by other causes than fiscal policy, and because the activity effects of fiscal policy changes are not well approximated by changes in the public budget.

The meta-study by Gechert and Rannenberg (2015) also finds that multipliers in downturns[36] are significantly higher compared to normal times, and slightly smaller in up-turns than in normal times, see Figure 6.2.2

The empirical findings thus largely confirm standard views on the short-run effects of fiscal policy. Note that the above does not address the political economy problem of timing discretionary fiscal policy to the business cycle situation, nor of avoiding the political biases associated with discretionary policies.

The findings reported above suggest that since Finland is a relatively open economy, fiscal multipliers should be smaller, but membership of the European Monetary Union and thus a fixed exchange rate works in the direction of increasing the size of multipliers. Some empirical studies have specifically considered the size of multipliers for Finland. Lehmus (2014) finds multipliers in the higher end of those reported above, and confirms that the difference between spending and tax multipliers also holds for Finland. Virkola (2014) finds somewhat larger multipliers and presents a comparison to Sweden, which has much lower multipliers (close to zero) consistent with the difference in monetary regime. Keränen and Kuusi (2016) moreover allow for business cycle-dependent multipliers, and find that multipliers are larger in recessions than expansions. Broadly, the findings for Finland are thus in accordance with the general findings from international studies.

6.3 Fiscal sustainability and consolidations

While the initial response to the financial crisis was an expansionary fiscal policy, there has later been a shift towards contractionary fiscal policies even though output and employment have not recovered. The main reason for this policy reorientation is high levels of public debt in combination with

[36] A method, which may be termed the residual approach, attempts to clarify how multipliers depend on the cyclical position of the economy. Blanchard and Leigh (2013) use a strategy where unexpected changes in output growth in 2010 are regressed on the projected fiscal tightening (measured by the projected change in the structural budget balance). The idea is that if output growth has fallen more than projected there is evidence that fiscal multipliers are higher than expected, which in turn indicates that multipliers are larger in downturns than in normal times. The authors conclude that multipliers in a severe downturn may be one unit larger than in normal times (0.5 versus 1.5). The problem with this method is that all causes for unanticipated changes in output growth are attributed to fiscal policy, which is a debatable assumption.

future pressure on public finances due to ageing populations, all of which raise questions of fiscal sustainability. When assessing the shift in policy, it should be borne in mind that automatic stabilizers are still operating, and hence the net shift is smaller than what can be gauged by discretionary fiscal policy changes.[37] Nonetheless, there is the dilemma that economic activity and employment consideration may call for expansionary policies, while public finance considerations call for consolidation. Consolidation is inevitable at some point, and the question is how to time and compose such policies. The following discusses these issues.

Reverse multiplier effects

From a traditional stabilization perspective, consolidation policies reduce activity and increase unemployment in a situation where there are arguments for the opposite, i.e. such policies are pro-cyclical rather than counter-cyclical. This view is contested by the argument that in certain circumstances a fiscal tightening need not result in lower activity and higher unemployment. The hypothesis is that a fiscal tightening, against the background of a high and unsustainable debt level, may be expansionary. The multiplier may thus change sign[38] under sufficiently dire circumstances. If this view is correct, both public finances and economic activity improve and there is no policy dilemma. The flipside of this argument is that a fiscal expansion under such circumstances will be in vain since public finances and activity will deteriorate.

The argument that "fiscal contractions are expansionary" relies on an expectations effect since as a result of the policy shift agents expect lower taxes (public expenditures) in the future, which in turn increases current demand[39,40]. This revives a debate in the 1980s and 1990s on "expansionary

[37] Measurement methods may also result in an exaggerated expression of contractionary fiscal policy. A stabilization policy is by definition temporary, i.e. a temporary increase in some expenditure item or reduction in some taxes. Under conventional methods this will first be recorded as a fiscal expansion and later as a fiscal contraction.

[38] Some of the studies included in Gechert and Rannenberg (2015) also display unconventional signs.

[39] In the present context it may also be conceivable that a consolidation package (if credible) may reduce perceived risks and thus lower precautionary savings leading to increases in private consumption and investments.

[40] This related to possible non-linear effects arising at high debt levels, i.e. if debt surpasses some critical level, leads to the economy performing differently. A recent study by Chudik et al. (2015)

fiscal contractions", see e.g. Giavazzi and Pagano (1990). Both case studies and econometric studies of the issue have been performed without finding clear support for such effects, see e.g. Giudice et al. (2003). More recent work has reconsidered the question. Based on the narrative approach, Alesina et al. (2015) conclude that consolidations via the revenue side are contractionary while those working on the expenditure side largely leave output unaffected. The crucial identifying assumption is that they consider discretionary fiscal policy changes not to be correlated with the country's short-term economic outlook. It is not clear whether this result is applicable in the current situation, where consolidation needs are clearly triggered by the business cycle situation (in combination with past failures to consolidate, and approaching demographic changes etc.). In a recent analysis, Guajardo et al. (2014) find that consolidations are contractionary irrespective of whether they are driven by spending cuts or tax increases, see also Cugnasca and Rother (2015).

The empirical evidence in support of reverse multiplier effects is thus not strong[41], and consolidation policies do involve a trade-off between the short-run concerns for activity and employment on the one hand, and public finances and fiscal sustainability on the other hand.

Consolidation and public finances[42]

If multipliers have the conventional sign, the extent of which consolidation policy actually improves public finances becomes relevant. Since such policies are contractionary[43], and more so in a downturn, the debt-to-GDP ratio may not fall in response to the consolidation (see e.g. Gechert et al. (2015)).This seems to suggest that consolidation policies are in vain, but such a conclusion may be premature.

If public finances are on a non-sustainable path, a consolidation is inevitable at some point in time, and hence the appropriate question is when to

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does not find support for a critical debt level applying generally, but finds non-linear effects at the country level.

[41] In cases of stressed credit markets and high interest rates there may be confidence effects from consolidation which may make fiscal consolidation expansionary, see Cugnasca and Rother (2015).

[42] For a further discussion of some of the issues here, see Andersen (2015b).

[43] Consolidation policies are often "packages" involving several policy changes including some primarily working via the demand side and some working via the supply (structural) side. This makes it difficult to disentangle the effects of the separate elements empirically.

undertake the consolidation, not whether a consolidation is needed. Hence, the consequences of a consolidation cannot be avoided. If policies in the past have suffered from various biases and necessary reforms have been postponed, it is not possible to exit such policies without costs. An exit strategy is necessary and it involves a trade-off between immediate and later consequences. The negative activity effects have a temporary component while the budget effect is more persistent (presuming permanent elements in the policy package), and hence under standard assumptions regarding multipliers a consolidation will improve public finances over time even if the immediate effect is small. Postponing consolidation will shift the adjustment burden forward and make it larger (due to increasing debt and debt servicing), highlighting the trade-off between the current and future effects of consolidation and thus also the inter-generational distribution effects hereof.

Furthermore, it can be argued that consolidation policies may be less effective in the current situation compared to past examples of country-specific consolidation policies. The difference is that currently many countries are in the same position, and are non-cooperatively planning consolidation policies. For small and open economies, a key channel through which consolidation policies work is via an improvement in competitiveness and thus an increase in net exports translating into increasing activity and employment (e.g. the consolidation in Sweden in the 1990s). When many countries are pursuing such policies simultaneously, as is the case after the financial crisis, such policies may have less effect or take longer to change the situation.

There are two arguments why the costs of consolidations may be particularly large in a downturn and therefore should be postponed, namely, the fact that multipliers are larger in downturns than in normal times[44] (see the discussion above) and that high unemployment may become persistent and thus increase the structural unemployment rate.

The differences in multipliers depending on the business cycle situation (see Figure 6.2.2) suggest that consolidation efforts in a downturn are particularly costly in terms of output and employment. Postponing

[44] This relates to the argument that structural reforms can be more easilyaphased-in when aggregate demand is high. Structural reforms frequently have their impact on the supply side, and if aggregate demand pulls activity, the effects may materialize more swiftly.

consolidation to a period with smaller multipliers would lead to lower output and employment costs. While an appealing argument, there are some caveats. First, it may be very difficult to time policies to differences in multiplier sizes. As discussed above, the experience with fine-tuning in general is not particularly positive, and this form of fine-tuning is even more sophisticated. Second, postponement of consolidation implies a larger adjustment burden in the future, pointing to a trade-off between the short- and medium-run effects of consolidation on output and employment. Based on empirical work for Finland, Keränen and Kuusi (2016) show that measured in present value terms, the effect of postponing consolidation on output is very close to zero. Concerns for output and hence employment do not, therefore, leave a strong arguments for postponing consolidation policies at present.

The persistence argument refers to the fact that the adjustment of wages (reservation wages) to a fall in employment is sluggish and long unemployment spells may depreciate social and human capital, for an overview see Røed (1997). If there is strong persistence, the long-run budget effects of a consolidation may be smaller than the short-run effects. A contraction to improve the budget (expenditure reduction or tax increase) will increase unemployment in the short run, but via persistence also increases unemployment in the future, which in turn worsens public finances. If the effect is strong enough – due to strong persistence or high multiplier effects – consolidation via tightened fiscal policy may be in vain. Andersen (2010) considers this argument and shows that persistence should be very strong or the multiplier very large for this argument to overturn the budget effects. In addition, this argument pertains to the immediate response when the crisis sets in, but is of decreasing relevance several years into the crisis.

The presence of persistence brings to the fore the question of what fiscal policy can accomplish. The case for an expansionary fiscal stabilization policy does not depend on the level of activity, employment or unemployment but on the difference to the structural levels of these variables. If low employment and high unemployment are due to structural problems, fiscal policy becomes less effective (the wrong instrument). In the debate it is sometimes asserted that an appropriate fiscal policy can undo the consequences of the crisis. The potential of aggregate demand management is to counteract decreases in aggregate demand by either

increasing public demand (expenditure increases) or inducing higher private spending (tax decreases). If aggregate demand is temporarily low, there is a case for an active stabilization policy. However, if imbalances or disequilibria were created before the crisis and there is a need for structural adjustments, aggregate demand management policies are not necessarily the right recipe[45], and the question is what can be gained by postponing adjustment.

Much of the discussion implicitly assumes labour input to be homogenous, such that it is possible easily and at small costs to relocate labour across uses/sectors. Only the level of aggregate activity matters, not its composition. A reduction in one component of aggregate demand (e.g. net exports) could, according to this line of reasoning, be substituted by an equal increase in another component (e.g. public consumption) while leaving aggregate activity and hence employment unchanged. The different demand components are assumed to be perfect substitutes with respect to aggregate employment or, to put it differently, an increase in aggregate activity lifts all boats in the labour market.

This homogeneity assumption is a decreasingly useful approximation of how the labour market works. This applies both to the sectoral and the qualification dimension of labour. The employment effect of a given change in aggregate demand may depend critically on the composition of the change, since sectors have different employment intensities and use different types of labour. Structural adjustment may thus be needed, and it is not clear that the required adjustment gets smaller by postponing necessary reform. Postponement seems only relevant if the changes and problems are considered temporary.

Moreover, aggregate demand management policy may be poorly targeted at groups at risk of marginalization in the labour market. The instruments available to increase aggregate demand in the short run (e.g. infrastructure investments) may primarily affect specific groups (building sector), and it cannot generally be assumed that this is the area in greatest need of a stimulus (e.g. if the sector "over expanded" prior to the crisis, there is a need to reallocate resources to other sectors). If particular groups are exposed to

[45] The lessons from the 1970s and 1980s was that aggregate demand management policies were not very effective, despite much activism, since there were important supply side and structural changes.

the risk of marginalization (unemployment becoming persistent), aggregate demand management policies may be a too imprecisely targeted instrument and more finely tuned programmes are called for.

Finally, the question of fiscal sustainability is a forward-looking problem, and the conflict between short-run concerns for activity and medium/long-run concerns for fiscal sustainability is often exaggerated. Fiscal sustainability basically depends on changing the time profile of public finances (e.g. alongside changes in the age composition of the population). Reforms to this end are inherently forward looking, and if they can be enacted in a credible and time-consistent way (generally presuming a broad consensus and thus political compromise on the measure needed), the less the need to implement measures that improve public finances in the short run.[46] This stresses the need to formulate plans and clear targets on how to tackle fiscal sustainability problems.

Political economy – successful consolidations

Many consolidation policies have been undertaken in the past, but are there any lessons to be learned as to what makes a successful consolidation? A vast empirical literature[47] has tried to identify the factors prompting consolidation efforts and their success or failure. This is a demanding empirical question since many factors are at play. The results depend on how to define both a consolidation and whether it is (un)successful[48], and to control for all relevant confounding factors.

There is evidence that the composition of the consolidation is crucial for its success since it is generally found that successful budget consolidations rely relatively more on expenditure reduction than revenue increases, see e.g. Lassen (2010) and the Swedish Fiscal Policy Council (2010). Consolidation primarily relying on expenditure reductions via wage expenditures or transfers have positive effects on production and consumption in the medium term, see Lassen (2010). Average GDP growth is thus higher and

[46] It should also be noted that some reforms to solve the sustainability problem, like increases in retirement ages, need not reduce aggregate demand in the short-run, and may even increase demand since the need to save is reduced, cf. Andersen (2010).

[47] See e.g. Lassen (2010) and Molnar (2012) for surveys of this literature.

[48] A consolidation can be defined in e.g. the structural budget balances or primary balance within a given period, and a successful consolidation defined in terms of the change in e.g. the debt-to-GDP ratio.

unemployment lower for successful than for unsuccessful consolidations. There is also evidence that more transparency in fiscal policy and well-defined fiscal rules are of importance in making consolidations successful, see Lassen (2010) and Molnar (2012).

As noted above, increasing employment and growth are important for the success of consolidations. However, these analyses leave unanswered the question whether improvement in the economic situation is due to the policy or other factors. In any case, this suggests that both the macroeconomic environment as well as the potential structural effects of consolidations are of importance. The latter is particularly important since a consolidation does not only involve the direct budget effect, but also the structural changes or reforms are typically associated with consolidations. This links to the previous discussion on the different structural effects of various fiscal policy instruments as well as to the importance of well-defined fiscal targets.

6.4 The timing and structure of the government's consolidation policies

We next turn to an assessment of the structure and timing of the government's proposed consolidation policies. The contents and the magnitude of the consolidation package were described in Chapter 3.

First, the above discussion shows that the structure of a consolidation programme – that is, the specific measures that are chosen as part of a consolidation package – matter for how consolidation affects economic performance. In general, the evidence on fiscal multipliers associated with different policy instruments suggests that multipliers for government spending are higher than multipliers for taxation. This is understandable, since reductions in government spending affect aggregate demand directly, whereas tax changes have such effects only indirectly if/when individuals and firms adjust their behaviour in response. That is, a consolidation carried out through spending cuts has stronger negative effects on output and employment than a consolidation carried out through tax increases.

Given this evidence, the government's decision to entirely avoid consolidation on the tax revenue side can be questioned. A commitment to conduct the required consolidation entirely through expenditure cuts or

cuts to social benefits puts an unnecessary constraint on the available policy options. It constrains the government's ability to pursue an active tax policy, as tax policy measures are restricted to changes in the tax structure. In addition to the evidence on multipliers, this conclusion is further strengthened by the findings presented in Section 6.1, according to which the size of the public sector in itself is not a good measure of economic distortions, and therefore a strong commitment to a given level of the tax-to-GDP ratio is a problematic policy objective from the point of view of ensuring good economic performance.

The structure of consolidation is also analysed in the background report commissioned by the Council and the Audit Office of Finland, Keränen and Kuusi (2016).[49] The conclusion on the structure of consolidation in the background report may at first appear to be at odds with our conclusion above. Keränen and Kuusi state that in the light of their findings, "the emphasis of the government's fiscal plans on net revenue side measures (defined as gross revenues minus transfers) seems to be well-placed". This difference in the interpretations stems from the fact that Keränen and Kuusi indeed consider consolidation via *net* revenue vs. consolidation via spending (government consumption and investment), i.e. their positive assessment is due to most of the consolidation being carried out through cuts to transfers. Cuts to transfers have the smallest multipliers in the Keränen and Kuusi study, but it is also still true that tax multipliers are smaller than multipliers for government consumption and investment. Our conclusion above is therefore consistent with the Keränen and Kuusi results. We would also not recommend a consolidation mainly through cuts to transfers solely based on multiplier considerations. These considerations relate only to economic efficiency (i.e. maximizing the present value of output, as also noted in Keränen and Kuusi), whereas consolidation solely though transfers would have obviously adverse effects on the income distribution. As was mentioned in Chapter 3, it would be advisable to carry out a comprehensive assessment of the distributive consequences of the consolidation package.

The distinction between active vs. passive spending, pointed out in Secton 6.1, is also relevant for an assessment of the structure of consolidation. Expenditure reductions that, for example, reduce the quality of education and research, or affect public investments in infrastructure generally, have

[49] Key features of the analysis in Keränen and Kuusi (2016) were described in Chapter 3.

detrimental effects on future productivity and income. Consolidations via such instruments are therefore not advisable. It is important to note that the common distinction between fiscal policy measures and structural reforms is often too simplistic: fiscal consolidation packages are also structural reforms and these structural implications need to be taken into account when designing consolidation policies.

Second, what can be said about the timing of the government's proposed consolidation measures in the light of empirical evidence? As was explained in Chapter 3, fiscal policy will be tightened gradually over the parliamentary term: the net effect of the proposed tax changes and expenditure cuts is to reduce the general government deficit by 0.7% of GDP in 2016 and by 1.9% of GDP in 2019.

As was explained above in Section 6.2, empirical evidence shows that fiscal multipliers are larger and fiscal contractions therefore more harmful in a recession. Given the current economic situation and the expectation that growth will turn positive (even though still remaining modest) in the coming years, this would point towards potential benefits from postponing consolidation. That is, it is important to note that given that consolidation is required, the optimal timing of consolidation depends not on the absolute size of the multipliers, but on the relative magnitude of the multipliers over time, as explained in Section 6.3. However, it was also noted above that delaying consolidation comes at a cost, namely that debt will continue to grow and therefore the required magnitude of consolidation will increase with the delay.

Keränen and Kuusi (2016) show that there are no gains in terms of the present value of GDP from postponing consolidation by 3 years compared to the minimum adjustment required to comply with EU fiscal rules (structural deficit of 0.5% of GDP in 2017). On the other hand, they also find that the net benefit of delaying consolidation may turn positive, if the delay is accompanied by an initial expansion on the expenditure side; this profile would imply taking advantage of relatively large expenditure multipliers in a recession. There is, however, great uncertainty related to these estimates and the differences between different scenarios are very small. The above findings stem partly from the fact that growth is expected to remain modest in the coming years. The gains from postponing consolidation would be larger if there are positive shocks to future growth (and vice versa in the case of negative shocks).

It appears that in the light of the above evidence, the government's decision to introduce consolidation gradually towards the end of the parliamentary term can be welcomed. In particular, larger expenditure cuts at present would likely be harmful for output and employment. On the other hand, given that the benefits from a further postponement are unclear and given that we are approaching a situation where EU fiscal rules are becoming binding, consolidation indeed needs to be carried out during the current parliamentary term (in particular given that the political system does not allow tying the hands of future governments). Overall, the timing of the consolidation programme appears to be rather well balanced between the concern for current economic activity and the need to address the sustainability problem in public finances.

6.5 Council's views

Theoretical and empirical work shows that there is no simple relation between the size of the public sector and economic performance. The latter depends critically on the structure of both the expenditure and financing side of the welfare state. While taxation in general distorts private economic incentives, the effects differ across tax instruments (e.g. wage income taxation vs. property taxation). Likewise some expenditures may strengthen e.g. labour supply both in a quantitative and qualitative dimension (e.g. day care, education).

Current policy is characterized by a commitment to avoiding any increases in tax-to-GDP ratio. The decision on the size and structure of the public sector is a political choice, and the relevant trade-offs depend on the specific instruments and activities. Having aggregate targets like the total expenditure-to-GDP or tax revenue-to-GDP ratio is, however, not ideal for controlling the size and structure of the public sector due both to measurement problems and the fact that they do not capture well how economic performance is affected by expenditures and taxation. These types of targets are also problematic in the sense that they are strongly affected by the business cycle situation and thus outside the short-run control of policy makers.

Fiscal policy has implications both in the short-run (stabilization) and medium to long-run. The short-run concern is to stabilize employment and production, and the medium-run concern is to ensure consolidation of

public finances and to support high employment rates and income levels (living standards) as well as an acceptable distribution of income. Fiscal stabilization policy can be used in the short run to counteract the effects of short-falls in aggregate demand, and empirical evidence supports the conventional views on the sign of fiscal multipliers. However, traditional stabilization policies are not well-targeted at structural changes.

As public finances in Finland are on an unsustainable path, a consolidation is inevitable at some point in time, and the appropriate question is when to undertake consolidation, not whether a consolidation is needed. This involves a trade-off between immediate and later consequences. Consolidation efforts are particularly costly in terms of output and employment in a downturn when fiscal multipliers are large. Postponing consolidation to better times with smaller fiscal policy multipliers would lead to smaller losses in output. However, the optimal timing of consolidation policies is difficult because, according to current estimates, economic growth will remain low at least for the next few years. In addition, postponing consolidation implies a larger adjustment burden in the future.

The government programme will tighten the fiscal policy stance gradually over the parliamentary term. Simulation results presented in this report indicate that the benefits of postponing consolidation in terms of the present value of output are close to zero. The timing of the consolidation program therefore appears to be rather well balanced between a concern for current economic activity and the need to address the sustainability problem.

The potential conflict between short-run concerns for unemployment and medium-term concerns for public finances can further be muted by formulating credible plans with broad political support for how to achieve consolidation. This is not ensured by vaguely formulated targets for what to be achieved in future with unspecified policy actions. The requirement is a formulation and approval of specific structural reforms with clear and well-defined targets by which to monitor whether the reforms result in the intended effect. If these conditions are satisfied, the budget effects do not have to come up-front but more gradually as the policy changes are phased in

Also the structure of a consolidation programme – that is, the specific measures that are chosen as part of a consolidation package – matters for how consolidation affects economic performance. Fiscal multipliers for

government spending are higher than multipliers for taxation. That is, a consolidation carried out through expenditure cuts has stronger negative effects on output and employment than a consolidation carried out through tax increases. Given this evidence, the government's decision to entirely avoid consolidation on the tax revenue side can be questioned. A commitment to conduct the required consolidation entirely through expenditure cuts or cuts to social benefits puts an unnecessary constraint on the available policy options.

Expenditure reductions affecting e.g. the quality of education and research have generally more detrimental effects on future productivity and income, and consolidations via such instruments are therefore not advisable. Financing via tax increases is less distortionary if e.g. property taxes are raised. The bottom line is that fiscal consolidation packages are also structural reforms and it is important to take these structural implications into account when designing consolidation policies. There is a strong case for reforms that increase structural employment (and reduce structural unemployment) since these will have a major effect on public finances and contribute to growth in potential output.

7 Taxes and the labour market

In this chapter, we turn to an examination of the effects of taxation on the behaviour of individuals in the labour market. In the light of empirical evidence on the topic, we comment on the government's tax policy, in particular policies related to earnings taxation. We discuss how taxation of earnings affects efficiency, employment, and tax revenue. (The government's policies regarding the tax structure more generally were also discussed in Chapter 3.)

Looking at the effects of taxation in the labour market is important and informative for a number of reasons. First, some of the most important potential adverse effects of taxation on the economy originate in the labour market: higher taxation reduces incentives to work, and hence may affect the output produced and income generated in the economy. The adverse incentive effects apply to both income taxation and social security contributions (which reduce take home pay), as well as commodity taxation (which reduces the purchasing power of the income earned). That is, both income and commodity taxes reduce the amount of goods and services that an individual can obtain with a given level of pre-tax earnings. Taxes imply that the private return from working is less than the social return. Since individuals can be assumed to react to private incentives, and those incentives are distorted by taxation, labour supply may be too low from society's point of view.

Second, the actual effects of taxation on labour supply (both the existence and magnitude of the effects) are ultimately empirical questions. Accordingly, this chapter focuses on empirical evidence. There is some very good quality evidence on the effects of taxation on individual behaviour in the labour market, based on large and detailed individual-level datasets from official registers. The best studies in the literature employ research

designs that provide reliable information on the causal effects of taxes on labour supply (instead of mere correlations or associations).

The empirical evidence on the effects of taxes on the labour market, as well as some policy implications, is reviewed in the background report commissioned by the Council (Matikka et al. 2016). The findings are discussed below in Section 7.1. We also discuss recent research that relates this individual-level evidence to labour supply elasticities at the macro-level. At the end of the Section, we turn to an evaluation of government policy in the light of the empirical evidence. In Section 7.2, we provide a discussion on the relationship between top tax rates and tax revenue. If we were to reduce top earned income tax rates, what would happen to tax revenue? In particular, are top tax rates already so high in Finland that reducing them would in fact increase tax revenue? Section 7.3 turns to the fact that it is not only tax policy that matters for work incentives, but also expenditure policies affect working decisions. In particular, some publicly provided services such as day care are seen as encouraging labour market participation. Finally, Section 7.4 concludes with a statement of the Council's views on the topic.

7.1 The effects of tax policy on labour supply and taxable income: empirical evidence and some implications

Before turning to a discussion of the government's tax policies regarding the taxation of earned income, we provide an overview of the evidence on which such an evaluation can be based. To structure the discussion, it is useful to divide the evidence on the effects of taxes on individual behaviour in the labour market into three broad strands. First, there is literature on the effects of taxation on the hours of work (the so called intensive margin of labour supply). This evidence relates to the behaviour of individuals who are already employed. In these cases, the relevant distortions are caused by *marginal tax rates*, i.e. the amount of tax paid from an additional euro earned: the marginal tax may have an effect on whether the individual finds it worthwhile to earn that additional euro.

Second, taxes and transfers may affect the decision of whether or not to work at all (the so called extensive margin of labour supply): that is, tax policy may affect the extent of labour market participation. The incentives for labour market participation depend on the *participation tax rate*, i.e. the fraction of earnings lost through taxation (or lost transfers) when moving from unemployment or outside the labour force to work. Note that the participation tax rate depends also on the level of benefits (income when not working) and the rate at which benefits are reduced when one starts to earn labour income.

Third, a more recent strand of literature takes a somewhat broader perspective, and looks at how marginal tax rates affect average taxable income. Such an analysis captures all channels through which taxable income responds to taxation. In addition to hours of work and labour market participation, taxes may also affect the more qualitative aspects of labour supply, such as the willingness to move for a job or work effort in general. Further, individuals may respond to taxes not only through changes in labour supply, but also through tax avoidance and evasion. The combined effect of these responses on taxable income is measured by the *elasticity of taxable income* (ETI).

Labour supply

First, we briefly discuss evidence on the effect of taxation on working hours. The question then is, how much does taxation affect the hours of work of individuals who are already working? The relevant parameter here is the intensive margin labour supply elasticity, which measures the percentage change in hours worked, when the marginal tax rate changes by 1%.[50] The key empirical findings from the international academic literature have been reviewed for example in Meghir and Phillips (2010). The conclusion is that male hours of work respond very little or not at all to incentives created by tax changes. On the other hand, working hours have been found to be somewhat more elastic for married women and lone mothers. The bulk of

[50] Tax increases affect labour supply through substitution effects (through affecting the relative price of work compared to leisure) and income effects (through the reduction in the level of after-tax income). Substitution effects reduce labour supply when taxes are increased, while income effects may increase labour supply. Only the substitution effect working through relative prices is regarded as distortionary. Therefore the relevant elasticity for measuring distortions is the Hicksian elasticity, which is calculated by assuming that the individual would be compensated for the income loss so that utility is kept constant after the tax change. (See also footnote 51.)

this evidence is based on data from Anglo-Saxon countries. Bargain et al. (2014) provide a comparison of labour supply elasticities across various European countries and the U.S.[51] Relatedly, Kosonen and Matikka (2014) find that the incomes of wage earners in Finland are unresponsive to marginal tax rates.

A key explanation for these findings is likely to be that in general, it is relatively difficult for individuals in full-time employment to adjust their hours of work in response to changes in taxation. On the other hand, it is likely that individuals who have more leeway in affecting their hours (part-timers, retired persons, youth) have more elastic labour supply.[52] Another explanation that has been suggested in the literature is that many papers look at reforms where tax rates have changed only little, and individuals may not react to small changes in taxation (e.g. because the change is too small to be noticed, or because of adjustment costs). For example Chetty (2012) discusses the consequences of such optimization frictions for the interpretation of labour supply elasticity estimates. We return to this issue below when we discuss the relevance of the microeconometric evidence on labour supply elasticities for the macroeconomy.

Second, taxation may also affect individual decisions of whether or not to work at all. The relevant parameter here is the extensive margin labour supply elasticity or participation elasticity, which measures the percentage change in the rate of labour market participation (employment), when the participation tax rate changes by 1%. The international literature on estimating the participation elasticity is summarized for example in Chetty et al. (2013). The finding in the empirical literature is that the effects of taxation on participation are moderate on average. A number of studies analyse how participation decisions react to changes in the earned income tax credit (EITC) (Eissa and Liebman 1996, Eissa and Hoynes 2004, Card and Hyslop 2005). The evidence here comes from the U.S. and Canada, but the question itself is directly relevant to current tax policy in Finland, as the government proposes to increase the EITC. Again the effects on labour

[51] See Ilmakunnas and Pudney (1990), Ilmakunnas (1997) and Kuismanen (2005) for early studies on female labour supply in Finland.

[52] For example, Harju and Matikka (2015) find that in contrast to wage earners, the income of self-employed in Finland does respond to taxation. This is however not only due to changes in labour supply, but also reflects tax planning. See the subsection below on evidence relating to the elasticity of taxable income.

market participation are found to be modest on average. (We return below to findings regarding stronger effects for some particular groups of individuals.) Jäntti et al. (2015) estimate the participation elasticity for Finland to be 0.18. This is close to the average in the other countries in the Jäntti et al. sample, which consists of 13 OECD countries.

The evidence therefore suggests that individual responses to income tax changes are not very large on average. One puzzle in the literature has been why labour supply elasticities in the macroeconomic literature, based on cross-country evidence, typically appear to be much higher than those based on microeconometric evidence: a general understanding in the literature has been that there is a stronger association between employment and tax differentials between countries, than in the individual-level data. For example, Prescott (2004) is an influential study in the macroeconomic literature on the topic; the elasticity used in that paper however was based on calibrations and not on estimations with a causal interpretation. Imai and Keane (2004), Rogerson and Wallenius (2009) and Chetty (2012) discuss reasons (human capital accumulation, effects of taxes on the length of the working life, optimization frictions) why macro elasticities may be higher than micro elasticities; see e.g. Jäntti et al. (2015) for a recent discussion of other papers that are relevant for this debate.

If there is a conflict between the micro and macro literatures on the effect of taxes on employment, one needs to take a stand on which type of evidence to rely on for tax policy purposes. Microeconometric studies typically have some key methodological advantages: especially as far as the best studies in the literature are concerned, one can say with some confidence that the estimated elasticities really capture the causal effect of tax changes on labour supply. Looking at macro data, on the other hand, there are many differences between countries that might affect both tax rates and labour supply, and might be difficult to control for. For example, in bad economic times, employment declines and the government may at the same time increase taxes to balance the budget. Therefore the fact that taxes and employment have a negative association does not mean that taxes were the cause for low employment. In microeconometric studies, with individual-level data, this challenge of controlling for other factors can be overcome with clever research designs that employ suitable control groups. On the other hand, however, critics of the microeconometric literature may claim that individual-level evidence is not very relevant for the macroeconomy, as

it fails to capture the economy-wide or longer-run effects of tax changes (such as those discussed in Imai and Keane (2004) and Rogerson and Wallenius (2009)).

Fortunately, there exists some literature that aims at reconciling the findings from the micro and macro literatures. Jäntti et al. (2015) estimate both micro and macro-elasticities from harmonised individual-level data across 13 OECD countries. Their results do not provide strong support for the view that macro estimates would be higher than micro estimates: The estimate of the intensive margin elasticity at the macro level is somewhat higher than at the micro level, while no difference is found at the extensive margin. Overall the micro estimates are close to the macro ones, and clearly below the values assumed in some of the macroeconomic literature. Chetty et al. (2013) and Chetty (2012) review the international evidence on labour supply elasticities, and study the role of indivisible labour and optimization frictions in bridging the apparent gap between micro and macro evidence. Indivisible labour refers to the fact that labour supply decisions cannot be captured by a continuous choice of working hours but (longer-run) participation decisions are also important; and optimization frictions refer to reasons (e.g. inattention to taxation, adjustment costs) why labour supply decisions might not respond to small tax reforms (such as those typically observed within countries), but might still respond to larger and more permanent differences in taxation observed across countries. Chetty et al. (2013) argue that both micro and macro evidence imply extensive margin elasticities around 0.2 and are consistent with intensive margin elasticities of about 0.3 (after accounting for the effect of frictions).[53] While these elasticities – especially at the intensive margin – are still somewhat larger than typical micro-estimates, the disagreement between the micro and macro evidence appears to be much smaller than is often thought.

Finally, it is important to note that even though average participation elasticities are not very large, there is evidence that the participation decisions of some groups of individuals are somewhat more responsive to

[53] This discussion refers to Hicksian elasticities (i.e. steady-state, or compensated elasticities that are calculated holding utility constant). These are the elasticities relevant for the purposes of long-run tax policy and for discussing tax distortions in public economics - see also footnote 48. Some discrepancies remain in the micro and macro evidence on extensive margin Frisch elasticities (calculated holding the marginal utility constant), which relate to changes in employment over the business cycle.

changes in taxation and benefits. For example, Kosonen (2014) has estimated the participation elasticity of mothers of young children in Finland, and finds a relatively large elasticity of 0.8. There are similar findings for example from Canada (e.g. Milligan and Stabile 2007). On the other hand, labour market participation decisions in this group in other Nordic countries appear to be less responsive to taxes than in Finland (Lundin et al. 2008, Havnes and Mogstad 2011), probably because the employment rate of mothers of young children is already much higher in those countries. (We will discuss some explanations for this finding also in Section 7.3.) More generally, as discussed in the background report (Matikka et al. 2016), the literature finds a larger than average participation elasticity for individuals with a relatively weak attachment to the labour market and therefore a low level of initial participation.

Taxable income

The labour supply elasticities discussed above only take into account one way in which individuals may respond to higher taxation, namely through changes in hours of work or labour market participation. The elasticity of taxable income (ETI), on the other hand, takes into account all ways in which individuals might change their taxable income after a tax change. Individuals may respond to taxes not only through changes in labour supply, but also through work effort, tax avoidance and evasion, and so on. The combined effect of these responses – that is, the overall negative effect of taxes on taxable income – constitutes the ETI.

The ETI is a theoretically well-founded measure of the distortions caused by taxation (e.g. Feldstein 1999), and hence the most important parameter to look at in this context. (Some notable caveats caused e.g. by possibilities for income shifting between different tax bases are noted below in Box 7.2.1.) The ETI is normally defined in terms of the net-of-tax-rate, i.e. the fraction of income that an individual gets to keep if earning an extra euro. The ETI tells the percentage change in taxable income, when the net-of-tax rate changes by 1%. If the marginal tax rate is t, then the net-of-tax-rate is $(1 - t)$. If the ETI is 0.5, then a 1% increase in the net-of-tax rate leads to a 0.5% increase in taxable income.

There is by now a fairly large and well-developed empirical literature measuring the ETI. This literature provides a prime example of both the difficulty of conducting credible empirical work, as well as innovative

solutions for how to tackle the challenge. The challenge arises from the fact that tax rates themselves are a function of income. Therefore a naïve analysis looking at correlations between taxes and income would not allow one to disentangle effects going in either direction (from taxes to income; or from income to taxes), and would therefore not be informative about the question of interest, namely the causal effect of taxes on income. To solve the challenge, one needs to find so called exogenous variation in tax rates (that is, variation that is not dependent e.g. on the individual's income level), and to compare the income development of individuals who are affected by such tax changes, to otherwise similar individuals whose taxes do not change; below we provide an example of how this is done in a Finnish study.

The conclusion from the ETI literature is that the elasticity of taxable income is fairly small on average – see Saez et al. (2012) for a review. Matikka (2015) has estimated the ETI for Finland. He uses municipal income taxes as the source of tax-rate variation. This set-up has the desirable property that the tax rate variation is indeed not related to the individual's income level (as municipal income taxes are flat i.e. the rates are not a function of income). Further, tax rates change differently (and at different times) in different municipalities: Similar individuals living in different parts of the country can therefore serve as a comparison group for individuals whose tax rates change at any given time due to changes in municipal taxation. According to the estimates in Matikka (2015), the average ETI in Finland is about 0.15. This estimate is similar in size to those obtained in other Nordic countries (Chetty et al. 2011, Kleven and Schultz 2014, Thoresen and Vattø 2013) and implies that average taxable income in Finland is not very responsive to taxation.

Below in Section 7.2, we provide an analysis of how the current top earned income tax rate in Finland compares to the revenue-maximizing tax rate. For that analysis, the ETI for high income individuals is relevant; this may of course be different from the average ETI. The evidence on how the ETI differs between income groups is fairly limited. Matikka (2015) does not find a significant difference between the average ETI and the ETI for high income individuals, though there is quite a bit of uncertainty associated with the income group specific estimates, and the data do not allow to estimate ETI separately for very top earners. A common finding in the international literature is that the ETI is somewhat higher than average for high income individuals, but that the main channel in high income individuals' response

to taxes is tax planning or avoidance. (Saez et al. 2012) For example Kreiner et al. (2015) find that high income earners in Denmark responded to a pre-announced tax reform mainly by shifting income across time (so that more income is earned when taxation is lower). On the other hand, the component of the ETI that corresponds to the real labour supply response to taxation is close to zero. In the Finnish context, high income individuals may respond to large earned income tax rates by shifting income across tax bases, i.e. reporting some of their income as capital income that is subjct to a lower tax rate than earned income. We return to this issue in Section 7.2.

Government's tax policy in the light of empirical evidence on labour supply and taxable income elasticities

According to the government programme, the government has the following goals regarding the structure and level of taxation: (i) the overall tax/GDP ratio should not increase; (ii) income taxes will not increase for any income group, and income tax reductions will be concentrated on those at low incomes; and (iii) the burden of taxation will be shifted from income taxation to taxing harmful activities. The last goal was already briefly discussed in Chapter 3. Let us now discuss goals (i) and (ii) in the light of the evidence presented in the current chapter. (Goal (i) was also discussed in Ch. 6 in relation to macroeconomic evidence on the relationship between taxation and economic growth.)

Regarding goal (ii) (and also related to goal (iii)), the government has decided to implement sizable cuts to income taxation during the current parliamentary term. As discussed in Chapter 3, in addition to tax instruments, the government has made other policy proposals that affect the total tax wedge of labour input: these include increases in unemployment insurance and pension contributions on the one hand, as well a comparable reduction in payroll taxes (employer social security conrtibutions) on the other hand.

The government's goal of targeting income tax reductions at low income individuals is reflected in the decision to increase the earned income tax credit (EITC). Roughly speaking, the purpose of the EITC is to improve incentives to work by providing a tax credit for earned (labour) income (as opposed to income outside work), particularly at the low end of the income

distribution where participation decisions are most relevant.[54] On the other hand, tax changes affecting top income individuals include the extension of the temporary solidarity tax until the end of the electoral term[55], as well as an increase in the top tax rate on capital income exceeding EUR 30,000 from 33% to 34%.

In the light of the evidence reviewed above, targeting income tax reductions at low incomes makes sense from the point of view of labour supply incentives – certainly more so than a general reduction in earnings taxation would do: labour market participation decisions, if anything, may be responsive to taxation, at least for some groups of individuals.

However, given the modest magnitude of average participation elasticities found in the literature reviewed above, the effects on labour force participation and therefore on employment are likely to be modest and subject to some uncertainty. According to these findings a general EITC increase may therefore be a somewhat blunt instrument, as it seems to be the case that only a relatively small fraction of individuals – namely groups with a low labour market participation rate to start with – are likely to change their participation decisions as a result. [56] Incentives targeted more closely at groups with a large participation elasticity can also be considered. For example, the generous system of homecare allowance creates considerable disincentives for mothers of young children to participate in the labour market. Reducing its length from the current situation (where the allowance can be obtained until the youngest child turns 3) would be likely to increace labour market participation of mothers. More generally, labour market participation decisions depend on the benefit system. We will discuss the unemployment benefit system in our next report.

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[54] In general, the EITC increases gradually for earned income above EUR 2,500 until it reaches its maximum value. After a small plateau region the EITC gradually decreases with earned income. The phase-out rate is much smaller than the phase-in rate. The government decided to increase the maximum amount of central government EITC from EUR 1,025 to EUR 1,260, with also a small in-crease in both phase in and phase-out rates.

[55] The solidarity tax will also be temporarily (in 2016-2017) applied to the second highest tax bracket, i.e. earnings exceeding EUR 72,300)

[56] One can also think of other reasons that might reduce the effects of schemes such as the EITC on incentives and behaviour. One reason may be tax salience, meaning that individuals might not be aware of or understand these types of incentives very well. This issue was briefly discussed in our previous report (Economic Policy Council 2015). Also if for example many long-term unemployed have other problems such as health problems that affect their ability to find work, they might not be very responsive to the types of incentives created by EITC.

A further note about the Finnish EITC system is in order. The phase-out region of the Finnish EITC is very wide. In fact, one can still receive (a small amount of) EITC with annual earnings of EUR 118,416; only for incomes exceeding this threshold does the credit go to zero.[57] The reason for such a slow phase-out rate is to avoid high tax progression in the phase-out region, that is, to mitigate disincentive effects at the intensive margin of labour supply. On the one hand, it is advisable to pay particular attention to disincentive effects in the phase-out region in the Finnish case: given the relatively narrow distribution of income in Finland, there are relatively large numbers of individuals at moderate incomes, whose incentives are affected if EITC is phased out too quickly. However, given the modest magnitude of intensive margin labour supply elasticities, this concern should not be emphasized too much.

The wide phase-out region implies that the EITC system is likely to be quite expensive, and extends to levels of income where incentive effects related to labour market participation are very unlikely to materialize. To make the system more efficient, it would be worth considering a reform whereby the EITC would be more tightly targeted at low (or moderate) incomes. In addition to potentially improved cost efficiency of the system, targeting the EITC more at the working poor would also promote equality. Overall, the highest absolute benefits of the income tax changes implemented in 2016 accrue on individuals at the 9th income decile, whereas individuals in the 6th decile benefit most in relative terms. (HE 31/2015).

Turning to goal (i), the government's tax policy is characterised by a strong emphasis on making sure that the tax/GDP ratio does not increase. In the light of the above evidence, even relatively high levels of taxation may not be very harmful for the economy, as individual decisions in the labour market appear fairly unresponsive to tax rates. (Related evidence on macroeconomic performance was discussed in Chapter 6.) Indeed, the first order effect of tax reductions is a loss in tax revenue. This can be demonstrated by considering the recent history of income tax reductions in Finland. Between 2000 and 2011, a series of income tax reductions were

[57] Details of the earned income allowance in municipal taxation are somewhat different, but the limit at which the allowance goes to zero is also very large at EUR 93,333.

implemented, whereby the average marginal tax rate declined by about 4%-points.[58]

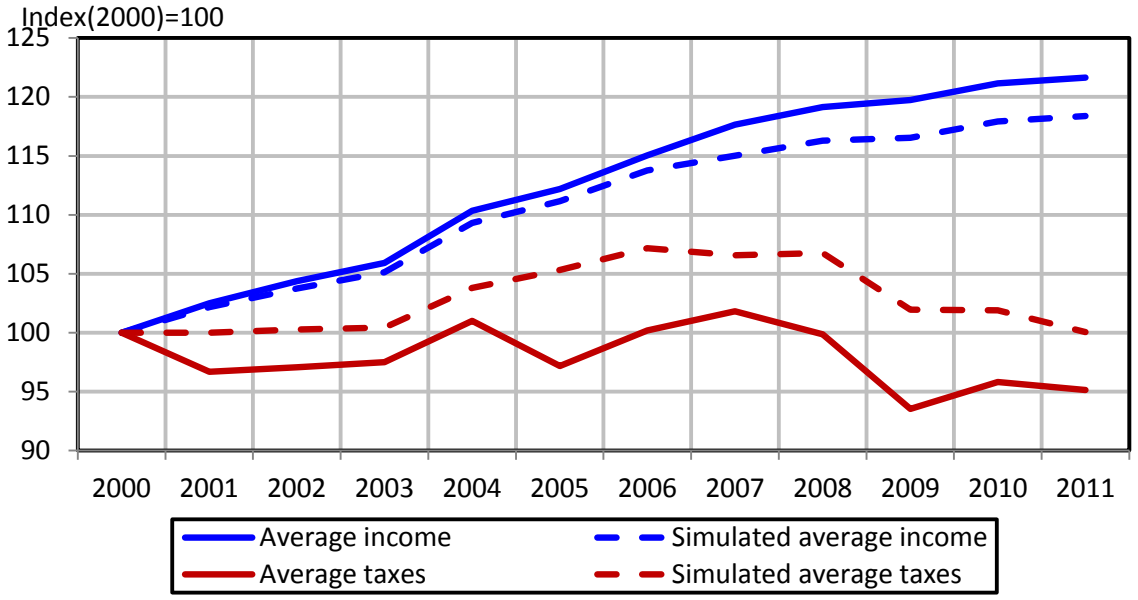
Figure 7.1.1 below, taken from the background report (Matikka et al. 2016), depicts the observed development of average income (top line) and average income taxes paid (bottom line) between 2000 and 2011. On the other hand, the dashed lines in the middle depict the simulated development of average income and average income taxes paid, if the income tax cuts in the 2000s had not been implemented. The simulations assume an elasticity of taxable income of 0.15 (Matikka 2015). The figure shows that average income would have increased somewhat more slowly, had the tax cuts not been implemented.[59] However, the figure also shows that taxes paid would also have developed differently – they would have been considerably higher in the absence of the tax cuts.

The simulation results in Figure 7.1.1 illustrate the general idea that when the elasticity of taxable income is small, tax reductions lead to a slight increase in economic activity, but also to a reduction in tax revenue. (It should be noted, however, that the results depicted in Figure 7.1.1 cannot be used to derive exact conclusions regarding the magnitude of the possible effects on the budget. The simulations relate to the development of income and taxes paid for the average individual, not to aggregate tax revenue.) That is, it is clear that the so called dynamic effects of income tax cuts are in general not sufficiently large to overturn the first order loss in tax revenue.

[58] This number relates to the average marginal tax rate including state income tax, municipal income tax and employee social security contributions, which declined from about 49% in 2000 to about 45% in 2011.

[59] In the simulation, the central government income tax rates are kept at their level in 2000. Any other changes in the tax law, such as inflation adjustment in the central government tax rate schedule and changes in tax deductions, occur normally. For more details, see Matikka et al. (2016).

Figure 7.1.1 The development of mean earnings and mean earnings taxes paid in 2000–2011 (index, 2000=100)



Source: Matikka et al. 2016

Even though it is clear that tax reductions normally lead to losses in tax revenue, top income tax rates are worth a closer examination in this respect. Since the Finnish income tax system is progressive and marginal income tax rates at the top of the income distribution quite high, one may worry about whether taxation of top incomes is already at such a high level that further tax increases might even lead to a loss in tax revenue. Despite the general development depicted in Figure 7.1.1, might reducing top marginal income tax rates in fact increase tax revenue? We turn to this question in the next section.

7.2 Revenue-maximizing top earned income tax rate (Laffer curve)

In this section, we provide an analysis of whether the top earned income tax rate in Finland is too high from the point of view of collecting tax revenue. Would tax revenue increase if the top tax rate on earnings was lower? The Finnish income tax system is progressive and the top marginal earned income tax rate (including employee social security contributions) is currently approximately 57%. This rate applies to taxable income above EUR 90,000 in 2015. If one also takes into account the impact of commodity

taxation (that also contributes to a deterioration of work incentives), one can calculate the so called effective marginal tax rate.[60] The rate of commodity taxation[61] in Finland was approximately 22% in 2014. Given these numbers, the effective marginal tax rate of top income earners is about 65%.

The relationship between tax rates and tax revenue is described by the so-called Laffer curve. When taxation is at a moderate level, tax revenue is increasing in the tax rate. However, at high levels of the tax rate, the disincentive effects of taxation may become so severe that tax revenue may start to fall if the tax rate was further increased. That is, tax revenue is first increasing, and then decreasing in the tax rate. The tax rate that maximizes tax revenue is called the Laffer rate.

The Laffer curve is often discussed in the context of top incomes: Since top incomes are most heavily taxed, one may suspect that Laffer curve considerations are most relevant at the top of the income distribution. Below, we will calculate the revenue-maximizing top earned income tax rate for Finland, and compare the results to the current level of taxation. Before proceeding to such calculations, the theory behind the determination of revenue-maximizing tax rates is reviewed in Box 7.2.1.

It is also important to note that as the term indicates, the revenue-maximizing tax rate only shows the level of taxes at which tax revenue is highest, and it should not be confused with the welfare-maximizing (or optimal) tax rate. This issue is discussed further at the end of this section.

[60] To calculate the effective marginal tax rate (EMTR), denote the top marginal tax rate on income by t and the average tax rate on consumption by τ. The individual's (static and linearized) budget constraint is then given by $(1+\tau)C = (1-t)Z$, where C is consumption and Z is pre-tax income. This yields $C = \left(\frac{1-t}{1+\tau}\right) Z = (1 - EMTR)Z$.

[61] The commodity tax rate is calculated as the share of indirect taxes in aggregate consumption expenditure. We are grateful for Marja Riihelä for providing these calculations.

Box 7.2.1 The elasticity of taxable income and the revenue-maximizing top earned income tax rate

The tax revenue-maximizing tax rate for top incomes depends on how taxable income reacts to taxation (i.e. the elasticity of taxable income), as well as on the shape of the income distribution (e.g. the number of individuals in the top tax bracket). It can be shown that the revenue maximizing top tax rate is given by the formula (see e.g. Piketty et al. 2014)

$$t^{max} = \frac{1}{1+a \cdot e}, \qquad (7.1)$$

where e is the elasticity of taxable income (ETI) and a is the so called Pareto-parameter that describes the relevant features of the income distribution. The revenue-maximizing top tax rate is the lower, the more responsive are incomes to taxation (captured by e), and the larger the number of individuals who are affected by these adverse incentives (captured by a).

However, this general formula for the revenue-maximizing income tax rate is not fully applicable to taxation of earnings in Finland. This is because of the tax avoidance opportunities provided by dual income taxation. Dual income taxation provides an opportunity for income-shifting, that is, converting some of one's earned income into more leniently taxed capital income. In the presence of income-shifting, the elasticity of taxable income is not sufficient to measure the revenue (or welfare) losses from earnings taxation. This is because a part of the tax revenue that is lost when the tax on earnings is increased, is returned through the other tax base. In this case, the revenue-maximizing top tax rate on earned income is given by

$$t^{max} = \frac{1+t_2 \cdot a \cdot s \cdot e}{1+a \cdot e}, \qquad (7.2)$$

where t_2 is the marginal tax rate on the alternative tax base (where some potential earnings can be shifted) and s is the part of the total taxable income elasticity e that is due to income shifting. (Piketty et al. 2014.) As was explained in Section 7.1, the general understanding in the literature is that the labour supply of top income tax earners responds very little to income taxes, and therefore a large part of any possible earnings response is due to other factors.

As income-shifting possibilities are prevalent in the Finnish context, we use the case without income-shifting (corresponding to equation 7.1) only as a benchmark. In most of the analysis, we use equation (7.2) to calculate the

revenue-maximizing top earned income tax rate for Finland. There is good evidence that income-shifting indeed does take place, but there is less evidence on its exact magnitude among top income earners in Finland. Harju and Matikka (2015) find that approximately 2/3 of the elasticity of taxable income of Finnish owners of privately-held corporations is due to income-shifting, but this estimate refers to a special group. On the other hand, other forms of tax avoidance would ideally need to be taken into account as well. For example, Kreiner et al. (2015) find the when intertemporal tax avoidance is accounted for, the remaining part of the ETI for high income earners in Denmark is close to zero.

The results of the top tax rate calculations are quite sensitive to assumptions made about the values of the parameters on the right hand side of equations (7.1) and (7.2). We therefore consider several values for the parameters. As outlined above, Matikka (2015) estimates the average taxable income elasticity in Finland to be 0.15, with no significant differences between income groups. We also consider other possible values for the elasticity ($e = 0.1$, $e = 0.3$ and $e = 0.5$). We consider two possibilities for the share of income shifting in the earnings response to taxation, namely $s = 0.5$ and $s = 0.7$. We consider two values for the Pareto-parameter $a = 3$ (for earned income) and $a = 2.25$ (for earned income plus capital income) where we consider the former to be relevant when there is no income-shifting, and the latter to correspond to the case where income shifting possibilities are taken into account.[62] Finally, as for t_2, we use the tax rate on dividends[63], as we consider this to be the most relevant alternative tax base in the Finnish context.

We next discuss how the current top marginal earned income tax rate in Finland compares with the revenue-maximizing tax rate. The analysis builds

[62] The Pareto-parameter can be calculated from the formula $\frac{a}{a-1} = \frac{Z^m}{\bar{Z}}$, where $\bar{Z}$ is the level of earnings corresponding to the lower limit of the top earned income tax bracket and Z^m is average income for individuals in the top tax bracket. The value $a = 3$ corresponds to the earnings distribution in Finland. When there is income-shifting, the question of which income distribution one should use to calculate a arises. The relevant distribution would be total earnings prior to any possible income-shifting response. Such a distribution is not directly observable, however. We use the combined distribution of gross earnings and capital income as a proxy.

[63] More specifically, we use the tax rate on capital income dividends withdrawn from a privately held corporation (dividends below the computational return on net assets of the firm).

on calculations presented in the background report (Matikka et al. 2016).[64] As explained in Box 7.2.1, the revenue-maximizing top tax rate depends on the income distribution (e.g. the mass of individuals in the top income bracket), the elasticity of taxable income (which measures the efficiency cost of taxation), and the extent of income shifting (which refers to the possibility of top income earners to convert some of their earned income into more leniently taxed capital income). Since there is considerable uncertainty associated with the estimates of the relevant parameter values in this calculation, we consider several possible values as explained in Box 7.2.1.

The results are presented in Table 7.2.1. We start from a benchmark where we assume that there is no income-shifting. This case is presented in the first row of Table 7.2.1. Given that this is only a benchmark, we consider only one value for the taxable income elasticity (Matikka 2015) in this case. When there is no income-shifting, assuming a modest elasticity is very reasonable. In this case, the revenue-maximizing top income tax rate (taking into account commodity taxes) would be 69%, slightly higher than the current rate (65%).

However, the assumption that only earned income is relevant for top income individuals is unrealistic. For example, the share of capital income in the income of the top 1% of income earners in Finland was about 45% in 2012 (Riihelä et al. 2014). As was noted in Box 7.2.1, the Finnish tax system provides incentives for income-shifting between different tax bases: The top tax rate on capital income in Finland is much lower than the top tax rate on earned income, and the tax rate on certain types of dividends is lower still. There is convincing Finnish empirical evidence of income shifting in practice (Pirttilä and Selin 2011, Harju and Matikka 2015).

Therefore, it is important to calculate the revenue-maximizing income tax rate in such a way that income-shifting possibilities are taken into account. This is done in the remaining rows of Table 7.2.1. For example, for the ETI estimate of 0.15 from Matikka (2015) and making the assumption that income shifting accounts for 50% of the reaction of top earners' income to tax rates, the revenue maximizing top earned income tax rate (including the

[64] In the background report, the calculations are presented without consumption taxes. We provide a version where consumption taxes are taken into account. Another difference is that when we discuss income shifting, we consider dividend taxation (instead of general capital income taxation) as the relevant alternative tax base.

commodity tax) would be as high as 80%. Therefore the revenue-maximizing top tax rate for these parameter values is clearly higher than the current effective marginal tax rate, 64%. (Note again that this is the effective marginal top tax rate including consumption tax and employee social security contributions.)

Table 7.2.1 The revenue-maximizing top earned income tax rate for different parameter values

elasticity of taxable income, ETI (e)	share of income shifting in ETI (s)	pareto-parameter (a)	top tax rate on dividends (incl. commodity tax) (t_2)	revenue-maximizing top tax rate (incl. commodity tax) (t^{max})
0.15	0	3		0.69
0.1	0.5	2.25	0.40	0.85
0.15	0.5	2.25	0.40	0.80
0.3	0.5	2.25	0.40	0.68
0.5	0.5	2.25	0.40	0.58
0.1	0.7	2.25	0.40	0.87
0.15	0.7	2.25	0.40	0.82
0.3	0.7	2.25	0.40	0.71
0.5	0.7	2.25	0.40	0.62

Note: See the last paragraph in Box 7.2.1 for an explanation of the parameter values used in the calculations

On the other hand, if the elasticity of taxable income were considerably higher than that found in Matikka (2015), then the current top tax rate may be quite close to the revenue maximizing one. For the current top tax rate to exceed the revenue-maximizing rate, the ETI would have to be above 0.42 (if the share of income shifting in the ETI is 0.7), or above 0.35 (if the share of income shifting is 0.5). Given that the ETI estimates in the relevant literature (for example for other Nordic countries) are below these numbers, it appears likely that the current top income tax rate is below the revenue-maximizing rate. It has to be kept in mind however that the above calculations are subject to considerable uncertainty, not least because of the uncertainty involved in the ETI estimates. Therefore it is also possible that the current top tax rate may be close to the revenue-maximizing level.

Some futher notes concerning the above calculations are in order, and they further point to the direction that the results of the analysis have to be interpreted cautiously. First, as mentioned above, we have included

consumption taxes in calculating the current top tax rate. Since consumption taxes affect work incentives, it is advisable to take consumption taxes into account in the calculations. However, to our knowledge, none of the ETI estimates in the literature actually take into account consumption taxes. To do this, existing ETI estimates should be revised downwards.[65] This would strengthen our conclusion that current top tax rates are likely to be below the revenue maximizing rate.

Second, we have also included employee social security contributions in calculating the current top tax rate. On the other hand, we have excluded social security contributions paid by employers. In principle, it should not matter which side of the market pays the tax, and therefore social security contributions paid by employers and employees should be treated similarly a priori. However, given that employer social security contributions mostly consist of pension contributions where the benefit largely accrues to the consumer in the form of future consumption, a case can be made for treating them as a form of savings[66]. To the extension that this holds, pension contributions can expected to be less distortionary than regular taxes on earnings. (See also Section 7.3 below for a more formal justification for this type of an argument.) This division also corresponds to the way in which the baseline tax rates are constructed for the ETI estimations in Matikka (2015).

Third, we have not accounted for the possibility of tax-motivated emigration in our calculations. If high taxes were to cause a significant proportion of high income individuals to emigrate, this would call for lower tax rates at the top. There is relatively little empirical evidence on the effects of taxation on

[65] This is because baseline tax rates including consumption taxes are higher than the baseline tax rates used in the ETI studies – and therefore baseline net-of-tax rates including consumption taxes are correspondingly lower. Hence, a one percent change in the baseline net-of-tax rates in the ETI studies corresponds to a more than one percent change in the net-of-tax rate including consumption taxes. A one percent change in net-of-tax rates including consumption taxes would therefore lead to a smaller response than those estimated in ETI studies.

[66] For exact equivalence to hold, this argument presumes a funded pension scheme where the return is the same as the rate of return on individual savings, and there are no borrowing constraints. There is no general rule as to how social security contributions should be treated in these types of calculations, as the appropriate treatment depends on the details of the tax and benefit system. In the Finnish case, the link between social security contributions and pension benefits is more direct than in many other countries. Not taking into account employer social security contributions at all is a simplifying assumption, as it is hard to determine which fraction should ideally be regarded as taxes, and we are not aware of such estimates for Finland. On the other hand, we have included employee social security contributions in full, even though a part of those also contributes towards pensions.

migration decisions to date (Kleven et al. 2013). Piketty and Saez (2013) conclude that the migration elasticity is likely to be fairly low in most countries. Furthermore, in Finland it is likely to be lower than in many other countries due to the relatively low fraction of foreigners (whose migration elasticity is likely higher than that of natives) in the population. The effect of migration on optimal top tax rates is therefore likely to be fairly limited in practice, even though its importance may increase when labour markets become more integrated internationally.

Laffer curve calculations have also been published by the Ministry of Finance (Kotamäki 2015). These calculations are somewhat hard to interpret in that they are based on average tax rates (whereas tax distortions relate to marginal tax rates). In the analysis, income and consumption taxes are treated separately. Further, the analysis does not concern top income individuals directly, as it rather relates to average taxation. The macro approach in that analysis can be considered complementary to ours. Despite these differences to the current approach, the Laffer curves in Kotamäki (2015) yield a similar conclusion as the calculations provided above, namely that the current tax rates in Finland are below the revenue maximizing rate. These Laffer curves therefore do not provide a justification for the claim that the level of taxation is currently unambiguously too high in Finland.

On the other hand, it is also important to note that the Laffer curve calculations do not imply that top earned income tax rates should be increased. First, the analysis was conducted keeping the capital income tax rate fixed. When both tax rates on earned income and capital income can be adjusted, income shifting considerations provide an argument for moving the two tax rates closer together: the two rates should be closer to each other than they would be if income shifting was not a concern (Piketty and Saez, 2013). It should be noted that the extent of income shifting (captured by s in equation (7.2)) should not be thought of as being completely beyond the control of policy-makers. Rather, income shifting or tax avoidance in general are to some extent determined by the features of the tax system (Piketty et al. 2014, 231) and the efficiency of tax collection can be improved by limiting the opportunities for tax avoidance. From this perspective, the

capital income tax rate (in particular taxation of dividends) and the top earned income tax rate in Finland are still quite far apart.[67]

Finally, it needs to be stressed that the above discussion relates to tax revenue maximization only. However, the objective of the government should be to maximize the welfare of citizens, not tax revenue. The analysis is nevertheless relevant also for the discussion about welfare. This is because the revenue-maximizing tax rate provides an upper bound for the welfare-maximizing tax rate: increasing tax rates above the Laffer rate would make no sense, since it would make taxpayers worse off (due to lower disposable income), and would also reduce tax revenue (as we would be on the downward sloping part of the Laffer curve). Therefore, it is clear that tax rates should in most cases be lower than and never exceed the revenue-maximizing rate.[68] Based on the above analysis, it seems likely that this is the case in Finland currently.

7.3 The combined effects of tax and expenditure policies on labour supply: comments on some special features of the Nordic model

The recent economic history of the Nordic countries has been characterized by high taxation and good economic performance in terms of relatively high growth, low unemployment and low inequality. Given the evidence presented above in Section 7.1, which shows that incomes do not after all react very much to taxation, this is perhaps not that surprising. Even though high taxation creates disincentives to work, it need not result in huge efficiency losses in practice.

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[67] If capital income and earned income have the same taxable income elasticity, the two tax rates should be equalized to maximize tax revenue. (Piketty et al. 2014, Piketty and Saez 2011.) More generally, however, even though the gap between the two tax rates should not be too wide to keep income-shifting under control, it is too simplistic to conclude that the tax rates on earnings and capital income should be identical. See for example Diamond and Saez (2011) for a good policy-oriented discussion on arguments regarding capital income taxation.

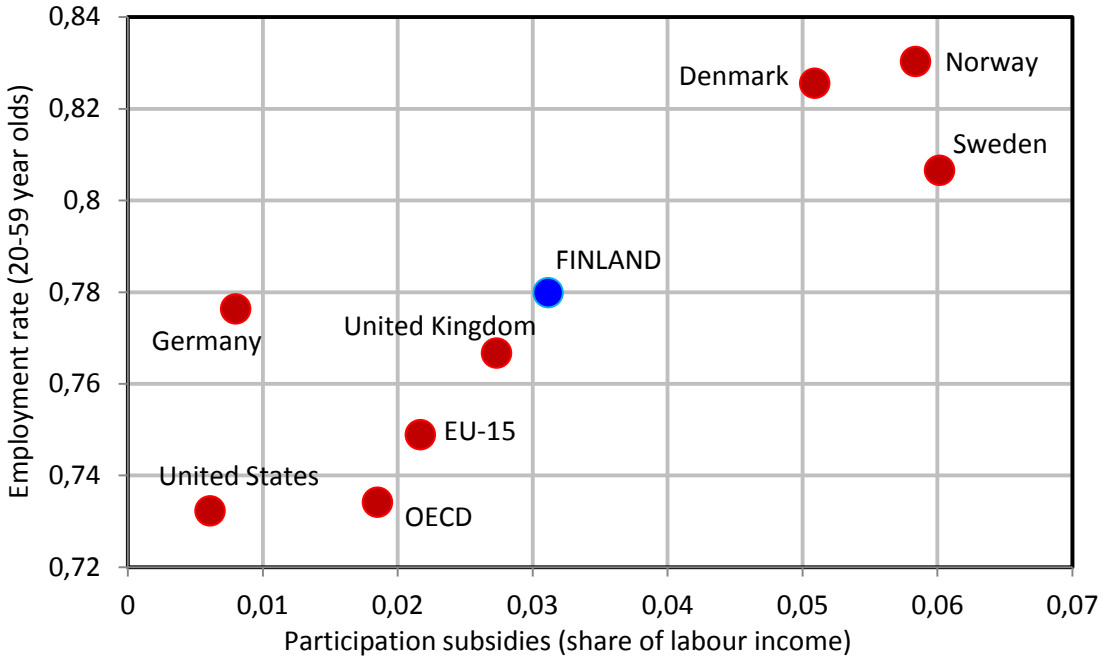
[68] The revenue-maximizing tax rate and the optimal tax rate are equal only if an extra euro given to top income earners has no effect on social welfare. For very high-income earners this type of a situation can arise even in standard economic theory. For example, the most widely used social welfare criterion in economics, utilitarianism, implies that the social welfare weight of highest income individuals approaches zero. Roughly speaking, this would occur if for the richest individuals, earning an extra euro would have no effect on personal welfare (the marginal utility of money goes to zero when income is high enough). See e.g. Diamond and Saez (2011, 169) for a discussion.

Further, there are some particular features of what is often called the Nordic model that make it possible to reconcile high taxation with good economic performance. In particular, a key feature is that high marginal and participation tax rates – that may have adverse effects on labour supply – are combined with subsidized provision of services that on the other hand serve to promote labour supply and in particular, labour market participation. Subsidized or publicly provided good quality day care for children, as well as elderly care, are prime examples of such services. They make working less costly, and therefore effectively constitute subsidies to labour market participation. (Kleven 2014, Rogerson 2007, Rosen 1996.) There is also an extensive and influential theoretical literature that discusses the general rationale for public provision of services that are complementary to labour supply and therefore encourage working (see e.g. Balestrino (1999) for a review).

High participation subsidies in the Nordic countries may therefore be one explanation for why high taxation can co-exist with good economic performance. Using data from Kleven (2014), Figure 7.3.1 plots the employment rate of 20–59 year olds against participation subsidies (public expenditure on child care, pre-school and elderly care as share of labour income) in Finland and a number of comparison countries. The figure shows that the employment rate and participation subsidies are positively correlated. The Scandinavian countries – Norway, Denmark and Sweden – show up as clear outliers in the OECD and EU-15, in that they have both markedly higher employment rates, as well as participation subsidies, than other countries. Even though Finland is also above the OECD and EU-15 average, both the employment rate and participation subsidies are clearly lower in Finland than in our Nordic counterparts. It should of course be noted that the numbers in Figure 7.3.1 point to a correlation, and cannot in themselves be interpreted as giving evidence of a causal relationship. Further, these findings relate to the employment rate (i.e. labour market participation). Average annual hours worked are below the OECD average in the Nordic countries.[69] It is natural that participation subsidies would be more relevant for labour market participation than work hours.

[69] See https://stats.oecd.org/Index.aspx?DataSetCode=ANHRS (accessed 15.1.2016).

Figure 7.3.1 Employment rates vs. participation subsidies in Finland and other countries in 2009



Data source: Kleven (2014)

Figure 7.3.1 plotted the overall employment rate for working age men and women, whereas participation subsidies are most relevant for parents – and in particular mothers – of young children. One particular feature that makes the Finnish system clearly less conducive to labour market participation than other Nordic countries is the system of homecare subsidies for young children. These subsidies clearly reduce incentives for labour market participation, and both the level and the length of the eligibility period of these subsidies are relatively generous in Finland. Indeed, the participation rate of mothers of children under three is only 50% in Finland, whereas the participation rate of mothers with older children is about 80%. In other Nordic countries the participation rates in these two groups are close to each other.

As was mentioned above in Section 7.1, microeconometric evidence shows that the labour supply of mothers of young children is responsive to these subsidies. Using municipal-level variation in homecare subsidies (stemming from variation in municipal supplements) to estimate the causal impact of homecare subsidies on labour market participation of mothers of small children, Kosonen (2014) finds the participation elasticity in this group to be

as high as 0.8. As was already mentioned above, reducing the length of the eligibility period for homecare allowance would be likely to increase labour market participation of mothers of young children.

The relationship between public services, taxation and labour supply have been discussed also for example in the context of publicly provided education. Bovenberg and Jacobs (2005) argue that spending on education mitigates the distortive effects of taxation by promoting human capital development, thus increasing the supply of skilled labour. Similar ideas are discussed for example in Heckman and Jacobs (2011), who also note that investments in education are more effective in building human capital the earlier in life they take place, and that the adverse effects of inadequate education are difficult to correct for at later ages.

Another related point is that to the extent that taxes are used to finance public services or benefits that are conditional on working and benefit the individual directly, taxes create fewer distortions than they would otherwise (Blomquist et al. 2010). To put it briefly, a part of the marginal income tax is non-distortionary, since it can be regarded as a payment for publicly provided goods and services; these services are costly to provide and therefore a payment is indeed warranted. Childcare is again the prime example here. Blomquist et al. (2010) provide calculations where they compare the work incentives of mothers of children in childcare age in Sweden (a country with high taxes and extensive public provision of childcare) and in California (with lower taxes and no universal public provision (and only some minor subsidies) of childcare). Quite interestingly, they find that the distortionary part of the marginal tax for this group is actually lower in Sweden than in California.

Even though childcare and other care services are perhaps the most prominent example here, the argument in Blomquist et al. (2010) can be applied to other services as well, to the extent that those services satisfy the assumptions of the analysis (i.e. being conditional on working and providing direct individualized benefits). For example, the argument can be seen as providing some support for the way in which we have treated pension contributions in the Laffer curve calculation above.[70] Another related feature

[70] However, it is very important to note that this argument can only be applied to old age pensions. Generous provisions for early retirement on the other hand have detrimental effects for incentives to work and study (e.g. Heckman and Jacobs 2011).

of the Nordic model is that benefits are often universal, and not only targeted at poor individuals. In addition to the above mentioned services, this applies for example to child support and student support. It is likely that universal services boost the willingness to pay taxes more than would be the case if services were only targeted at the poor.

Overall, an economy with high taxes and high service provision need not be less efficient than another one with low taxes and low service provision. One key conclusion that we can draw from the above discussion mimics the findings from the more macro-oriented discussion in the previous chapter: the distortionary effects of taxation depend crucially on how tax revenue is spent. In the light of these findings, various expenditure decisions of the current government – reducing expenditure on day care and education, for example – are bound to work towards lowering, rather than increasing labour market participation.

7.4 Council's views

Income taxes distort incentives to work. However, according to typical empirical estimates from studies using high-quality individual-level data and credible research strategies to identify causal effects, the negative effects of income taxes on employment, working hours and taxable income are only modest on average.

Tax incentives matter most for labour supply at the lower end of the income distribution, and for particular groups with low labour market participation (such as mothers of young children). Targeting tax reductions at lower incomes may be justified both on equity and efficiency grounds, even though the implications of the proposed increases in the EITC for aggregate employment are likely to remain fairly small. The EITC is currently also phased out very slowly in Finland and it would be worth considering a reform whereby the EITC would be more targeted at low incomes.

High quality public services such as child care form an integral part of the Nordic model, and evidence shows that public provision of such services further mitigates the negative incentive effects of taxes on employment. Providing public services that encourage labour supply in part explains why high taxes and high employment can coexist.

At the top end of the income distribution, possibilities for income-shifting between the earned income and capital income tax bases may reduce tax revenue. Moving the top capital income tax rate and the top earned income tax rate closer together would reduce possibilities for tax avoidance.

Modest tax distortions also imply that, in general, tax cuts reduce tax revenue and tax hikes increase revenue. Due to the high tax progression in Finland, however, the relationship between top tax rates and tax revenue warrants a closer examination. We present calculations in this report where the current top earned income tax rate in Finland is compared to the revenue-maximizing top tax rate. The calculations are subject to considerable uncertainty, and the conclusions that can be drawn depend, for example, on the realationship between earned income and capital income taxation, and the extent of income-shifting among top income earners. According to the calculations, it appears likely that the current top income tax rate is be below the revenue-maximizing tax rate. It is important to note that the optimal tax rate is in most cases below, and never exceeds the revenue maximizing tax rate. It is important to also note that the optimal tax rate is in most cases below, and never exceeds the revenue-maximizing tax rate. Cutting taxes or avoiding tax increases can be a legitimate policy goal, but its justification purely on efficiency grounds is problematic.

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