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*The Secretariat's draft report was prepared for the Committee by Henrik Braconier and Christophe André, with contributions from Dilyana Dimova and Sarah Flèche, under the supervision of Piritta Sorsa. Research assistance was provided by Jérôme Brézillon, Isabelle Duong and Clara Garcia.*

*The previous* Survey of Finland *was issued in April 2010.*

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# BASIC STATISTICS OF FINLAND (2010)

## THE LAND

| | | | |
|---|---|---|---|
| Area (1 000 km$^2$) | 390.9 | Major cities (thousand inhabitants): | |
| *of which:* | | Helsinki | 588.5 |
| Agricultural | 22.5 | Espoo | 248.0 |
| Forests (2008) | 262.6 | Tampere | 213.2 |
| Lakes | 34.5 | Vantaa | 200.1 |

## THE PEOPLE

| | | | |
|---|---|---|---|
| Population (thousand) | 5 375 | Labour force (thousand) | 2 672 |
| Number of inhabitants per km$^2$ of land area | 17.7 | Employment (thousand) | 2 426 |
| Net natural increase (thousand) | 10.1 | Employment (% of total): | |
| Net migration (thousand) | 13.7 | Agriculture, forestry and fishing | 4.8 |
| | | Industry and construction | 24.2 |
| | | Services | 71.0 |

## PARLIAMENT AND GOVERNMENT

| | | | |
|---|---|---|---|
| Composition of Parliament (number of seats): | | Government, number of ministers from: | |
| National Coalition Party (conservatives) | 44 | National Coalition Party | 6 |
| Social Democratic Party | 42 | Social Democratic Party | 6 |
| The Finns | 39 | Green League | 2 |
| Centre Party | 35 | Swedish People's Party | 2 |
| Left Alliance | 14 | Left Alliance | 2 |
| Green League | 10 | Christian Democrats | 1 |
| Swedish People's Party | 9 | Total | 19 |
| Christian League | 6 | | |
| Other | 1 | | |
| Total | 200 | Last general election: 17 April 2011 | |

## PRODUCTION AND PUBLIC SECTOR

| | | | |
|---|---|---|---|
| Gross domestic product (billion EUR) | 180.1 | Public consumption (% of GDP) | 24.6 |
| GDP per head (EUR) | 34 588 | | |
| Gross fixed capital investment: | | General government (% of GDP): | |
| % of GDP | 18.8 | Current and capital expenditure | 55.3 |
| Per head (EUR) | 6 319 | Current revenue | 52.1 |

## FOREIGN TRADE

| | | | |
|---|---|---|---|
| Exports of goods and services (% of GDP) | 40.3 | Imports of goods and services (% of GDP) | 39.0 |
| Main exports (% of total): | | Main imports (% of total): | |
| Metals, machinery and transport equipment | 20.1 | Intermediate goods | 35.9 |
| Electrical and optical equipment | 16.3 | Consumer goods | 25.3 |
| Wood, pulp and paper | 21.7 | Capital goods | 20.4 |
| Other goods | 41.9 | Energy | 18.4 |

## THE CURRENCY

| | | |
|---|---|---|
| Monetary unit: Euro | Currency units per USD, average of daily figures: | |
| | Year 2011 | 0.7192 |
| | December 2011 | 0.7606 |

# Executive Summary

**The global outlook is weakening, slowing growth in Finland.** *The Finnish economy has still not recovered from the sharp 2008-09 recession and GDP remains about 3% below its mid-2008 level. Unemployment may start to increase again. Policymakers should cushion the downturn by strengthening active labour market policies. An even worse global outlook may materialise, however. Risks relating to the ongoing sovereign debt crisis in the euro area, and the weak health of the banking sector in many countries are significant.*

**While the budget deficit is small, current fiscal plans are not ambitious enough to deal with future fiscal challenges related to an ageing population.** *Raising the (minimum and maximum) retirement ages, improving incentives to work for older individuals and further tightening early-retirement schemes would increase labour supply and could lower fiscal costs sufficiently to address these long-term challenges. Enacting such reforms now would leave room for short-term fiscal stimulus if the economic slowdown turns out significantly worse than expected. Without major retirement reforms, significant further fiscal consolidation would soon be needed to deal with the costs of ageing.*

**After a long period of strong growth, Finland's productivity performance has weakened recently, reflecting a weak performance in information and communication technologies but also in the public sector.** *Higher productivity would support higher living standards and can also mitigate future fiscal challenges. Structural reforms aiming at increasing productivity therefore need to move up the agenda. Current support for businesses and private sector R&D do not seem to be effective and should be scaled back further and streamlined together with business taxation. Government R&D spending should mainly focus on funding research in academic environments and should be distributed in such a way as to reward academic quality.*

**Stronger competition, especially among shielded private and public service sectors, could contribute to higher productivity.** *Less restrictive zoning and planning regulation for retail trade would boost productivity through stronger competition and larger scale economies. Exposing low-productivity government dominated sectors – such as utilities, transport and health provision – to competition would also raise productivity. In addition, thorough reforms of the municipal system are needed to shore up sustainability and efficiency, and announced plans for mergers should therefore be pushed through.*

**Productivity in the health sector has been falling and Finland underperforms the most efficient OECD countries on some indicators of the population's health status.** *Ageing will put further pressures on public health spending, underlining the need for significant and lasting efficiency gains. The planned reform to restructure municipalities and public services offers opportunities to reduce inefficiencies related to the excessive fragmentation of health care provision.*

**Health inequalities between socio-economic groups and regions are high by OECD standards.** *Apart from addressing the fragmentation of the health care system, increasing user choice and competition in health service provision would also improve efficiency and equity. Reinforcing the role of cost-effective primary care, home care and prevention would contain the increase in the need for costly specialised care and long-term care services.*

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# Assessment and recommendations

## Finland is being hit by the renewed global economic slowdown

The global economy has slowed, dragging Finland along. In the 2008-09 recession the Finnish economy contracted by 10% peak-to-trough despite being cushioned by relatively resilient domestic demand, prudent fiscal policy and a sound financial sector (Figure 1). However, exports fell dramatically and have not recovered, reflecting a weak export performance compared to neighbouring OECD countries since 2008 (Figure 1). GDP still remains about 3% below its mid-2008 level (Figure 1). Unemployment peaked at 9% in early 2010, and has receded only slowly, but may rise again.

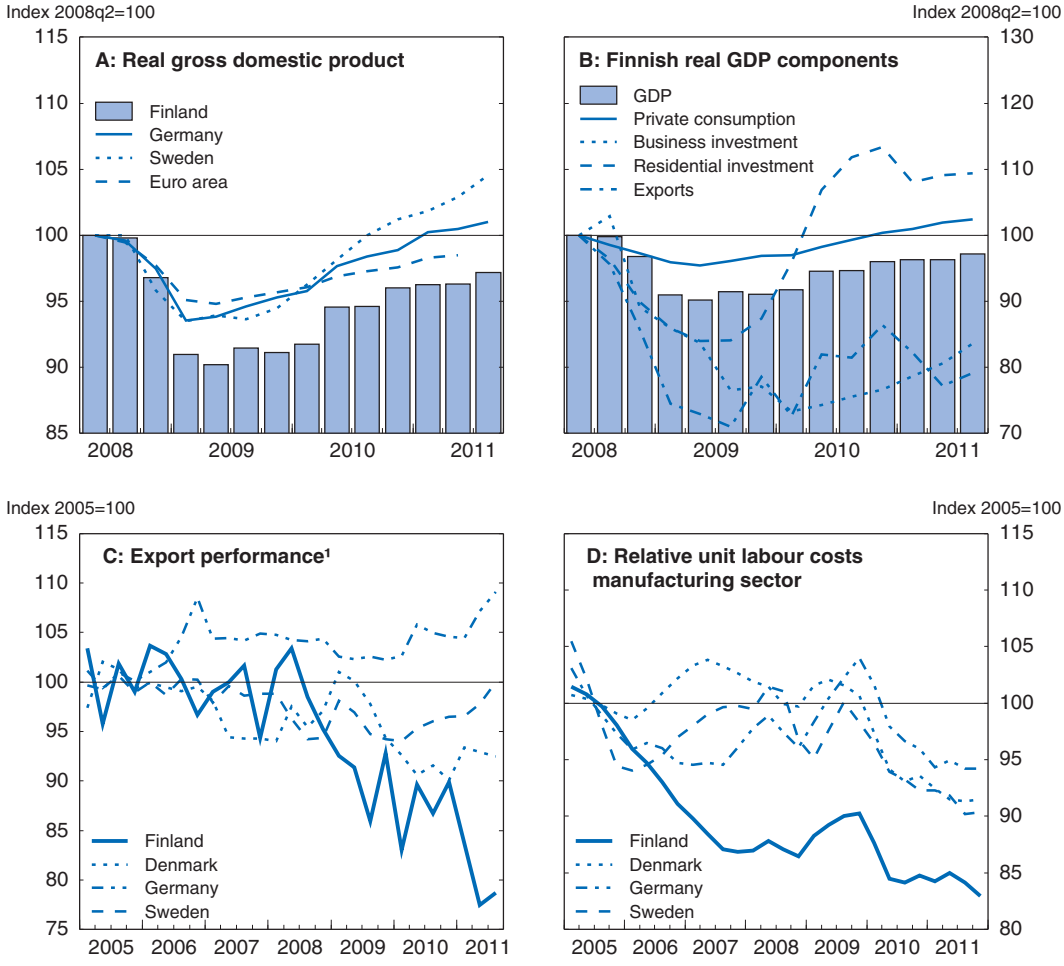
The macroeconomic outlook described in this Survey is based on the assumption that European economies will continue to "muddle-through" the ongoing sovereign debt crisis (OECD, 2011a). Hence, it is neither assuming a resolution of the crisis, nor a major negative event, such as a sovereign default. Large uncertainties therefore surround these projections, with risks mainly on the downside. Most significant risks relate to sovereign default in the euro area and the health of the banking sector in many countries. They will continue to grow in the absence of bold, economically robust and politically viable solutions at the European level (Box 1). Continued uncertainty both in Europe and globally will bear on growth and jobs, with adverse effects on wellbeing.

This *Survey* focuses on domestic policy settings that should be improved to soften the impact of the international slowdown and promote a stronger economy. First, in order to mitigate the impact of the weakening economy, labour market policies should be adjusted. Second, the government should address long-term fiscal challenges related to ageing by further reforming the pension system, boosting labour supply and improving the fiscal framework. Third, structural reforms to increase productivity both in the private and public sector should be pursued (Chapter 1). Finally, health care reforms should be carried out to improve efficiency and equity of health care provision (Chapter 2).

### *The economy is losing momentum and inflation is set to fall*

Whereas domestic demand has proved relatively resilient so far, exports are weakening again. Exports remain more than 20% below their 2008 peak, and the ongoing deceleration in global growth will lead to a further weakening in demand for them. Moreover, market shares have fallen despite a drop in relative unit labour costs in manufacturing by around 15% since 2005, driven by high productivity growth in the sector. This contrasts with developments in neighbouring countries like Germany, Sweden and Denmark, which have experienced limited market share losses or even gains with broadly stable unit labour costs (Figure 1). Finland's weak export performance, which has been especially clear in ICT, forestry and metal industries, reflects falling demand for many products that Finnish firms produce in the global market. To some extent this development

Figure 1. **Recent macroeconomic developments**




1. Exports of goods and services divided by export market for goods and services, volume.
*Source:* OECD, *OECD Economic Outlook Database*.

*StatLink* http://dx.doi.org/10.1787/888932566782

Box 1. **A reinforced architecture for Economic and Monetary Union**

In response to the sovereign debt crisis, European leaders have progressively agreed on more fiscal surveillance and co-ordination, while resources for dealing upfront with financing sovereign debt issuance and recapitalising banks have been put forward. On the 9th of December 2011 leaders for the euro area and some other EU countries agreed on further new proposals to reinforce fiscal procedures in the Economic and Monetary Union and strengthen tools to directly deal with the sovereign debt crisis.

Crisis management is enhanced in various ways:

- The planned ratification of the European Stability Mechanism (ESM) has been brought forward to July 2012 and countries stand ready to accelerate capitalisation of the ESM.

Box 1. **A reinforced architecture for Economic and Monetary Union** *(cont.)*

- The European Financial Stability Facility (EFSF) will be able to purchase bonds in the secondary market, using the European Central Bank (ECB) as an agent.
- Additional bilateral loans to the IMF (€ 200 billion) could be made to help with the crisis.
- The introduction of a changed voting procedure for urgent ESM decisions, only requiring a qualified majority (85%), subject to confirmation by the Finnish parliament.

A "fiscal compact" is introduced including:

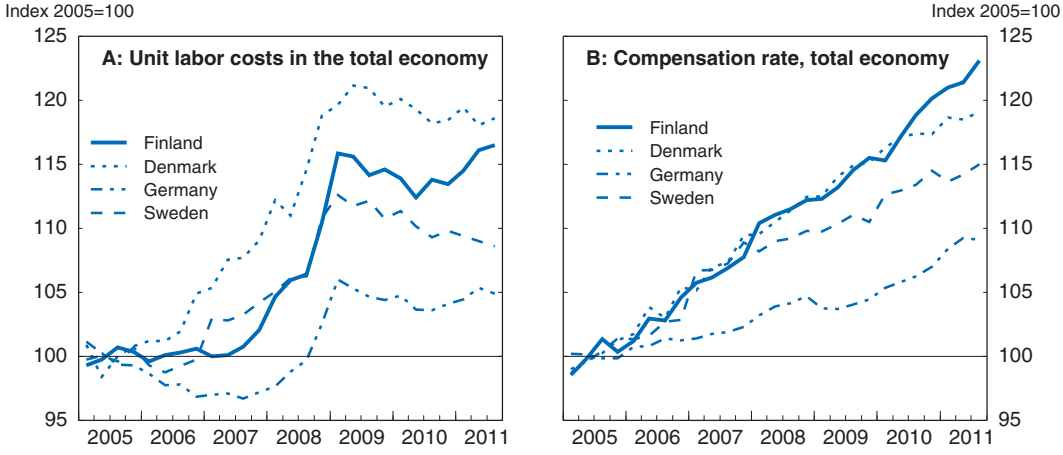
- The required fiscal rule of a balanced budget to be introduced in constitutions or equivalent is more precisely defined as a structural deficit smaller than 0.5% GDP, with member countries introducing an automatic mechanism to achieve this target.
- Countries in the EDP (Excessive Deficit Procedure) must set out an economic partnership programme of structural reforms, which will be scrutinised by the Commission and the Council along with budget plans.
- Countries will submit *ex ante* debt issuance plans.

Additional fiscal initiatives include a launch of EDP for euro area member countries risking breaching the 3% deficit threshold, unless a qualified majority of members opposes.

reflects a normalisation of the ICT sector's performance, following a lengthy boom. Significant upside and downside risks to exports remain, as Finnish exports are highly cyclical and the final extent of structural adjustment in traditional export sectors remains unclear.

Unit labour costs in the total economy have risen faster than in Germany and Sweden, primarily reflecting faster wage growth, especially after the 2007-08 wage agreements (Figure 2). The recent framework agreement for 2011-13 concluded by employers and unions caps total wage increases at slightly above 2% per annum, with specific settlements to be agreed on the industry level, dampening unit labour cost increases.

Figure 2. **Unit labour costs and wages**




*Source:* OECD, *OECD Economic Outlook Database.*

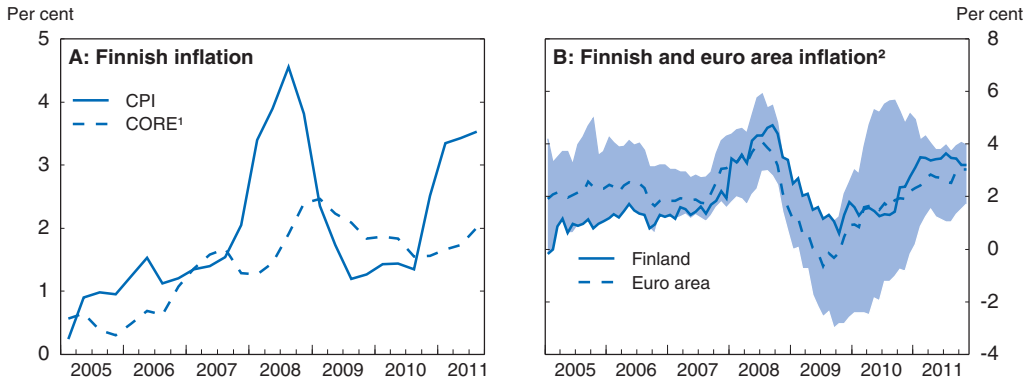
StatLink http://dx.doi.org/10.1787/888932566801

Domestic demand is set to grow slowly, as households' balance sheets are weakening in response to falling share prices and stagnating house prices, and growth in real incomes is slowing as wage growth has decreased and inflation has risen. Fiscal policy is turning mildly contractionary, and slowing exports and uncertainties weigh on investment. These forces will slow GDP growth sharply in 2012. A recovery during 2013 is expected as the global outlook brightens, uncertainty falls and income growth resumes.

Relatively high growth in unit labour costs has kept inflation above the Euro area average since 2008. Since mid-2010, VAT and other indirect tax increases, as well as higher energy and food prices, have also contributed, bringing the inflation rate close to the top of the euro area range (Figure 3). Once temporary factors dissipate, inflation is expected to recede, as the output gap remains wide and wage growth slows further.

Figure 3. **Inflation is pushed by energy price hikes**

Harmonised consumer prices – year-on-year growth rate




1. HICP excluding energy, food, alcohol and tobacco.
2. The shaded area indicates the maximum and the minimum among 12 Euro area members: Euro area excluding Cyprus, Estonia, Malta, Slovak Republic and Slovenia.

*Source:* OECD, Main economic indicators database.

StatLink http://dx.doi.org/10.1787/888932566820

### *The labour market is stagnating, which calls for more active labour market policies*

Rising employment and a shrinking working-age population pushed down unemployment until recently. Still, unemployment remains high compared to before the 2008-09 recession and little further improvement is foreseen during the coming years. The slowdown in the economy will lead to a temporary fall in employment and a rise in unemployment. From mid-2012, the unemployment rate should resume its downward trend as activity starts to pick up again (Table 1).

The labour market response in the 2008-09 recession was muted relative to the sharp fall in GDP. This reflected both a surge in temporary lay-offs (Figure 4, Panel A) and a sharp drop in productivity growth in the ICT sector related to growing structural problems (see Chapter 1). As a repetition of the latter is not very likely, employment is expected to develop more "normally" in relation to GDP going forward.

In the 2008-09 recession and the subsequent recovery, temporary layoffs surged as demand fell and later contracted when demand started to recover. Thus, the existing temporary lay-off scheme allowed firms to shrink wage costs rapidly, and later increase employment when activity picked up without costly and time consuming search and

Table 1. **Main economic indicators for Finland**

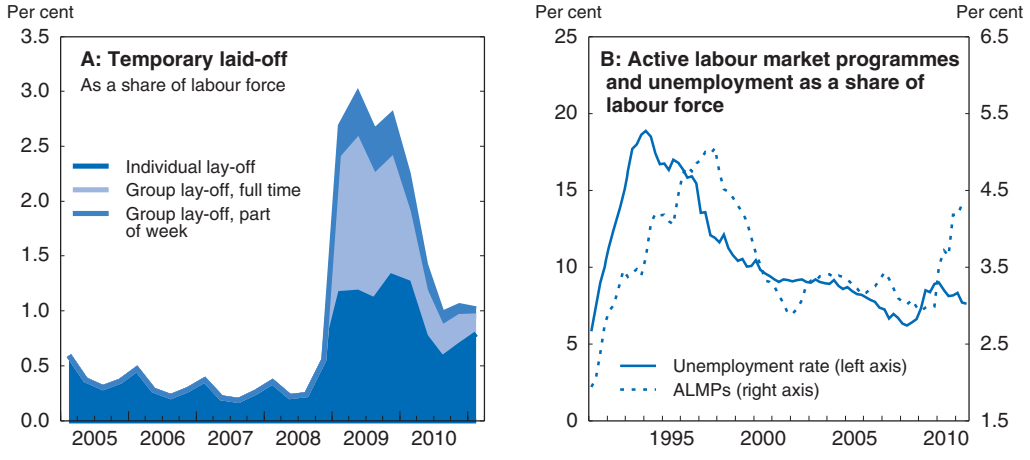
| | 2008 Current prices EUR billion | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|
| | | Percentage changes, volume | | | | |
| GDP at market prices | 185.5 | –8.2 | 3.6 | 3.0 | 1.4 | 2.0 |
| Private consumption | 95.5 | –3.1 | 2.7 | 3.1 | 0.5 | 2.0 |
| Government consumption | 41.7 | 0.9 | 0.6 | 0.5 | 0.8 | 0.7 |
| Gross fixed capital formation | 39.8 | –13.5 | 2.8 | 6.6 | 1.9 | 0.8 |
| Final domestic demand | 177.0 | –4.5 | 2.2 | 3.1 | 0.9 | 1.5 |
| Stockbuilding[1, 2] | 1.6 | –1.9 | 0.9 | 1.1 | 0.2 | 0.0 |
| Total domestic demand | 178.5 | –6.4 | 3.1 | 4.3 | 1.0 | 1.4 |
| Exports of goods and services | 87.0 | –21.5 | 8.6 | –0.3 | 4.6 | 3.3 |
| Imports of goods and services | 80.0 | –16.1 | 7.4 | 2.0 | 3.6 | 1.8 |
| Net exports[1] | 7.0 | –3.1 | 0.6 | –0.9 | 0.4 | 0.6 |
| *Memorandum items* | | | | | | |
| Output gap[3] | | –8.2 | –6.1 | –4.6 | –4.8 | –4.6 |
| Harmonised index of consumer prices | | 1.6 | 1.7 | 3.2 | 2.6 | 1.8 |
| Unemployment rate | | 8.3 | 8.4 | 7.9 | 8.0 | 7.7 |
| General government financial balance[4] | | –2.7 | –2.8 | –2.0 | –1.4 | –1.1 |
| Cyclically-adjusted financial balance[3] | | 0.5 | –0.3 | –0.3 | 0.3 | 0.5 |
| Gross government debt[4] | | 51.6 | 57.6 | 61.2 | 65.5 | 68.5 |
| Current account balance[4] | | 1.9 | 1.8 | 0.4 | 1.2 | 1.7 |

1. Contributions to changes in real GDP (percentage of real GDP in previous years), actual amount in the first column.
2. Including statistical discrepancy.
3. Per cent of potential GDP.
4. Per cent of GDP.

*Source:* OECD, *OECD Economic Outlook No. 90 Database.*

hiring (Figure 4, Panel A). However, the implicit subsidy in the layoff scheme can lead to excessive use, as the benefits are paid by the unemployment insurance – with costs shared between all employers, employees and the government – with no extra cost to employers who use the scheme. Still high levels of temporary laid-off compared to before the 2008-09

Figure 4. **Labour market development**




*Source:* Ministry of the Economy and Employment; Eurostat and OECD, *OECD Economic outlook database.*

StatLink http://dx.doi.org/10.1787/888932566839

recession and relatively long lay-off periods suggest significant lock-in of labour. If employers that take advantage of the programme were to bear some extra costs, risks of locking-in labour in declining firms and sectors would be mitigated. Alternatively, firms could be required to provide job-relevant training for temporarily laid off employees; this could also boost future productivity.

As in most OECD countries, long-term unemployment rose significantly after the 2008-09 recession, but has started to come down recently in Finland. It now stands below 2%, which is roughly half of the EU average and in line with the average for neighbouring Nordic countries. The darkening outlook may increase long-term unemployment again, calling for earlier intervention to get people back to work. Despite recent steps towards more ambitious activation policies, for example through making activation mandatory for young workers after a 3 month unemployment spell, active labour market policies only gear up almost 2 years after unemployment starts to increase (Figure 4, Panel B). This is late in comparison to Nordic neighbours (OECD, 2010a), and partly reflects that intensified activation starts relatively late in an international perspective (Duell *et al.*, 2009). Late activation discourages early job search and possibly depreciates the stock of human capital. Therefore earlier activation, perhaps in the form of an activation guarantee, would be warranted for all employees. The existing profiling system should be applied to all registered unemployed.

### *The financial sector is solid, but should continue strengthening its liquidity position to enhance ability to absorb shocks*

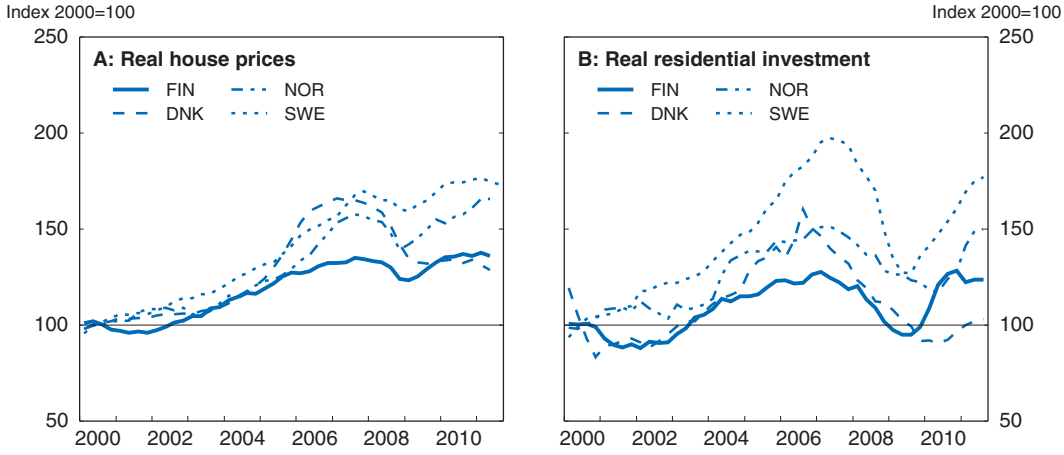
The Finnish financial system fared well through the global financial crisis, as banks had been prudent in lending during the expansion and had little exposure to high-risk foreign securities. While loan losses increased, mainly from loans to manufacturing companies largely dependent on exports, the share of non-performing loans remained low at 0.6% at end-2010. The banking system is well capitalised with a Tier 1 ratio of 13.2% at end-2010 and very high quality regulatory capital, essentially made up of share capital and undistributed profits. The stress test conducted by the financial supervisory authority (FIN-FSA) in spring 2011 indicated that Finnish banks would easily withstand an adverse economic scenario. Direct exposure to peripheral euro area countries is negligible. Nevertheless, Finnish banks are not immune to indirect repercussions from potential sovereign and banking crises. A funding gap between domestic loans and deposits imposes reliance on wholesale funding. Even though the funding gap has been fairly stable in recent years and is increasingly met through covered bonds rather than unsecured debt, it would be useful to strengthen liquidity positions further, to limit dependence on short-term foreign financing and to enhance the resilience of the financial system.

### *The property market is stabilising*

As the global financial crisis unfolded, real house prices declined by over 8% between the third quarter of 2007 and the first quarter of 2009, and residential investment fell by a quarter. These developments have been broadly similar to, if somewhat less pronounced than, those observed in other Nordic countries, except Denmark which experienced larger house price falls (Figure 5). From mid-2009 the market recovered, spurred by low mortgage rates. Pre-crisis peaks in prices and investment were rapidly exceeded, raising fears that a housing bubble might be forming and prompting FIN-FSA to issue guidelines for mortgage lending in March 2010 (FIN-FSA, 2011). The guidelines are prudent, especially as they seem

to have been introduced before a bubble developed: the house price-to-income ratio is close to its long-term average and in 2011 both prices and investment have been losing momentum. Housing prices and investment seem to be in line with current household income, mortgage rates and balance between population and the housing stock (André and Garcia, 2012). Nevertheless, the economic slowdown and increase in uncertainty will weigh on prices and investment in the short term, and significant price falls cannot be ruled out. Structural features of the Finnish market make it volatile: most mortgages carry variable rates, the tax system encourages home-ownership through low property taxes and deductibility of mortgage interest. The Programme of the Finnish government (Prime Minister's Office, 2011) signals that mortgage interest deductibility will be reduced moderately and progressively over the parliamentary term, which is welcome. Progressive reduction of deductibility should go on until it is entirely abolished. Property taxes are determined by municipalities, within limits set by the central government, and valuations are currently not closely related to market values of dwellings. A closer link would provide an automatic stabiliser, also reducing volatility (Vartia, 2006), although such changes have often proved difficult to implement politically.

Figure 5. **Housing prices and residential investment**




*Source:* OECD, *OECD Economic outlook database*; National sources and OECD calculations.

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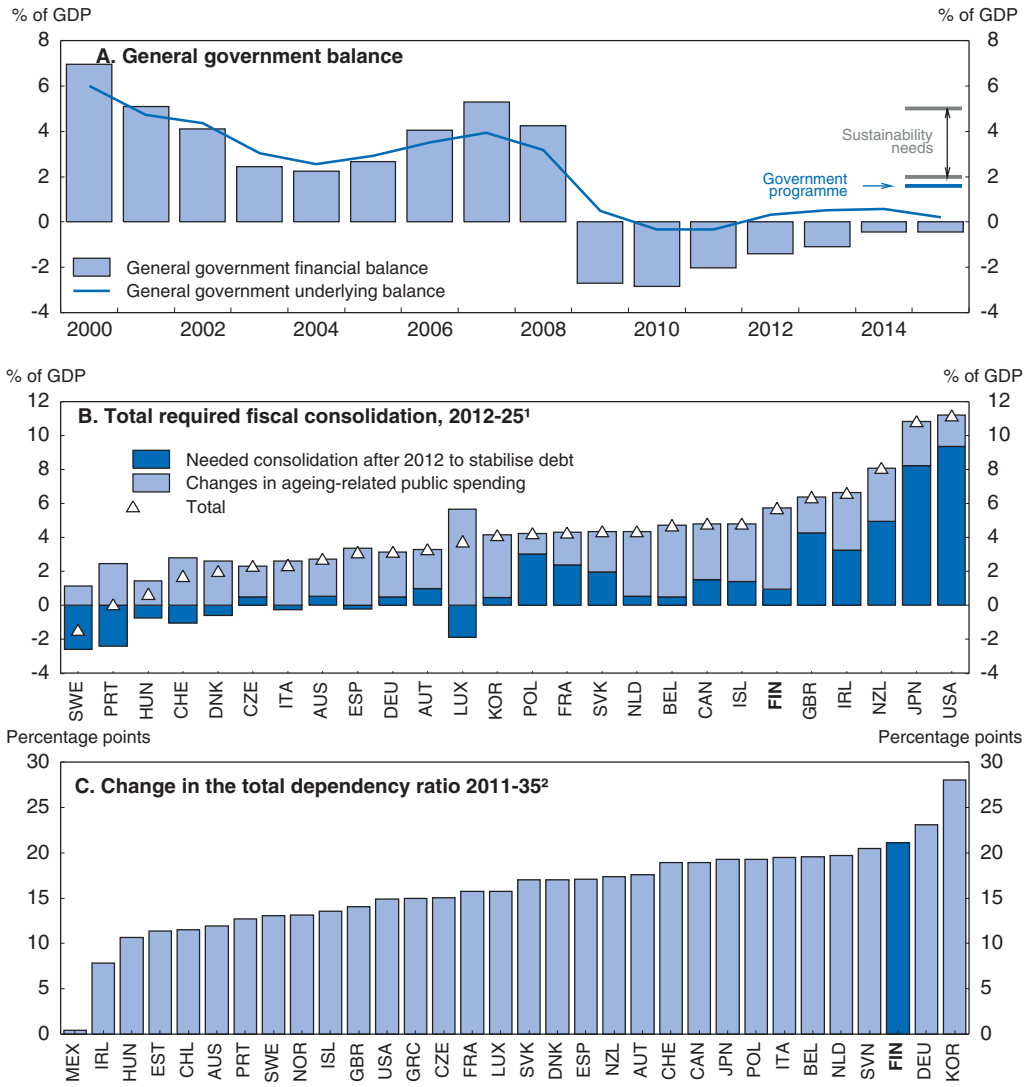
## Fiscal policy has been prudent but long-term fiscal challenges remain

The underlying fiscal position in Finland deteriorated during the recession, reflecting expansionary policies and weaker potential output (Figure 6, Panel A). Still, the deficit and debt levels remain relatively low compared to other OECD countries, and announced consolidation will further reduce the deficit (Figure 6, Panel A; Table 1). The consolidation implies slightly contractionary budgets going forward. Should the economic situation deteriorate drastically compared to current projections, Finland should consider temporary stimulus measures to support activity, together with other fiscally sound countries. Such stimulus would have to be weighed against risks of lost confidence in the fiscal position and should preferably be accompanied by structural fiscal and labour market reforms to enhance long-term sustainability.

Figure 6. **General government balance**




1. Greece has been excluded due to fast-changing economic conditions and policies.
2. The total dependency ratio is population aged below 15 and over 65 divided by population aged 15-64 years (working age).

*Source:* OECD, *OECD Economic Outlook 89*, Box 4.2 and Table 4.4; OECD, *OECD Economic Outlook 90 database*; *OECD, Pensions at a Glance 2011*: Retirement-income Systems in OECD; OECD calculations.

*StatLink* http://dx.doi.org/10.1787/888932566877

### *Long-term fiscal challenges should be addressed now*

The longer-term fiscal challenge is severe compared to other EU countries. A low deficit and debt level means that relatively small additional consolidation efforts would be needed to stabilise debt based on current spending pressures (Figure 6, Panel B). However, a fast-ageing population and a low effective retirement age will increase spending pressures significantly over the coming decades (Figure 6, Panel B and C). Age-related spending in relation to GDP is estimated to increase by 5.4 percentage points between 2012 and 2030, mostly reflecting rising pension costs (Box 2). Based on the previous government's fiscal plans, the Programme of the Finnish Government (Prime Ministers'

### Box 2. **Long-term fiscal outlook**

The macroeconomic scenario up to 2013 is based on the *OECD Economic Outlook 90* (OECD, 2011a) and announced policies. The output gap is assumed to close by 2017. Labour productivity and employment are expected to develop slightly weaker than what is assumed in the Stability Programme update 2011 (Ministry of Finance, 2011). The interest on government gross debt is assumed to be 4.5% and the interest rate on government gross financial assets is set to 2.9%, implying a differential in line with the historical average of 1.6%. Gross government financial assets in relation to GDP are assumed to remain at their 2012 level of 122%. Age-related expenditures are assumed to increase by 5.4 percentage points of GDP between 2012 and 2030 due to rising pension costs and health spending in relation to GDP, and remain more or less unchanged thereafter (See *e.g.* Kinnunen, 2009). Based on these assumptions, immediate permanent tax increases or spending cuts equivalent to 4.6% of GDP would be needed to ensure that future revenues covers future spending in present value terms. The methodology is discussed more in detail in the previous *Survey* (OECD, 2010a).

Table 2. **Summary of macroeconomic and fiscal projections**
(Average across period)

| | 2011 | 2012-15 | 2016-30 | 2031-50 |
|---|---|---|---|---|
| GDP growth (%) | 3.0 | 2.2 | 1.7 | 1.3 |
| Labour productivity growth (%) | 1.9 | 2.1 | 1.9 | 1.5 |
| Employment growth (%) | 1.0 | 0.1 | –0.2 | –0.2 |
| Inflation (GDP deflator, %) | 3.3 | 2.0 | 2.0 | 2.0 |
| Primary net lending (% of GDP) | –2.0 | –1.2 | –2.2 | –4.2 |
| Net lending (% of GDP) | –2.0 | –1.0 | –3.0 | –9.3 |
| Net debt (% of GDP) | –61 | –52 | –21 | 82 |
| Gross debt (% of GDP) | 61 | 70 | 102 | 204 |

*Source:* OECD, OECD Economic Outlook 90 and OECD computations.

Office, 2011) estimated the fiscal sustainability gap, which shows the permanent fiscal consolidation needed to cover future obligations, at between 2 and 5% of GDP. The OECD currently estimates it at slightly above 4.5% of GDP (see Box 2). These estimates are uncertain, as they are based on the estimated output gap which is hard to measure due to difficulties in assessing productivity developments since the onset of the 2008-09 recession (Chapter 1). The fiscal plans in the 2012 budget proposal are not ambitious enough to achieve targets set in the government's programme, halt the ongoing rise in the government debt to GDP ratio, or to close the sustainability gap (Figure 6, Panel A; Box 2). The longer-term nature of the fiscal challenge and the bleak outlook for the economy mean that fiscal improvements should primarily be reached through labour market and pension reforms, rather than upfront consolidation, thus lowering spending and boosting revenues in the longer run. The *2010 Economic Survey* (OECD, 2010a) discussed Finland's long-term fiscal outlook at some length, and provided a set of recommendations on labour market and pension reforms that would resolve these challenges. By dealing with longer-term fiscal challenges upfront with pension and labour market reforms, the government can maintain trust in the fiscal position.

It has been widely recognised by Finnish policy makers that while the 2005 pension reform was a step in the right direction, further measures are needed to raise the effective

retirement age to mitigate the increase in ageing-related costs and close the fiscal sustainability gap. So far, little progress has been made in initiating further concrete reforms however, and suggestions provided by the working groups set up by the previous government were not sufficiently far-reaching to deal with the issues (OECD, 2010b). The previous *Survey* (OECD, 2010a) recommended raising the minimum and maximum retirement age and improving incentives to remain in employment beyond the minimum retirement age. The government should also tighten early retirement routes by abolishing the so-called unemployment pipeline, where unemployed can remain on benefits until retirement from ages 58-60 – depending on birth year – after the latest reform to the system. Disability pension should only be awarded on purely medical grounds.

Addressing structural rigidities in the labour market would also support higher labour force participation and a stronger fiscal position. Replacement rates are high in an OECD perspective (OECD, 2010a), especially for low earners, and for individuals on basic income support and housing benefits. Together with late activation, this contributes to low employment rates compared to other Nordic countries. Lower and tapered benefits would create stronger work incentives and employment. Stronger work incentives for groups with low labour force participation rates and potential preferences for part-time work, such as second-earners in families with small children and pensioners, would also spur labour supply and improve access to more labour flexibility for firms. This could also help to improve productivity in the service sector, as more flexibility in working hours can help reduce overstaffing.

### *A stronger fiscal framework would help achieving medium-term sustainability*

The previous *Survey* (OECD, 2010a) recommended a four-year rolling deficit target that leaves room for the automatic stabilisers to work. To prevent medium-term fiscal slippage and thereby ensure sustainability, the deficit target needs to be consistent with a stable long-term debt-to-GDP ratio. The current expenditure ceiling has been working well. However, it only covers a small part of general government expenditures compared to some other OECD countries, as it excludes cyclical spending, pensions and municipal spending outside central government transfers. As shown in the previous *Survey* (OECD, 2010a), government expenditures have grown faster in Finland than in comparative countries, largely reflecting strong spending growth in the municipal sector. Extending the spending ceilings to a larger share of expenditures and to all levels of government, would help to curb spending growth. If such an expansion is not deemed possible, other measures to contain municipal spending need to be taken. As discussed in the *2010 Survey*, effectiveness and credibility of fiscal policy can be facilitated by fiscal surveillance and knowledge dissemination provided at arms-length from the government.

Box 3. **Recommendations on labour market policies, labour supply and fiscal policy**

Labour market policies should be adjusted to increase resilience and flexibility by:

- Adjusting active labour market policies so that activation takes place earlier (OECD, 2010a).
- Adjusting the temporary lay-off scheme so that the employer bears some of the costs of the programme.

Box 3. **Recommendations on labour market policies, labour supply and fiscal policy** *(cont.)*

As discussed in the previous *Survey* (OECD, 2010a), the government should boost labour supply and improve the fiscal framework and long-term sustainability by:

- Pursuing further retirement reforms in terms of increasing the minimum and maximum retirement age, tightening early retirement routes and making work after the minimum retirement age more profitable.
- Lower high replacement rates in the unemployment insurance and related benefit systems to improve work incentives. Work incentives for second-earners in families with small children should also be improved.
- Strengthen the fiscal framework by adopting a medium-term fiscal target for the general government balance (while allowing automatic stabilisers to work) that is consistent with a debt target. Contain spending growth, especially in municipalities, preferably by expanding the expenditure ceiling to cover a larger share of general government spending.

## Restarting the growth engine is becoming urgent with the drastic drop in productivity

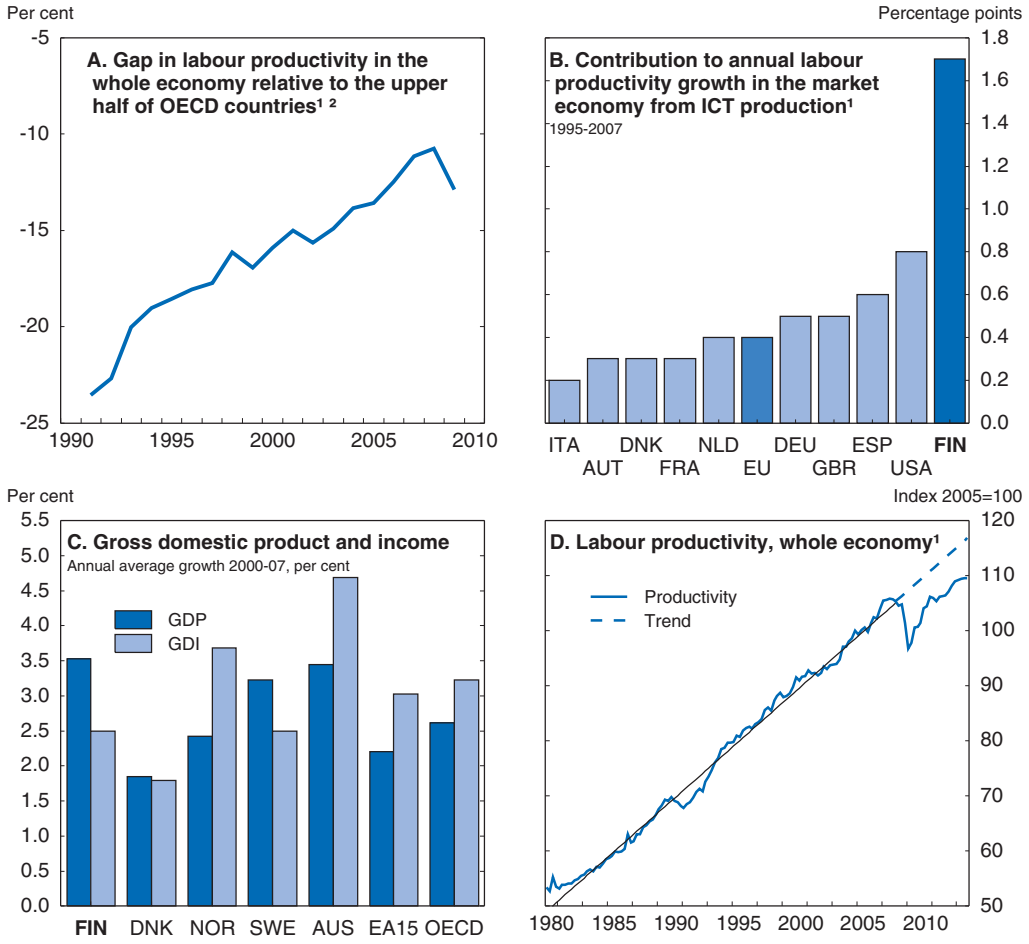
Labour productivity grew rapidly in Finland over the last decades and has been converging to that of the best-performing OECD countries (Figure 7, Panel A, and Chapter 1). Finnish productivity in manufacturing rose to being one of the highest in the OECD area, although service sector productivity remains low. Finland has been one of the most successful OECD countries in reaping the benefits of the rise of the ICT sector for growth (Figure 7, Panel B). Improvements in living standards are less impressive, however, as deteriorating terms-of-trade related to falling global prices of ICT goods have hollowed out purchasing power (Figure 7, Panel C).

Productivity performance started to deteriorate just before the recession. The slowdown can be attributed to several factors, such as technological and market-related setbacks in the ICT sector, a lower potential for catching-up in the manufacturing sector and diminishing growth contributions from structural change, likely reflecting waning effects of past structural reforms. Falling public sector productivity has also been a drag on economy-wide productivity (see below). Finally, the recession reduced the level of productivity by about 7% (Figure 7, Panel D). Although there is no firm evidence that trend productivity growth has slowed, sustaining high productivity growth will require action in several areas, such as higher education, R&D support, business subsidies and taxation. Furthermore, supporting flexibility and encouraging more competition in shielded private and public service sectors through further product and labour market deregulations would support stronger productivity. Structural reforms in these areas to raise long-term productivity therefore need to move up the policy agenda.

### *Reforms to higher education could improve quality and leverage public R&D spending*

Finland has been successful in increasing investment in R&D, which amounted to almost 4% of GDP in 2010, of which three-quarters is funded by private sources. Government funding has played a pivotal role in basic research and education, but there has also been direct R&D support to business. Maintaining and supporting high and

Figure 7. **Labour productivity and growth**




1. Value added per employee.
2. Percentage gap with respect to the simple average of the highest 17 OECD countries in terms of GDP per hour worked (in constant 2005 PPPs).

*Source:* van Ark (2011), Up the hill and down again; OECD, National Accounts database; *OECD Economic Outlook No. 90 Database*; OECD, *OECD Going for Growth 2010* and OECD, *OECD Going for Growth 2011*.

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profitable private sector R&D spending which generates large spillovers is of great importance for future growth.

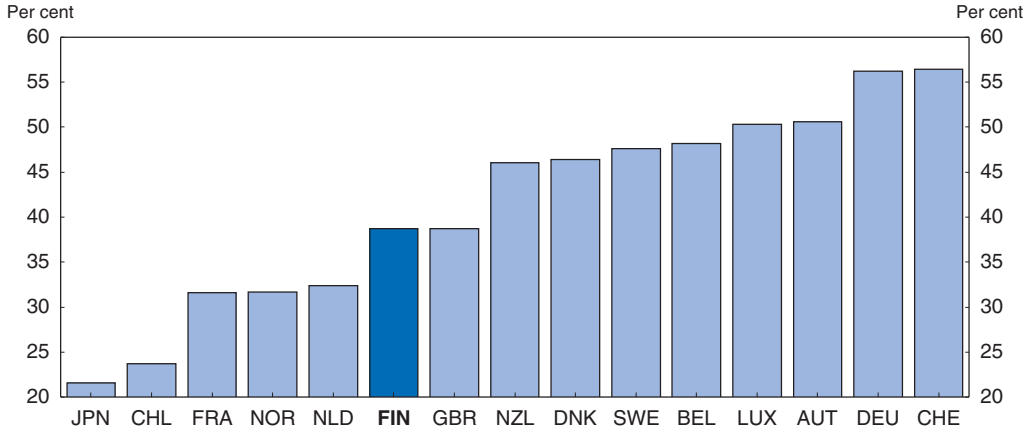
The primary role of government R&D policies is to help fund education and basic research, which yields higher social than private returns. Finnish universities perform relatively well compared to other European countries, but trail top performers, such as the United States and Nordic neighbours. This partly reflects lack of specialisation, critical mass and international interaction; Finnish university departments tend to be small in an international perspective (MEE, 2009). University education and R&D should be consolidated regionally through more competitive distribution of funding, raising quality through more competition and achieving economies of scale. Study times could be shortened and productivity increased in higher education by tightening administrative rules on financing to students.

### *Business support should be cut and focused on remaining externalities*

Government direct support for business sector R&D amounts to roughly 0.1% of GDP, which is fairly low in an OECD perspective. The decline of traditionally R&D intensive sectors is challenging the R&D support system. In the current system, relatively few firms seem to innovate (Figure 8). New growth areas need to develop, raising issues related to skills, flexibility and the role of government. Direct R&D subsidies may also have become less useful as R&D among Finnish firms is now to a large extent pursued at the international technological frontier, where policy makers' ability to identify promising projects may be limited (Sabel and Saxenian, 2008). Recent support to climate and energy technology seems to have failed in making a measurable impact on innovation, pointing to the technological and economic hurdles that government agencies face with R&D support. The government should consider whether a move towards a more generalised R&D subsidy system, *e.g.* through tax credits along the lines of the Norwegian *Skattefunn* system, would improve flexibility and efficiency. Such a system may also better fit the needs of small start-ups.

Figure 8. **Firms having introduced either a product or a process innovation**

As per cent of all firms




*Source:* OECD (2009); Ministry of Economy, Fifth Innovation Survey Indicators.

*StatLink* http://dx.doi.org/10.1787/888932566915

Government business support measures cover roughly 10% of all firms and cost 1% of GDP, although some cuts have been announced by the new government. The business and innovation support system in Finland has grown over the last 20 years with new actors entering, and supporting institutions becoming "broader" in general. Public procurement is also used to promote innovation. At the same time as support measures have broadened, technological capabilities within firms have increased and the ability of capital markets to fund start-ups and innovations have greatly expanded. Evidence suggests that support measures have failed to generate sustained effects on supported firms (Koski and Pajarinen, 2011). Support that competes closely with the private sector should be terminated and the number of supporting institutions reduced. Direct support should focus on addressing positive externalities in terms of high productive jobs, innovations and R&D spillovers, *e.g.* through a strong focus on basic research. Support measures should be set up in such a way that their impact can be assessed regularly.

### *Supporting entrepreneurship, innovation and firm growth would enhance productivity*

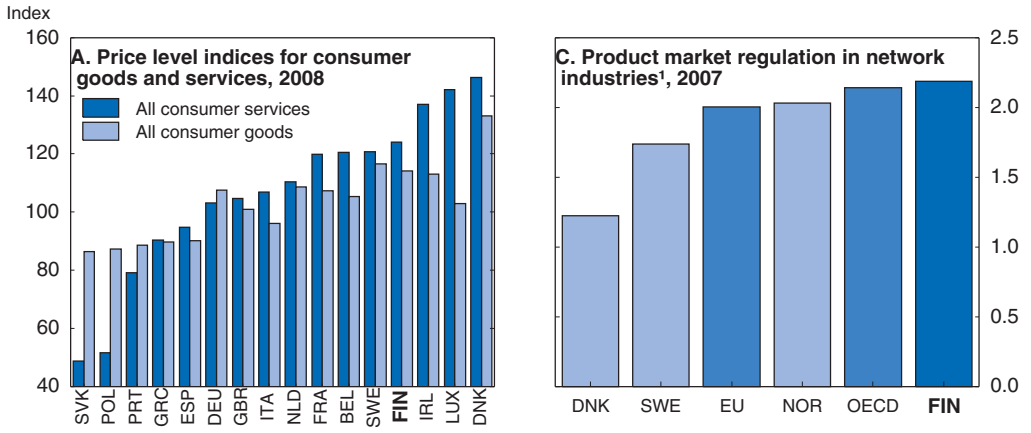
Improving the average quality of start-ups and providing opportunities for promising firms to expand quickly would improve Finland's growth performance. The dynamic process of firm creation and destruction is an important source of productivity growth. The combined contribution to productivity from firm entry and exit in Finland seems to be low in an OECD perspective (Bartelsman *et al.*, 2009). One contributing factor is that newly created firms tend to be less productive than incumbents, and have become increasingly so over the last 15 years. Hyttinen and Maliranta (2011) find that entrants are between 10% and 20% less productive than incumbents, depending on the sector. A better understanding of the forces behind this development could help in identifying policies to improve the performance of newly created firms.

Removing tax distortions would improve incentives for firm growth and risk taking. Although conditions for entrepreneurship in Finland are favourable relative to the OECD average in terms of a strong skill base, positive attitude towards entrepreneurship and good access to capital in different forms, post-entry growth among Finnish firms is relatively slow and structural change, in terms of labour shifting from low to high productive firms and sectors, contributes relatively little to productivity growth compared to other OECD countries. As a first step, capital taxation should be adjusted so that widely held companies are not discriminated against in relation to closely held companies or sole proprietors (Lindhe *et al.*, 2004). The current beneficial treatment of the latter hampers the entry of external capital, which is a precondition for fast growth.

### *Stronger competition would boost productivity in lagging service sectors*

Finland's strong productivity catch-up over the last 20 years has been largely confined to the manufacturing sector with performance in most services and other shielded sectors remaining below the OECD average. The large productivity differential between manufacturing and services in Finland reduces productivity gains from structural change, raises domestic prices and results in an underdeveloped service economy in an OECD perspective.

Figure 9. **Product market regulations and price levels**




1. Scale from 0 (least restrictions) to 6 (most restrictions).
*Source:* OECD, Database on Product Market Regulation and Eurostat.

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Stronger competition in non-traded sectors would foster lower prices, productivity growth and boost employment (Arnold *et al.*, 2011). Product markets have become substantially less regulated in Finland over the last ten years, and regulation is now largely in line with other Nordic countries. Prices on consumer goods and services remain high in comparison to other EU countries (Figure 9, Panel A), however. Although this partly reflects a high VAT rate, high product market regulation in network industries may contribute with adverse consequences for productivity in downstream industries (Figure 9, Panel B; Bourlès *et al.*, 2010). Robust regulatory frameworks in terms of competition policy and product market regulation, but also sufficient labour market flexibility, are needed to ensure competition in non-traded sectors. Ensuring strong competition in sectors that are less exposed to international competitors and especially opening government-dominated services, such as health, to competition can also incentivise innovation.

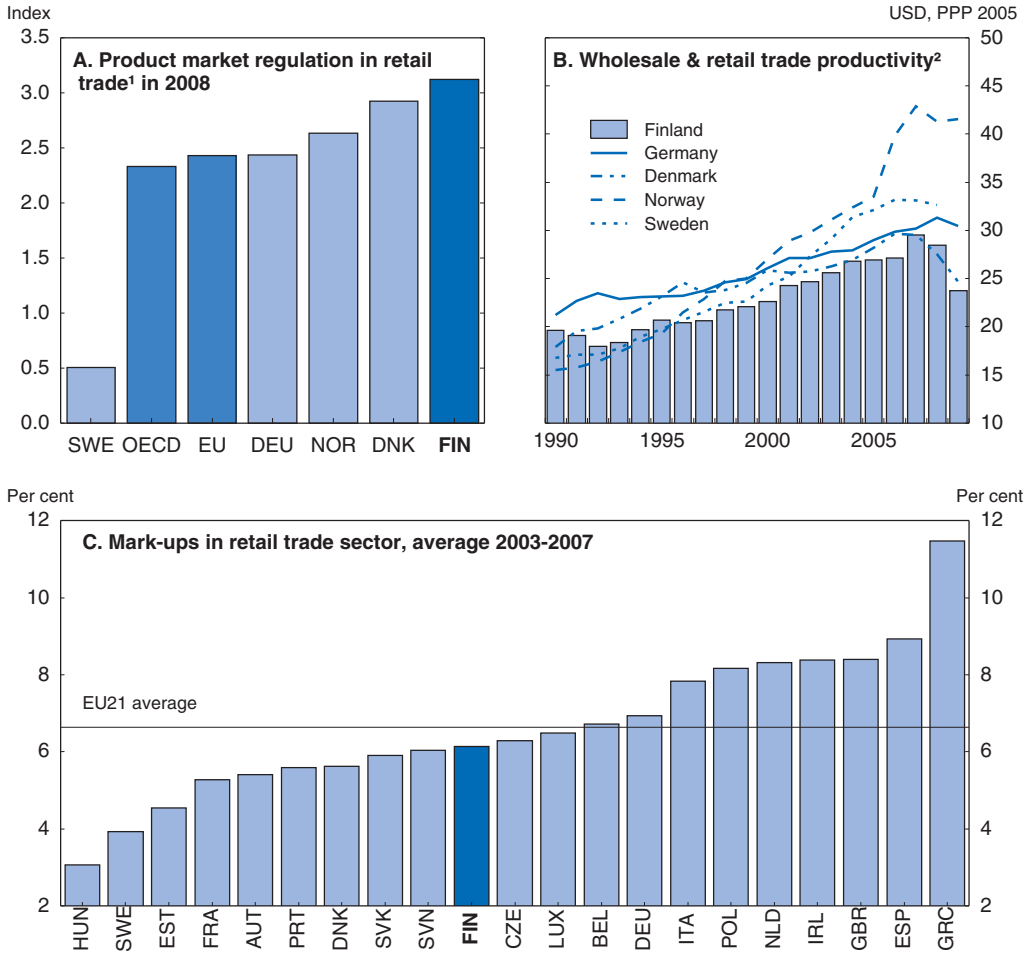
### *Productivity in the inefficient retail sector can be raised by more competition and less regulation*

Regulatory barriers in the Finnish retail sector are among the highest in the European Union (Figure 10, Panel A). As in other Nordic countries, market concentration is high, but labour productivity in wholesale and retail significantly trails Norway, Sweden and Germany (Figure 10, Panel B). If productivity growth in Finnish retailing had kept up with that in Sweden since 1995 – which has moved in a direction of more deregulation, more intrusive competition policies and less restrictive zoning – productivity would have been 35% higher, equivalent to 6% of GDP. Mark-ups in Finland are higher than in Denmark and Sweden, but are not high in an EU perspective (Figure 10, Panel C), illustrating that low efficiency more than excessive market power seems to be the main culprit for high prices in relation to the EU average.

The Competition Act which came into force in 2011 brings stricter merger control, enhanced damage compensation, "whistle-blowing" instruments and expanded investigation powers for the Finnish Competition Authority (FCA). The Act brings regulation in line with recommendations from the European Commission and should be a useful vehicle for stronger competition. Currently, the FCA is small in comparison to corresponding organisations in similar-sized countries (Table 3), although its budget has been expanded recently by 0.6 million euros.

Competition and productivity would stand to gain from a less restrictive planning regime, which would allow for larger stores and more out-of-centre developments and, hence, more competition. Restrictive zoning and planning regulations hamper retail productivity both by lowering competition and keeping down the size of stores, hindering shops from realising store-level economies of scale. Land-use planning is in the hands of municipalities, but the Land Use and Building Act of 2000 shifted planning in a more restrictive direction, with a presumption that hypermarket development should take place in city centres. Furthermore, larger developments have to be agreed with neighbouring municipalities and the Ministry of the Environment, while local trade associations, where incumbent firms are represented, also have to be consulted in the process. The Revised National Land Use Guidelines of 2009 put further restrictions on out-of-centre development and in 2011 these restrictions were extended to further retailing categories. Although out-of-centre developments raise concerns about environmental impact in terms of increased greenhouse gas emission due to more transport, analysis of the impact of more dispersed development in other OECD countries tends to show only small increases

Figure 10. **The retail sector**




1. Scale from 0 (least restrictions) to 6 (most restrictions).
2. Value added per hour.

*Source:* Panel A: OECD, Database on Product Market Regulation. Panel B: OECD, STAN Database and OECD calculations. Panel C: OECD, Industry and Services, SDBS Structural Business Statistics.

*StatLink* http://dx.doi.org/10.1787/888932566953

Table 3. **Staffing and funding of Nordic competition authorities, 2010**

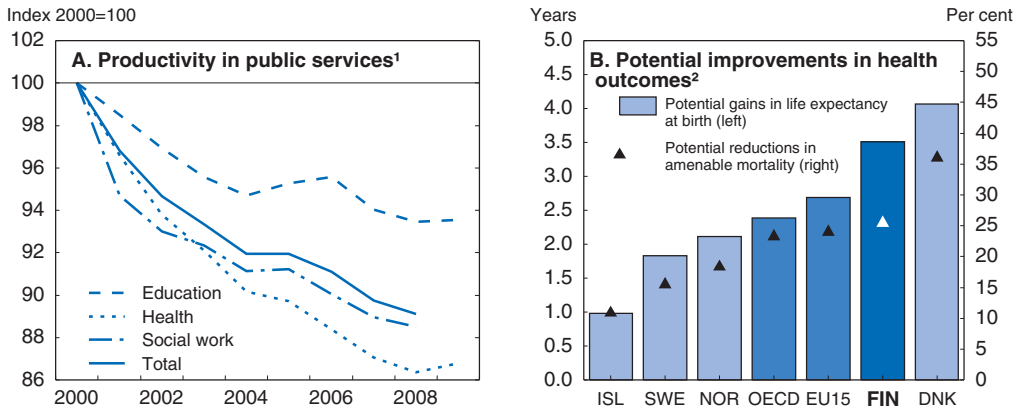
| | Staff | Budget (million €) | Population (million) |
|---|---|---|---|
| Finland | 70 | 5 | 5.4 |
| Denmark | 145 | 28 | 5.5 |
| Norway | 109 | 11 | 4.9 |
| Sweden | 135 | 14 | 9.4 |

in emissions (See *e.g.* Solutions, 2009). These negative externalities would be addressed more efficiently through pricing, such as through petrol taxes. Stakeholders who have a clear interest in hindering development, such as incumbents or neighbouring municipalities, should not have a privileged role in the decision process.

### *Broader public sector reform can improve fiscal sustainability through efficiency and address equality*

Productivity in the provision of public services has declined by more than 10% since 2000 (Figure 11, Panel A). Even though measuring productivity in non-market services is fraught with difficulties, current trends point to deterioration in efficiency which, if not reversed, could threaten fiscal sustainability and the ability to continue providing high quality public services. The main obstacle to higher efficiency is the fragmentation of municipal services, as municipalities are often small, which prevents them from achieving economies of scale and benefitting from competition in provision, but also reduces their ability to hire qualified personnel. Migration to large cities compounds the problem by eroding tax bases. For all municipalities, increasing demand for health and long-term care, a municipal responsibility, is putting extra pressure on fiscal resources. In addition to limiting cost-efficiency, the current organisation of public services makes it challenging to ensure equality of access and homogenous quality of services for all citizens.

Figure 11. **Productivity and efficiency**




1. Value added per hour.
2. Based on life expectancy and amenable mortality which have been calculated using, respectively 2007 and 2003 data.

*Source:* Statistics Finland, *Statistics on Local Government Productivity 2009*; OECD (2010), *Health Care Systems: Efficiency and Policy Settings*, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888932566972

Since 2005, the government's key strategy for municipal reform has been to create larger municipalities or enhanced co-operation among municipalities. The number of municipalities was reduced from 416 in 2005 to 336 in 2011, but the median population is still only around 6 000, which is low in relation to the wide responsibilities devolved to municipalities, notably in the health and education sectors. Furthermore, the mergers have not yet produced substantial productivity gains, which can partly be explained by the fact that participating municipalities typically agree not to adjust the workforce following a merger.

The government has announced a "comprehensive nationwide reform to restructure municipalities and services, building on economically robust municipalities, enabling improvements in administrative structures, productivity and the effectiveness of municipalities" (Prime Minister's Office, 2011). It will propose a new map of municipalities

in 2012, with mergers to be implemented by 2015. However, as mergers will remain voluntary and are likely to face stiff opposition in some areas, the outcome is uncertain. The reform is aimed at providing economically robust municipalities that will be large enough to provide basic public services, with the exception of specialised medical care and demanding social welfare services. The role of regional administrations will be enhanced, particularly in social and health care services, research and development, environmental policy and transport and communications infrastructure. Large municipalities will be able to resort increasingly to competitive bidding for services, an evolution which will be facilitated by planned amendments to the Act on Public Contracts. Though there will be initial costs to mergers, the intended structure could help municipalities provide services in a more effective and efficient way over the longer term. Further developments in benchmarking of public entities, as is underway, would help the diffusion of best practice.

### Box 4. **Recommendations for productivity enhancing reforms**

**Boosting entrepreneurship, innovation and R&D**

Government support for R&D, entrepreneurship and start-ups should focus on addressing externalities in terms of education, R&D spillovers and creating high productive jobs, largely leaving funding to a generally well-functioning capital market. Specifically the government should:

- Maintain a strong government support role in basic R&D and education. Academic performance should be improved by distributing research grants according to performance. Administrative rules for student financing should be tightened to shorten university study times.
- Lower business subsidies and shrink the number of business supporting institutions. Lower or terminate government funding in areas (like venture capital) where markets nowadays provide equal or better services.
- Consider whether a R&D tax credit would be a more efficient instrument for supporting private sector R&D.
- Align capital taxation across organisational forms.

**Enhancing competition and deregulation**

Stronger competition, especially in less internationally exposed service sectors, could boost growth. The government should therefore:

- Pursue more structural reforms within network industries and open up government dominated sectors to private provision, *e.g.* in health, in order to increase productivity and provide stronger incentives for private sector R&D in those sectors.
- Follow up the 2011 Competition Act by ensuring that the competition authority has sufficient resources to fulfill its extended mandate.
- Loosen zoning and planning restrictions on retail development to encourage competition and increase store-level scale economies.

**Improving public sector efficiency**

- Pursue further municipal mergers to increase efficiency and achieve economies of scale in basic service provision.
- Develop benchmarking further to enhance municipal-level productivity.

## Greater efficiency and equity in the health care system would lower fiscal costs and improve health outcomes

The Finnish health care system offers universal coverage, high quality services and on average good health outcomes, at moderate cost. Nevertheless, productivity seems to have declined more in health care than in any other part of public services since 2000, even if numbers need to be taken with caution given measurement difficulties (Figure 11, Panel A). Furthermore, international efficiency comparisons produced by the OECD suggest that the performance of the health system is below average (Figure 11, Panel B). Hence, there is room for improving health care efficiency and thereby generating major social and economic benefits. Health is a key dimension of well-being, and health inequalities are higher in Finland than in most other OECD countries, in contrast to relatively low socio-economic ones. While health inequalities are to some extent related to factors outside the control of the health care sector, prevention of risky behaviour and promotion of healthy lifestyles are part of broadly defined health policies. Furthermore, inequalities in access to high quality health care are also likely to contribute significantly to health differences. Inequalities in access to General Practitioner (GP) and specialist consultations favouring the top income groups are among the highest in the OECD (OECD, 2011b). Health expenditures already account for a sizeable share of general government spending. Increasing cost of medical technology, rising patients' expectations and a rapidly ageing population will strain resources, unless productivity improves, and may require raising taxes or restricting supply of public services significantly.

### *The decentralised structure of the Finnish health care system contributes to inefficiencies*

Health care services are primarily provided by the public sector and financed through taxation. The health care system is one of the most decentralised in the OECD, with municipalities responsible for most public health care financing and provision. Private services are available, mostly for primary care, with much higher co-payments from patients than in the public sector. Occupational care also provides wide access to primary care for employees, free of charge. Funding is organised through parallel systems combining taxation and compulsory national health insurance (NHI), complemented by patients' co-payments.

The fragmentation of health care service provision is a source of inefficiency, which the government intends to address through municipal reforms and mergers. The government aims at creating a stronger municipal structure built on economically robust municipalities which are large enough to be able to provide basic public services, with the exception of specialised medical care and demanding social welfare services. If radical mergers are enacted, this could provide large economies of scale in primary health care and help improving the quality of services. Small municipalities often struggle to supply adequate medical care, in particular as a result of difficulties in hiring qualified personnel. Previous municipal mergers have so far not yielded expected productivity gains, and planned reforms therefore have to be accompanied by a more consolidated provision of services to achieve desired gains from scale economies. International evidence suggests that a population base of around 200 000 is needed for efficient care provision. In Finland, this would mean moving from more than 330 to about 30 municipalities. Such reforms could also reduce regional inequalities in quality and access to health care and facilitate pooling of risks. Larger municipalities would be able to achieve better co-ordination

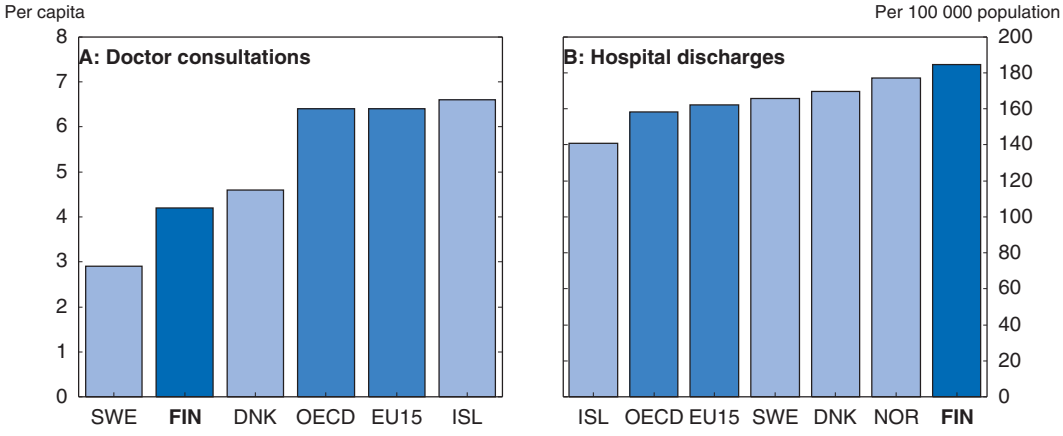
between different areas of health care, in particular through better co-operation with the national health insurance. This could mitigate problems associated with the current parallel funding system, which provides incentives for cost-shifting between services financed through different channels. Should the municipal reform fail to achieve a high level of mergers and substantially lower the number of municipalities, efficient management of health care by municipalities would be difficult. This would raise questions on the need for potentially more radical reforms to boost equity and efficiency, for example through the creation of regional or national health funds, as some Finnish institutions have suggested.

### *Resources should be shifted from secondary to less costly primary care to enhance efficiency*

The balance between primary and secondary care is tilted towards the latter, which is usually both more costly and less desirable in terms of patients' well-being. The number of GP consultations per capita is low, while hospital use, as measured by the number of hospital discharges, is high (Figure 12). Furthermore, the number of avoidable hospital admissions for asthma and heart failure are among the highest in the OECD. The government plans to streamline the hospital sector to increase specialization and optimise patient paths through guidelines and information dissemination. Emergency services, including in health centres, will also be reformed to alleviate pressure on the hospital sector, though it remains unclear to what extent. On the basis of the new Health Care Act, the Ministry of Social Affairs and Health is currently working on a Decree on the grounds for emergency medical care and on the requirements for emergency clinics according to medical specialty. The Decree is expected to result in further centralisation of hospital emergency services, supported by better functioning primary care emergency centers and out-of-hospital emergency care. Modifying payment methods in the out-patient and in-patient sectors to reward performance better could create incentives for processes of care that also would lead to better quality treatments, as well as improved cost efficiency.

Figure 12. **Doctor consultations and hospital discharges**

2010 or latest available year




*Source:* OECD, *Health Database*.

StatLink http://dx.doi.org/10.1787/888932566991

In Finland, most doctors working in municipal services are salaried employees and face weak incentives to increase activity and productivity. The low number of consultations per doctor can be explained only partly by the fact that 20% of doctors work part time. Activity in public primary care could be stimulated by introducing an element of capitation and fee-for-service payment in the remuneration of health teams, which could be facilitated by the development of primary care DRGs. While introducing a fee-for-service component would encourage primary care production, a capitation element would moderate spending relative to a pure fee-for-service payment system. Pay for performance, linked to preventive, curative and responsiveness targets, would help hold down costs.

Harmonising hospital payment methods across the country could improve efficiency. Hospital district budgets are decided by a council of member municipality representatives. Each hospital district chooses its payment method. There has been a tendency to move from bed-per-day payments to activity-based prices. At least 13 out of 20 hospital districts are now using DRG-based payments. However, the absence of national guidelines implies differences in rules for DRG use across hospital districts. Furthermore, DRGs are currently mainly used as an accounting tool, rather than as a way to induce efficiency gains, because hospital financial losses have to be covered by municipalities. Potential negative side effects of using DRGs to determine provider payments observed in other countries, such as classifying patients in more remunerative DRGs and patient selection, call for tight monitoring of the system.

### *More user choice could increase efficiency and innovation*

As a publicly-integrated system, the Finnish health care system traditionally offered little choice of provider to patients. A new Health Care Act expanding user choice in the municipal sector came into effect on 1 May 2011, with the objectives of empowering patients, ensuring equal access to services, and improving the quality of care and co-ordination between primary and secondary health care, as well as between social and health services. User choice could be enhanced further and innovation promoted through market-type mechanisms in health care provision. Pervasive market failures in terms of asymmetric information and incomplete insurance markets mean that markets alone cannot produce effective health care outcomes. However, the introduction of regulated competition in some areas of health care supply can improve user choice, efficiency and innovation. With such settings, the purchaser is in principle able to maximise value-for-money for its residents by buying medical services from competing suppliers, either public or private.

The success of market-type mechanisms in health care provision depends on a number of conditions. Competitive pressures might be low due to a small number of providers. It is especially the case in low density areas and for hospital care, where there are large economies of scale and scope, implying that the benefits of competition might be outweighed by excessive fragmentation in some parts of Finland. co-ordination of care might also be weakened. Hence, the range of activities to open to competition needs careful consideration. Whether there should be competition on prices or only on quality is a major issue in designing commissioning models. Price competition would incite providers to implement innovations, but there are often worries that it might lead to deterioration in the quality of care and cost savings are uncertain. Therefore, the United Kingdom, for instance, has so far ruled out competition on prices and the Finnish innovation fund SITRA has proposed a model of competition with fixed prices for Finland.

In contrast, price competition has been allowed in New Zealand, Norway, Sweden and some Finnish municipalities; and it is pervasive in the United States. A potential challenge for systems allowing price competition is to control quality as providers try to maximise profit by cutting quality. This can be done through the enforcement of strict guidelines, though this might discourage innovative processes. A more flexible solution is to develop quality indicators and benchmarking, which could be done by the National Institute for Health and Welfare (THL) which has extensive expertise in this field, especially once a national electronic patient record is operational and provides the relevant data.

### *Prioritising health promotion and non-institutional long-term care would improve health outcomes*

Reinforced disease prevention and health promotion would contribute to better health outcomes. Prevention of disease and health promotion are central values in Finnish public policy. Nevertheless, smoking, drunkenness and obesity rates, especially among teenagers, are fairly high by OECD standards and regular consumption of fruit is low. Promoting healthy lifestyles, optimising prevention, detection and treatment of hypertension, which affects predominantly lower socio-economic groups, could contribute to reducing mortality from cardiovascular diseases. While taxation is widely used to dissuade harmful consumption, further dissemination of information on health risks and benefits from a healthy diet, including through mass media, could be considered.

Continuing to develop long-term care policies aimed at substituting home care, where older people can live more independently while still receiving some assistance for institutional care, will improve both financial sustainability and the well-being of elderly people. The use of vouchers for buying services needed to support independent living at home could be expanded. Finally, the challenge in terms of the health workforce created by the age structure of the population, as large cohorts of medical staff are retiring at the same time as an ageing population requires more health care, will have to be met. As proposed by the government, admission targets for medical education should be raised. In addition, the tasks of qualified nurses should be upgraded further and ways to encourage older medical practitioners to defer their retirement should be explored.

Box 5. **Recommendations on health care policy**

**Reorganise health care to improve efficiency and quality of care**

- Ensure that the merger process leads to the establishment of municipalities that are large enough to ensure efficient provision of health care and social services. Ensure that mergers result in efficiency-enhancing re-organisation of services.
- Rationalise the organisation of health services to achieve a better balance between primary and specialised care.

**Create incentives for a better balance between lower cost primary and more expensive specialised care**

- Introduce a mix of capitation and fee-for-service payment in health teams' remunerations to encourage activity in primary care.
- Encourage the effective use of DRGs in hospitals by adopting national guidelines and encourage developing DRGs for primary care.

Box 5. **Recommendations on health care policy** *(cont.)*

**Increase user choice**

- Drawing on existing experiences in some municipalities, purchaser-provider split should be adopted in areas where the population base and the level of complexity of treatment allow meaningful competition.
- Competition on prices should be permitted wherever the level of complexity and the density of population allows, accompanied by appropriate benchmarking of health care providers, possibly requested from the National Institute for Health and Welfare (THL).

**Develop information flows**

- Complete the nationwide patient record, which is essential to improve co-ordination of care.
- Continue to develop electronic tools to promote evidence-based medicine and health provider benchmarking.

**Invest in prevention and promote healthy lifestyles, especially among young people and lower socio-economic groups**

- Further dissemination of information on health risks but also benefits from healthy diet, including through mass media, should be considered and prevention of disease in high-risk groups, could be reinforced.

**Develop non-institutional long-term care further**

- Continue to encourage the development of home care to limit dependence on institutional care and explore possibilities to expand the use of vouchers for buying services needed to support independent living at home.

**Ensure the availability of an adequate health workforce**

- Adapt admission targets for medical education to anticipated needs, continue to upgrade the tasks of qualified nurses and explore ways to encourage older medical practitioners to defer their retirement.

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# ANNEX A1

## *Progress in structural reform*

This table reviews recent action taken on recommendations from previous *Surveys*. Recommendations that are new in this *Survey* are listed in the relevant chapter.

| Recommendations | Action taken since the previous *Survey* (April 2010) |
|---|---|
| **Pension Reform** | |
| Increase the effective retirement age to 65 and fully close the unemployment pipeline to retirement. Increase or abolish the maximum retirement age. | In January 2011 the age limit for part time pension was raised from 58 to 60 years and pension is only accrued on wage. |
| Apply actuarial adjustment also during the period after the minimum retirement age to improve incentives to remain employed after the minimum retirement age. | No action taken. |
| Consider measures to encourage a more significant defined-contribution third pillar, to improve intergenerational risk sharing. | Since 2010 there is a new option for private, tax deductible pension savings in specific long-term retirement savings account, in addition to the existing deductability of private pension insurance. |
| Make study periods ineligible for pension credit accumulation, and scrutinise the effectiveness of the higher accrual rates for older workers. | No action taken. |
| **Fiscal framework** | |
| Strengthen the fiscal regime and support external assessment of policies through the establishment of a fiscal council. | No action taken. |
| Improve measures of and reporting on tax expenditures. | The system of calculation of tax expenditure has been revised and further changes are under consideration. Since 2010, tax expenditures are reported in the budget. |
| **Tax Reform** | |
| Continue to lower the taxation of labour with priority given to lowering the top marginal tax rate on labour in order to keep and attract highly skilled jobs and to reduce incentives for income reclassification. | Taxes on earned income have been adjusted to compensate for inflation and higher earnings. The government will apply this rule to labour earnings for its four-year term of office. The maximum of the in-work tax credit is increased from € 740 to € 900 as well as the basic allowance from € 2 250 to € 2 850 in 2012. In addition, linked to the centrally bargained framework agreement the average tax rate of earned income is reduced by 0.2 percentage points in 2012. |
| Remove the opportunities offered by the dual tax system for high income earners to reclassify labour income as capital income. Lower the threshold for taxation of dividends for closely held corporations. | Capital income tax rate will be increased from 28% to 30% and, after a threshold of € 50 000, to 32% in 2012. Maximum tax exemption for the dividends of closely held companies will be reduced from € 90 000 to € 60 000. |
| Raise property tax revenues by setting property assessment values (for tax purposes) equal to 100% of market valuations and by raising property tax rates. | Review of the assessment values and property taxation has been started. No significant increases in property tax rates since the 2010 reform in the minimum and maximum rates. |

| Recommendations | Action taken since the previous *Survey* (April 2010) |
|---|---|
| Raise the minimum municipal tax rates on all immovable property types and remove the maximum threshold. Extend the property tax base to agricultural and forestry land. | The latest rise in the property tax rates was done in 2010. According to the government programme the property tax base will not be extended to agricultural land and forests. |
| To improve incentives for municipalities to raise more revenue from property taxation, apply a maximum tax rate on labour income (instead of to property as at present). To ease the transition, a relatively high maximum could be levied to start with, and then gradual reductions over time. Alternatively, oblige municipalities to match any increases in income tax rates with proportional increases in property tax revenues. | No action taken. |
| Consider a tax ceiling for municipalities' income taxes to restrain expenditure growth. Alternatively, the municipal transfer system should be amended to significantly weaken incentives for municipal income tax hikes. | No action taken. |
| Eliminate the share of corporate income tax flowing to municipalities. Fill the resulting funding gap by a combination of higher property taxes and higher state grants. | During the recession the share of corporate income tax revenues directed to municipalities was increased from 22% to 32%. This share will be reduced to around 28% for the period of 2012-2013. |
| Consider ways to further broaden the corporate tax base and lower the rate. | Corporate income tax rate will be reduced from 26% to 24.5% in 2012. |
| Raise the revenue efficiency of the VAT by eliminating reduced VAT rates. Use the additional revenue to lower either the overall VAT rate or labour taxes more generally. Tax cutting potential in the short term should not be used to further lower reduced VAT rates as currently planned. | The VAT rate for newspaper and magazine subscriptions will be raised from 0% to 9% in 2012. |
| Replace the preferential treatment of peat with a levy and abolish other distorting refund schemes for energy intensive industries including the agriculture sector. | In the beginning of 2011, a structural reform of energy taxation came into force. In this reform the taxation of heating and transport fuels are based on the energy content and carbon dioxide emissions. In the reform taxes on coal, natural gas and certain other fuels were increased significantly, about 100%. In line with the reform the refund scheme for agriculture (fuel tax rebate) is limited to the energy content, *i.e.* the agricultural producers pay tax based on carbon dioxide emissions. Also a gradually increasing tax on peat was introduced. However, its level is still lower than that of other fuels. The new government also plans an additional moderate increase in the tax on peat. |
| **Municipal Reform** | |
| Open up the municipal purchasing of non-core services to competitive bidding by introducing more mainstreaming of outsourcing policy. All municipal activities that could potentially be supplied by the private sector should be judged to be economic activities and the purchase of their services should be open to competitive bidding. | On non-core services, see competitive neutrality below. On core services, the health insurance act was renewed. The new act makes it possible to grant reimbursement under health insurance for the care and treatment provided by private health care providers that lease public health and social care facilities. The Health Care Act that entered into force on 1 May 2011 extends the possibility to choose place of care. |
| Promote the implementation of municipal-level productivity programmes, including an explicit policy of replacing only a certain percentage of all retiring workers, as is the case at the central government level. | The ministerial working group accepted national productivity targets for municipalities and joint municipal authorities with one set of targets as means to promote productivity. Achievement of the targets will be followed annually. The government with various actors will launch a development campaign for municipal productivity and effectiveness. |
| Develop more sophisticated benchmarking exercises and put in place other structures to facilitate the sharing of best practice municipal management. | The co-ordination and monitoring working group for the local government productivity programme published a guidebook in 2011 with a set of practical means of promoting productivity in municipal services. According to the government programme, sharing and adoption of best practices will be encouraged. |
| Continue to promote municipal mergers and favour mergers over partnership areas. | A major municipal reform is planned. Criteria and schedule will be specified by the end of 2011. |

| Recommendations | Action taken since the previous *Survey* (April 2010) |
|---|---|
| Ensure that private sector companies face a level playing field with respect to municipally-owned agencies by encouraging the incorporation of all municipally-owned activities that constitute economic activities. | The Ministry of Finance working group on competitive neutrality in local government submitted its proposals in 2010. A Government proposal to Parliament for an Act amending the Local Government Act is in process. The gist of the proposal is to require local authorities and joint municipal boards to transfer activities carried out in competitive market environments to companies, other corporate entities or foundations. |
| Ensure that municipally-produced services do not receive implicit subsidies, by introducing best-practice accounting systems which ensure that internal costs incurred by municipally-owned activities are correctly attributed. As part of this, municipalities should be required to pay tax on their own property. | No action taken. |
| In the absence of reform to European VAT legislation, consider modifying national legislation to broaden the definition of activities that are classified as taxable. | No action taken. |
| **Labour Market Reform** | |
| Continue to decentralise wage negotiations to increase flexibility. | Central-level labour market organizations concluded in October 2011 a broad-based agreement for the framework for pay and cost increases in branch-level collective agreements for a period of 25 months.<br>Compared to the 2009-2010 round of negotiations the 2010-2011 agreements consisted of more locally negotiated items. The 2011-2012 negotiations continue this trend. |
| Tighten legal requirements for geographical (and occupational) mobility of the unemployed, and step up sanctions and enforcement. | No legal changes, but new instructions to widen the scope of job offers spatially and by job type, stressing the importance of accepting part-time jobs, fixed term contracts, etc., has been introduced. |
| Audit the subsidies currently directed at assisting inter-regional mobility. Supplement those that are found to be effective and abolish those (like the second residence subsidy) that are found to be less effective. | No action taken. |
| Taper unemployment benefits over time as is currently done in many other OECD countries. | No action taken. |
| Abolish the unemployment “pipeline”. | Pipeline has not been fully closed, but the qualifying entry age was increased from 59 to 60 years in 2010. |
| Tighten access to sickness and disability benefits by pairing stricter activation requirements with improved retraining to match skills to the new structure of the economy. | No action taken. |
| Review options for part-time work and their effectiveness. Make pension rules more accommodating of part-time work. Expand part-time work opportunities for disabled workers. Address inflexibilities in child care arrangements so as to promote greater part-time participation of mothers. | No action taken. |
| Refine the interaction of the tax and social security systems with a view to addressing the disincentives to labour force participation and skills training for those workers who face extremely high average earning tax rates and marginal earning tax rates. For instance, taper unemployment benefits over time. Reassess the Home Care Allowance with a view to improving incentives for the labour market participation of women with young children. | Tax cuts done and decided (see the tax section).<br>The basic unemployment allowance and labour market subsidy will be increased as of 1 January 2012, the housing allowance rules will be adjusted accordingly. This increase (105 euro) in the housing allowance earnings limits is carried through the entire schedule, hence diminishing the average effective tax rate for all housing allowance recipients. |
| Ensure earlier activation for the unemployed. Make sure that available profiling tools are used by the local labour market boards to identify individuals with high risks for long-term unemployment to focus resources and activation measures to the most needy. | Social guarantee for young people is planned in 2011 and operational in 2013. All people under the age of 25 and all recently graduated people under the age of 30 and unemployed for three months will be guaranteed a tailored response from the employment offices.<br>As a trial, the management of employment will be transferred to municipalities after 12 months of unemployment or earlier, with individual follow-up and monitoring. The trial lasts until 2015. |
| Strengthen central co-ordination in the Public Employment Service to harmonise intervention procedures across local labour market boards and improve efficiency. Extend performance-based pay in the Public Employment Service. | No action taken. |

| Recommendations | Action taken since the previous *Survey* (April 2010) |
|---|---|
| Consider nationalising the unemployment insurance. | No action taken. |
| **Education Reform** | |
| Address the matriculation backlog by allocating additional starting places to areas of greatest student demand and by providing more financial support to students to do their degrees outside of Finland as temporary measures. Provide more information for students on employment prospects and wages of recent graduates. | In relation to the number of students taking matriculation examination, there are one and a half times as many starting places in higher education. |
| Encourage tertiary institutions to increasingly assess applications using the matriculation exam results only so that by the end of the 3-5 year transition period most students are able to enter tertiary education in the same year that they matriculate. From that point onward, separate university entrance exams in most fields should be abolished. At the same time strengthen the role of the Open University and polytechnics as alternative routes to university. | The government programme states that matriculation examination will, among other things, be developed to facilitate more extensive utilisation of the matriculation examination in the selection of students for higher education.<br>A major reform of student selection process is underway including developing joint electronic admission system for both universities and polytechnics. At the same time, universities are developing flexible routes to those students, who already have entered higher education system. |
| Relax the centrally-planned system of starting places and introduce tuition fees together with an income-contingent loan system that covers tuition fees and living expenses. | Universities and polytechnics have the possibility to charge tuition fees from students outside EU/EEA area, during the trial period 2010-14. |
| Change university admittance rules, so that students would be automatically enrolled in a Bachelor's instead of a Master's degree. Admission to a Master's degree should be contingent on completion of a Bachelor's degree with a sufficiently high standard but should not include entrance exams. | No action taken. |
| Amend university financing, so that a larger weight is given to the number of Bachelor's Degrees | The joint working group of the Finnish Universities and Ministry of Education and Culture is currently planning a proposition for the universities amended funding formula. The working group has planned to increase the weight of the number of Bachelor's Degrees in the formula. The Ministry will decide on the funding formula early 2012. |
| Revise public sector hiring requirements, so that a Bachelor's degree (from either a university or a polytechnic) would be sufficient for certain positions. Develop the Master's degree as a conversion programme away from the subject of the first degree or as a professional development programme. | No action taken. |
| Increase the focus on the quality of Doctoral degrees by introducing, for example, a performance-based financing system that would put emphasis on the employment of Doctoral graduates and the quality of research. | The joint working group of the Finnish Universities and Ministry of Education and Culture is currently planning a proposition for the universities amended funding formula. The working group has planned to increase the weight of the number of scientific publications in the formula. Higher quality (internationally refereed) publications has been planned to have higher emphasis in the model. The Ministry will decide on the funding formula early 2012. |
| **Labour migration policy** | |
| Streamline the work permit system so that foreign workers with the right skills can be accessed efficiently. Consider adopting a green card scheme like that in Canada and Denmark and doing away with the requirement for an "immigration work assessment". | In 2009, the former Government proposed the removal of the labour test. However, the Bill was dropped by Parliament.<br>Implementation of the EU Blue Card Directive (on highly qualified workers) is in process. The Government's proposal was submitted to Parliament in autumn 2011. No "green card scheme" is under preparation. |
| Identify the industry sectors most in need of foreign labour and direct assistance to firms and potential immigrants in these industries. | The Ministry of Employment and the economy takes into account immigration and its effect on labour supply in its short and long term scenarios. This is done at the level of occupation and also regionally. |
| Provide greater assistance to Finnish firms competing to attract workers in the European labour market including more promotion of Finland as an attractive destination and co-sponsoring employment fairs in source countries. | The National Institute for Health and Welfare has finished a project with the City of Helsinki and the Helsinki Uusimaa Hospital District where they pointed to the potential to recruit health care staff from new EU countries. There have also been other regional recruiting drives. |

| Recommendations | Action taken since the previous *Survey* (April 2010) |
|---|---|
| Do more to promote Finland as a destination for foreign students and encourage these students to stay after completing their studies. Extend the duration of the post-study job-search permit. | No action taken. |
| Do more to help the existing stock of immigrants better integrate into the labour market, including by providing substantial resources for basic skills and language training. | The law on integration of immigrants came into effect in September 2011, assigning duties and responsibilities to different levels of administration.<br>The Ministry of Education and culture has financed a number of programmes for teachers in adult education where the teachers have received further training in teaching to immigrants.<br>Vocational apprenticeship training has been targeted and tailored to help (young) immigrants.<br>Information on working in Finland, becoming an entrepreneur, etc. has been added to internet portals and are available in several languages. |
| Improve foreign qualification recognition schemes so that migrant workers are utilised to their full capacities and to avoid the over-qualification phenomena seen in many other OECD countries. | No action taken. |

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*Chapter 1*

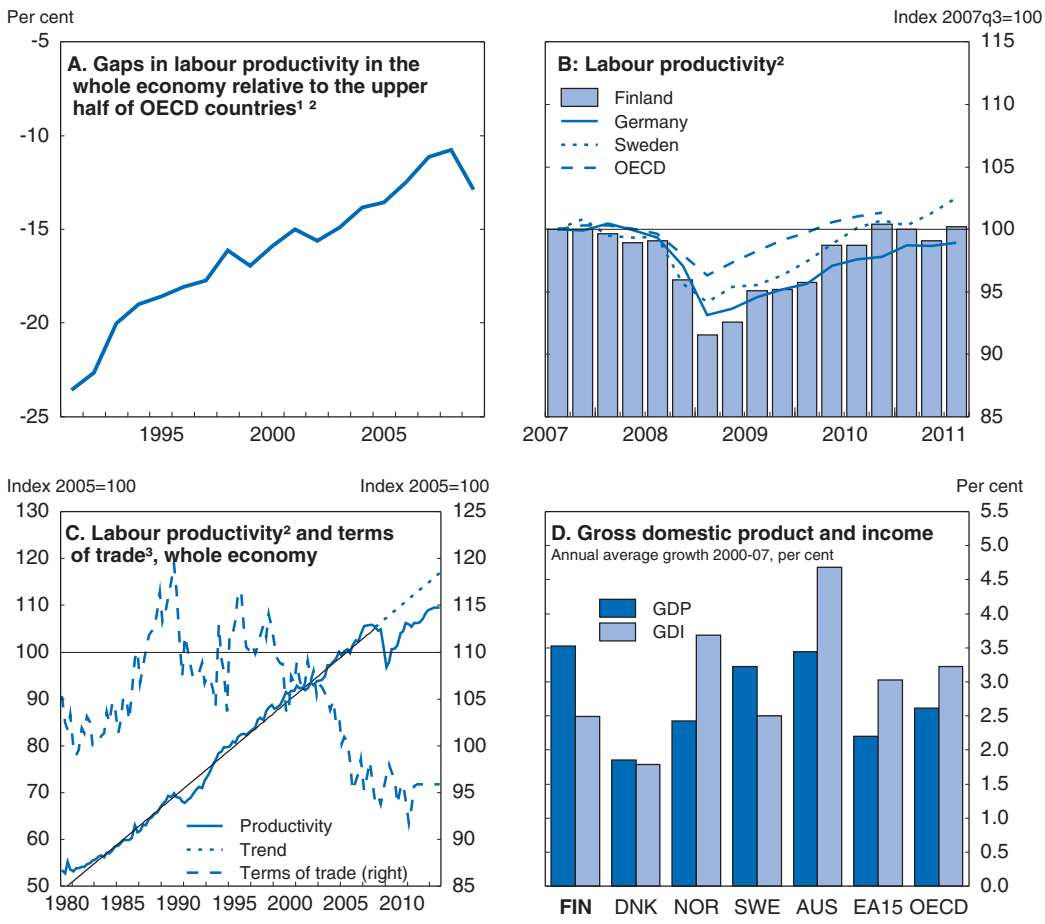
# Restarting the growth engine

*Impressive productivity performance during the last decades has weakened since 2007, reflecting the 2008-09 recession but also a poor performance in important sectors, like the information and communication technology sector. Reforms to raise long term productivity growth need to be pursued. Current project-based R&D-support and business subsidies seem inefficient and should be scaled back and remaining support should focus on addressing externalities in terms of the creation of high productive jobs and R&D spillovers. A R&D tax credit could provide higher flexibility, equity and efficiency than current targeted support. Capital taxation should be streamlined to improve incentives for entrepreneurship and growth. The performance of the higher education system could be improved through allocating more R&D funding and teaching resources based on quality rather than block grants. Productivity performance could be enhanced by exposing sectors like health provision, network industries and retailing to more competition through lowering government dominance in provision and loosening planning restrictions.*

## Finland's strong productivity performance started to weaken before the recession

Productivity grew rapidly in the decades up to the 2008 financial crisis, boosted by a cyclical expansion in the wake of the deep recession in the 1990s, significant structural reforms and an excelling information and communication technology (ICT) sector. Between 1991 and 2008 labour productivity grew at an annual rate of 2.8%, measurably shrinking the productivity gap relative to the best-performing OECD countries (Figure 1.1,

Figure 1.1. **Labour productivity and GDP growth**




1. Percentage gap with respect to the simple average of the highest 17 OECD countries in terms of GDP per hour worked (in constant 2005 PPPs).
2. Value added per employee.
3. Ratio of the deflator of exports of goods and services to deflator of imports of goods and services.

*Source:* OECD, *National Accounts*; *OECD Economic Outlook No. 88 and 90 Databases*; OECD, *Going for Growth 2010* and *OECD Going for Growth 2011*.

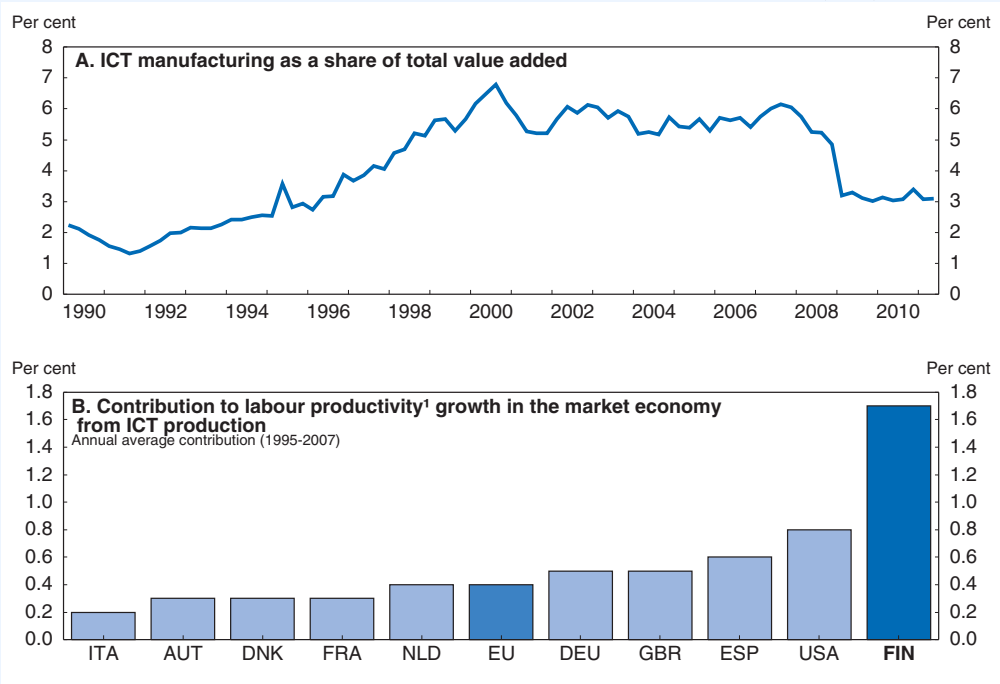
StatLink http://dx.doi.org/10.1787/888932567010

Panel A). The 2008-09 recession halted the productivity convergence. While labour productivity fell by almost 4% from peak to trough in the OECD area, the decline was more than twice as large in Finland (Figure 1.1, Panel B). Finland's weakening performance recently can to a large extent be explained by a sharp fall in value added per employee in the ICT sector that coincided with the downturn (Box 1.1). Productivity growth has

### Box 1.1. **The impact of the ICT sector and Nokia on the Finnish economy**

The ICT sector grew spectacularly in Finland from the early 1990s until 2008, primarily reflecting the rapidly expanding manufacturing part of the sector.[1] As a share of total value added, the total ICT sector peaked at 10% in 2002 and remained largely unchanged at 9.5% in 2007. Roughly 2.3% of the Finnish labour force was employed in the sector in 1995 as well as in 2010, and the ICT sector's contribution to overall productivity growth was extraordinary in an OECD perspective (Figure 1.2, Panel B). Due to data availability and the fact that the most dramatic development in the total ICT sector relates to the manufacturing part, the following analysis will be focused on this sub-sector, which in 2007 made up 6% of total value added in the economy (Figure 1.2, Panel A). Between the first quarters of 2008 and 2009, value added fell by 48% in the sector, deducting 5.5% from economy-wide value added. Roughly half of Finland's exceptional fall in GDP during the recession can thus be attributed to this sector, and correcting for this factor Finland was not worse hit than other OECD countries. The sector has recovered from the beginning of 2009, but employment and especially output remain significantly lower than before 2008. The sector's contribution to annualised GDP growth switched from 1.3 percentage points during 2000Q1-08Q1 to –1.0 in 2008Q1-11Q2.

Figure 1.2. **The information and communication technology (ICT) sector**




1. Value added per hour.

*Source:* Statistics Finland and OECD calculations.

*StatLink* http://dx.doi.org/10.1787/888932567029

Box 1.1. **The impact of the ICT sector and Nokia on the Finnish economy** *(cont.)*

Pure volume indexes exaggerate the impact on the local economy of export-oriented sectors that enjoy fast productivity growth, as fast-falling prices improve living standards of (mainly foreign) buyers of the products. Output prices in the ICT sector fell by 3.7% per annum in 1995-2010, while overall output prices increased by 1.8%. From a welfare perspective, nominal value added in the sector is a better measure of its economic impact as this relates to wages and profits that the sector generates. The industry's share of total nominal value added can thus be used as an indicator of the "excess" value to the domestic economy that the sector has created.[2] As Panel A of Figure 1.2 shows, the ICT sector's share of total value added surged from 3% in 1995 to 6% in 2007, before falling back to 3% in 2009. From this perspective, less than 30% of the productivity contribution from ICT during 1995-2007 actually contributed to higher living standards in Finland and the remaining gains were lost in the recent contraction.[3] The "excess' contribution for the full period 1995-2010 is therefore close to zero. While the previous productivity performance is unlikely to be regained, the negative drag on overall productivity growth is likely to have largely vanished. The shrinking importance of the ICT-sector should eventually slow the persistent terms-of-trade deterioration, but so far there is little evidence of this (Figure 1.1, Panel C).

The sharp contraction in the Finnish ICT sector since 2007 reflects growing structural challenges that were aggravated by the recession. These structural challenges mainly related to outsourcing of production – whereby many of Nokia's Finnish partners were unable to follow the firm's global expansion (Seppälä, 2010) – the persistent problems in integrating Nokia's and Siemens network services and Nokia's problems in maintaining market leadership in the mobile phone sector and especially the smartphone segment. Between the third quarters of 2010 and 2011, Nokia's market share in smartphones fell from 36% to 17% (Gartner, 2011). Announced cutbacks in staff during 2011 amounted to 10 500 employees worldwide in both production and R&D activities. With the mobile phone sector continuing to develop rapidly and disruptively, the future development is difficult to predict, but many analysts are pessimistic about Nokia's ability to maintain its leading position in the mobile phone market (see *e.g.* Kenney and Pon, 2011).

Table 1.1. **Nokia's Finnish operations in relation to the Finnish economy**

Per cent

| | 1995 | 2007 | 2009 |
|---|---|---|---|
| Value added | 1.1 | 3.2 | 1.5 |
| Employment | 0.9 | 0.9 | 0.8 |
| R&D | 16 | 31 | n.a |

The decline of the ICT sector poses challenges to policy makers. Firstly, down-sizing will contribute to a weakening labour market. Although a large share of laid-off employees are likely to have a strong educational background, skills may not always be attuned to labour demand, creating needs for further training and geographic mobility. As discussed in the previous Survey (OECD, 2010b), improvements in activation policies and "make work pay" policies would also support faster reemployment. Secondly, the adjustment in the ICT sector is one major factor behind the downward level adjustment in labour productivity seen during the recession. As discussed in Box 1.1, this shift should be viewed as a permanent rather than cyclical adjustment, with implications for potential output and therefore fiscal sustainability going forward. The effect on the overall productivity level

Box 1.1. **The impact of the ICT sector and Nokia on the Finnish economy** *(cont.)*

from the adjustment of the ICT sector is estimated at 3% of GDP here. Thirdly, it should be noted that a disproportionate share of Finland's high R&D spending is performed within the ICT sector. In 2007, Nokia by itself stood for roughly 30% of R&D spending in the Finnish economy which, according to the estimates reported in Box 1.3 would contribute to 1.5-2.0% of the level of overall productivity. Creating better conditions for innovation and R&D across a larger share of the economy and increasing returns to R&D could maintain high R&D spending and contribute to stronger productivity growth.

1. The manufacturing part of the ICT sector is here defined as manufacturing of of electronic products and electric equipment (SIC 26-27), Telecommunications services (SIC 61) and Computer and information services (SIC 62-63). The total ICT sector also includes some service outputs.
2. This is only an approximation, due to two counteracting forces. Firstly, some of the sector's production is used and consumed domestically, meaning that the exercise underestimates the true impact. Secondly, with a global ownership of stocks, most of the profits are being distributed to foreign owners, leading to an overestimate of the local impact.
3. This estimate follows from that ICT as a share of nominal value added increased by 3 percentage points, while the share in constant prices increased by 11 percentage points.

resumed, but the level of labour productivity remains roughly 7% below the pre-recession trend compared with an OECD average around 5% (Figure 1.1, Panel C).

Finland's impressive productivity performance was not fully translated into equivalent increases in living standards, as the worsening terms-of–trade dissipated some of the productivity gains to trading partners (Figure 1.1, Panel C). This is mainly due to the importance of ICT goods in exports, for which prices have been falling fast. As a result, the terms-of-trade decline has reduced the purchasing power of Finnish households. This drag has been significant and real income, measured as GDI, grew slower than in comparator countries during the years before the recent recession (Figure 1.1, Panel D).

The outlook for a resumption of high productivity growth is clouded. The Nokia-led ICT production boom in Finland during the 1990s and 2000s was most likely a "once-in-a-lifetime" experience. The virtuous cycle of rising profits, more R&D investment and superior products has come to an end and is unlikely to be repeated (Box 1.1). More broadly, the successful catch-up in productivity levels already achieved makes further improvements more difficult, as productivity in many sectors in the Finnish economy is now on a par with the best-performing OECD countries. Finally, the pace of structural reforms has slowed in recent years in Finland which is lowering growth-contributions from structural change and to falling public sector productivity. These less advantageous prospects have also been borne out in recent data, with the recovery in productivity being shallower than after the 1990s recession (Box 1.2). In addition to the downward shift in the trend level of productivity, long-term productivity growth may thus settle at a slower pace than before the recession and more in line with the OECD average, as has been the case for the 2007-11 period (Figure 1.1, Panel B).

There is plenty of room to improve productivity performance with further structural reforms. Innovation activities need to be broadened to a wider range of sectors to maintain current high R&D spending, which sustains growth. Market-oriented structural reforms could also boost productivity growth, especially through supporting structural transformation and raising productivity in low productive service sectors. If labour productivity in services and other non-exposed sectors (such as construction, electricity,

gas and water) were at the OECD average, Finland's GDP per capita would be 5% higher, almost making up for the productivity drop during the 2008-09 recession. Aiming higher than the OECD average could yield additional returns; if productivity in the wholesale and retailing sector had developed in line with Sweden's since 1998, GDP per capita would have been 6% higher today. Similarly, achieving the same productivity in the health care sector as the best performing OECD countries could lower health spending by 2.5% of GDP without affecting health outcomes (OECD, 2010a).

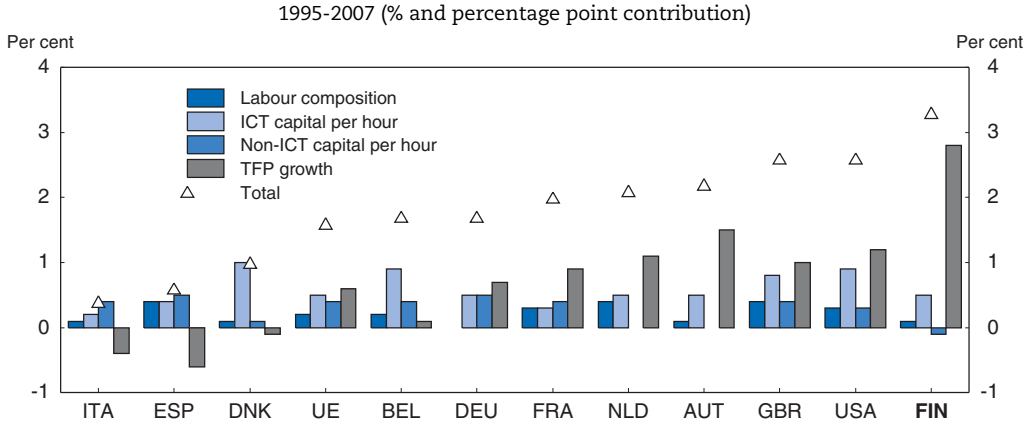
This chapter starts by analysing the recent growth performance of Finland in more detail. It then moves on to assess the evolution of sources of growth and how they may continue to develop going forward. This analysis can then form a basis for paths and patterns of future growth. Finally, structural policy measures and recommendations that can enhance productivity growth are developed.

### *Productivity growth has been uneven*

The rapid labour productivity growth before the 2008-09 recession was largely driven by high total factor productivity (TFP) growth, while skill accumulation and capital deepening only provided minor contributions (Figure 1.3). This exceptional performance in TFP can to a large extent be attributed to the productivity development in the ICT sector (Box 1.1) and a huge shift in investment patterns from physical capital towards R&D.[1] Therefore, Finland's long-term productivity performance is not only characterised by strong growth, but it also stands out in terms of composition.

Figure 1.3. **Decomposition of labour productivity[1] growth in selected OECD countries**

1995-2007 (% and percentage point contribution)




1. Value added per hour.

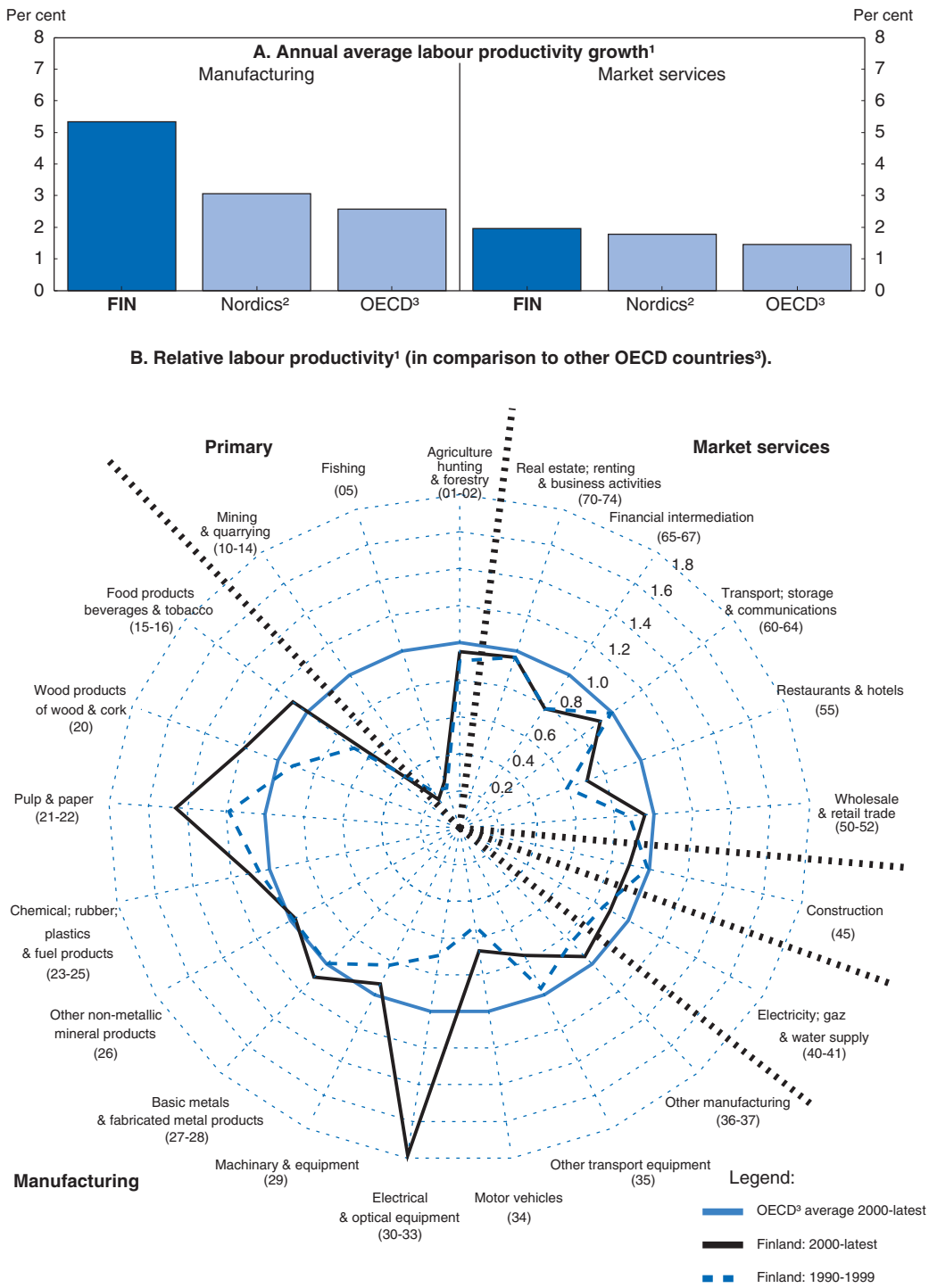
*Source:* van Ark (2011), Up the hill and down again.

StatLink http://dx.doi.org/10.1787/888932567048

Finland's catch-up in overall labour productivity *vis-à-vis* other OECD countries also masks significant differences in productivity performance across sectors (Figure 1.4, Panel A). The manufacturing sectors have in general caught up with – and often surpassed – OECD average productivity levels. Productivity in the manufacturing sector is now higher than the OECD average and close to the international productivity frontier, largely on par with, for example the United States and Sweden (Figure 1.4, Panel B; Maliranta *et al.*, 2010). However, labour productivity still lags the OECD average in services, primary production, utilities and construction, but also some manufacturing sectors.

Figure 1.4. **Labour productivity**[1]

1980-2008 or latest available figure




1. Value added per hour.
2. DNK, NOR and SWE.
3. AUT, BEL, DNK, FRA, DEU, GRC, ITA, NLD, NOR, ESP, SWE and GBR. Figures are based on ISIC 3 classification.

*Source:* OECD, *STAN Database* and OECD calculations.

StatLink http://dx.doi.org/10.1787/888932567067

## Box 1.2. **Structural breaks in Finnish labour productivity**

The 2008-09 recession was accompanied by an unprecedented drop in labour productivity in Finland. While productivity levels in the past, *e.g.* after the recession in the early 1990s, tended to recover to the previous trend, there is scant evidence as yet of that happening this time (Figure 1.1, Panel C). If productivity levels have indeed shifted down permanently, this will have wide-ranging consequences for long-term economic performance and the need for long-term fiscal consolidation. These consequences would be aggravated if the long-term growth rate has slowed.

This box applies statistical techniques to systematically detect and identify structural breaks in Finnish labour productivity. Structural breaks are identified by splitting the sample at all possible breakpoints, and comparing the variance of the resulting sub-samples.[1] Once a breakpoint has been identified, further breaks are detected by sequentially testing the resulting sub-periods (see *e.g.* Chong, 1995). Additionally, the robustness of the break dates is assessed by contrasting the results with the simultaneous estimation method discussed by Bai and Perron (1998). The advantage of these methods is that they do not rely on "priors" to identify breaks, but rather let the data detect when breaks occur and estimates the shape of the structural change. The models do not provide any structural explanations of why a break has occurred.

Assume a simple dynamic model where labour productivity develops according to a first-order autoregression:

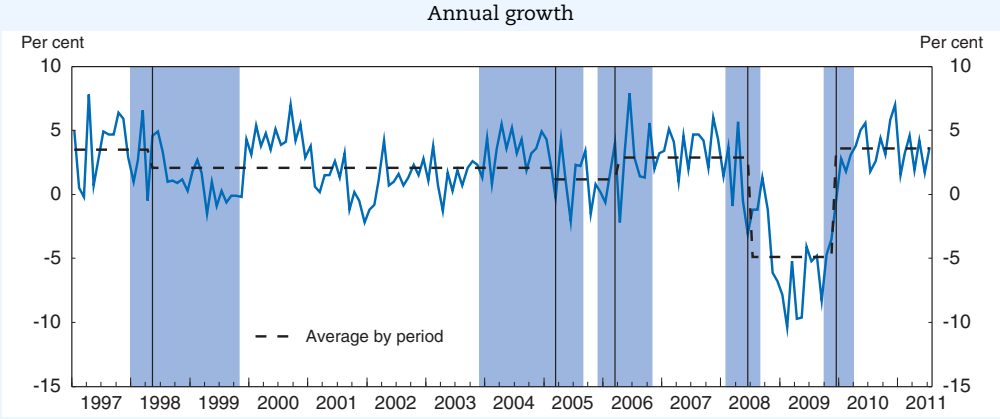
$$y_t = \alpha + \rho y_{t-1} + \varepsilon_t$$

where $y_t$ denotes the annual growth in labour productivity, measured as output per employee. Quarterly national accounts have too low a frequency to correctly identify potential structural breaks lying close to the recent recession. Instead, the monthly Trend Indicator of Output compiled by Statistics Finland is used. This variable is harmonised with the quarterly national accounts calculations, and it is deemed as "capable of predicting the development of the value added in the national economy at least fairly well" by Statistics Finland. Unfortunately, it is available only from January 1997. For robustness purposes the analysis is also performed using monthly industrial production and quarterly value added, which are available further back in time.

Five structural breaks are detected by the sequential method, and confirmed by the Bai and Perron (1998) technique (Figure 1.5): May 1998, March 2005, March 2006, June 2008 and

Figure 1.5. **Labour productivity based on Trend Output Indicator**[1]

Annual growth




1. Value added per employee. Structural breaks are denoted by vertical lines; shaded areas represent the confidence intervals around estimated breakpoints.

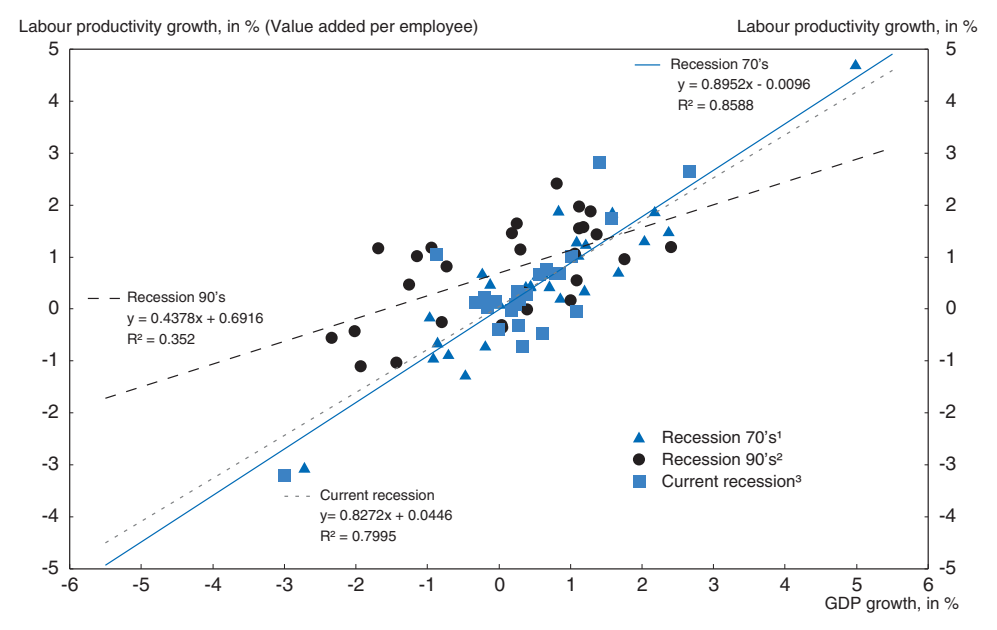
*Source:* Statistics Finland and OECD calculations. StatLink http://dx.doi.org/10.1787/888932567086

## Box 1.2. **Structural breaks in Finnish labour productivity** *(cont.)*

December 2009. The breaks in March 2006, June 2008 and December 2009 appear to be particularly strong: apart from the evidence of a break in the regression model, there is a statistically significant change in the autoregressive parameter and in the mean growth rate in those sub-periods. Estimates based on industrial production and quarterly GDP identify breaks at similar points in time.

Unfortunately, the availability of high-frequency data is not sufficient to perform similar analyses for previous recessions in order to investigate whether the post-recession recovery is unusually weak compared to pre-recession growth. This comparison relies instead on the relationship between productivity and GDP growth, which indicates that the aftermath of the 2008-09 recession is more similar to the 1975 recession (when trend productivity growth slowed after the recession) than to the 1990s recession (when trend productivity growth accelerated; Figure 1.3). Thus, there is little evidence that productivity will be able to revert to its previous trend level, and some indications that trend productivity growth may have slowed.

### Figure 1.6. **Relationship between productivity and GDP growth around recessions**




1. Recession 70s: 1974q2-1981q1.
2. Recession 80s: 1989q2-1996q1.
3. Current recession: 2007q3-2011q2.

*Source:* OECD, *OECD Economic Outlook No. 90 Databases*.

StatLink http://dx.doi.org/10.1787/888932567105

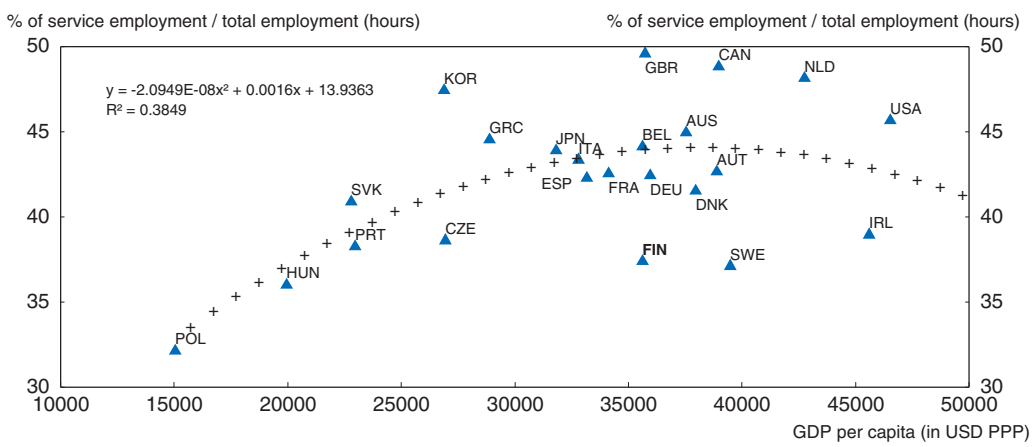
1. See *e.g.* Hansen (1997).
2. We prefer to follow the iterative method, as the built-in Bai and Perron simultaneous method does not exploit changing variance and autocorrelation to get a more precise estimate of the breakpoint.

High productivity in manufacturing and low productivity in sectors less exposed to international competition points to some of the opportunities and challenges that Finland faces:

- Sectors less exposed to international competition – such as parts of market services, publicly provided services and utilities – could play a more important role in productivity growth going forward, given their current low relative levels of productivity. Low productivity in services contributes to keeping prices high and to a relatively small size of the sector in Finland (Figure 1.7), with negative welfare effects for consumers. Public sector reforms, including opening up larger swathes of the public sector to competition should play a prominent role as productivity has fallen the last decade and seems to lag other OECD countries in some areas, such as health (Chapter 2). Such reforms could also provide larger markets to support innovation and growth in connected private service sectors.
- Achieving above-average growth in manufacturing in Finland will be more challenging as the catch-up potential has largely vanished. Better technologies and improved organisational practices will to a larger extent have to be developed through innovation rather than imitation, which tend to be more costly and risky. It may also require a different approach to business support and science and innovation policies, as targeting of support is becoming more difficult (Sabel and Saxenian, 2008).
- Structural transformation between sectors, firms and jobs should be harnessed and encouraged in such a way that resources are channelled towards the most productive uses.

Figure 1.7. **Service employment share and GDP per capita**

2008 or latest available year




*Source:* OECD, *OECD Employment Outlook 2010*; OECD, *STAN Database* and *EUKlems Database*.

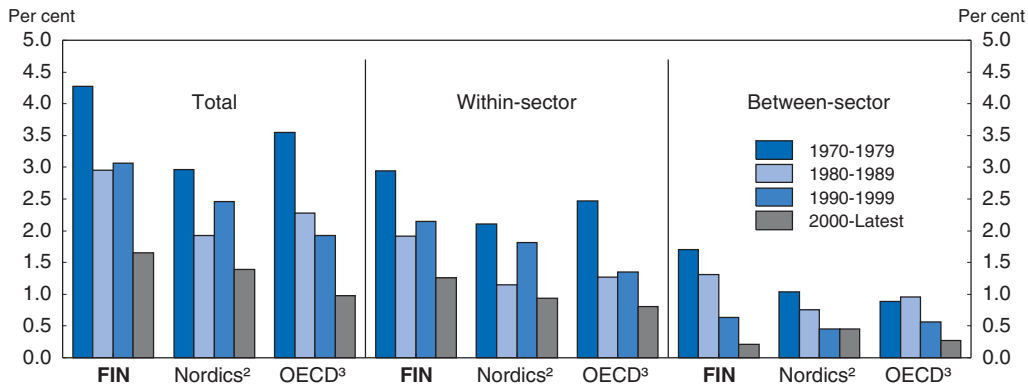
StatLink http://dx.doi.org/10.1787/888932567124

## Rigidities hamper structural transformation and thus slow productivity growth

Structural change in terms of shifting resources from low to high productivity jobs is currently relatively low in Finland, although it could give a lasting contribution to growth. This can be illustrated by decomposing improvements in labour productivity into a within-sector-effect – measuring how much productivity improvements within a sector contribute to overall growth – and a between-sector-effect – measuring how much the movement of

labour from low- to high-productive sectors contributes to growth. While productivity growth in Finland, as in other high-income OECD countries, is primarily attributed to rising productivity within sectors rather than through the relocation of resources, the contribution from the so-called between-sector-effect is now lower in Finland than in the other Nordic countries and the OECD average (Figure 1.8). The rapid slowdown in the between-sector-component, especially compared to other Nordic countries, illustrates that some of the benefits from earlier structural reforms are waning in Finland. At the firm level, recent OECD estimates also show that employment in high-productive firms has grown more slowly in Finland than in several comparable countries (Figure 1.9). Productivity should be boosted by spurring labour relocation from low to high productive jobs within and between firms, industries and regions.

Figure 1.8. **Decomposing labour productivity[1] growth**

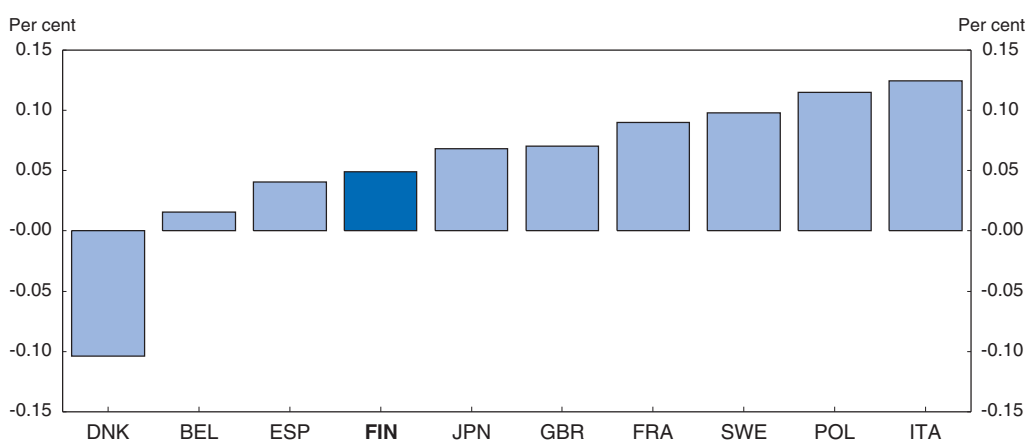



1. Value added per hour.
2. DNK, NOR and SWE.
3. AUT, BEL, DNK, FRA, DEU, GRC, ITA, NLD, NOR, ESP, SWE and GBR. Figures are based on ISIC 3 classification

*Source:* OECD, *STAN Database* and OECD calculations.

*StatLink* http://dx.doi.org/10.1787/888932567143

Figure 1.9. **Residual correlation coefficients between employment growth and the firm's productivity[1] level**




1. Value added per employee.

*Source:* OECD, *OECD Employment Outlook 2009*.

*StatLink* http://dx.doi.org/10.1787/888932567162

### *Extensive employment protection can impede functioning of labour markets with adverse effects on productivity*

A well functioning labour market will improve individuals' chances of finding new and more productive employment. Job search, geographic mobility and skill-upgrading therefore need to be promoted; they are influenced by policies bearing on stringency of employment regulation, work-incentives, incentives for geographic mobility, wage flexibility and training.

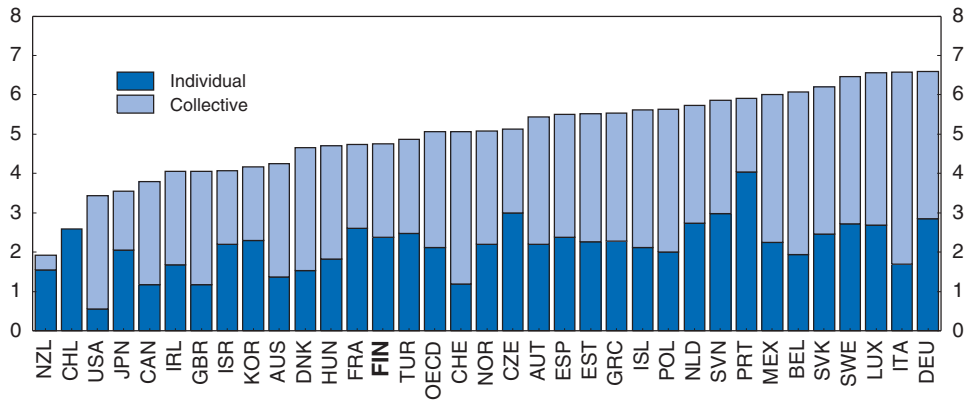
Excessive employment protection legislation (EPL) for employees on permanent contracts can hamper productivity growth by inhibiting structural change (Bassanini *et al.*, 2008) through several channels. EPL raises the cost of downsizing, as downsizing costs increase, in turn weakening incentives for expanding high-risk projects and reacting to changing markets. Uncertainty about future exit costs may lower investment further. High EPL may also make employees more complacent about their own and their employers productivity, leading to less effort and less intense search for new (and more productive) jobs, which may be especially detrimental for productivity among less productive workers, as indicated by the results in Box 1.3. OECD (2010c) also finds that high levels of EPL lead to lower job to job transitions, especially within sectors where wage premia (and productivity differences) are large.

On top of damping labour mobility from less to more productive firms, high EPL may stifle innovation and hamper commercialisation of new technologies. Due to high costs of failure, innovation may be more focused on incremental improvements rather than disruptive and risky but possibly high-yielding new innovations. Nokia's 20-year transformation from a sprawling conglomerate to a global ICT firm clearly illustrates this incremental approach and its benefits. Extensive EPL may however tilt incentives against commercialising new products within Finland, leading inventors to either never commercialise or preferring to sell new inventions at a relatively early stage. The operating system LINUX and the database system MySQL are recent examples of Finnish innovations for which commercial development and economic returns were mainly reaped abroad.

Lowering EPL could thus support productivity growth, although the level of EPL is close to the OECD average (Figure 1.10). However, legislated and formally agreed costs related to redundancies often only form a part of firm's total layoff costs, as informal agreements often add to them. Mandatory redundancy pay in Finland equals 14 days to 6 months of pay (MEE, 2010), severance packages in the December 2010 Nokia cut amounted to 5 to 15 months pay. Any reforms therefore should focus on total redundancy costs, rather than pure legislative changes. Uncertainty about future redundancy costs can also contribute to lower investment in high risk ventures. From this perspective, the government also needs to think carefully about pushing for larger employer contributions when downsizing or closures occur, as has been the case in the government's "Handle the structural crisis-model" applied to the current Nokia downsizing. Such policies add to uncertainty and expected costs of future adjustment or exit with possible ramifications for entry. They also make redundancy costs contingent on size and profitability. One way forward could be for all firms to make recurrent payments into a system that can provide severance pay to laid-off workers, as is currently the case in the Austrian *Abfertigung Neu*-system.

Figure 1.10. **Protection of permanent workers against dismissal**

In 2008, scale from 0 (least restrictions) to 12 (most restrictions)



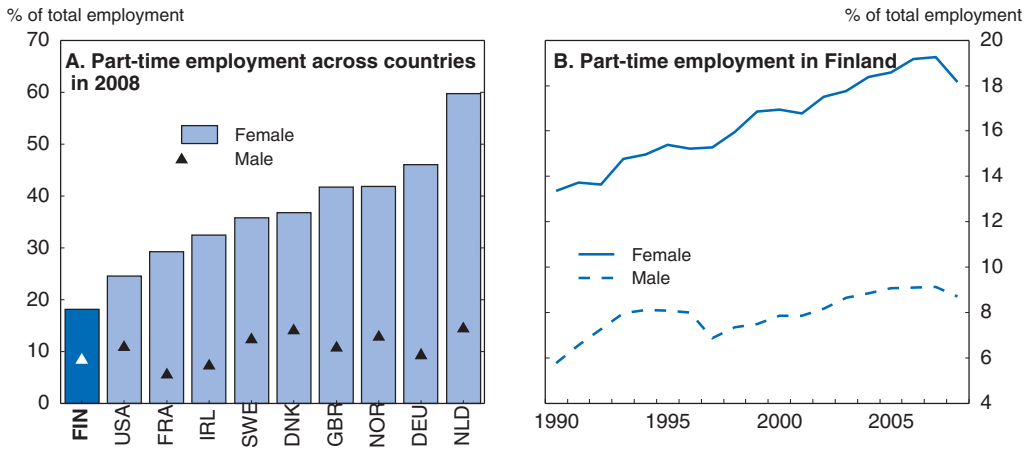

*Source:* OECD, *Employment Protection Database.*

StatLink http://dx.doi.org/10.1787/888932567181

### *Greater work-time flexibility and stronger incentives for part-time work could improve employment outcomes and productivity*

Low levels of labour market flexibility are likely to have a disproportionately large negative impact on service sector development and productivity. Firms in the service sector typically have a greater need to match production to demand over the working day and week than manufacturing firms, and hence they would benefit more from greater flexibility in working hours. As a consequence, the service sector relies more on part-time workers. Low flexibility in working hours may cause overstaffing during slow hours and understaffing during peak-hours, affecting productivity negatively. In an OECD perspective, the incidence of part time work is low in Finland, especially among women (Figure 1.11). While this is likely a consequence of a number of factors, weak incentives for individuals to participate in the labour market at least on a part time basis contribute.

Figure 1.11. **Part time employment**




*Source:* OECD, *Labour Force Statistics Database.*

StatLink http://dx.doi.org/10.1787/888932567200

Providing stronger work incentives for groups where labour force participation is low and where full time work may not be an option, such as second-earners in families with small children and pensioners, would spur labour supply and improve the functioning of labour markets. Incentives for part time work among those groups are often relatively limited in Finland. Single parents and potential second-earners in families with small children face strong disincentives for part time work due to income-dependent transfers, such as the Home Care Allowance, and childcare fees (OECD, 2005). Economic incentives for individuals on national, earnings-related or full-time disability pension to work even part time are weak, due to low income thresholds (Hytti, 2006; OECD, 2010b). Furthermore, active labour measures targeted at incapacitated individuals, which exist in other Nordic countries, would also be useful.

## Further deregulation, opening of markets and more competition would benefit especially service sector productivity

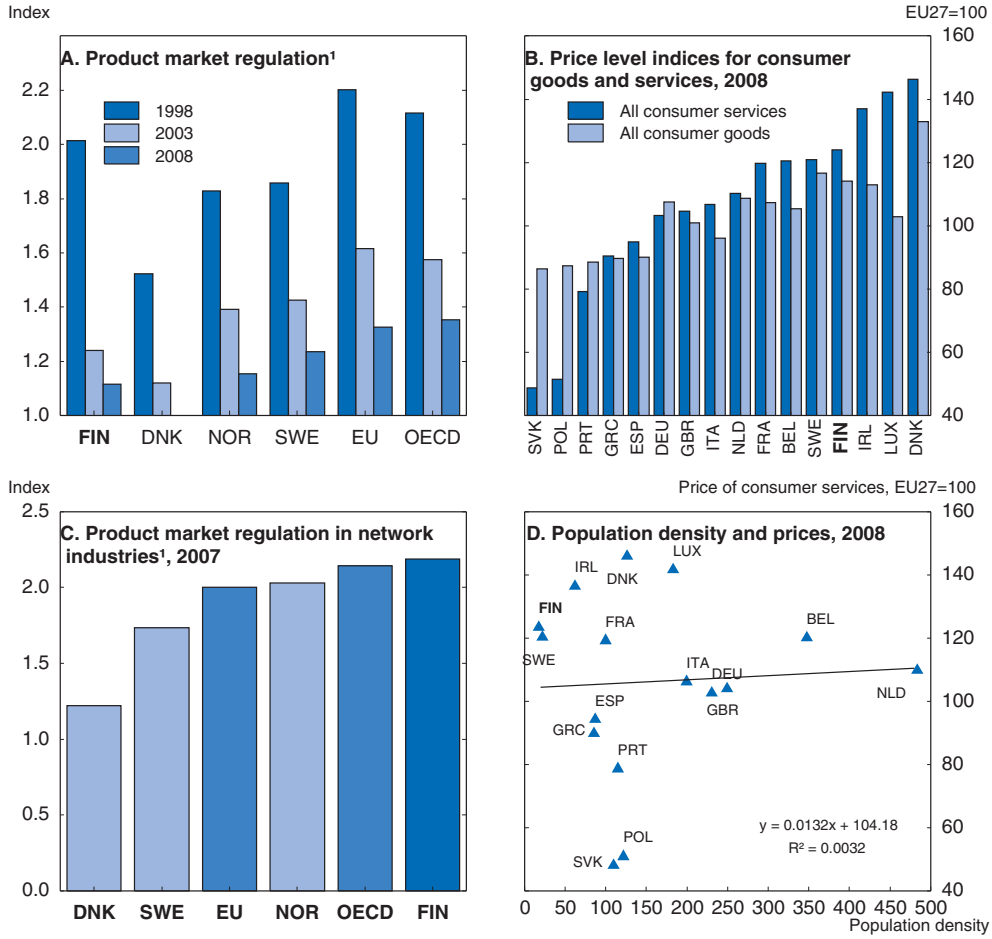
In 2009, average labour productivity in market services was roughly 75% of that in manufacturing in Finland, while it was 115% in the average OECD country. Transition further into a service economy will therefore prove more costly for Finland than for comparable countries, unless the low productivity in services is addressed. Productivity gains in services and other less exposed sectors generally have a higher direct impact on domestic welfare, as the gains in consumer surplus from lower prices or better quality are fully retained within the country.

While product-market regulation (PMR) has become less intrusive in most OECD countries during the last ten years, improvements have been larger in Finland (Figure 1.12, Panel A). PMRs are now in line with the other Nordic countries and are slightly lower than in the average EU and OECD country. However, prices of consumer goods and services remain high in comparison to other EU countries (Figure 1.12, Panel B), although this partly reflects a high VAT rate (Kotilainen *et al.*, 2010).

Strong competition fosters low prices, high productivity growth and efficient resource allocation while boosting employment (Arnold *et al.*, 2011). In the tradeable sectors, international competition can provide such pressure and measures to expose more sectors to international competition should therefore be pursued (Box 1.3). For sectors that are less internationally exposed, policy makers need to provide robust frameworks in terms of competition policy and product market regulation to support growth. Weak regulatory frameworks and low levels of competition in upstream activities also reduce productivity in downstream sectors, regardless of whether the latter are exposed to international trade or not (Bourlès *et al.*, 2010). While some progress has been made in fostering competition in network industries in Finland, improvements have been slower than in other countries, largely reflecting a high share of public ownership in the transport and utilities sectors (Figure 1.12, Panel C). Productivity remains relatively low in government-dominated sectors like electricity, gas and water distribution, but also in transport, storage and communication (Figure 1.14). Government plans to introduce competition in the rail sector in metropolitan areas is therefore welcome.

It has been argued that country-specific factors, such as a peripheral geographical position and low population density are the real drivers behind high price levels and low productivity. While it is true that agglomeration of skilled labour may be important for some skill intensive activities like R&D, there is little evidence that price levels of consumer goods and services are correlated with population density, as higher transport costs tend

Figure 1.12. **Product market regulation and prices**




1. Scale from 0 (least restrictions) to 6 (most restrictions).

*Source:* Panels A & C: OECD, *Database on Product Market Regulation*. Panels B & D: Eurostat.

StatLink http://dx.doi.org/10.1787/888932567219

## Box 1.3. **Institutions and labour productivity in the OECD area**

This box estimates how some institutional settings – such as barriers to entrepreneurship and investment – impact labour productivity in OECD area industries. Specifically, labour productivity is estimated as a function of a lagged productivity-gap (to capture potential catch-up effects), the capital intensity, R&D-spending and a set of institutional variables. The policy variables are explained in Table 1.2, and capture barriers to entrepreneurship, investment, construction and starting a firm.

Table 1.2. **Policy variables**

| Variable | Explanation | Source |
|---|---|---|
| Barriers to entrepreneurship | A composite indicator of the degree of regulatory and administrative opacity, administrative burdens on start-ups, barriers to competition, and state involvement in business operations. | OECD |
| Barriers to investment and trade | A composite indicator of direct and indirect obstacles to FDI and trade. | OECD |
| Cost of construction permits | The ratio of expenses related to securing a construction permit relative to average income per capita. | World Bank |
| Time it takes to start a business | The time it takes to start a business measured as the number of days it takes to secure all operational permissions. | World Bank |

### Box 1.3. **Institutions and labour productivity in the OECD area** *(cont.)*

Cross-country cross-industry data for sixteen OECD member countries* and 21 sectors for the period 2006-2010 is used. The dependent variable and the control variables are available per industry and country combinations, but policy variables vary only across countries. Specifically, the following equation is estimated (with industry dummies):

$$\ln(Y_{ij}/L_{ij}) = a_{0ij} + a_1 * \ln((Y_{ijt-1}/L_{ijt-1})/(Y/L)_{max(i),t-1}) + a_2 * \ln(K_{ijt}/L_{ijt}) + a_3 * \ln(R\&D_{ijt}/Y_{ijt}) + a_j * Policy_{jt}$$

where *i,j* and *t* denote industry country and time period respectively. The dependent variable is the log of labor productivity which is regressed on capital intensity, R&D intensity, lagged productivity gap, policy indicators and industry dummies. The lagged productivity gap measures the distance between the labor productivity in an industry in a country relative to the best performing country within the same industry in the previous period, thus capturing the scope for catch-up.

As shown in Table 1.3, the included control variables have the expected signs and are highly significant. A low level of productivity in the previous period leads to a low level in the current period too, but the size of the negative coefficient shows catch-up or conditional convergence towards the industry frontier. Higher capital intensity and higher R&D intensity also affects productivity positively. The capital-intensity coefficient is more than four times larger if industry dummies are excluded (not shown here), suggesting that capital intensity is to a large extent driven by industry-specific technological factors.

Table 1.3. **Baseline regression**

| | Baseline |
|---|---|
| R&D-intensity | 0.044*** |
| Capital-labour ratio | 0.065*** |
| Lagged productivity gap | –0.539*** |
| Observations | 209 |
| R-squared | 0.857 |

The institutional variables are included one at a time as the precision of estimates fall when they are estimated jointly. The coefficients of the control variables remain stable across the set of included policy variables. Estimates for policy variables are reported in Table 1.4 and show that barriers to entrepreneurship, barriers to investment and trade, and time it takes to start a business significantly affects productivity in the expected way.

Table 1.4. **Impact of policy variables**

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | Estimated coefficient | Mean | Minimum | Maximum | Finland | Effect on Finnish labour productivity |
| Barriers to entrepreneurship | –0.207*** | 1.22 | 0.82 | 1.95 | 1.36 | –0.030 |
| Barriers to investment and trade | –0.065*** | 1.18 | 0.19 | 2.64 | 1.71 | –0.035 |
| Costs of construction permit | 0.000 | 78.98 | 19.23 | 143.58 | 128.28 | Not significant |
| Time it takes to start business | –0.004*** | 17.17 | 3.50 | 47.00 | 14.00 | 0.013 |

Box 1.3. **Institutions and labour productivity in the OECD area** *(cont.)*

The estimates in Table 1.4 suggest that Finland could gain substantially in terms of productivity in moving adverse policy settings. Lowering barriers to investment and trade and barriers to entrepreneurship to the OECD average could yield an increase in aggregate labour productivity of almost 3% and 3.5% respectively. Altogether, these estimates suggest that improved policy settings in these areas could increase labour productivity by almost 6.5% by moving to OECD average and up to 25% by reaching the best performers' level.

A set of extensions are estimated, exploring the impact of policy variables and controls interacted with sector characteristics (results not shown here) indicate that barriers to investment and trade are more detrimental for sectors that are relatively far from the industry's productivity frontier, indicating that relatively low productive Finnish service sectors are negatively affected by detrimental policy settings in these areas. There is scant evidence that groups of sectors (manufacturing, services, etc.) are affected in different ways by policy variables across the OECD area.

* The included countries are Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Italy, Japan, Korea, Netherlands, Norway, Spain, Sweden and United Kingdom.

to be compensated through lower land prices, congestion and wages (Figure 1.12, Panel D). In any case as in other OECD countries, the majority of the Finnish population lives in urbanised regions.

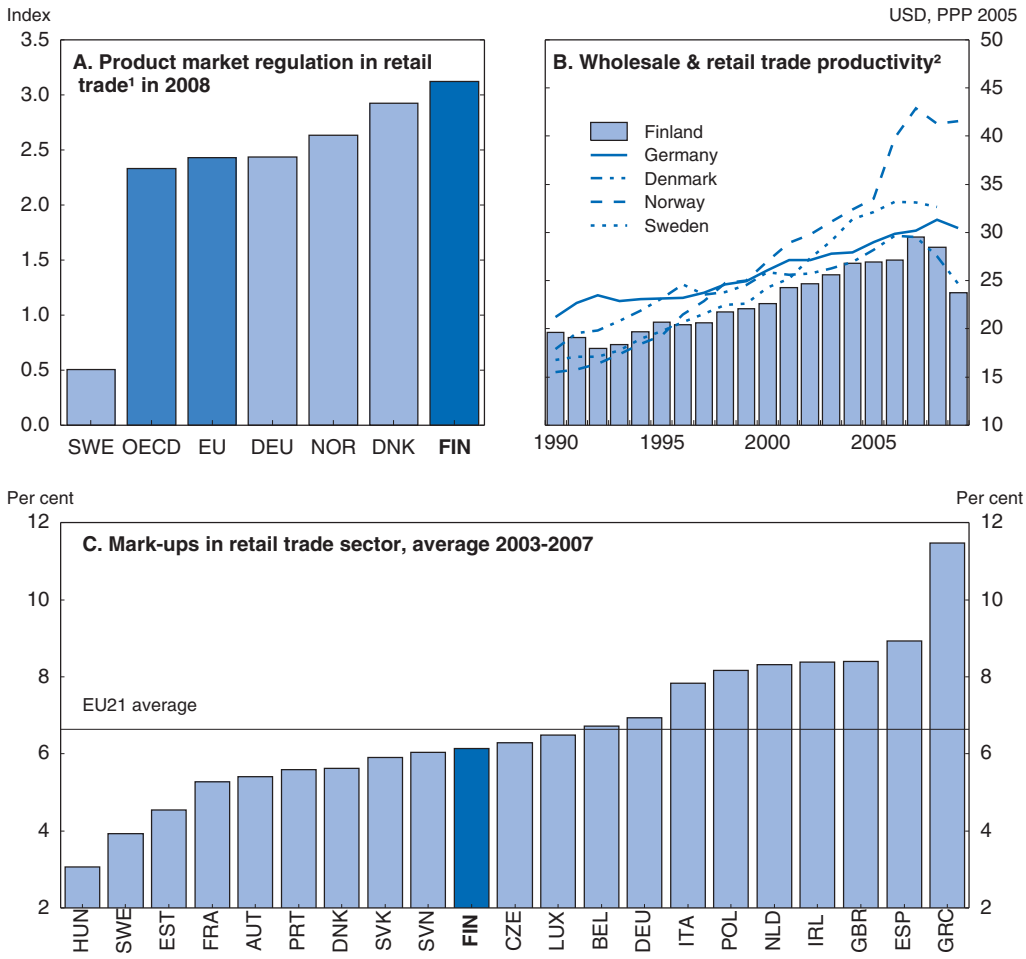
### *More competition and deregulation in retailing would raise productivity*

Despite recent deregulation, domestic regulatory barriers in the Finnish retail sector are among the most restrictive in the European Union (Figure 1.13, Panel A). As in the other Nordic countries, market concentration is high. The three main retail food groups account for more than 85% of total retail food sales (GAIN, 2010). Labour productivity in wholesale and retail trails Norway, Sweden and Germany (Figure 1.13, Panel B).

In the food retail sector, concentration has increased in the last few years, despite the entry of the German Lidl group into the Finnish market. Traditional measures of concentration, such as the Herfindahl-Herschman index, show that concentration now is as high as in the other Nordic countries, with mark-ups higher than in Denmark and Sweden, though lower than the EU average (Figure 1.13, Panel C). There is also growing evidence that the structure of the market, at least among the larger stores, is converging towards a duopoly between the K- and S-groups (Niemi and Xing, 2011). These tendencies were reinforced by the S-group's acquisition of a large share of the SPAR-group, which was approved by the Finnish Competition Authority (FCA) in 2006. Given that there is no evidence of firm level (as opposed to store level) economies of scale in Finnish retailing, the increased concentration is likely to contribute to stronger market power and higher prices (Aalto-Setälä, 2002). Lower concentration could therefore contribute to stronger competition and lower prices, and although there appears not to be any evidence of improper conduct, it could be useful for the FCA to conduct a market study of the food retail sector.

Competition law and merger control have been more lenient than what the European Commission has recommended (EC, 2011). The new Competition Act which came into force in November 2011 rectifies shortcomings relating to stricter merger control, expanding investigative powers for the competition authority, enhancing damage

Figure 1.13. **The retail sector**




1. Scale from 0 (least restrictions) to 6 (most restrictions).
2. Value added per hour.

*Source:* Panel A: OECD, *Database on Product Market Regulation*. Panel B: OECD, *STAN Database* and OECD calculations. Panel C: OECD, *Industry and Services, SDBS, Structural and Demographic Business Statistics*.

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compensation and introducing "whistle-blowing" instruments. The increased powers are welcome, but the government should consider whether the FCA is sufficiently funded and staffed in light of its expanded remit. In terms of staffing and budget, it is small compared to corresponding organisations in similar-sized countries (Table 1.5), although its staff has been expanded by 15 persons recently.

Table 1.5. **Staffing and funding of Nordic competition authorities, 2010**

| | Staff | Budget (million €) | Population (million) |
|---|---|---|---|
| Finland | 70 | 5 | 5.4 |
| Denmark | 145 | 28 | 5.5 |
| Norway | 109 | 11 | 4.9 |
| Sweden | 135 | 14 | 9.4 |

Zoning and planning restrictions hamper retail development, as new firms are often dependent on using new rather than existing locations. For big international retailers, out-of-centre location may be the only real option given that they may pursue larger-sized shops and greenfield locations. As has been discussed extensively by *e.g.* Gordon (2004), the development of out-of-centre "big box" retailing has been one major source of differences in productivity growth between the United States and Europe. In Finland, municipalities are responsible for land-use planning decisions according to the Land Use and Building Act of 2000. The Act shifted planning in a more restrictive direction, with a presumption towards the establishment of hypermarkets in city centres and larger developments to be agreed with neighbouring municipalities and the Ministry of the Environment. The Revised National Land Use Guidelines of 2009 put further restrictions on out-of-centre developments, as "major retail trade units should be located so as to support the urban structures" (Ministry of the Environment, 2009). In 2011 these restrictions were extended to hitherto excluded retailers in furniture, hardware and cars. Deviations from these guidelines are only allowed if impact studies show that the proposed development is in line with sustainable development. The more restrictive approach to land-use has been effective in containing retailing expansion, with no net growth in retail space between 2004 and 2009.

### Box 1.4. **Retail sector reforms in Nordic countries**

Significant liberalisation in retailing has been pursued in Norway and Sweden during the last 15 years, leaving the overall regulatory frameworks less intrusive than in Finland. The reforms have contributed to impressive increases in productivity in the sector as well as the wider economy.

In Norway, consumer prices have traditionally been high compared even to other Nordic countries, reflecting high wages, import protection and costs of agricultural products and transport, as well as weak competition in wholesale distribution and strong market concentration in retailing. In 1998, retail regulation was more restrictive than in the other Nordic countries, but subsequent reforms lowered regulatory levels below those in Denmark and Finland, but left them significantly above those in Sweden. Labour productivity rose spectacularly by around 7% per annum between 1998 and 2008, and while food prices remain high in comparison to other Nordic countries and to the EU, price differentials have shrunk (Konkurrenstillsynet, 2006). Market concentration has increased, with the four major players accounting for 98% of food retailing. Since 2008, there has been some back-tracking, with tighter restrictions on opening shopping centres outside urban areas and making it simpler for the government to overrule the Norwegian competition authority (OECD, 2010d).

In Sweden, retailing reforms started in earnest in 1992 when municipal planning restrictions were successively loosened, the country decided to join the EU and a new competition authority was set up. Danish and German retailers entered the market, spurring competition. Opening hours were deregulated already in 1974, with the exception of the government monopoly on alcohol sales which still remains in place. In 2010, the government's retailing monopoly on drugs was dismantled, thereby opening competition between pharmacies. These reforms brought large benefits as between 1996 and 2005 food prices rose by roughly 0.5% per year less in Sweden than in the EU-15, and between 1998 and 2008 labour productivity in wholesale and retailing increased by almost 5% per annum. Expansion abroad has been strong, including well known examples as IKEA and H&M.

Box 1.4. **Retail sector reforms in Nordic countries** *(cont.)*

Several factors behind the rapid growth in productivity in Swedish retailing may be worth mentioning. The weakened role for municipalities and trade associations in planning decisions meant that large, and often out-of-centre, stores increased market shares rapidly. During the last 10 years, these are estimated to have increased from 250 to 350 (Invest in Sweden, 2011). At the same time, market concentration has largely been kept at bay through entry. Furthermore, there is evidence that new entrants in retailing, combined with more stringent competition legislation, weakened the traditional market power of the main wholesale distribution chains, forcing them to compete more vigorously. For food products, this tendency is illustrated by the rapid rise of private label products. During the last few years market concentration has increased slightly, with some firms withdrawing from the market.

Apart from restricting entry, excessive planning regulations may hamper productivity through keeping down the size of retail stores. Aalto-Setälä (2002) finds significant store-level economies of scale, and hence the large share of small shops (less than 400 square meters) in Finland and the development constraints from planning laws which impede productivity. Aalto-Setälä's (2002) estimates that a doubling of the average size of stores would increase average productivity by roughly 3%.[2]

While planning and land-use regulations need to consider environmental and access concerns (Pilat, 1997), current legislation takes a heavy-handed and excessive approach. Simulations of economic and environmental effects on urban development strategies in the United Kingdom tend to show small increases in greenhouse gas emissions from dispersed development, but also a positive distributional impact through lower land prices and rents (Solutions, 2009). To what extent these results would hold in Finland remains an open issue, but it seems unlikely that the environmental benefits from more compact developments could outweigh the significant productivity gains that out-of-centre developments can yield.

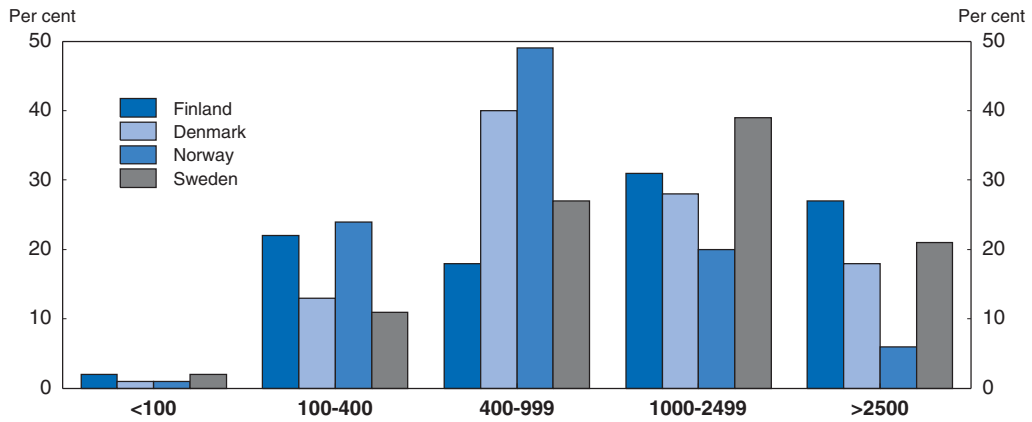
Relevant concerns about greenhouse gas emissions related to urban sprawl should rather be addressed through making the polluter pay, *e.g.* in terms of petrol taxes or congestion charges. Price-based measures would be more predictable and transparent and would also be less exposed to the vested interests of incumbents, who have an explicit role in planning discussions in the current planning legislation. There may also be scope for more level treatment of zoning for housing and retailing; to the extent that housing development remains less restrictive than retailing, it makes sense to ensure that appropriate retailing can develop in near proximity.

Restrictive and discriminating legislation on opening hours also contributes to raising retailers costs. For small retailers, opening hours are unregulated. Medium-sized and large outlets still face some restrictions, although legislation on opening hours has been liberalised successively, with the latest reform in 2009 allowing retailers of all sizes to be open between 12.00 and 18.00 on Sundays. Restrictions on opening hours create inconveniences for consumers, increase costs for stores and distorts supply in favour of small high-cost retailing stores. It is sometimes argued that size restrictions favour independent retailers, but evidence from Italy suggest that discrimination in favour of small shops does not measurably improve conditions for them, as major retailing groups

respond by setting up smaller shops (Schivardi and Viviano, 2009). In Finland, grocery sales in (smaller) convenience stores and gas station marts are also dominated by the "big three" retailing groups (GAIN, 2010). The distortion created by size discrimination can be seen from the size distribution of retailers in Finland compared to Denmark, Norway and Sweden (Figure 1.14) The incentives for retailing units to be kept below the 400 square metre restriction is evident. Relevant concerns about working time should be addressed through the collective bargaining system and hence opening hours should be unrestricted for all retailers, with the exception of sales of alcohol and pharmaceuticals which may need a more restrictive regime for health and social reasons.

Figure 1.14. **Size distribution of food retail stores**

Square meters




*Source:* Einarsson, 2007.

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## Policies bearing on entrepreneurship, innovation, investment and R&D could be more efficient

TFP growth is the main source of labour productivity growth in most OECD countries, and especially in Finland (Figure 1.3). Factors that are closely linked to TFP growth are innovation, entrepreneurship and R&D. Improving outcomes in these areas would help sustain growth going forward. A well functioning system to support innovation and entrepreneurship has several dimensions in addition to above-mentioned labour market flexibility, access to sufficiently large markets and efficient provision of intermediate inputs. Most important are supply of ideas and entrepreneurs, access to capital and incentives for innovation and growth.

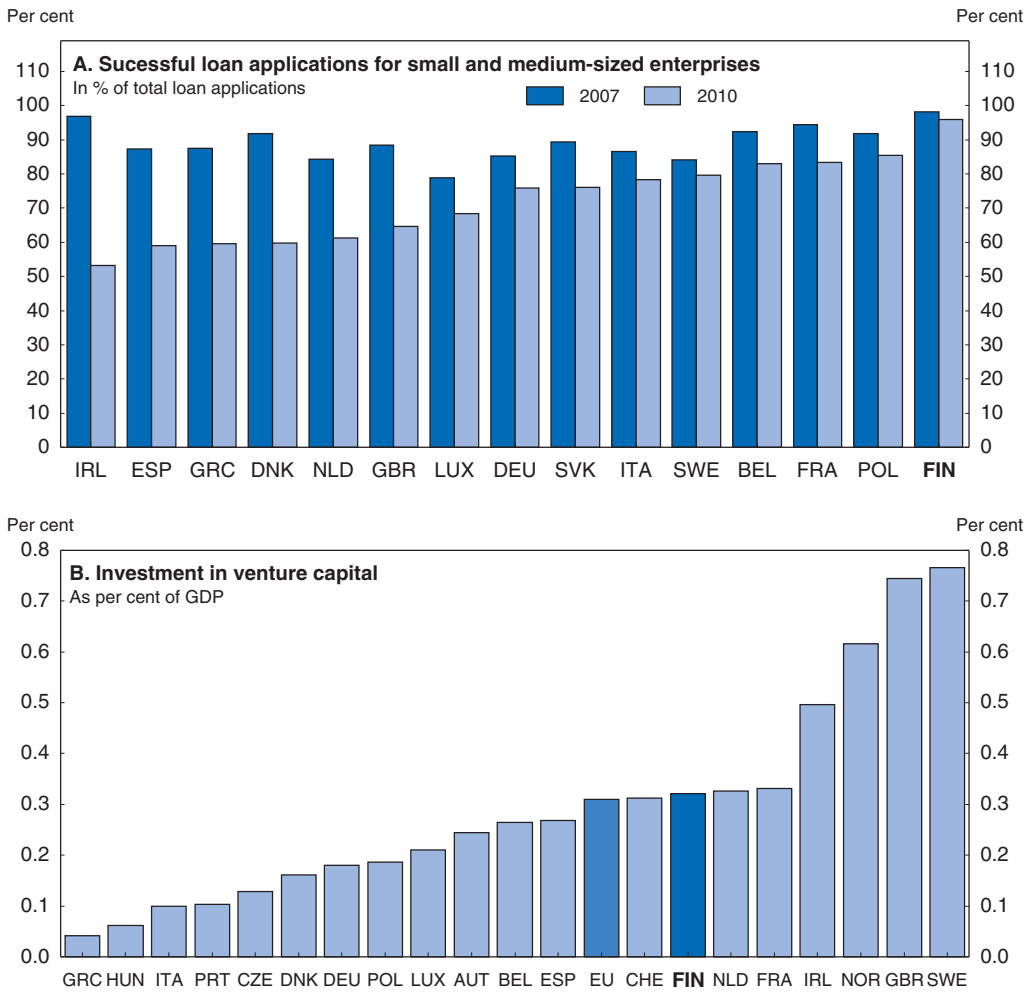
### *Conditions for start-ups are beneficial in Finland…*

Conditions for start-ups are broadly favourable in Finland, as indicated by relatively high rates of firm creation – above those in neighbouring Nordic countries but on a par with the OECD average (OECD, 2009b). Favourable supply conditions include a high general education level, relatively wide-spread training in starting a business and that comparably few Finns seem to see the risk of failure as a hindrance to starting a business (Criscuolo and Wilson, 2010). The overall regulatory framework of doing business also performs relatively well in Finland, and the country ranks as number 13 out of 183 in the World Bank's *Ease of Doing Business* index.[3] However, institutional barriers to entrepreneurship tend to be

slightly higher than in the average OECD country (OECD, 2010e), which is likely to impact productivity negatively (Box 1.3). Entrepreneurial aspirations also seem to be lower than in neighbouring Nordic countries (Autio, 2009).

Access to private sector finance seems better in Finland than in most OECD countries. For most small firms debt financing is the most common source of funding. Although access to credit became a bit more restricted during the financial crisis also in Finland, the robust state of the financial sector and temporary funding through Finnvera cushioned the impact. Access to credit for small firms remains excellent (Figure 1.15, Panel A). Debt financing may not be appropriate for many start-ups, however. For firms with little collateral, undeveloped products and unsure future market prospects, equity financing through business angels, venture capital (VC) and later on stock markets plays an important role. While VC markets developed relatively late in Finland, private VC investments are higher than the European average but lower than in most Nordics, perhaps reflecting extensive government schemes in this area in Finland (Figure 1.15,

Figure 1.15. **Access to capital**




*Source:* Eurostat news release 144/2011 and European Private Equity and Venture Capital Association, *Yearbook 2011*.

*StatLink* http://dx.doi.org/10.1787/888932567276

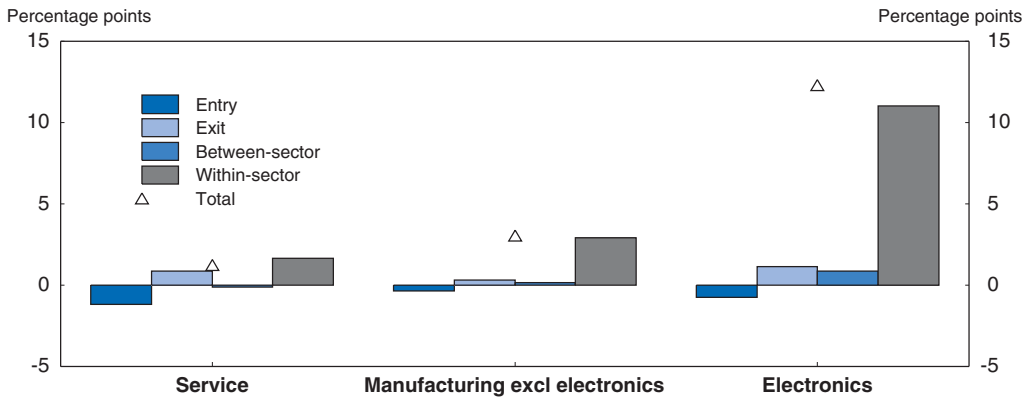
Panel B).[4] The causal effect of VC funding on firm productivity may not be large anyway, as a significant share of the productivity differences between VC and non-VC supported firms seems to come from VC firms ability to chose the most promising projects rather than VC funding increasing the likelihood of success (Hirukawa and Ueda, 2008).

### *... but new entrants are often inefficient...*

The dynamic process of firm creation and destruction is an important source of productivity growth among OECD countries, although the measured impact depends on the length of the studied period and measurement methods. One way to analyse the contribution from firm dynamics to growth is to utilise "shift-share" analysis to decompose productivity changes into effects from entry, exit, "within-firm" growth and shifts in labour between firms. Productivity growth in Finland, as in other OECD countries, is to a large extent driven by large positive within-firm effects. In Finland, contributions to firm's productivity from net entry are negative due to negative contributions from entry and relatively small positive contributions from exit (Figure 1.16).[5] The negative effect from entry is more pronounced in services than in manufacturing. Productivity contributions from net entry in manufacturing in Finland are smaller than in most other OECD countries (Bartelsman *et al.*, 2009). This reflects the fact that entry contributes negatively to Finnish productivity while exit has a comparatively small positive productivity effect.

Figure 1.16. **Contributions to labour productivity[1] growth in Finnish firms**

Annual average contribution (1996-2007)




1. Value added per hour.
*Source:* Hyttinen and Maliranta (2011).

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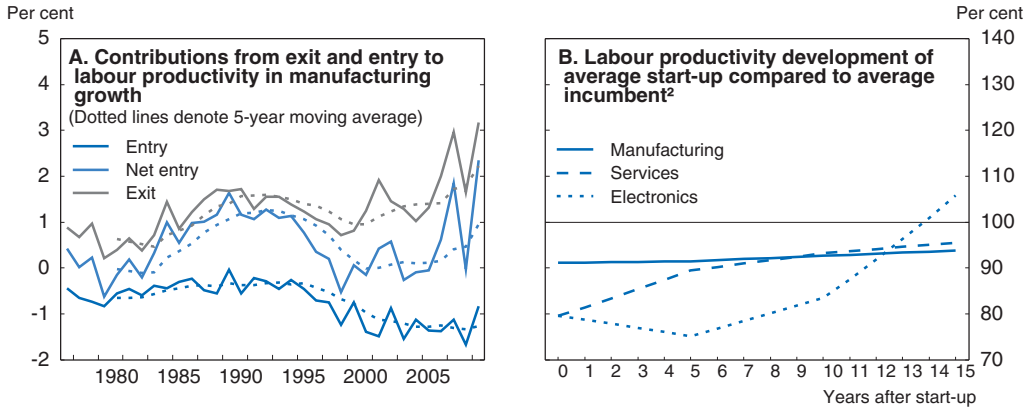
The negative contribution of firm entry to productivity means that entering firms have substantially lower productivity *vis-à-vis* incumbents. This gap spans from –9% for manufacturing firms to –20% for services and for the electronics sector (Hyytinen and Maliranta, 2011). Several factors may explain why firms enter despite their average labour productivity being low. First, entrants tend to have limited information on their productivity and therefore need to test it under market conditions. Second, lower capital intensity among entrants may also be reflected in lower labour productivity. Finally, measurement issues can be a problem. As Foster *et al.* (2008) show, entering firms initially tend to set lower prices than incumbents, which means that industry level deflators will underestimate their true productivity.

Since the mid-1990s, start-ups in the Finnish manufacturing sector seem to have become less efficient in relation to incumbent firms, which has led to increasingly negative contributions from entry (Figure 1.17, Panel A). As many of the entrants were forced out of business, positive contributions to productivity from exit have risen with a lag. Exit-contributions rose further in manufacturing during the recent recession, when manufacturing employment fell by more than 11%. While this cleansing can contribute to higher productivity in the manufacturing sector, the effect on overall productivity is less clear and depends on what happens to dislocated labour. As a result of the sharp fall in manufacturing employment, an increasing share of employment is now located in lower productivity service sectors with average productivity in market services being only 75% of manufacturing. Furthermore, if shed workers have higher labour productivity than the average worker and leave the workforce, the net effect of their leaving employment on overall productivity will be negative, not to mention the detrimental effect of lower employment on output. The extent and quality of reemployment possibilities are therefore crucial for the overall outcome.

Figure 1.17. **Productivity[1] in Finnish firms**




1. Value added per hour.
2. Relative productivity levels for different ages of firms are based on average productivity of entrants and average relative productivity growth for surviving firms across age groups. Hence, the chart only illustrates relative productivity for a set of hypothetical firms.

*Source:* Maliranta, M. (2011), unpublished results; and OECD calculations.

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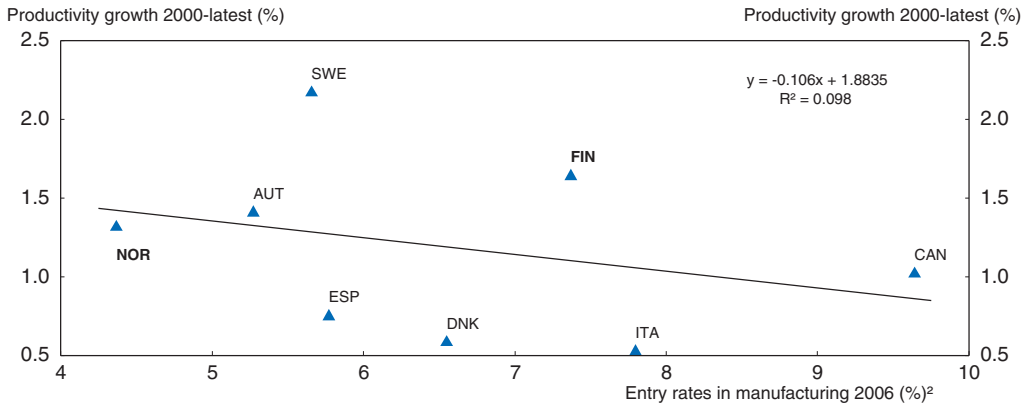
### *... and start-ups tend to grow slowly*

Low productivity at entry would not necessarily be a drag on growth if sufficiently many firms survive and experience strong productivity growth during their first years. Negative static productivity effects from entry would then be compensated through positive dynamic within-firm effects.[6] There is, however, little evidence suggesting that gains in productivity among Finnish start-ups are sufficient to compensate for the initial productivity gap, as productivity levels are estimated to trail incumbents more than 10 years after entry (Figure 1.17, Panel B). Finnish start-ups also tend to expand less rapidly than those in most other OECD countries (Bartelsman *et al.*, 2003). High numbers of entry and exit combined with slow growth among start-ups suggest that too many low-quality firms enter and that incentives for subsequent growth may be too weak.

In general, there is little evidence that high entry rates are positively related to productivity growth; if anything, the correlation seems negative (Figure 1.18). Sanandaji (2011) reports a negative correlation between entrepreneurship and self-employment in cross-country data, highlighting that the latter is not a good proxy for the latter. To raise productivity, policies should aim at aligning economic incentives for entry and firm-growth with social returns. First, improvements in the average quality of start-ups should be pursued by increasing quality of business ideas, *e.g.* through improvements in higher education and basic R&D discussed later, and through lowering entry of firms with low productivity and limited growth potential. Excess entry of non-viable firms will harm productivity directly by moving labour and capital from more productive employment to less productive self-employment. It also implies an indirect cost by making it more difficult for promising firms to find sufficient funding from private sources, contributing to slow growth among start-ups. The costs associated with imperfect information from investors' perspective will increase as the average quality of projects falls, lowering expected returns.

Figure 1.18. **Entry rates and productivity[1] growth**




1. Value added per hour.
2. Entry as a percentage of active enterprises.

*Source:* OECD, *Structural and Demographic Business Statistics (SDBS) Database*; OECD, *STAN Database* and OECD calculations.

*StatLink* *http://dx.doi.org/10.1787/888932567333*

Second, policies should aim to reward entrepreneurial activities that create large positive externalities, which mainly are creating high-productive jobs (that generate externalities in terms of higher tax revenues) and providing R&D spillovers. This means that incentives for firm growth rather than entry should be improved. Furthermore, R&D support should focus on maximising spillovers. These issues are explored in the coming pages.

### *Government direct support has had little if any long-term impact on employment and productivity and should be reduced further*

Public programmes to support start-ups and SMEs are widely used across the OECD. In 2008, almost 10% of Finnish firms received direct public support through grants, loans and guarantees, with total support measures amounting to close to 1% of GDP (Koski and Tuuli, 2010). The 2012 budget has imposed significant cuts to some grants and the institutional structure is under review. There are currently a large number of government agencies involved in funding business development, and the number of available instruments is large (Box 1.5).

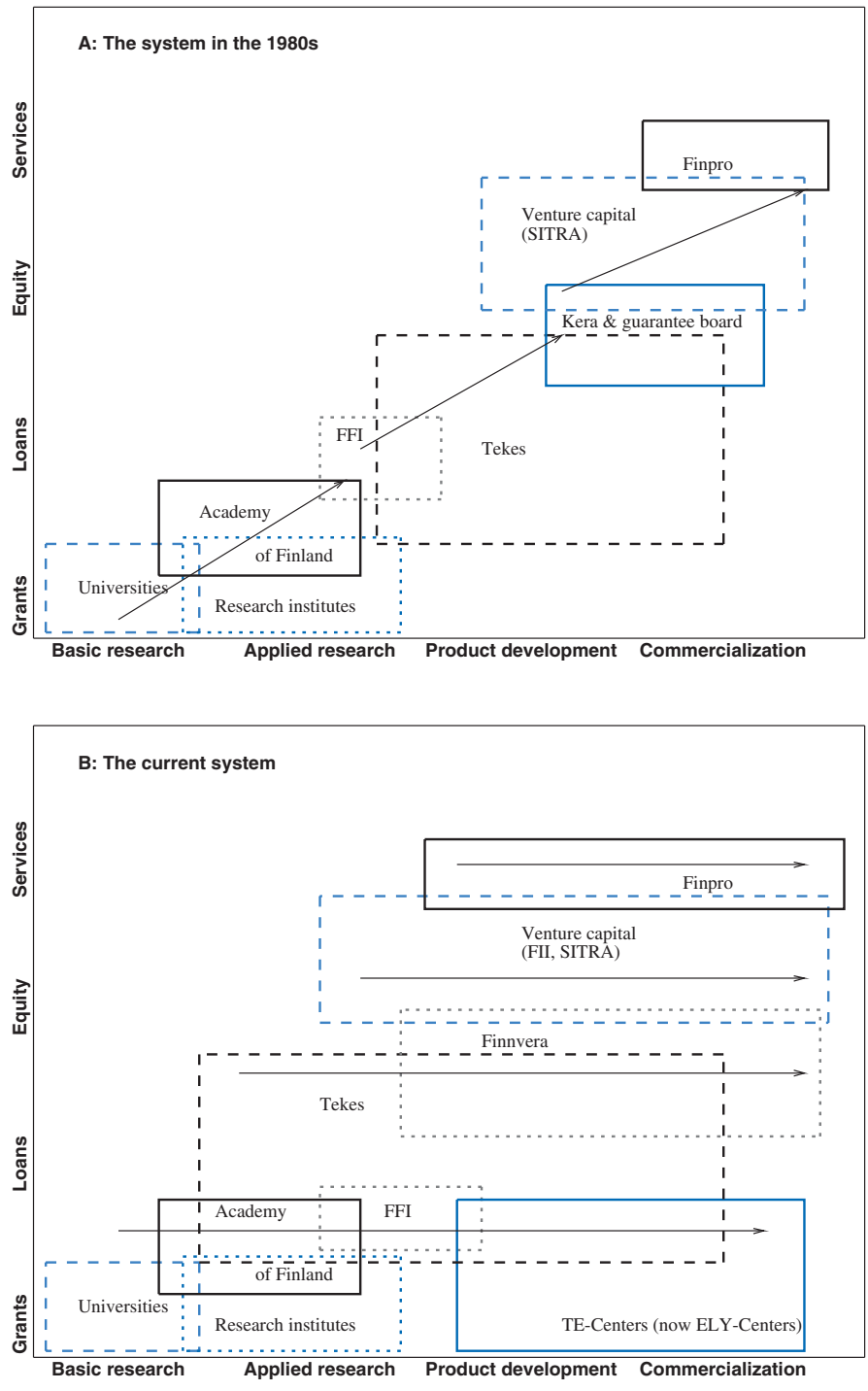
### Box 1.5. **Government-funded finance companies and support schemes in Finland**

Business and innovation support from the government is provided in different forms and through different organisations. Figure 1.19 covers some of the most important organisations and how they provide support in terms of the development stage of an innovation or product and in which form this support is provided. In general, two tendencies can be seen over time; the number of institutions has increase and institutions are becoming broader in terms of the stages that they cover. Hence, overlaps among organisations have increased since the 1980s. Most strikingly, expansion has been strongest in areas where capital market funding has become most readily available (commercialisation). Some of the most important government-owned institutions are (excluding pure research organizations like universities, research institutes and the Academy of Finland):

- The Finnish Funding Agency for Technology and Innovation (TEKES) funds R&D and innovation through grants and subsidised loans. Annual funding amounts to roughly € 600 million and funding can be provided for R&D, innovation, expert services and internationalisation. 50-60% of funding is directed towards small and medium-sized enterprises and according to TEKES, project competition is guided by uniform principles across Finland.
- The Foundation for Finnish Inventions (FFI) screens and evaluates inventions and helps develop them into businesses. While FFI is a private foundation, it is mainly funded by the MEE.
- Finnvera provides financing for start-ups, growth, internationalisation of firms and credit guarantees for exports. Support is provided offering loans, domestic guarantees, venture capital investments, export credit guarantees and other services associated with the financing of exports. As a response to the financial crisis and credit crunch, the European Union temporarily weakened state aid rules and Finnvera provided countercyclical financing until end-2011. In 2010, new commitments amounted to € 3.5 billion while total outstanding commitments were € 11 billion.
- SITRA, the Finnish Innovation Fund funds applied research in different programme areas and provides financing for business support and venture capital funding. New investment amounted to € 10 million in 2009 and total assets to € 700 million, of which € 100 million was venture capital investment.
- Finnish Industry Investment limited (FII) provide venture capital and private equity with focus on growth, internationalisation, spin-offs, major industrial investments, and sectoral and corporate restructurings. Total assets amounted to € 680 million in 2011 of which more than 80% are invested in 87 private sector funds.
- FINPRO provides consulting services for exporting firms.
- ELY-centres (previously TE centres) are 15 regional bodies responsible for a wide range of policy areas including labour markets and business support. ELY-centres grants EU structural funds and provide business support for start-ups and for the internationalisation of innovation environments.

Box 1.5. **Government-funded finance companies and support schemes in Finland** *(cont.)*

Figure 1.19. **Innovation support organisations in Finland**




*Source:* Georgiou *et al.*, 2003.

Support for start-ups, entrepreneurship and small and medium-sized enterprises can be motivated if this mitigates negative externalities. The main motivations for government loans and guarantees to firms relate to mitigating imperfections in capital markets for small firms. There has traditionally been a concern, both in Finland and other OECD countries, that small firms have too little access to capital, due to uncertain prospects, insufficient collateral within such firms and an underdeveloped private capital market. By providing capital and reassuring private sector investors that the quality of the project is high, public support could bridge early funding problems and possibly crowd-in private capital. Furthermore, subsidies can also be motivated by the possible inability of firms to capture the full returns of their investments in R&D. In Finland, regional policy goals are also part of the rationale for support measures, while clean-technology support has become a more recent focus.

However, the effects of current subsidy schemes on firms' development seem to be rather disappointing, although evaluations typically focus on the employment effects of support measures rather than productivity. The poor results are likely to reflect problems in government agencies in identifying and funding the most relevant projects in an appropriate way, but also the significant improvements in access to private sector capital seen the last 20 years, providing better substitutes for government support (Figure 1.15).

It is therefore not surprising that recent studies have found little evidence of lasting effects from public financial support measures on employment and productivity. Koski and Pajarinen (2011), for example, find that firms that receive subsidies tend to experience higher employment initially but that the effect vanishes after four years. Thus support seems to lead to faster short-term expansion without any measurable long-term effects on employment. Small innovative firms also rank "financial support provided by the public sector" as less important for operations than "availability of risk financing" and especially "a motivating company and capital taxation scheme" (Kotiranta *et al*., 2009).

There is also evidence, both internationally and in Finland, that public sector VC is less useful for firms in terms of creating value-added than private VC (VICO project, 2011). While the need for public financial support has decreased with improving capital market sophistication, skill requirements for project appraisals have risen, at least when it comes to technologically advanced start-ups. Indeed, the presumption that government agencies should be better placed to evaluate business prospects of firms than private sector specialists could be questioned. To some extent the launch of the Startup Accelerator scheme (VIGO) in 2009 modelled on Israeli incubator schemes, where private sector venture capital expertise aids in choosing government funded projects, can be seen as an attempt to mimic private venture capital. It may be the case however that these scarce resources are better used in the private sector.

Support programmes may also crowd out private investment and create a group of firms that become dependent on support. Recent evidence for Finland suggests that firms which initially receive government support tend to continue to depend on such support both from their initial support organisation and other government schemes (Koski and Tuuli, 2010). This is especially true for large firms which are less likely to exit support systems (Koski and Pajarinen, 2011). Thus rather than being a "seal of quality" that crowds in private funding, public support can reduce reliance on private capital markets, possibly reflecting low quality of supported projects. The continued dependence on public support could also be due to better terms of finance or convenience effects for the firms and the

supporting organisations. In general, there is a need to design support programmes in a way that evaluations can be made, for example, through randomisation or geographically different implementation.

Spending should be cut further and institutions with overlapping responsibilities, or with activities that largely overlap with private markets, should be merged or discontinued. Altogether, five government organisations provide late-stage innovation and business support in competition with the private sector. As these organisations have expanded in terms of coverage of different firm development stages, overlaps are now significant (See Box 1.5). A recent survey among key stakeholders in the innovation system also points to significant overlaps in government support organisations (Kotiranta *et al.*, 2009). Especially in venture capital activities it is hard to see the need for three government actors: SITRA, FII and Finnvera. Running costs of business support are significant, with the Ministry of the Economy and Employment estimating that just the wage costs of support agencies amounted to 20% of the total subsidies provided in 2010, not counting wage costs in the regional Centres for Economic Development, Transport and the Environment (ELY centres). With better-functioning capital markets, the government's supporting role should be focused on remaining externalities, which largely seem to stem from R&D spillovers and too low incentives for firms to grow and create high-productive jobs. As discussed later, these externalities are likely to be addressed more efficiently through the tax system.

The strong regional dimension in support measures may contribute to disappointing outcomes. On top of EU structural funds, both R&D support and "non-innovation" support is more gauged towards disadvantaged regions (Ottaviano *et al.*, 2009). This bias contributes to entry of less productive firms, as entrants in disadvantaged regions tend to have lower productivity. Although social and regional concerns in terms of employment are relevant, some evidence even suggests that innovation support has had a negative impact on productivity in disadvantaged regions in Finland, through leading to a more inefficient allocation of resources (Ottaviano *et al.*, 2009). Effectiveness of R&D activities is more sensitive to agglomeration benefits and localised knowledge spillovers than most other economic activities, and hence disadvantages in peripheral locations are likely to be large while spillovers are likely to be small. Better value-for-money in R&D support should be assured through actual uniformity in support criteria across Finland. Relevant regional employment concerns should be addressed through labour mobility, more local wage flexibility and sufficient labour market training.

### *Tax policies should support high productivity and growth*

Tax incentives for self-employment and entry are significant, incentivising labour to shift from more productive employment to less productive self-employment. This adds to already existing incentives for self-employment from government support measures and a larger scope for tax evasion among self-employed than employees. The scope for underreporting of income and tax evasion is significant among the self-employed. Based on consumption patterns, Johansson (2005) estimates that self-employment incomes in Finland are underreported by 16-40%, equivalent to 1-3% of GDP. These estimates present an upper bound on the productivity loss from individuals becoming self-employed to exploit enhanced room for underreporting, with the actual effect likely to be significantly smaller.

The dual income tax system (DIT) in place in Finland since 1993 provides incentives for income shifting from earned income to capital income, which is realised through moving

from employment into setting up a business. Thus incentives for choosing self-employment are related to the difference between marginal tax rates on labour relative to capital income, which is significant. Pirttilä and Selin (2011) show that the introduction of the dual income tax system in Finland in 1993 immediately lead to significant income shifting among the self-employed and that this has contributed to rising income inequalities. While there are no direct estimates of the dynamic effects, the more lenient tax treatment of the small firms coincides with the increasing share of self-employed in Finland since 1993 – which have tended to fall in other OECD countries – and the deterioration in productivity of entering firms seen from the mid-1990s (Figure 1.17, Panel A). There is however no direct evidence that the DIT system is leading to excess entry of inefficient firms and therefore lower productivity growth. It should also be noted that the DIT system was introduced to reduce the distortions related to high marginal tax rates on capital income for the self-employed in the previous comprehensive tax system (Sørensen, 2005).

Distortions in corporate taxation may hamper productivity growth in Finland as closely held companies, and often sole proprietors, are taxed less than widely held companies. This hampers successful firms from growing, hindering them from realising scale economies. Inefficiencies here can be identified at two levels. First, non-incorporated sole proprietors may receive a more lenient tax treatment than incorporated firms, as they escape the two-tier taxation on corporate forms (Lindhe *et al.*, 2004). Second, closely held companies are favoured in relation to widely held corporations, due to the partial relief on dividend income for the former. As incorporation and later non-active owners are preconditions for firms' getting access to more capital and achieving stronger expansion, this will hold back entrepreneurial firms. These inefficiencies should be addressed, and if anything tax treatment should be biased in favour of incorporation and wide ownership to support growth to counteract the bias towards self-employment in the DIT system. The reduction in the maximum threshold on tax exemptions on dividends from closely held companies taking place in 2012 is a welcome first step.

Lower corporate taxes would also support growth. Changes in taxation announced in the 2012 budget include lowering the corporate tax rate 1 percentage point (to 25%) and increasing the tax rate on capital income 2 percentage points and making it mildly progressive, will have a negligible impact on investment incentives. Further lowering of corporate taxes should therefore be pursued, with accompanying increases in *e.g.* property taxes.

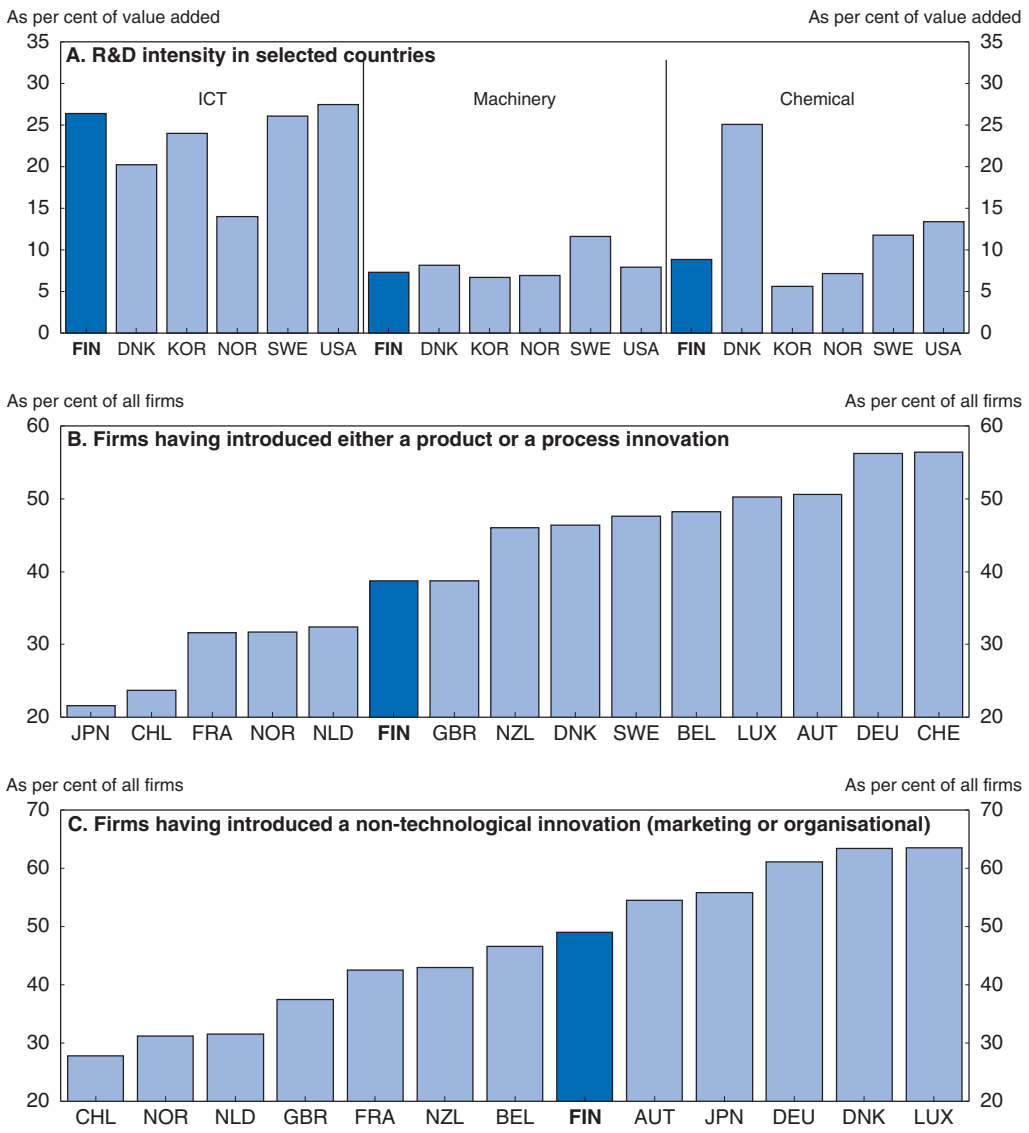
### *R&D policies should be modernised and redirected to more general support for innovation*

Finland's investment in R&D is among the highest in the OECD area. High private and public R&D spending brought the total close to 4% of GDP in 2010 and supply of researchers is high. Still output of R&D is less impressive, with the quality of universities being good but not extraordinary, while firm's output in terms of innovation is mediocre. Furthermore, R&D policies in Finland face additional challenges:

- While private R&D spending amounted to almost 3% of GDP in 2009, higher than in virtually all OECD countries, Finland's level of spending is to a large extent explained by the importance of ICT in production, which tends to be R&D intensive regardless of country (Figure 1.20, Panel A). As described in Box 1.2, value added and profitability in the ICT sector has shrunk dramatically and R&D spending in the sector is being cut, raising questions about the future path of the sector and hence aggregate R&D.

- Similar to Korea but in contrast to some other high R&D countries, such as the United States and Sweden, R&D intensity (as a share of value added) is not particularly high in other industries in Finland (Figure 1.20, Panel A). Less exceptional levels of R&D in other sectors suggest that returns to R&D may be lower than in other high R&D countries (Mathieu and van Pottelsberghe de la Potterie, 2010). Furthermore, intermediate outputs in terms of new innovations and products are lower than in several other OECD countries (Figure 1.20, Panel B and C).
- While publicly funded R&D can play an important role for private sector R&D, government R&D spending only makes up roughly a fourth of the total in Finland (1.1% of GDP in 2009). A wider perspective on instruments is needed to improve the expected

Figure 1.20. **R&D and innovation**




*Source:* OECD, *STAN Database* and OECD calculations.

StatLink http://dx.doi.org/10.1787/888932567352

return of corporate R&D. Specifically, innovation and growth need to be seen in a wider context dealing with competition issues, entrepreneurship and labour market legislation. Access to a sufficiently large local market is often crucial, as was demonstrated when the mobile telephone market took off in Finland in the early 1990s. Market fragmentation is especially severe within traditional public sectors like health, social services and education, where provision is almost exclusively in the hands of small municipalities. This leaves weak incentives and returns for private sector innovation and R&D in these and adjacent sectors.

- Due to the strong catch-up in productivity relative to other OECD countries, a large share of the Finnish economy is now operating at or close to the technology frontier. Under such conditions, firms have to increasingly focus on inventing genuinely new products and technologies rather than imitating leaders. Apart from forcing firms to change their behaviour, this also creates new challenges for government support systems.

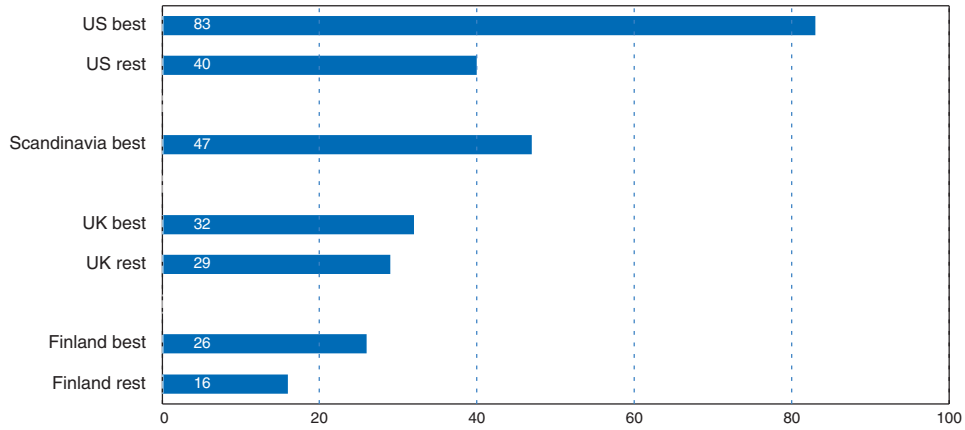
Although government spending on R&D is high in an OECD perspective, evidence suggests that performance can be improved. Spending on R&D in higher education and the output of researchers is high in an international context. Adjusted for population size, Finnish universities rank higher than the European average, but below Nordic neighbours and other top performers in terms of quality (Aghion *et al.*, 2007).

As discussed in the previous *Survey* (OECD, 2010b), the productivity of the higher education system needs to be increased. Cumbersome entrance procedures and requirements that slow entrance to universities, and therefore delay entry into the labour force, should be streamlined. This delay is compounded by long tertiary study times, where only 45% of students complete their studies within the targeted duration (Prime Minister's Office, 2009). Anglo-Saxon countries, such as the United Kingdom and Australia have introduced tuition fees combined with student finance system with income-contingent loans, partly to address these problems. In Finland, acceptance for tuition fees seems low, and tightening administrative rules on financing of studies may be a better way to deal with long study times in universities.

The quality of university research and teaching could also be improved through reaping larger economies of scale and more competition for resources. In an international and Nordic context, Finnish universities and departments are small, reflecting a strong focus on equality across regions and universities (MEE, 2009; Figure 1.21). The 2009 Universities Act envisages mergers, but it remains unclear whether enough scale economies can be reaped, especially in creating sufficiently large and specialised departments. Distributing research grants more competitively, while letting institutions specialise or close down, would provide some market mechanisms to achieve scale economies and competition, and thus higher efficiency.

Support for business R&D should be targeted at areas where the discrepancies between private and social returns are highest. Targeted support risks being captured by business and bureaucratic interests and tends to be administratively costly. Tax based measures have typically been effective in raising R&D spending and reward activities with high private returns, but entails deadweight costs (Bloom *et al.*, 2000). In Finland, policies have focused on direct R&D support measures, primarily provided through the Finnish Funding Agency for Technology and Innovation (TEKES) in terms of grants and loans (see Box 1.5). Direct support for business sector R&D amounts to roughly 0.1% of GDP, which is fairly low in an OECD perspective. The direct support model may have become less

Figure 1.21. **Size distribution of university departments**




*Source:* Deschryvere, 2009.

StatLink http://dx.doi.org/10.1787/888932567371

attractive over time however, as a large share of the economy is operating close to the global productivity frontier, where firm's innovations will be more focused on genuine innovations in terms of technologies and products, resulting in larger technological and market uncertainties (Sabel and Saxenian, 2008). Evaluating projects to provide direct support is more difficult and costly under those conditions, which may show in less successful outcomes in R&D support policies. While the R&D support provided to Nokia by TEKES during the 1990s seems to have been useful for the development of the ICT sector, TEKES' recent support for the climate and energy sectors seems to have had little if any impact on the sectors' performance in terms of value added (NAO, 2011).

The declining returns from direct support measures suggest that new paths should be considered. One conclusion could be that public resources should be concentrated to basic research in the higher education system. Alternatively, as suggested in the 2011 Government programme, the government could consider moving some resources to provide R&D subsidies through the tax system, rather than the current case-by-case approach. Such funding is becoming more popular among OECD countries, and *e.g.* in Norway, Canada and the United Kingdom such credits are more generous for smaller firms. Evaluations of the Norwegian *SkatteFunn* system of tax credits point to a high impact on R&D volumes compared with other support measures and significant positive productivity effects (Cappelen *et al.*, 2008). The system has proved especially efficient in encouraging R&D among smaller firms.

The government should also consider whether current systems provide the best opportunities for promoting co-operation between the public and private sectors. Public procurement is one route that the government has used to promote private sector innovation. To address the imbalance between the focus of current R&D spending and likely future needs, the government introduced a new Innovation Strategy in 2008. This includes funnelling a larger share of public R&D spending towards non-technological areas such as the public sector and private services, with TEKES now funding more R&D in services than in the industry. Concerns have been raised that the top-down approach with Strategic Centres may be too accommodating to established enterprises and sectors and to shifts in government targets (MEE, 2009). These concerns are to some extent confirmed as

the Strategic Centres of excellence for science, technology and innovation first set up since 2006 focused on mature sectors like Forestry, ICT and Metal industries. A bottom-up approach based on universities and firms could provide a more dynamic interaction.

### Box 1.6. **Recommendations for productivity enhancing reforms**

**Enhancing competition and deregulation**

Stronger competition, especially in less internationally exposed service sectors, could boost growth. The government should therefore:

- Pursue more structural reforms within network industries and open up government dominated sectors to private provision, *e.g.* in health in order to increase productivity and provide stronger incentives for private sector R&D in those sectors.
- Follow up the 2011 Competition Act by ensuring that the competition authority has sufficient resources to fulfill its extended mandate.
- Loosen zoning and planning restrictions on retail development to encourage competition and increase store-level scale economies. Incumbent firms should not have a privileged role in the municipal planning process. Neither should consent from neighboring municipalities be needed. Concerns about the environmental impact of out-of centre developments should be addressed by price instruments, like petrol taxes.

**Boosting entrepreneurship, innovation, R&D and growth**

Government support for R&D, entrepreneurship and start-ups should focus on addressing externalities in terms of education, R&D spillovers and creating high productive jobs, largely leaving funding to a generally well-functioning capital market. Specifically the government should:

- Maintain a strong government support role in basic R&D and education. Academic performance should be improved by distributing research grants according to performance creating incentives for competition, specialisation and scale economies in university research.
- Streamline entry procedures and tighten administrative rules on study financing to shorten study time in universities.
- Shrink the number of business supporting institutions. Lower or terminate government support in areas (like VC) where markets nowadays provide equal or better services.
- Consider whether a R&D tax credit would provide higher flexibility, equity and efficiency. Regional equality dimensions should be avoided when distributing R&D support.
- Align capital taxation across organisational forms so that firms face sufficient incentives to expand. Widely held companies should not be discriminated against in relation to closely held companies or sole proprietors.

## *Notes*

1. While total investment in manufacturing, measured in terms of physical capital and R&D, remained fairly constant as a share of value added between the early 1990s and 2010, the R&D share increased from less than 20% in 1991 to more than 60% in 2010 (EK, 2011).
2. Average turnover around 14 million times -0.27 as the estimated coefficient.
3. *www.doingbusiness.org/rankings*.

4. Anyway, levels and composition of VC activity are likely to reflect demand as much as supply. In Finland, private equity and venture capital is highly skewed towards *Communications* and *Transportation*, while sectors like *Consumer goods and retail, Consumer services* and *Energy and environment* receive much less funding, reflecting the role of demand (EVCA, 2011).
5. The large and negative contribution from entry is also evident in plant-level analysis (Hyytinen and Maliranta, 2011).
6. It should be noted that entry may also affect aggregate productivity indirectly by increasing exit rates among inefficient incumbent firms or force the latter to improve their productivity performance in order to survive. The positive contribution of these effects on productivity are likely to be larger if the quality of start-ups increases.

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*Chapter 2*

# Enhancing efficiency and reducing inequalities in health care

*The Finnish health system provides universal coverage for a wide range of services and enjoys high public satisfaction. Nevertheless, performance has been mixed: infant mortality is low, life expectancy is high for women but below OECD average for men, health inequalities are large across socio-economic groups and regions, and efficiency has been declining in recent years. A rapidly ageing population, costly medical technology and rising patients' expectations will strain resources going forward. Therefore, reforms aimed at enhancing efficiency are essential to ensure that high quality health care continues to be provided in a economically sustainable way and that health inequalities are reduced. As the fragmentation of health care provision is a major source of inefficiencies, planned reform to restructure municipalities and services should improve efficiency and quality of care, provided enough mergers are achieved to bring municipalities to a sufficient size. Announced reforms in service provision should improve the balance between primary and specialised care. Further measures to increase user choice and information and enhance prevention and health promotion will be needed to optimise the performance of the system.*

## Health reform ranks high in the Finnish policy agenda

Although the Finnish health care system performs relatively well in terms of health outcomes, it falls behind its OECD peers on efficiency and equality of access. The Finnish health care system offers good quality health care at a moderate cost, provides universal coverage, and enjoys high public satisfaction. It has contributed to improvements in the health of the Finnish population over the past decades, as evidenced by spectacular increases in survival rates following heart attack, stroke and cancer. Nevertheless, on a number of health outcome and efficiency indicators, Finland is lagging the best OECD performers. Furthermore, it is among the OECD countries with the highest health inequalities and these increased over the past two decades, despite policy efforts to reduce them.

There is wide agreement in Finland that efficiency and inequality issues need to be tackled. A number of institutions have made reform proposals and the government is planning a reform of municipalities and services, which should improve efficiency and quality of care. This *Survey* draws on OECD best practice and benchmarks to contribute to that debate. The case for reform is reinforced by the challenges from rapid ageing. While Finland has been able to contain spending on health care better than many other OECD countries, increasing cost of medical technology, rising patients' expectations and a rapidly ageing population will strain resources. This may require raising taxes or restricting the supply of public health services significantly, unless productivity gains take place. Higher taxes may lower the growth potential of the economy by discouraging activity and shifting some production abroad. Restricting public health care provision would also affect the growth potential through a detrimental effect on health and hence the ability of individuals to participate in the labour market.

Improving the population's health can bring huge benefits in terms of well-being, growth and productivity (Box 2.1). The health status affects labour supply, which will be all the more important for economic growth as the old age dependency ratio increases. Individuals in good health are more productive, less often on sick leave and enjoy better opportunities to build up human capital. The chances that they retire early are reduced. Gains in labour supply can be significant. In 2009, more than 25 000 people (0.7% of the working-age population) retired on disability pensions, two thirds of them because of musculoskeletal or mental disorders. In the same year, 8.5% of the population aged 20-64 was on disability benefits, compared to an OECD average of 5.7% (OECD, 2010a).[1] Furthermore, additional losses in productive capacity arise from individuals in poor health who continue to work, but with reduced productivity. Finally, as older people remain in good health for longer it reduces the burden of care on their relatives, who are more likely to take up a job.

This chapter describes the organisation of Finnish health care and assesses its performance in terms of health outcomes, equality and productivity. Subsequently, it examines policies to ensure sustainability in the face of rapid aging, and to improve quality, equity in access and efficiency.

Box 2.1. **Health is a key dimension of well-being**

Finland has one of the highest levels of life satisfaction in the OECD. It ranked second after Denmark in 2008 in the Gallup World Poll, and fourth in the World Values Survey 2005-2008 (Table 2.A1.1). However, while Finland's GDP grew substantially between 1981 and 2008, life satisfaction has been roughly stagnant or even in decline, from 7.91 in 1981-1984 to 7.84 in 2005-2008 (World Values Survey; Table 2.A1.2). During the same period, self-assessed health has worsened, while it has improved in the OECD as a whole.

The most important factor for self-reported subjective wellbeing in Finland, apart from income, is good health (Table 2.A1.3). An increase in reported health by 1 unit (for instance, moving from good health to very good health) would increase overall life satisfaction by roughly 5% on average in Finland. Other important determinants are being employed and having freedom of choice in everyday activities. Being unemployed has a large negative and significant coefficient of 0.4. Interestingly, the same ranking in determinants of life satisfaction applies in Sweden and Denmark. However, the coefficient of health is highest and above the OECD average for Sweden, while Finland and Denmark are both below the OECD average.

The government's explicit goal is to improve the wellbeing of current and future generations. It has recognised that wellbeing is a multi-dimensional concept that goes beyond GDP per capita and economic performance and policy should take into account the stock of environmental, human and social resources. The above results show that apart from increasing GDP per capita, consumption and income, Finland's wellbeing would be enhanced, compared to the OECD average by policies related to the education system, employment, stronger freedom in life and social cohesion. However, the most important factor overall seems to be the subjective state of health.

## The performance of the Finnish health care system has been mixed overall

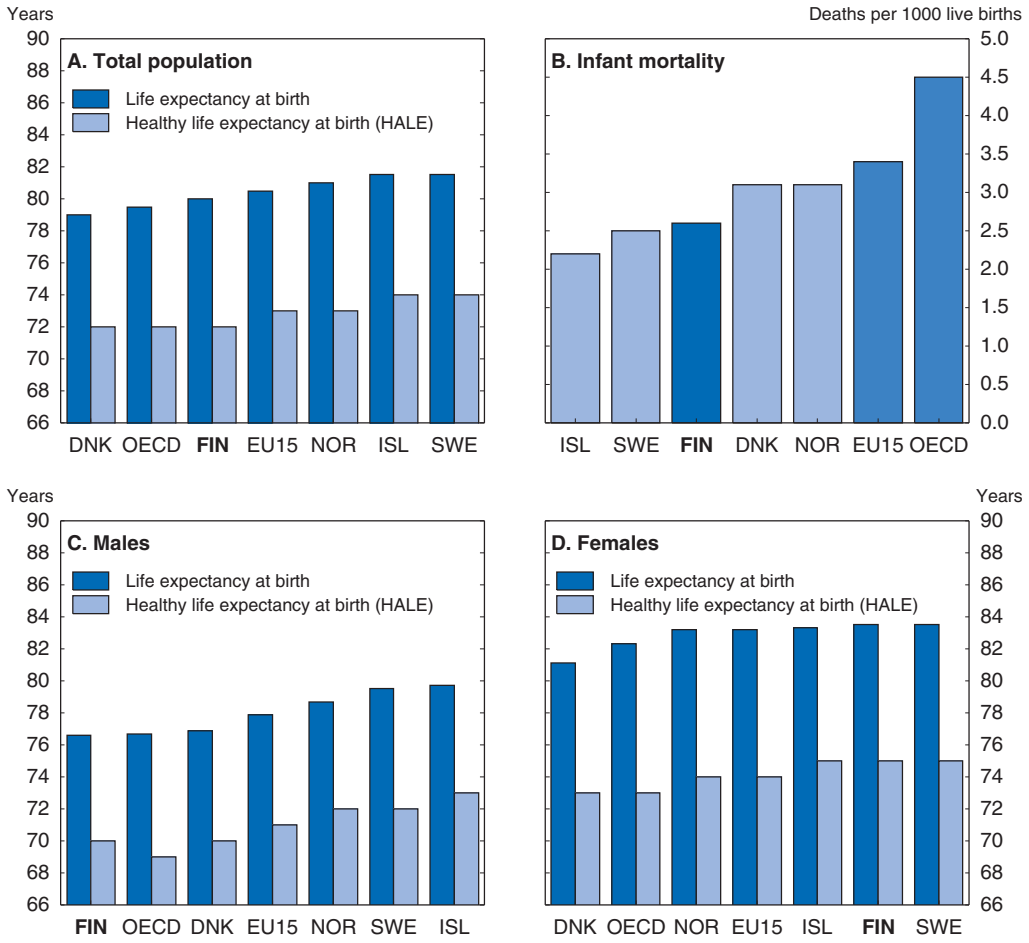
System-level efficiency indicators, while crude and imperfect, can be useful to assess the performance of the Finnish health care system against relevant benchmarks, in particular OECD and EU15 averages as well as other Nordic countries (EU15 refers to the 15 countries that formed the European Union in 1995). They can be complemented by some relevant sub-sector and disease level performance information (OECD, 2010b). This section puts Finnish health outcomes into international perspective before relating them to inputs, such as health care spending or the number of health practitioners, to derive efficiency indicators.

### *Life expectancy is above average with women in better health than men*

Life expectancy at birth for the total population is above the OECD average but below the EU15 average and the best performing Nordic countries (Figure 2.1). The difference in life expectancy between genders is one of the highest in the EU15 and within the OECD it is higher only in eastern European countries. While life expectancy for women is among the top 10 in the OECD, it is below the EU15 average and all other Nordic countries for men. Healthy life expectancy (HALE), an indicator developed by the World Health Organisation to account for years lived in less than full health due to disease and/or injury, shows a similar pattern, although HALE for males is slightly higher than the OECD average. Mortality differences between working-age men and women relate to causes both amenable to health care and outside its direct control. Mortality from ischaemic heart diseases is six times higher for men, while alcohol-related and accidental deaths are nearly four times

Figure 2.1. **Life expectancy and infant mortality**

2010 or latest available year[1]




1. 2007 data for healthy life expectancy at birth (HALE).

*Source:* OECD, *Health Database* and WHO, *World Health Statistics 2010*.

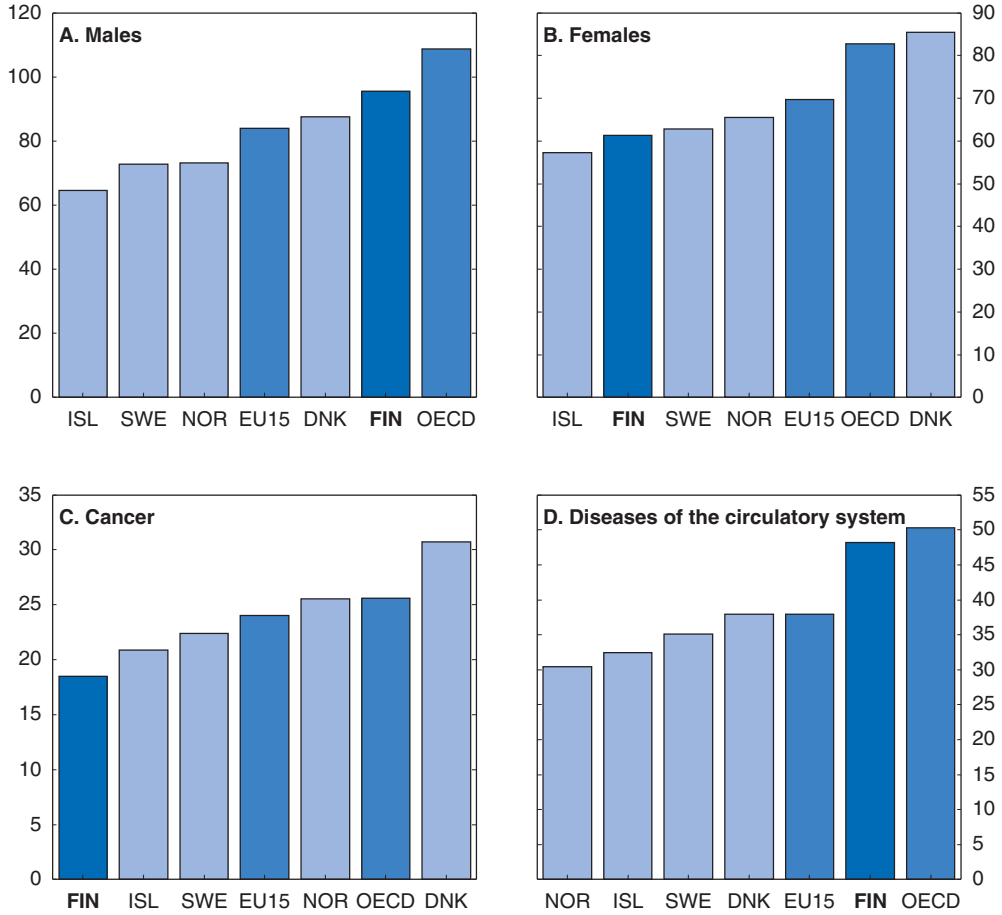
StatLink http://dx.doi.org/10.1787/888932567390

higher (Statistics Finland, 2011). The infant mortality rate in Finland, as in other Nordic countries except for Denmark, is among the lowest in the OECD, presumably reflecting the longstanding priority given to maternity and childcare in Finland.

Gender differences in terms of amenable mortality are also large (Figure 2.2, Panel A). Amenable mortality – *i.e.* those deaths that could be avoided by timely and effective medical care – provides a better measure of the impact of health care on the population's health status than life expectancy, even though it is affected by the prevalence of diseases as well as medical achievements (Gay *et al.*, 2011). Finland's amenable mortality rate for men is higher than in any other Nordic country, but for females it is the second lowest after Iceland. The results also vary widely across diseases. Diseases of the circulatory system and cancers, together, account for more than 80% of amenable mortality in Finland and the OECD. The number of avoidable deaths from cancer is the second lowest in the OECD, in part reflecting effective prevention and screening, whereas amenable mortality from diseases of the circulatory system are significantly above all other Nordic countries and the EU15 average. This may to some extent reflect external factors, such as lifestyle, but might also result from weaknesses in prevention and health care provision (Figure 2.2, Panel B).

Figure 2.2. **Amenable mortality by gender and cause**

Age-standardised rates per 100 000 population in 2007[1]




1. 2006 for Denmark, Norway and Sweden; the OECD and EU15 averages exclude Belgium.

*Source:* Gay, J.G. *et al.* (2011), "Mortality Amenable to Health Care in 31 OECD countries: Estimates and Methodological Issues", *OECD Health Working Papers*, No. 55, OECD Publishing.

StatLink http://dx.doi.org/10.1787/888932567409

### *Health inequalities across socio-economic groups and regions are large*

Differences in health status are large between socio-economic groups and have increased since the 1980s despite the fact that reducing health disparities has long been a key policy objective. The gap in life expectancy at 35 between the highest and the lowest income quintiles was 12.5 years for men and 6.8 years for women in 2007. Moreover, since 1988, it has widened by 5.1 years for men and 2.9 years for women (Tarkiainen *et al.*, 2011).[2] Smaller reductions in mortality from cardiovascular diseases and – to a lesser extent – alcohol-related diseases, accidents and suicides in lower socio-economic groups have driven up inequalities. Such a pattern is not unusual. A report commissioned by the UK Presidency of the European Union in 2005 found inequalities in health between people with higher and lower educational level, occupational class and income level in all European countries and a widening of those inequalities during the last decades of the 20th century (Mackenbach, 2006). However, health inequalities seem to be particularly high in Finland, which contrasts with income and education inequalities, which are among the lowest in the OECD (OECD, 2010c).

Reducing health inequalities requires improvements in health care access, effectiveness and prevention focusing on low income groups. Roughly half the mortality differences between socio-economic groups in Finland in the 1990s have been estimated to be related to variations in alcohol and tobacco consumption (Palosuo *et al.*, 2009). But prevention and new treatments, notably for cardiovascular diseases, also seem to have benefitted the upper classes most (Martikainen *et al.*, 2001). Morbidity, as measured by self-assessed health status, is about twice as high among people with low education relative to those with high education. Inequalities in morbidity are similar to those of other EU countries and have remained broadly stable over the past decades (Palosuo *et al.*, 2009). Measures should thus focus on effective disease prevention and promotion of healthy lifestyles and actions on the socio-economic determinants of health, such as poverty and income inequalities (OECD, 2010c; Rotko *et al.*, 2011).

Regional health differences are also large. Age-standardised mortality rates of the 15-64 population ranged between 230 and 440 for 100 000 in 2009 (Statistics Finland, 2011). Regional differences in working age population mortality rates seem to have remained fairly constant over the past 20 years, while differences in life expectancy are somewhat larger than in Sweden but smaller than in Denmark. For men, they tend to be larger than in western and southern Europe (Valkonen, 2001). Differences are considerably larger than the all causes average for some specific causes of death, including ischaemic heart diseases and alcohol-related illnesses. Regional differences in mortality seem to reflect both lifestyle factors and causes amenable to health care.

Efforts to reduce health inequalities have not produced good results. The Health 2015 public health programme set the objective of reducing mortality differences between genders and socio-economic groups by a fifth (MSAH, 2001).[3] However, since the launch of the programme, inequalities have rather increased than diminished. Facing this situation, the government set a national action plan to reduce health inequalities in 2008. The plan is structured around three priority areas: social policy measures (improving income security and education, decreasing unemployment and poor housing); strengthening the prerequisites for healthy lifestyles, with special attention to disadvantaged groups where unhealthy behaviour is common; and improving the availability and quality of social and health care services for everyone (MSAH, 2008).

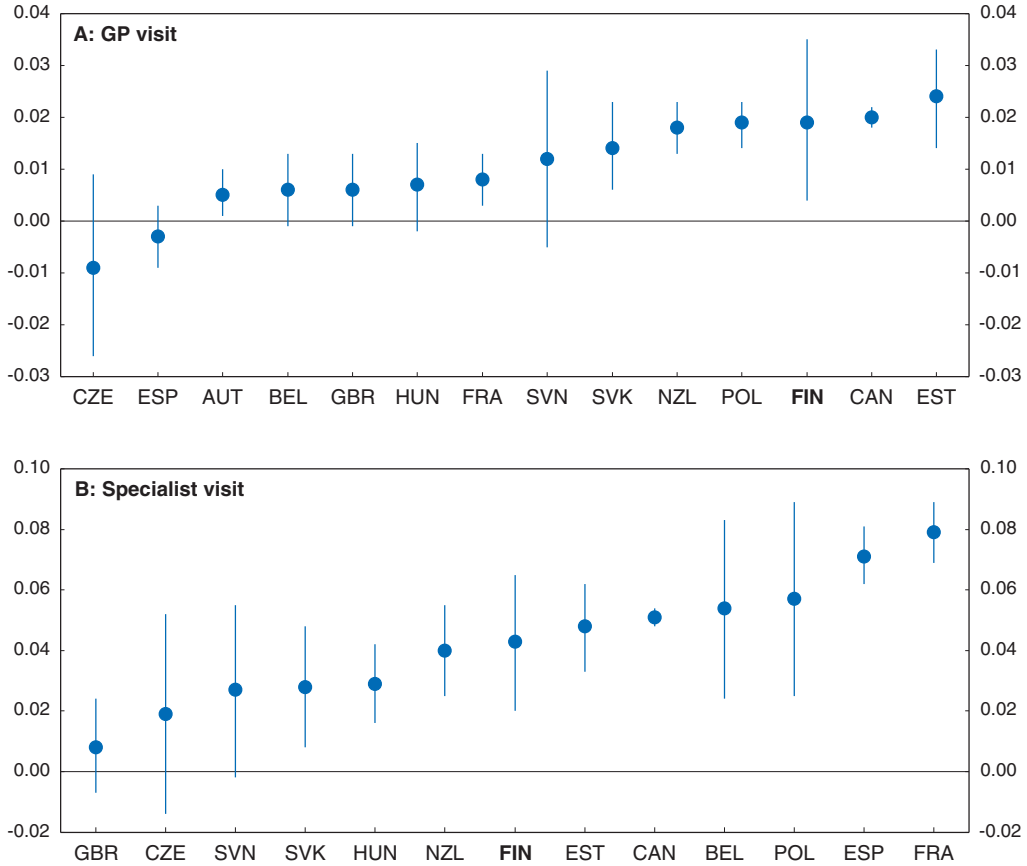
Although health inequalities can be related to factors that are to some extent outside the control of the health care sector, the nature of health policies can be important. Prevention of risky behaviour and promotion of healthy lifestyles are part of broadly defined health policies. Furthermore, inequalities in access to high quality health care are also likely to contribute significantly to health differences. Inequalities in access to GP and specialist consultations favouring the highest income groups are among the highest in the OECD (Figure 2.3). Such inequalities result, at least in part, from the fragmentation of the Finnish health care system, where small municipalities are facing difficulties to provide adequate health care services.

### *While Finns are generally satisfied with their health system surveys point to important weaknesses*

Public satisfaction with the health system is high. Although public satisfaction is an important objective of health policy, it is subjective and is only weakly correlated with objective indicators of health status (OECD, 2010b). A survey carried out in 2009 for the European Commission showed that 94% of respondents described the overall quality of healthcare in Finland as good, a proportion surpassed only in Austria and Belgium. Finns

Figure 2.3. **Inequality in access to physicians**

Horizontal inequity indices[1] for probability of a doctor consultation[2], 2009[3]




1. The probability of a GP or specialist visit is inequitable if the index is significantly different from zero. It favours low income groups when it is below zero, and high income groups when it is above zero.
2. With 95% confidence interval.
3. Or nearest available year.

*Source:* OECD (2011), *Health at a Glance 2009*: OECD Indicators, Charts 6.5.2 & 6.5.3.

*StatLink* http://dx.doi.org/10.1787/888932567428

were also among the EU citizens who felt the least likely they could be harmed by hospital or outpatient care (Special Eurobarometer 327). The Eurobarometer 283 survey (2007) shows that Finns are very satisfied with the quality of the health care they receive, but less so with accessibility (especially to dentists and GPs) and affordability (especially for specialists). A 2009 Gallup poll confirmed the high level of confidence in the health system, with 85% of positive answers. However, only 66% of respondents were "satisfied with the availability of quality healthcare in their city or area" and the difference between confidence in the national health system and satisfaction with local services was the largest in the OECD (Brown and Khoury, 2009). Waiting times seem to be the main source of dissatisfaction with local services.

In the 1990s and early 2000s, Finland's health care was affected by a lack of responsiveness to demand, a common problem in public integrated systems combining mostly tax financing with mainly public health care provision. Waiting times in primary care (measured by the proportion of patients having to wait more than two days for a consultation with a general practitioner) in the mid-90s were the third highest in a sample

of 16 European OECD countries, only surpassed in Sweden and Norway. Waiting times for the most common elective surgical procedures were the longest in a sample of seven OECD countries in 2000, with an average of over 200 days (OECD, 2005). Furthermore there were large variations in waiting times across municipalities (Vuorenkoski *et al.*, 2008; Teperi *et al.*, 2009). The government has taken steps to improve quality of services over the past decade resulting in reduced waiting times. In 2005, a new law (Primary Health Care Act and Act on Specialized Medical Care) set maximum waiting times for health interventions: immediate contact with health centres during working hours by phone or personal visit must be guaranteed and non-urgent appointments must be made within 3 working days. Treatment needs must be assessed within 3 weeks following hospital referral and non-urgent hospital treatment must take place within 6 months thereafter. Monitoring has also been developed, in particular with a requirement for quarterly publication of waiting lists by all public health care providers. The legislation led to a large reduction in waiting times (Vuorenkoski *et al.*, 2008). Waiting times for hospital treatment have shrunk spectacularly, with the number of patients waiting more than 180 days falling from close to 10 000 at the end of 2007 to around 1 000 in spring 2011.

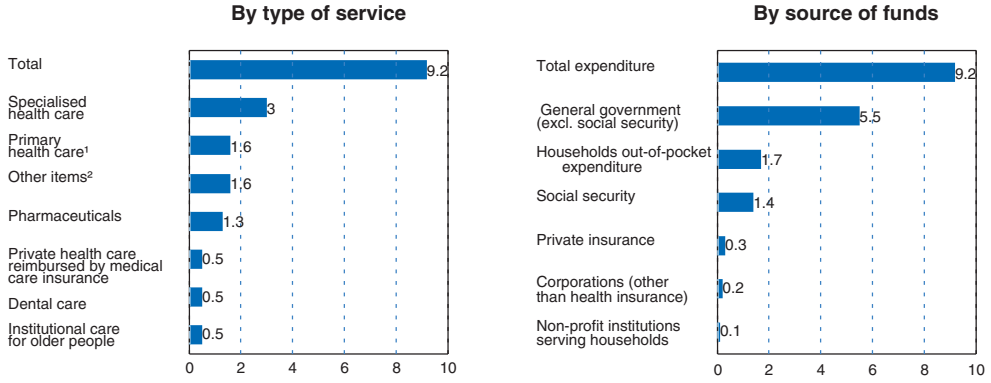
However, problems remain, especially in primary care. In March 2011, nearly 80% of the population lived in an area where the waiting time for a GP consultation was over two weeks and this proportion was rising. For a dentist consultation, the waiting time was over four weeks in 85% of health centres. Such a situation creates inequalities in access to health care as employees can use occupational health care and private consultations are available to those who can afford large co-payments.

## The highly decentralised health care system with multiple tracks and parallel financing contributes to inequality and inefficiency

The Finnish health care system can be characterised as an integrated public health care system, similar to those of other Nordic countries, the United Kingdom and southern Europe (Box 2.2). In these systems, health care is mainly provided by the public sector and financed through taxation. Two distinctive features of the Finnish system are a high degree of decentralisation and a parallel system of funding combining taxation and national health insurance (Figure 2.4).

Figure 2.4. **Breakdown of health expenditure**

Per cent of GDP, 2009




1. Excluding occupational and student health care as well as dental care.
2. Gross health investments, occupational and student health care and therapeutic appliances.

*Source:* Ministry of Social Affairs and Health and OECD, *Health Database*.

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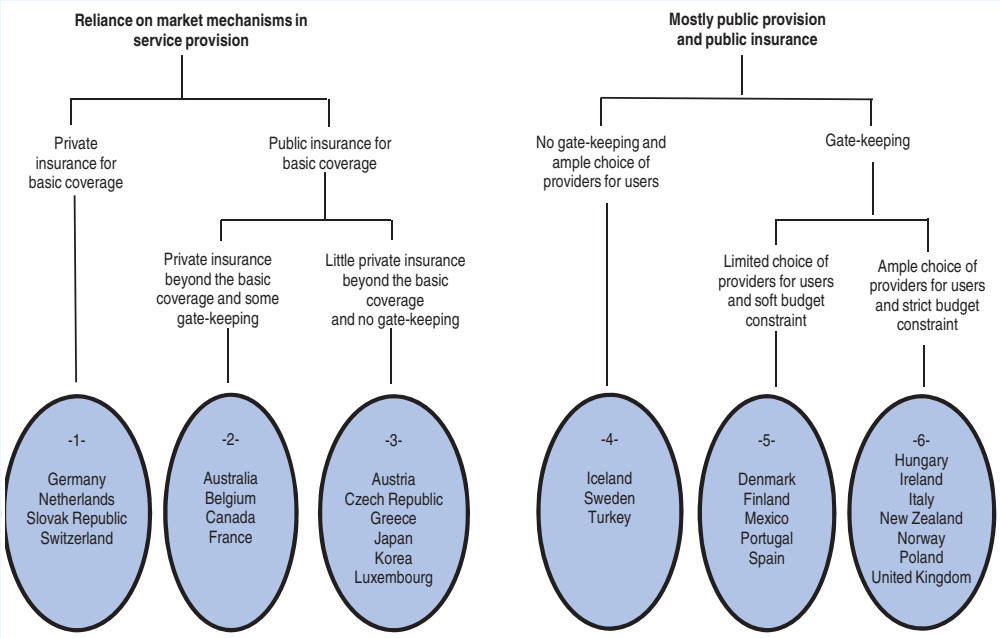
## Box 2.2. **The Finnish health care system in OECD perspective**

A recent OECD report establishes a typology of health care systems based on a set of information on health policies and institutions gathered from 29 OECD countries, with the aim of providing a more thorough description of health systems than the usual classifications based on financing models (OECD, 2010b). The first divide across OECD health care systems is between the countries, like Finland and other Nordics, where the government finances and provides most health services and those giving a greater role to private provision and in some cases financing of health care (Figure 2.5). Among the first group of countries, a further split relates to the intensity of gate-keeping – the need for referral to access specialised care – and the ability of patients to choose between health care providers. Finland has quite strong gate-keeping and limited user choice, which differentiates it from Sweden and Iceland. The degree of user choice and the tightness of the budget constraint are further discriminating factors. Countries in the group to which Finland belongs have relatively soft budget constraints and offer limited choice of providers to patients, contrary to those of the group which includes Norway.

Figure 2.5. **Typology of OECD health care systems**[1]




1. These country groups are derived from a cluster analysis. The countries on the left, such as Germany and the Netherlands, tend to rely on market mechanisms to supply health care whereas those on the right, such as Finland and the United Kingdom, depend more on public command-and-control. Apparently diverse countries fit the same group: the rules in Iceland, Sweden and Turkey for instance all provide for ample user choice even if in practice there are geographical and other constraints. Note that the United States did not participate in the Survey.

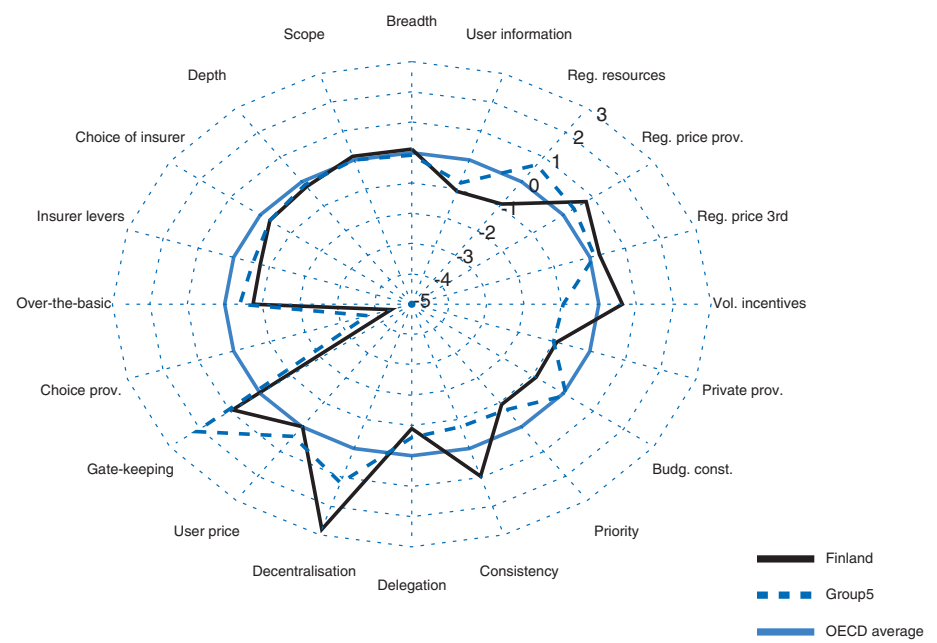
*Source:* OECD (2010), *Health Care Systems – Efficiency and Policy Settings*, OECD Publishing, Paris.

Overall, the Finnish health care system has institutional characteristics that are broadly similar to those of Denmark, Mexico, Portugal and Spain (Figure 2.6). In addition to the features mentioned above, in most countries of this group the provision of health care is highly decentralised. Finland stands out as one of the most decentralised systems in the

Box 2.2. **The Finnish health care system in OECD perspective** *(cont.)*

OECD (Vuorenkoski *et al.* (2008). The decentralisation indicator from the *OECD survey* on health system characteristics ranks Finland as the third most decentralised country among 29, behind Spain and Canada. Finland is the only Nordic country that delegates the financing and governance of primary, hospital care and social services to municipalities (OECD, 2005). This attribution of responsibilities reflects the organisation of Finnish government around only two tiers (central and municipal), while counties constitute an intermediate level in Denmark, Norway and Sweden (Moisio *et al.*, 2010).* Norway and Denmark have been moving towards greater centralisation since, respectively, 2002 and 2007. In Canada and Spain a large part of responsibilities lies with regions rather than municipalities, which implies less fragmentation of health care. Moreover, the largest Canadian provinces and Spanish autonomous regions have a larger population than Finland as a whole. Meanwhile, health care costs account for a large share of the budget of Spanish autonomous regions, which are struggling to meet their fiscal targets in the current difficult economic and financial context.

Figure 2.6. **Policy and institutions**[1]




1. Country groups have been determined by a cluster analysis performed on policy and institutional indicators. Group 5 is Denmark, Finland, Mexico, Portugal and Spain. Data points outside the average circle indicate that the group or the country under scrutiny performs better than the OECD average. The data shown are simple deviations from the OECD average.

*Source:* OECD (2010), *Health Care Systems – Efficiency and Policy Settings*, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888932567466

* The 19 regions are instruments for municipal co-operation rather than an autonomous intermediate tier of government, as regional council members are nominated by municipalities and regions lack own revenue sources (Moisio *et al.*, 2010).

### *The delivery of primary care through three channels contributes to inequalities*

*Municipal health care* provides the largest share of primary care, including more than 70% of outpatient physician consultations and nearly 60% of dentist visits (Vuorenkoski *et al.*, 2008). Legislation (Primary Health Care Act) requires municipalities to have a health centre providing primary health services. Health centres run jointly by a federation of municipalities are an option in sparsely populated areas (there were 162 health centres for 336 municipalities in 2011). Municipal health centres provide a wide range of services, from general outpatient care to laboratory services and dental care. Many health centres also have inpatient facilities (typically 30 to 60 beds), mainly providing long-term care for chronically ill elderly individuals. The concentration of activities in health centres provides opportunities for co-ordinated care, especially for chronic diseases, which are becoming more prevalent as population ages (Teperi *et al.*, 2009).

Providing quality health care can prove challenging for small municipalities, especially in sparsely populated areas where they are often struggling to recruit qualified personnel and cannot benefit from economies of scale (Box 2.3). Health centres provide wide access to care, as they charge only modest user fees of 8.9% of total costs on average (2009) and annual ceilings on out-of-pocket payments prevent patients from catastrophic costs. They constitute the only available care option for the poor and jobless, who do not have access to occupational care and cannot afford user fees in the private sector. Hence, ensuring the ability of health centres to provide timely quality health care is essential from an equity standpoint.

Box 2.3. **Pros and cons of decentralisation in health care**

The Finnish health care system is one of the most decentralised in the OECD, with municipalities responsible for most health care financing and provision. This Box summarises the main pros and cons of decentralisation in the Finnish context – for more details, see Bremner (2011) and OECD (2005).

**Pros**

- Municipalities are accountable to local residents and may show greater flexibility than higher levels of government in responding to local needs and preferences.
- A decentralised system allows more innovation and experimentation than a centrally-planned system.
- As municipalities are responsible for social services, they may be able to offer greater integration between social and health services, especially for the most vulnerable.
- Decentralisation, with taxes levied at the municipal level, may encourage fiscal discipline.

**Cons**

- Decentralisation generates regional inequalities in access to health care and quality of services. It is challenging for small municipalities to provide adequate health care services, in particular because they suffer from diseconomies of scale and often face difficulties in recruiting medical staff.
- Small municipalities often lack the expertise needed to organise, plan or purchase health services efficiently. The bargaining power of municipalities in dealing with large providers is often limited, potentially leading to higher prices than a single payer could negotiate. Furthermore, as municipalities have more control over health centre than hospital district spending, specialised care may be favoured at the expense of primary care.

Box 2.3. **Pros and cons of decentralisation in health care** *(cont.)*

- Risk pooling is very limited in small municipalities, generating uncertainty about health care costs and exposing small municipalities to catastrophic costs. A risk-equalisation scheme is used to ensure national equity in financing. However, such schemes are always imperfect as finding the adequate risk-adjustment formula is very difficult.
- Conflicts of interest may arise as municipalities are both purchasers of health services on behalf of their residents and producers of health services employing large numbers of local staff. Some estimates suggest that municipalities would be willing to accept hospital costs 20% higher to avoid hospital's closure.
- Local information systems have developed independently and lack of harmonisation at the national level is an obstacle to effective co-ordination of care and benchmarking of health care providers.
- The fragmentation of the hospital sector limits opportunities for economies of scale and scope and specialisation for complex treatments.

*Occupational health care* provides a substantial amount of primary care to employees, who account for about a third of the population. Firms are required by legislation (Occupational Health Care Act) to provide preventive care to their employees, but many large and medium-sized employers also provide extra services – in particular access to GPs – free of charge. In the mid-2000, additional services were provided to some 90% of employees with access to compulsory occupational health care services and 45% of employees' physician consultations – 13% of the total number of consultations – were in occupational care (Teperi *et al.*, 2009, Vuorenkoski *et al.*, 2008). Occupational health care is either supplied in health care units owned by employers or purchased from private or municipal providers. It is funded by employers for more than half of the costs, the complement being borne by the earned income insurance section of the National health insurance (NHI), which collects social contributions from employers (66% of revenues) and employees (26%) and receives a state subsidy (5.5%).

*Private health care* offers a complement to public provision, enhancing user choice for patients who can afford to pay the high co-payments and offering a "safety valve" whenever the public sector struggles to respond to demand. The private sector mainly supplies primary care, accounting for 16% of the overall number of consultations and 25 to 30% of specialist visits. The private share is especially high in dental visits (about 40%) as the municipal sector suffers from a shortage of dentists. NHI reimburses up to 60% of the basic tariffs set by the government, but since many health professionals are charging fees well above the tariffs, the effective reimbursement rate is around 30%.

### *The organisation of secondary care in numerous hospital districts is costly*

The 20 hospital districts are managed and financed by federations of municipalities. Each municipality has to be part of a hospital district. Hospital districts include a central hospital – five of which are university hospitals – and in some cases a few smaller general hospitals or more specialised units (*e.g.* psychiatric, or children's care). Patients need a referral from their health centre or a private or occupational physician to access non-emergency hospital treatment. Small user fees are charged, on average 3.9% of total costs (2009).

### *User choice has been limited but is being gradually expanded*

A new Health Care Act, which came into effect on 1 May 2011, expands user choice in the municipal sector, in two steps. Since May 2011, patients have access to non-emergency health care outside their municipality under special circumstances (*e.g.* if they reside in another municipality on a regular or long-term basis). From 2014, patients will have the right to choose their health centre and hospital from all such units in the country. The main objectives are to empower patients, ensure equal access to services, improve the quality of care and co-ordination between primary and secondary health care, as well as between social and health services (Mäntyranta *et al.*, 2011). Before the new Health Care Act, virtually no user choice was available within the public health sector, although many patients had a choice between public and occupational and private care. Most OECD countries provide more user choice, especially other Nordics apart from Denmark (OECD, 2010b).

### *The parallel financing system contributes to inefficiencies*

Health care is mainly financed by a combination of local and national taxes and compulsory NHI, plus patients' co-payments. Municipal taxes and central government grants fund municipal health care, including secondary care provided by hospital districts. In 1993, to improve cost control, enhance efficiency of municipal health services, empower municipalities and reduce state regulation, the central government moved from retrospective payment of actual costs to non-earmarked block grants. Grant amounts are determined through a formula taking into account population and estimated needs for services based on the age structure of the population, an indicator of morbidity and the remoteness of the municipality. In addition, a revenue equalisation scheme ensures redistribution between municipalities with varying abilities to raise revenues. NHI reimburses private and occupational health services, outpatient prescribed drugs – at a standard rates of 42% and higher rates for treatments for specific chronic conditions or other serious diseases (72% and 100%) – and pays sickness and maternity benefits.

The drawbacks of the parallel provision of health care seem to overweigh the advantages (Table 2.1). Occupational and private care partly financed by social insurance allow employees or patients who can afford high co-payments better access to health care and eases pressures on a sometimes overstretched public sector by encouraging the development of private care provision. Substitution of occupational care (which is partly financed by employers) or private care (with large co-payments) for public care reduces costs for municipalities. User choice, which has so far been very limited in the public system, is thereby expanded at a limited cost for public finances. However, the system produces incentives for cost-shifting between activities financed through different channels, which lead to sub-optimal decisions regarding the provision of care and large inequalities in access between socio-economic groups with different coverage and financial resources, and regions with varying health care supply. The system generates duplication of services in primary and occupational care, over-capacity in diagnostic services, weakening of control over public spending, low cost-consciousness in drugs prescribing, diminished pressures for quality improvement in health centres and diversion of resources from the municipal sector (OECD, 2005).

Table 2.1. **Main features of the parallel provision of health care**

| Health care provider | Municipal | Private | Occupational |
|---|---|---|---|
| Cost containment | Fairly strong | Weak | Weak |
| Accessibility of manpower | Challenging | Good | Excellent |
| Regional accessibility of services | Fairly good | Unequal | Unequal |
| Access to care | Still some waiting time problems | Good | Good |
| Referral to specialist care | Needed | Not needed | Needed |
| User choice | Limited | Good | Employer's choice |
| National steering | Weak | None | Weak |

*Source:* National Institute for Health and Welfare.

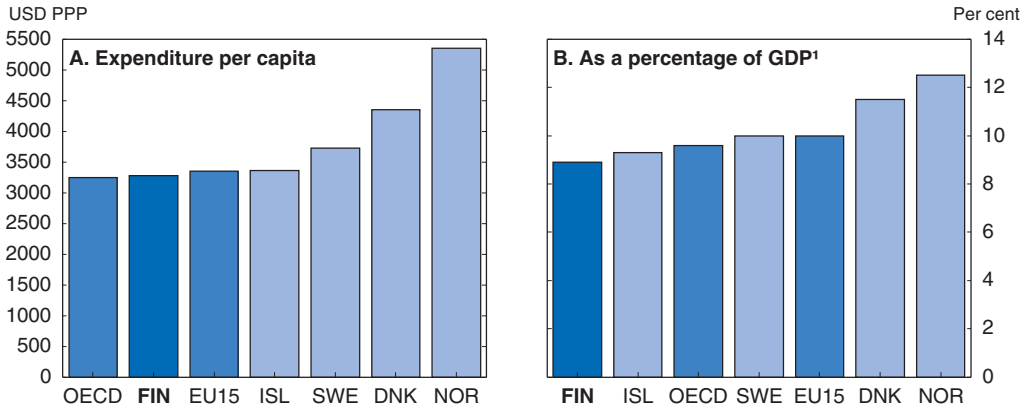
## *Rising spending pressures call for efforts at improving input use and efficiency*

### *Health expenditure is moderate but rising*

In 2007, per capita expenditure was only slightly above the OECD average and below the EU15 average and other Nordic countries (Figure 2.7, Panel A). Health spending accounted for 8.2% of GDP, again below the OECD average and all other Nordic countries (Figure 2.7, Panel B). Moderate spending reflects the ability of the public-integrated health care model to control costs more effectively than other types of systems, with more private sector involvement, as budget constraints are tighter (Docteur and Oxley, 2003). A relatively low number of doctors, a skill mix giving an important role to nurses and fairly modest remuneration of health professionals have also contributed to contain costs.

Figure 2.7. **Total expenditure on health care**

2010 or latest available year



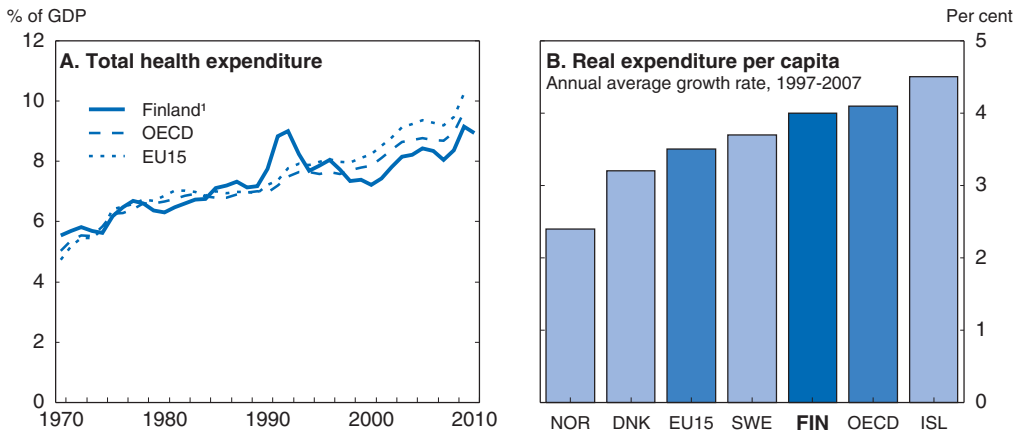

1. Mainland GDP for Norway.

*Source:* OECD, *Health and Economic Outlook Databases*.

*StatLink* http://dx.doi.org/10.1787/888932567485

Spending growth has accelerated over the past decade. Finland followed the OECD average closely between 1970 and the early 1990s (Figure 2.8, Panel A). The period following the deep recession in the early 1990s was characterised by spending restraint, accompanied by productivity gains which allowed the level of service provision to be broadly maintained (OECD, 1998). But since the turn of the century, pushed by economic growth and developments in medical technologies, health expenditure as a percentage of GDP has been growing again in line with the OECD average (Nguyen *et al.*, 2009). Over the ten years to 2007, average real health expenditure growth has been 4%, close to the

Figure 2.8. **Trends in health care spending**[1]




1. Break in series for Finland in 1993 and 1995.
*Source:* OECD, *Health Database*.

StatLink http://dx.doi.org/10.1787/888932567504

OECD average, but higher than in the EU15 and other Nordic countries except Iceland (Figure 2.8, Panel B). While higher expenditure growth than in neighbouring countries might be partly justified by previous restraint and a lower initial level of spending, the trend needs to be monitored closely as the rapidly ageing population, costly medical technology and rising patients' expectations will generate further spending pressure.

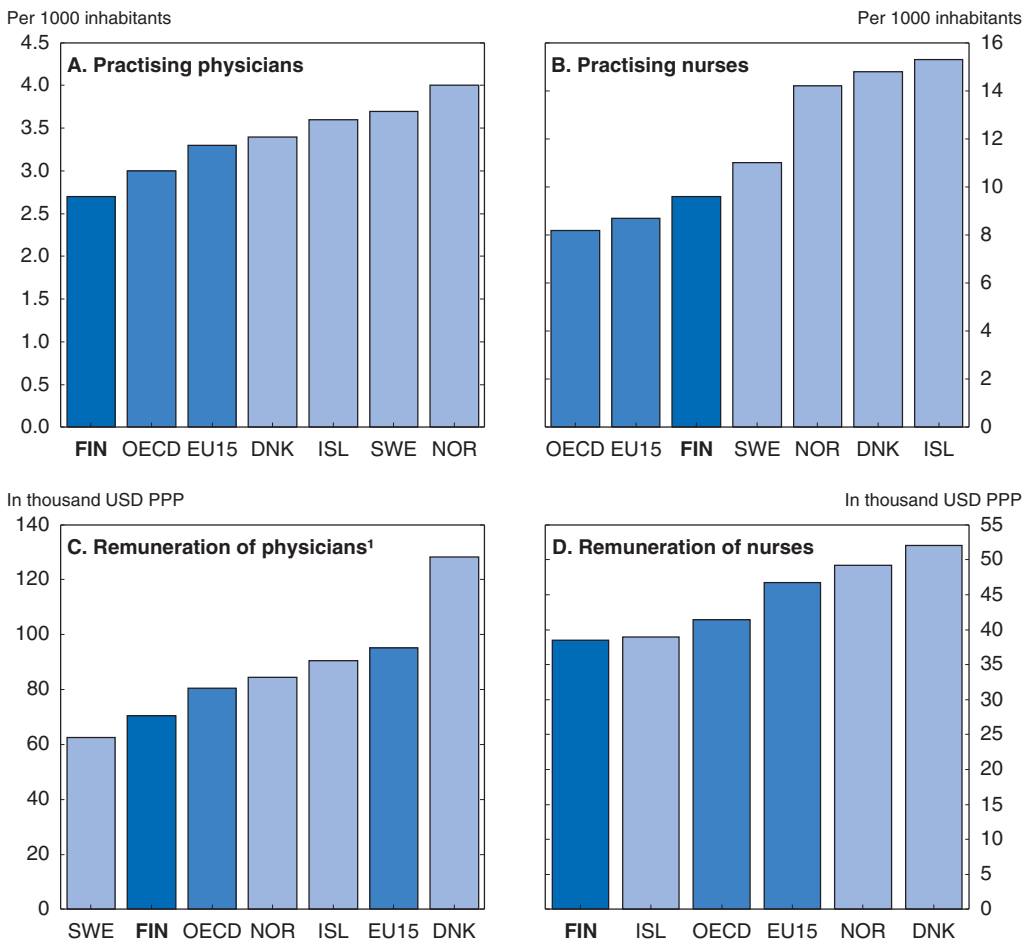
Current projections show that cost-containment measures will be necessary to ensure the sustainability of high quality health care provision over time. Projections from the Ministry of Social Affairs and Health (MSAH) and the OECD point to substantial increases in public expenditure on health and long-term care over coming decades. MSAH projections suggest that, on the basis of the current consumption structure, expenditure could rise from 7% of GDP in 2008 to nearly 11% in 2050. According to OECD projections, the increase in expenditure by 2050 would be between 3 and 6 points of GDP, depending on assumptions about cost developments. The highest estimate corresponds to the assumption that, for given demographics, expenditure grows 1% per annum faster than income – corresponding to the OECD trend over the past two decades – while the lowest implies that expenditure growth converges to income growth by 2050 (Oliveira Martins and de la Maisonneuve, 2006). Cost developments are estimated to account for an increase in spending of 1.3 to 4.2% of GDP by 2050, to which the demographic effect would add 1.8% of GDP. In the high-cost scenario the increase in costs dwarves the demographics effect, highlighting the importance of cost containment to ensure the financial sustainability of the health care system. Some drivers of cost increases, such as productivity differentials (Baumol effect), medical technology developments and public expectations are to some extent beyond the control of policymakers. Failure to contain costs would result in higher taxes or social contributions, a reduction in the supply of other public services, a deterioration of the quality of health services, higher out-of-pocket payments by households or a combination of these undesirable outcomes.

### *The health workforce is fairly small and inexpensive by international standards and in short supply*

The number of doctors is fairly low at 3 per 1 000 inhabitants, compared to an EU average of 3.5 and even higher numbers in Iceland, Sweden and Norway (Figure 2.9, Panel A). Remunerations of public health personnel are low by international standards, which is related to the fact that the vast majority is public sector salaried and to the compression of remunerations in the Nordic social model (Figure 2.9, Panel C and D). A sharp reduction of the number of medical students in the early 1990s, as unemployment among physicians grew, led to subsequent shortages, which are slowly being brought down. The overall shortage of doctors in municipal health centres was estimated at 6% in 2011 (down from 11% in 2008), but up to 22% in the worst affected region (FMA, 2011). In hospitals, the shortage was 7.5% on average (KT, 2010). The number of nurses, though lower than in other Nordic countries, is higher than the OECD and EU15 average (Figure 2.9, Panel B). As in other Nordic countries, the ratio of practising nurses to practising physicians is high, reflecting the

Figure 2.9. **Health workforce and remunerations**

2010 or latest year available




1. Salaried income of general practitioners whenever available; otherwise self-employed income. For Norway, salaried income of specialists.

*Source:* OECD, *Health Database*.

StatLink http://dx.doi.org/10.1787/888932567523

important role of nurses in these systems. Shortages of nurses are estimated to average 3.2% of positions in municipal social and health services (KT, 2010). The number of foreign-born physicians – largely from Estonia and Russia – has almost doubled since 2000, to 6.9% in 2007. The share of foreign nurses remains much smaller, at 2.2%.

### *Spending on drugs seems to have been brought under control*

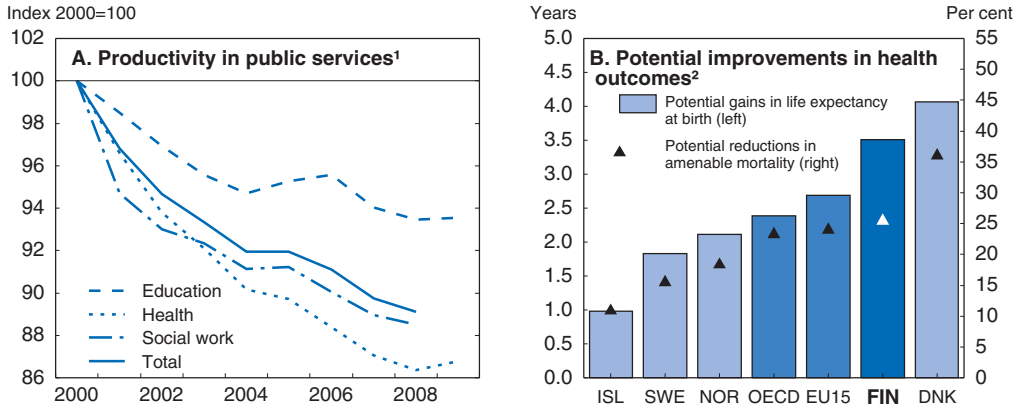
While total expenditure on health care declined in the 1990s, spending on pharmaceuticals continued to increase fast. As a result, drug consumption, though not exceptionally high by European standards, has made up a growing share of health expenditure, rising from around 12% in 1990 to more than 18% in the mid-2000s. As it is reimbursed by NHI, rather than being subject to a strict government budget constraint, spending on drugs had been more difficult to keep in check than other areas of spending. The government has taken a number of measures to bring pharmaceutical expenditure under control. The ROHTO programme, initiated in 2003, promotes rational pharmacotherapy by involving health practitioners in workshops focussing on prescribing decisions and care processes. The program is exceptional in spreading information on pharmacotherapy independently from the pharmaceutical industry. A reference price system was introduced in April 2009, generic substitution was extended and electronic tools to support evidence-based medicine were developed. As a result, drugs consumption declined in real terms in 2009. A remaining area for improvement is financing. Currently, medicines used in public health care are financed by municipalities whereas outpatient drugs are covered by national health insurance, which may in some cases influence treatment decisions and lead to sub-optimal choices. The planned consolidation in the municipal sector will provide opportunities for better co-ordination between larger municipalities and the National Health Insurance.

### *However, system-level indicators suggest important inefficiencies remain*

Statistics Finland computes productivity numbers, which show a continuous decline in health productivity between 2000 and 2008, followed by a small improvement in 2009 (Figure 2.10, Panel A). It is worrying that the increase in inputs is not reflected in an increase in the volume of health services produced. However, similar trends have been observed in other countries and may, to some extent, reflect difficulties in measuring inputs and outputs and adjusting for quality improvements in health care (Hardie *et al.*, 2011; Deveci, 2011). Efficiency should be assessed by considering the contribution of health inputs to the ultimate goal of improving the population's health status, rather than the mere production of health services, which in some cases might not be provided in an optimal way or may even have limited effect on health.

A recent OECD study derives efficiency estimates by relating health outcomes – such as life expectancy or infant mortality – to health care inputs, controlling for socio-economic conditions and lifestyle factors (OECD, 2010b). The analysis estimates that if Finland reached the efficiency frontier – the performance achieved by the most efficient OECD countries – life expectancy could be more than 3 years higher for the same level of spending (Figure 2.10, Panel B). A scenario assuming a move towards the efficiency frontier over a ten year horizon suggests that health spending could be about 2 points of GDP lower at the end of the period compared to a no-reform scenario. To put this number into perspective, recall that the OECD projections mentioned above indicate that demographics would add 1.8 points of GDP to public health care spending by 2050 and that the total

Figure 2.10. **Productivity and efficiency**




1. Value added per hour.
2. Based on life expectancy and amenable mortality which have been calculated using, respectively 2007 and 2003 data.

*Source:* Statistics Finland, *Statistics on Local Government Productivity 2009*; OECD (2010), *Health Care Systems: Efficiency and Policy Settings*, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888932567542

increase in expenditure would be between 3 and 6% of GDP. Hence, potential efficiency gains could offset the impact of ageing on health spending and contribute further to alleviating the pressures on government finances arising from the cost of technology and rising public expectations.

## Policies to improve efficiency and equality while ensuring long-term sustainability

Policies to restructure municipalities and services, increase user choice and develop information flows, achieve economies of scale and promote prevention and healthy lifestyles would help improve efficiency, equality and sustainability. Given demographic trends, long-term care and healthy workforce policies also deserve particular attention.

### *Reform of municipalities and services has large potential for both efficiency and equity gains*

The fragmentation of health care service provision is a source of inefficiency, which the government intends to address through municipal reforms and mergers. The government has announced a "comprehensive nationwide reform to restructure municipalities and services, building on economically robust municipalities, enabling improvements in administrative structures, productivity and the effectiveness of municipalities" (Prime Minister's Office, 2011). Those economically robust municipalities would consist of customary commuter areas large enough to be able to provide basic public services, with the exception of specialised medical care and demanding social welfare services. The government will propose a new map of municipalities in 2012, with mergers to be implemented by 2015. However, as mergers will remain voluntary and are likely to face stiff opposition in some areas, the outcome is uncertain. If radical mergers are enacted, this could provide large economies of scale in primary health care and help improving the quality of services. Previous municipal mergers have so far not yielded expected productivity gains, and planned reforms

therefore have to be accompanied by a consolidation of provision to achieve desired scale economies. Regional inequalities in quality and access to health care could be reduced and efficiency increased through such reforms, while pooling of risks would increase. Larger municipalities could be able to achieve better co-ordination between different areas of health care, in particular through better co-operation with the national health insurance. This could mitigate problems associated with incentives for cost shifting in the parallel funding system. International evidence suggests that a population base of around 200 000 is needed. In Finland, this would mean moving from more than 330 to about 30 municipalities. Should the municipal reform fail to achieve a high level of mergers, efficient management of health care by municipalities would be difficult. This would raise questions on the need for more radical reforms to boost equity and efficiency, for example through the creation of regional or national health funds, as some Finnish institutions have suggested (Box 2.4).

### Box 2.4. **An overview of Finnish health care reform proposals**

There seems to be a broad consensus in Finland on the need to reform the health care system to reduce its fragmentation and to move away from the inefficient parallel funding system. The main feature of both the National Health Fund advocated by the Social Insurance Institution (KELA) and the National purchaser-payer system promoted by the Finnish Innovation Fund (SITRA) is a national pooling of health financing. The main difference between the two models on health care provision is the SITRA emphasis on competition with fixed prices, while the KELA framework could allow more flexibility in price negotiations. A more decentralised solution is the Regional single payer system supported by the National Institute for Health and Welfare (THL). The main objectives and elements of these proposals are described briefly below.

**The National Health Fund (KELA model)**

The National Health Insurance Institution (KELA) is proposing the creation of a national health fund by pooling the funds from state subsidies, municipal taxes and social insurance contributions. A number of advantages are put forward. The proposed system would remove the perverse cost-shifting incentives created by the parallel financing system, which should improve efficiency and co-ordination of care. An asset of KELA in this respect is the availability of an electronic system of patient records, but this is limited to the scope of the National health insurance. The move towards increasing patient choice should be facilitated compared to the current system, as financing would become independent from care provision. This could contribute to reducing inequalities in access to health care. Competition between public and private institutions could be enhanced and innovations and quality improvements attracting more patients would be rewarded. A single-payer would have more bargaining power in negotiations with providers, which could allow a better control over costs. A national fund would imply much better risk pooling and bring more certainty about health costs to municipalities. As a national organisation, the health fund would be in a better position than municipalities to monitor the quality of care and to benchmark providers. Finally, KELA has the infrastructure to run a national scheme, including local branches close to the users.

Box 2.4. **An overview of Finnish health care reform proposals** *(cont.)*

However, there are also drawbacks to the KELA proposal. As discussed above, systems based on social insurance provide better user choice and responsiveness than public-integrated systems, but have more difficulty in containing costs. Co-payments would presumably need to be set at a fairly high level to contain demand, with potential adverse effects on equity. Administrative costs might rise, as they are usually higher in insurance-based systems than in public-integrated models, even if KELA has so far been able to contain them to a reasonable level of 3% of total expenditure. Nevertheless, the relatively high costs of insurance systems suggest that although municipalities tend to struggle to control health care spending, especially in the hospital sector, there is no guarantee that a social insurance would do better. The impact of the KELA reform on costs is uncertain and would depend on the ability of the system to control demand and to commission services efficiently. As KELA has little experience in commissioning, it is a significant challenge (Keskimäki, 2003).

The KELA model would represent a major transformation of the health system and additional issues would arise, especially regarding the role of municipalities. Responsibilities for health care and social welfare would become separate, while they are now both taken on by municipalities in an integrated fashion. Given the interactions between the two areas, co-ordination mechanisms would need to be established. Various financing options are considered by KELA. One of them involves replacing municipal taxes by higher social contributions and central government subsidies. Should this solution be adopted, social contributions should be based on all categories of income instead of wages only, to avoid increasing labour costs, which could have a negative impact on employment. Another thorny question relates to the role of municipalities as health care producers. Municipalities would compete with private providers to supply primary care. Health centres offer a valuable care structure, but in the context of separation between financing and provision of care, there seems to be little rationale for municipal management, especially as the general competence of municipalities does not include practicing economic activities. While municipalities would probably retain ownership in most cases, health centres should become arms length health care providers.

**The National purchaser-payer system (SITRA model)**

The Finnish Innovation Fund (SITRA) has designed a comprehensive model of health care provision and funding. The motivations are to increase productivity through enhanced competition and co-ordination, and equity by allowing equal access to health services for all categories of the population. The model is organised around the idea of free choice between providers competing, but with fixed prices. This would resemble the model adopted by the United Kingdom since the early 1990s. Emergency care and some highly specialised care (*e.g.* difficult traumas) would be excluded from competition. A single national payer financed through taxes would be set up, allowing for optimal risk pooling. The national purchaser-payer would be distinct from health care providers, would fix prices, commission services and monitor outcomes. Evaluation and management would be facilitated by a national information system in which all health care producers would have to register. The remuneration of providers would be tied to health benefits and risk levels rather than the volume of services provided, which would generate efficiency incentives.

Box 2.4. **An overview of Finnish health care reform proposals** *(cont.)*

The SITRA model has the attractions of rationalising financing, improving user choice, fostering innovation through competition and creating incentives for efficiency improvements. However, innovation and enhanced choice might result in higher costs, at least in the short term. In the longer term, there should be benefits, at least in terms of welfare, if not necessarily in terms of direct costs.* Effective commissioning requires gathering information and building up skills, which can be costly, as the United Kingdom experience shows. Restricting competition to quality with fixed prices at the same time as encouraging innovation may lead to an "arms race" in health service supply and discourage cost-saving innovations. Though controlling for quality is challenging, rigorous monitoring and developed information systems should allow it, at least for some treatments. The Tampere experience seems encouraging in that respect, even though a learning process in contracting has been necessary to reach fully satisfactory results.

**The Regional single payer system (THL proposal)**

In 2010, the National Institute for Health and Welfare (THL) put forward a reform proposal that would set up 12 to 15 regional bodies at the centre of the organisation and financing of health care. THL considers that the proposals aiming at more centralisation at the national level, like those put forward by KELA and SITRA, would take decision making too far from users and designated regions as the appropriate level to organise health care supply. The THL reform would address the two main weaknesses of the current system: the cost-shifting incentives associated with the multiplicity of sources of funding and the fragmentation of health care provision. Funding from local taxes, central government subsidies and out-of-pocket payments would be gathered by regional organisations, covering a population of at least 200 000, which according to international evidence seems a reasonable base for organising primary and especially secondary health care. This organisation would also potentially strengthen co-ordination within health care and between health care and social services.

In a regional insurance fund, risk pooling is imperfect. The size of the population covered prevents the catastrophic risks generated by rare and costly events that small municipalities are facing. However, as health risks vary across regions, ensuring equity at the national level would require risk-equalising transfers. An adequate risk formula has always been difficult to determine, both in Finland and elsewhere. Competition between providers is also likely to be weaker than in the KELA and SITRA models, as the distinction between purchasers and providers is less clear. Regional organisations would be responsible both for financing and organising health care. While in principle some activities could still be open to competition, in practice regional providers may favour their own providers, as happened in Norway after the 2002 reform towards regional centralisation (Bibbee and Padrini, 2006).

Even though more rooted in Finland's local democracy tradition than the KELA and SITRA models, the THL reform is wide-ranging. Municipalities would no longer be funding and organising health and social services. The composition and accountability of regional bodies would have to be clarified. Responsibility for a large part of health care has been transferred to the regional level in Norway in 2002 and Denmark in 2007. In Norway, regional executive board members are nominated by the Minister of Health. Unelected boards run the risk of being dominated by the medical profession or a health bureaucracy and lack accountability to the public. In Denmark, regional councils are elected, but it has been argued that the regional level attracts little interest from politicians and voters as its responsibilities are limited to health care and it has no power to collect taxes (Byrkjeflot, 2004).

Box 2.4. **An overview of Finnish health care reform proposals** *(cont.)*

The national health insurance run by KELA would be abolished, implying a radical change in the way occupational health care above the legal requirements, private health care and outpatient drugs are financed. This would have significant consequences for users and providers and is likely to meet resistance, in particular from employers and trade unions over occupational care (Keskimäki, 2010). Finnish occupational care provides a large share of outpatient services and is greatly valued by users, as it gives quick access free of charge to GPs. But it also generates inequalities in access to health care, as only employees can benefit from it, and leads to duplication of services. Hence, it would be desirable to remove privileged access to primary care through the occupational sector. However, it is only conceivable if responsiveness is not affected. User fees, from which only the occupational sector is exempted, could be another contentious issue. The impact on private health care is more ambiguous. Private care would no longer be reimbursed through national health insurance, but regional authorities would apply the principle that the money follows the patient to the service provider, which is consistent with the goal of promoting user choice and competition between providers, whether public or private. Reimbursement of outpatient medicines by regional bodies instead of national insurance would cut the municipal sector's incentive to substitute drugs paid for by patients and national insurance to treatments for which it bears the cost. Doctors might also become more conscious about the cost of drugs, although large co-payments on medicines already contribute to cost awareness. Beyond these points, the change in reimbursement channels for drugs is unlikely to have major effects as long as schedules are not modified.

* It is argued that "in the medium and long run, the best way to contain costs is to improve quality" because "better health is less expensive than poor health" (Teperi *et al.*, 2009). While the impact in terms of welfare is obvious, it is less so in terms of costs, as better health care also prolongs the life of individuals in poor health, sometimes at high costs.

### *Achieving greater economies of scale in health care provision over time is key for efficiency*

The fragmentation of primary and hospital care limits improvements in the efficiency of health care delivery and economies of scale. Securing 24-hour high-quality services is challenging when provision is fragmented, especially due to recruitment difficulties. Policies to encourage municipality mergers should strengthen the primary care sector. Reforms in the organisation of the hospital sector and emergencies should also improve quality of care and efficiency.

#### *There is scope to reinforce the role of primary care*

Evidence from break ups of municipalities between 1990 and 2003 support the idea that small health centres are facing significant diseconomies of scale (Luoma *et al.*, 2007). Concentration of activity in health centres of sufficient size would generate higher volumes of care conducive to optimal medical practice and economies of scale. Larger health centres can afford more advanced medical equipment, recruit staff more easily and build a stronger medical knowledge base.

#### *More rationalised and specialised hospital care can boost efficiency and quality of care*

Overall, Finnish hospitals look relatively efficient in international comparison, but are a cost burden for smaller municipalities. Erlandsen (2007) finds that hospital unit costs for selected Diagnosis Related Groups (DRGs) are among the lowest – along with Denmark and

the United Kingdom – in a sample of 10 OECD countries, including all Nordics. Moreover, the price of inpatient hospital services relative to that of other goods and services appears low by international standards (Koechlin *et al*., 2010). Meanwhile, quality of care is generally high, as indicated for example by low in-hospital fatality rates and a very high share of cataract surgery performed in day care. A recent study using Data Envelopment Analysis finds Finnish hospitals to be somewhat more efficient than their Danish counterparts and respectively about 10% and 20% more efficient than Norwegian and Swedish hospitals (Linna *et al*., 2010). Nevertheless, productivity of hospitals has been declining since the late 1990s, and large regional differences remain in efficiency, cost and outcomes (Aaltonen, 2007, Häkkinen, 2010). The average length of stay in hospitals is long for most conditions (OECD, 2010b). Municipalities tend to complain about difficulties in controlling costs because of the asymmetry of information between hospitals and them, as well as standards fixed at the national level (OECD, 2005). As a result, hospitals face a relatively soft budget constraint and hospital costs are squeezing municipal budgets, potentially constraining municipalities to cut on other valuable items, including primary care and social services. Municipal reform, if implemented successfully, should alleviate these problems.

The reform of municipalities and services should give municipalities better control over general hospitals, as large municipalities will have enhanced bargaining power and will be able to build a wider health knowledge base compared to current hospital districts. Finland needs to increase hospital concentration, and develop special units to take care of remote areas based on a careful evaluation of the trade-off between proximity and appropriate scale to deliver effective treatments. There is increasing international evidence of a link between hospital size and quality of care, indicating the presence of minimum volume thresholds for effectiveness of care. The thresholds vary with the complexity of the interventions. They can be quite low for simple interventions, but are much higher for complex ones (Com-Ruelle et al., 2008). The trend towards creating condition-specific multidisciplinary care units to treat complex pathologies (for example, the Heart Centre in Tampere University Hospital) as well as the use of increasingly sophisticated technologies also militate for further concentration of hospital care, at least in some activities. Norway and Denmark have moved in this direction over the past decade (Box 2.5). The reform of services is also moving in that

### Box 2.5. **Health care reforms in Norway and Denmark**

Over the past decade, Norway and Denmark have embarked on ambitious reforms of their hospital sectors. The 2002 reform in Norway transferred the ownership of hospitals from counties to the central government, centralising responsibility for specialised care in the Ministry of Health Care Services. The reform created five Regional Health Enterprises responsible for delivering health services in their regions and overseeing local health enterprises. The main objectives were to improve cost control, which had been perceived as weak under county supervision, increase efficiency, by improving specialisation and reaping economies of scale, and reduce waiting lists and disparities in service supply across counties (Kittelsen *et al*., 2008; Byrkjeflot, 2004). Patients were also given free choice of all public hospitals (1999 Act on Patient Rights), as in Finland with the 2011 Health Care Act. Even though the reform allows for a purchaser-provider split, an integrated organisation of health care has been favoured, motivated by the dispersion of the population and concerns about costs and lack of expertise in commissioning. The reform seems to have brought positive results, with an estimated increase of 4% in hospital

Box 2.5. **Health care reforms in Norway and Denmark** *(cont.)*

productivity (Kittelsen *et al.*, 2008). Waiting times have been reduced both in primary and secondary care. However, regional differences in the quantity and quality of services remain a concern (Bibbee and Padrini, 2008). Real health expenditure per capita has increased less than in the OECD, EU15 and other Nordic countries since 2002, despite cost-pressures and loosening of budget constraints generated by the oil boom and very large pay increases granted to hospital doctors in 2002-2003.

The 2007 Danish reform aims at concentrating hospital care to achieve economies of scale and scope and productivity gains. Responsibility for secondary care has been transferred from counties to five regions, with populations ranging from 600 000 to 1.5 million. Some responsibilities concerning health promotion, prevention and rehabilitation are transferred from counties to municipalities, which have to sign co-ordination agreements with regions to specify the division of tasks and information channels. The National Board of Health has provided obligatory guidelines for hospital planning. It distinguishes between basic functions, *i.e.* frequent low complexity treatments, which do not require centralisation, and special functions, which are to be provided by a limited number of hospitals, depending on their complexity. This is in line with international evidence showing that efficiency thresholds tend to increase with the complexity of the treatment. For emergency wards, a population base of 200 000 to 400 000 is recommended, implying a reduction from about 40 currently to 20-25 (Andersen and Jensen, 2010). While it is too early to measure the performance of the new system, estimates suggest that some hospital mergers could yield efficiency gains as high as 30% (Kristensen *et al.*, 2010).

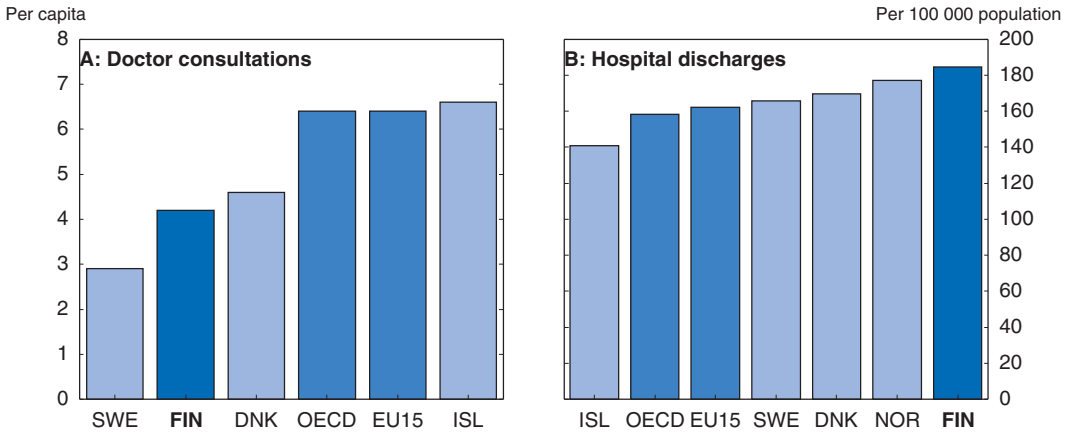
direction, with plans to reorganise very specialised care around the five University hospitals. Hospital concentration brings some specific problems in remote areas where patients might need to travel fairly long distances to the closest hospital. This calls for specific care organisation for such areas, exploiting the potential of mobile specialists, telemedicine, and other remote monitoring, laboratory and care solutions. For example, the Danish government has decided to invest in GP-staffed emergency care centres, helicopters and expanded pre-hospital care in remote areas (Kristensen *et al.,* 2010), which might also work in Finland.

### *Better balance between primary and specialised care would help both equity and efficiency*

The balance between primary and secondary care is tilted towards the latter, which is usually both more costly and less desirable in terms of patients' well-being. The number of GP consultations per capita is low, while hospital use, as measured by the number of hospital discharges, is high (Figure 2.11, Panel B). Furthermore, the numbers of avoidable hospital admissions for asthma and heart failure are among the highest in the OECD. Government plans to optimise patient paths through guidelines and information dissemination and to reform emergency services, including in health centres, could alleviate the pressure on the hospital sector, though it remains unclear to what extent. On the basis of the new Health Care Act, the Ministry of Social Affairs and Health is currently working on a Decree on the grounds for emergency medical care and on the requirements for emergency clinics according to medical specialty. The Decree is expected to result in

Figure 2.11. **Doctor consultations and hospital discharges**

2010 or latest available year




*Source:* OECD, Health Database.

StatLink http://dx.doi.org/10.1787/888932567561

further centralisation of hospital emergency services, supported by better functioning primary care emergency centers and out-of-hospital emergency care.

Modifying payment methods in the out-patient and in-patient sectors could create incentives for better quality treatments and improved cost efficiency. In Finland, most doctors working in municipal services are salaried employees and face weak incentives to increase activity and productivity. In some centers, patients are assigned to a specific doctor ("personal doctor system"). In those cases, doctors are paid through a mix of salary (60%), capitation (20%), fee-for-service (15%) and other allowances (5%), in order to encourage the provision of timely care to patients (Paris *et al.,* 2010). While this initiative introduced 15 years ago looked promising, it has now been discarded by many (if not most) health centres. The number of consultations per doctor is low, which can only partly be explained by the fact that 20% of doctors work part time (Figure 2.11, Panel A). Public sector doctors often also work part time in the private sector. Activity in public primary care could be stimulated by introducing an element of capitation and fee-for-service payment in health teams' remunerations, which could be facilitated by the development of primary care DRGs. While introducing fee-for-service component would encourage primary care production, a capitation element would moderate spending relative to a pure fee-for-service payment system. Pay for performance, linked to preventive, curative and responsiveness targets, could also be considered (OECD, 2005).

Harmonising hospital payment methods across the country could improve efficiency. Hospital district budgets are decided by a council of member municipality representatives. Each hospital district chooses its payment method. There has been a tendency to move from bed-per-day payments to activity-based prices. At least 13 out of 20 hospital districts are now using DRG-based payments. However, the absence of national guidelines implies differences in rules for DRG use across hospital districts (Häkkinen, 2010). Furthermore, DRGs are currently mainly used as an accounting tool, rather than as a way to induce efficiency gains, because hospital financial losses have to be covered by municipalities. Potential side effects observed in other countries, such as DRG creep (the tendency to classify patients in more remunerative DRGs) and patient selection, of using DRGs to determine provider payments call for tight monitoring (Mikkola *et al.*, 2001).

### *User choice and innovation can be increased through the use of more market-type mechanisms*

Many OECD countries are seeking to introduce market-type mechanisms into their integrated public health care systems to increase productivity, and reduce long waiting times (Smith, 2009). While the pervasiveness of serious market failures in the health care sector means that markets alone cannot produce efficient outcomes, the introduction of regulated competition in some areas of health care supply can improve user choice, efficiency and innovation. Establishing a separation between purchaser and provider functions is at the heart of the creation of market-type mechanisms. With such settings, the purchaser is in principle able to maximise value-for-money for its residents by buying medical services from competing suppliers, either public or private, though this requires sufficient size and expertise.

Introducing competition in health care provision through a purchaser-provider split makes systems with mainly public provision of health care more responsive to demand. More choice is provided to users, though control over patients' choices remains tighter than in insurance-based systems, where choices are individual rather than made by purchasing organisations. However, insurance-based systems are in general moving towards restricting user choice through increased cost-sharing and tighter gate-keeping to control costs. By encouraging new providers to enter the market, the purchaser-provider split can generate extra capacity and contribute to shorten waiting times, as happened in the United Kingdom. Innovations leading to improved quality of care and/or cost-efficiency are encouraged.

However, international experience with purchaser-provider splits is mixed, calling for caution with design. The United Kingdom has introduced a purchaser-provider separation since 1991, with some positive results in terms of responsiveness to patients' needs and cost reduction in the hospital sector, but is still in search of the optimal organisation of commissioning (Smith, 2009; Smith and Goddard, 2009). A purchaser-provider split was introduced in more than half of Swedish counties in the early 1990s, with some apparent successes in reducing waiting times for elective surgery and increasing efficiency of hospitals (Lofgren, 2002; Magnussen *et al.*, 2009). Nevertheless, the ability of the system to generate competition between hospitals has been limited by the close links between purchasers and providers within counties. Support for purchaser-provider splits among the public, policy-makers and health professionals also seems to have been eroded by concerns about equity and quality of care (Magnussen *et al.*, 2009). Norway successfully introduced a purchaser-provider split for nursing care in the early 1990s. But while the 2002 hospital reform allows for a purchaser-provider split, the system has remained highly integrated (Box 2.5). New Zealand introduced market-type mechanisms in 1993, but abandoned them in 2001, as results had been disappointing. Poor performance was attributed to the existence of natural monopolies, the high political cost of letting public hospitals going out of business or exiting activities and the high costs of contracting and enforcement (Ashton *et al.*, 2005).

In Finland, purchaser-provider separation has been encouraged by the central government and adopted by several municipalities in the 2000s – *e.g.* Tampere, Karjaa, Oulu, Jyväskylä, Turku, Raisio. In small municipalities, the model is used to organise joint provision of services by groups of municipalities or to outsource to private companies. Outsourcing primary care seems to have resulted in higher costs than own provision in small municipalities (Mikkola, 2009). It is difficult for small municipalities to develop

competitive health care markets and the introduction of market-type mechanisms might actually reinforce the power of large providers (Häkkinen and Lehto, 2005). However, difficulties in hiring doctors in municipal health centres often leave small municipalities with no alternative to contracting out. Large municipalities like Tampere have more ambitious reforms, which promote competition and innovation. The Tampere experience seems to yield positive results in terms of cost-containment. Expertise in contracting has been progressively strengthened to prevent quality erosion accompanying lower prices. Private supply has developed, providing a benchmark for public providers in some relevant activities. A more general evaluation of purchaser-provider models in Finland has been carried out by SITRA (MAISEMA), showing positive results overall. Cost-efficiency and awareness were found to have improved after the introduction of purchaser-provider splits. Nevertheless, the report notes that contracts have sometimes been vague and difficult to renegotiate and that purchasing expertise needs to be enhanced (Tynkkynen, 2009).

Given the current large number of small municipalities in Finland with limited human and financial resources and bargaining power for efficient health care purchasing, a mixed approach might be appropriate with a gradual increase in purchaser-provider separations, to the extent that mergers create larger municipalities. Competitive pressures might be low due to a small number of providers. It is especially the case in low density areas and for hospital care, where there are large economies of scale and scope, implying that the benefits of competition might be outweighed by excessive fragmentation in some parts of Finland. Co-ordination of care might also be weakened. Hence, the range of activities to open to competition needs careful consideration. Smith (2009) argues that there is "a strong case for adopting a mixed approach to contracting, perhaps using a main provider for the bulk of services, but encouraging contestability for some other hospital services, or for some portion of contracted services". Additional concerns are the potentially high administrative cost of commissioning, especially when dealing with a large number of suppliers, and the potential lack of commissioning expertise of some purchasers.

The nature of the Finnish system also suggests that a flexible solution should be adopted to price versus quality competition. Price competition would incite providers to implement innovations, but risks leading to deterioration in the quality of care. Therefore, the United Kingdom has so far ruled out competition on prices and the Finnish Innovation Fund SITRA has proposed a model of competition with fixed prices for Finland (Box 2.4). In contrast, price competition has been allowed in New Zealand, Norway, Sweden and some Finnish municipalities. A major challenge for systems allowing price competition is to control quality. This can be done through the enforcement of strict guidelines, though this might discourage innovative processes. One solution is to develop quality indicators and benchmarking, which could be done by the National Institute for Health and Welfare (THL) that has extensive expertise in this field, especially once a national electronic patient record is operational and provides the relevant data.

### *Developing better information flows would enhance efficiency*

Improving information flows could facilitate co-ordination between primary and specialised health care and also with social services, allowing patients to be monitored over whole care cycles, and avoiding duplication in medical tests, incompatible medications and delays in treatment. An essential step in that respect is the decision by parliament in December 2006 that statutory nationwide electronic patient record (EPR) and

prescription systems should be introduced in Finland following a four-year transition period. For the time being, only one in six pharmacies can deliver electronic prescriptions. The EPR project has been running behind schedule and is now expected to be completed by 2015. Such delays are not exceptional. Few countries have already succeeded in building EPRs. The United Kingdom project (Connecting for Health) has been delayed several times. One of the few successes has been achieved by the Canadian province of Alberta, which has an only slightly smaller population than Finland. Information could also be used to promote evidence-based medicine further and benchmark providers, as in the Hospital Benchmarking Project developed since 1996 (Häkkinen, 2010). In addition, the EPR will generate a reduction in administrative costs and is expected to break even in seven years.

### *Investing more in prevention and promoting healthy lifestyles can have high pay-offs*

The North Karelia project, which was initiated in the 1970s and lasted until the mid-90s, was very successful in lowering heart disease mortality, largely through healthy lifestyle promotion (Puska *et al.*, 2009). But the current situation with respect to non-medical determinants of health varies across lifestyle factors. The percentage of adult smokers is below the OECD average and declining. The obesity rate among adults is slightly below the OECD average, but is increasing. Adults' alcohol consumption, though not among the highest in the OECD is above average. More worrying, Finland is one of the few countries where it is still rising. Also of concern are smoking and drunkenness among 15-year olds and 11-15-year olds overweight and obesity rates, which are all high by OECD standards (Figure 2.12). Finland taxes alcohol and tobacco heavily. Excise duties are levied on sweets, ice cream and soft drinks. Apart from higher taxes on products harmful to health, other cost-effective measures, such as disseminating targeted information on health risks and benefits from healthy diet, including through mass media, could be considered (WHO, 2011).

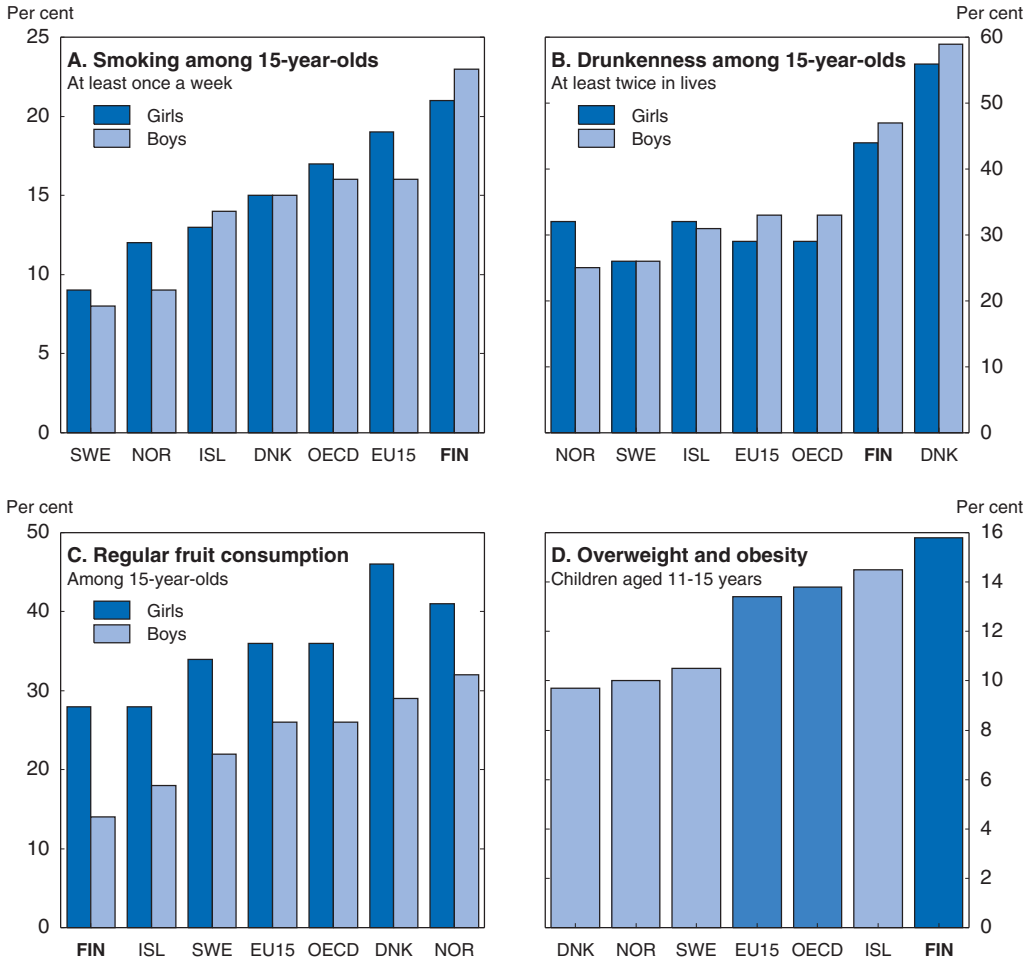
Beyond promoting healthy lifestyles, optimising prevention, detection and treatment of hypertension, which affects predominantly lower socio-economic groups, could contribute to reducing mortality from cardiovascular diseases (Mackenbach, 2006; WHO, 2011). Screening for cancer is extensive in Finland, allowing early treatment and high survival rates (OECD, 2011). To prevent depression and reduce depression-related work disability in Finland, the Ministry of Social Affairs and Health set up the Masto project (2007-2011), which promotes well-being at work, enhances depression prevention, improves treatment and rehabilitation, and supports continued work and return to work after depression. Implementation and follow up on the recommendations of the report will need to be monitored closely as depression is a major source of health impairment and withdrawal from the labour market.

### *Organising efficient long-term care for an ageing population is important for wellbeing and sustainability*

Spending on long-term care currently accounts for less than 2% of GDP, but this share is expected to more than double by 2050, as the proportion of very old people increases. In this context, it is important to ensure that long-term care is provided in the most cost-effective way. Since the 1990s, policies have succeeded in substituting service housing (housing with special care facilities, often including 24-hour assistance) for institutional care for a growing number of elderly people (Figure 2.13). As institutional care is very expensive, the move towards service housing generates substantial savings, while

Figure 2.12. **Non-medical determinants of health**

2005-06

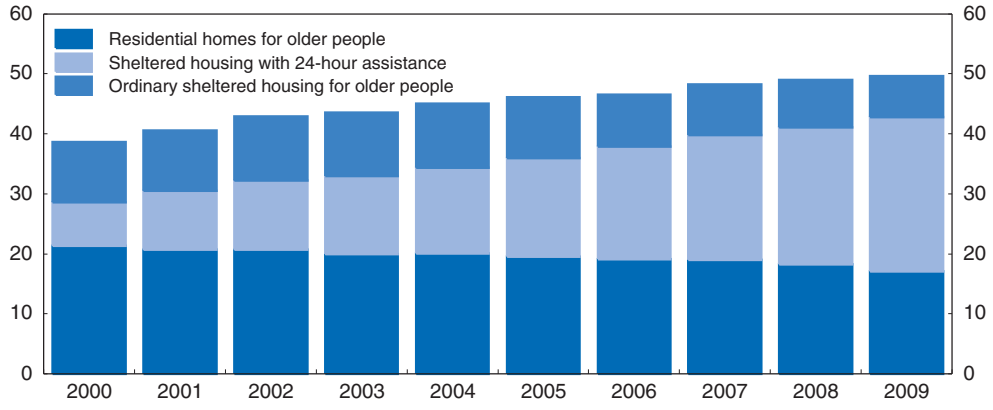



*Source:* Currie, C. *et al*,. (2008), Inequalities in Young People's Health: Health Behaviour in School-aged Children, (HBSC) International Report from the 2005/2006 Survey, WHO Regional Office for Europe, Copenhagen.

*StatLink* http://dx.doi.org/10.1787/888932567580

Figure 2.13. **Institutional care and housing services in social care for older people**

Per 1 000 clients on 31 December




*Source:* National Institute for Health and Welfare, *SOTKAnet Database*.

*StatLink* http://dx.doi.org/10.1787/888932567599

improving the quality of life of old people. Nevertheless, health centres should retain the capacity to accommodate patients in need of rehabilitation, so that there is no obstacle to discharge such patients from intensive care units. Many municipalities use contracting out and competitive tendering in service housing. Vouchers for buying services needed to support independent living at home are used by some municipalities, including Helsinki and Tampere. Although the evidence on the impact of open tenders in elderly care is limited, some studies suggest that they often reduce costs, though it is not always the case (Kähkönen and Volk, 2008). In this area, stringent evaluation is essential to ensure that cost reductions are not achieved at the expense of quality and patients' safety and monitoring tools should be developed.

### *Measures towards ensuring the availability of an adequate health workforce are needed*

In addition to current supply constraints, the age structure of the Finnish population creates a further challenge for the availability of service personnel. Large cohorts of medical staff will retire at the same time as the increasing number of older people will raise demand for medical services. The government needs to make sure that the demand for health personnel is met, to guarantee the supply of quality health care and limit pressures on costs that could arise from resource shortages. Increases in the admission targets for medical education are part of the development plan for education and university research for 2011-2016 adopted by the government on 15 December 2011. As noted earlier, payment incentives could encourage health professionals to increase their level of activity. The government could also encourage older health professionals to defer their retirement, for example by offering them part-time and adjusted responsibilities (OECD, 2005). Reducing the fragmentation of the health care system and strengthening cutting edge medical centres should also create better prospects for medical staff. Nurses have been assigned advanced tasks, which in other countries are generally performed by physicians (Delamaire and Lafortune, 2010). Furthermore, in 2010 qualified nurses were granted limited prescribing rights. Medical professionals recruited from abroad can provide a useful complement to locally trained staff.

Box 2.6. **Recommendations on health care policy**

**Reorganise health care to improve efficiency and quality of care**

- Ensure that the merger process leads to the establishment of municipalities that are large enough to ensure efficient provision of health care and social services. Ensure that mergers result in efficiency-enhancing re-organisation of services.
- Rationalise the organization of health services to achieve a better balance between primary and specialised care.

**Create incentives for a better balance between lower cost primary and more expensive specialised care**

- Introduce a mix of capitation and fee-for-service payment in health teams' remunerations to encourage activity in primary care.
- Encourage the effective use of DRGs in hospitals by adopting national guidelines and encourage developing DRGs for primary care.

Box 2.6. **Recommendations on health care policy** *(cont.)*

**Increase user choice**

- Drawing on existing experiences in some municipalities, purchaser-provider split should be adopted in areas where the population base and the level of complexity of treatment allow meaningful competition.
- Competition on prices should be permitted wherever the level of complexity and the density of population allows, accompanied by appropriate benchmarking of health care providers, possibly requested from the National Institute for Health and Welfare (THL).

**Develop information flows**

- Complete the nationwide patient record, which is essential to improve co-ordination of care.
- Continue to develop electronic tools to promote evidence-based medicine and health provider benchmarking.

**Invest in prevention and promote healthy lifestyles, especially among young people and lower socio-economic groups**

- Further dissemination of information on health risks but also benefits from healthy diet, including through mass media, could be considered and prevention of disease in high-risk groups, could be reinforced.

**Develop non-institutional long-term care further**

- Continue to encourage the development of home care to limit dependence on institutional care and explore possibilities to expand the use of vouchers for buying services needed to support independent living at home.

**Ensure the availability of an adequate health workforce**

- Adapt admission targets for medical education to anticipated needs, continue to upgrade the tasks of qualified nurses and explore ways to encourage older medical practitioners to defer their retirement.

## *Notes*

1. Benefit recipiency rates are affected by factors other than health condition, such as accessibility and generosity of benefits, anti-discrimination legislation and vocational rehabilitation programme. Nevertheless, self-assessed disability prevalence as a percentage of the population aged 20-64 is also among the highest in the OECD (OECD, 2010a).
2. Studies using occupational class or education level instead of income as socio-economic indicator find qualitatively similar results, though differences in life expectancy are significantly smaller (Palosuo *et al.*, 2009; Valkonen, 2001).
3. The TEROKA project aims to develop a knowledge base and tools to promote the attainment of the objective of the Health 2015 public health programme for reducing health inequalities. Information is available at *www.teroka.fi*.

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# ANNEX 2.A1

## *Some stylised facts about life satisfaction in Finland*

GDP as a measure of wellbeing has well known drawbacks, recently highlighted by Stiglitz *et al.* (2009). GDP mainly reflects market production, excluding *e.g.* household production. Furthermore, Stiglitz *et al.* (2009) emphasise that wellbeing is a multi-dimensional concept, and identify, in addition to material living standards, a variety of other important determinants of wellbeing. Examples are health, education, personal activities, political voice and governance, social connections and relationships, environment and economic and physical insecurity. Other studies also show that wellbeing is not just a function of income at a point in time, but adapts to changes in income. If GDP growth slows, life satisfaction can decrease (Di Tella *et al.*, 2003).

Policy makers are increasingly interested in these additional indicators and their determinants as complements to GDP. An index of wellbeing has, for example, been developed in Canada, and the Australian Bureau of Statistics has published a dashboard of wellbeing indicators since 2002, along the lines spelled out more comprehensively in Stiglitz *et al.* (2009). In the United Kingdom, the development of a wellbeing index as a reference for policy was proposed recently by Prime Minister Cameron, building on work by the Office for National Statistics (2010). Efforts to improve the measurement of wellbeing are being co-ordinated in an ongoing OECD project on "Measuring Progress in Societies" as a follow-up to Stiglitz *et al* (2009). The OECD recently published a better life indicator to measure wellbeing in member countries (OECD, 2011b).

Comparing wellbeing across countries and over time remains a challenge and there are many ways to measure it. In recent years, a large body of theoretical and empirical research has examined the inherently complex conceptual and measurement problems related to a broader concept of wellbeing. Research has been facilitated by the development of internationally comparable wellbeing indicators (World Value Survey, Gallup World Poll). However, these polls remain unofficial and are at times criticised for covering limited samples and changing excessively between waves. Furthermore, these surveys have no variables on housing, although it can be an important determinant of wellbeing. The types of wellbeing measures developed include expanded GDP, weighted averages of life satisfaction indexes, and self–reported subjective assessments of wellbeing based on survey data (Boarini *et al.*, 2006). Self-reported subjective wellbeing can be further divided into life satisfaction surveys (ranks of 0 to 10 of a person's satisfaction with life) and emotional wellbeing indicators (a person's emotional feelings at a point in time) (Kahneman and Deaton, 2010; Di Tella *et al.*, 2001). Index–based measures face problems with subjective weights, while expanded GDP excludes potentially important factors of

wellbeing. Studies based on self-reported life satisfaction avoid these problems, but are subject to challenging data interpretation issues. These studies, which are getting increasing attention in the literature (Helliwell *et al*., 2008 and 2009), tend to show that self-reported subjective wellbeing has a strong correlation with income, but also that other factors, such as health, unemployment and divorce, or quality of life indicators based on objective outcomes, are important. The results are also broadly consistent across surveys.

Compared to the OECD, the results of regressing life satisfaction on its key determinants show that education level and freedom of choice have bigger coefficients in Finland. This means that having a higher education level and feeling free to choose among everyday activities is more important for the Finnish people than for the OECD inhabitants on average. Having a higher education level increases life satisfaction as it improves access to employment, contributes to higher productivity, labour force participation and the opportunity to participate in economic and social activities. Freedom of choice plays a relatively large role for wellbeing in Finland. Approximately, one point increases in this variable increases wellbeing in the same proportion as a higher income.

Other significant factors relate to social cohesion: having friends to count on increases wellbeing as much as a doubling in income, this is twice as much as in OECD as a whole. Trust in people also improved life satisfaction but in the same proportion as in the OECD average. Social relationships and participation in community life are important both for their direct impact on life satisfaction (we enjoy the time we spend with friends) and because they contribute to our ability to achieve wider goals. Finally, income inequality, extent of political corruption and concerns about the environment seem less important for wellbeing in Finland. The coefficients of income inequality and political corruption are not significant at the 5% level however.

### *Note*

1. For methodology, see OECD (2011c), Annex 3A.2.

Table 2.A1.1. **Comparisons between different indicators of life satisfaction of countries**

| Life satisfaction, World Value Survey ranking, 1981-2008 | Gallup World Poll, 2008 | Human Development Index ranking, 2007 | OECD Better Life Indicator (all topics rated equally) |
|---|---|---|---|
| 1. Denmark | 1.Denmark | 1. Norway | 1. Australia |
| 2. Switzerland | **2. Finland** | 2. Ireland | 2. Canada |
| 3. Iceland | 3. Norway | 3. Germany | 3. Sweden |
| 4. Ireland | 4. Sweden | 4. Australia | 4. New Zealand |
| 5. Austria | 5. Netherlands | 5. Iceland | 5. Norway |
| 6. **Finland** | 6. New Zealand | 6. Sweden | 6. Denmark |
| 7. Sweden | 7. Canada | 7. Netherlands | 7. United States |
| 8. Canada | 8. Israel | 8. France | 8. Switzerland |
| 9. Luxembourg | 9. Australia | 9. Switzerland | 9. **Finland** |
| 10. Norway | 10. Switzerland | 10. Luxembourg | 10. Netherlands |
| 11. New Zealand | 11. United States | 11. Japan | 11. Luxembourg |
| 12. Netherlands | 12. Austria | 12. **Finland** | 12. Iceland |
| 13. United States | 13. Belgium | 13. United States | 13. United Kingdom |
| 14. Australia | 14. United Kingdom | 14. Spain | 14. Austria |
| 15. Great Britain | 15. Ireland | 15. Canada | 15. Ireland |
| 16. Belgium | 16. Iceland | 16. Austria | 16. Germany |
| 17. Germany | 17. Luxembourg | 17. Belgium | 17. Belgium |
| 18. Italy | 18. Germany | 18. Great Britain | 18. France |
| 19. Portugal | 19. Czech Republic | 19. Italy | 19. Japan |
| 20. Israel | 20. Italy | 20. New Zealand | 20. Israel |
| 21. Slovenia | 21. Spain | 21. Denmark | 21. Slovenia |
| 22. France | 22. France | 22. Greece | 22. Spain |
| 23. Czech Republic | 23. Greece | 23. South Korea | 23. Czech Republic |
| 24. Greece | 24. South Korea | 24. Israel | 24. Italy |
| 25. Japan | 25. Poland | 25. Slovenia | 25. Poland |
| 26. Poland | 26. Slovenia | 26. Portugal | 26. Korea |
| 27. Turkey | 27. Portugal | 27. Czech Republic | 27. Greece |
| 28. Slovak Republic | 28. Slovak Republic | 28. Estonia | 28. Slovak Republic |
| 29. Hungary | 29. Japan | 29. Slovak Republic | 29. Hungary |
| 30. Spain | 30. Estonia | 30. Poland | 30. Portugal |
| 31. South Korea | 31. Turkey | 31. Hungary | 31. Estonia |
| 32. Estonia | 32. Hungary | 32. Turkey | 32. Turkey |

Table 2.A1.2. **Life satisfaction and others indicators in Finland and OECD, 1981-2008**

| | 1981-1984 Finland | 1994-1999 Finland | 2005-2008 Finland | 1981-1984 OECD average | 1994-1999 OECD average | 2005-2008 OECD average |
|---|---|---|---|---|---|---|
| Life satisfaction<br>1. dissatisfied<br>…<br>10. satisfied | 7.91 | 7.78 | 7.84 | 7.34 | 6.95 | 7.36 |
| Subjective state of health<br>1. very poor<br>…<br>5. very good | 4.06 | 3.94 | 3.82 | 3.54 | 3.80 | 3.92 |
| Unemployment<br>1. unemployed<br>0. other | 0.029 | 0.144 | 0.084 | 0.054 | 0.054 | 0.057 |
| High educational level<br>1. inadequately completed elementary education<br>…<br>8. university with degree/higher education | – | 4.06 | 4.43 | – | 4.44 | 4.91 |
| Freedom of choice<br>1. no choice at all<br>…<br>10. a great deal of choice | 7.65 | 7.67 | 7.44 | 6.66 | 6.76 | 7.18 |
| Important in life: friends<br>Not at all important<br>…<br>4. Very important | – | 1.46 | 1.39 | – | 1.56 | 1.48 |
| Environmental index<br>($CO_2$ emissions) | 106.93 | 118.90 | 103.33 | 98,39 | 101.91 | 101.54 |
| Trust in people<br>People can't be trusted<br>Most people can be trusted | 0.57 | 0.48 | 0.58 | 0.41 | 0.33 | 0.37 |
| Extent of political corruption<br>1. almost no public officials engaged in corruption<br>….<br>4. almost all public officials engaged in corruption | – | 2.18 | 2.06 | – | 2.59 | 1.94 |

*Source:* World Values Survey (1981-2008).

Table 2.A1.3. **Weighted least square regressions of life satisfaction on different components, controlling for individual-year fixed effects, robust standard errors**

| | Weighted Least Square regression, micro data, Finland, 1981-2008 | Weighted Least Square regression, OECD countries, 1981-2008 | Weighted Least Square regression, Denmark, 1981-2008 | Weighted Least Square regression, Sweden, 1981-2008 | Compensating differentials with respect to log income Finland, 1981-2008 |
|---|---|---|---|---|---|
| Material living standards | | | | | |
| Log income | 0.201** | 0.290** | 0.255 ** | 0.415 ** | |
| | (0.062) | (0.020) | (0.124) | (0.077) | – |
| Income inequality | –0.008 | –0.053** | –0.083** | –0.026 | |
| | (0.015) | (0.004) | (0.028) | (0.017) | 00.03 |
| Health | | | | | |
| State of health (subjective) | 0.520** | 0.603** | 0.475** | 0.749** | |
| | (0.054) | (0.013) | (0.088) | (0.054) | 02.58 |
| Self-sufficiency and education | | | | | |
| To be unemployed | –0.391** | –0.517** | –0.372 | –0.408** | |
| | (0.124) | (0.048) | (0.258) | (0.176) | 01.94 |
| Educational level | 0.011 | –0.001 | | –0.072** | |
| | (0.018) | (0.006) | – | (0.019) | 00.05 |
| Personal activities | | | | | |
| Freedom of choice and control | 0.258** | 0.242** | 0.257** | 0.232** | |
| | (0.028) | (0.005) | (0.040) | (0.027) | 01.28 |
| Environment problems | | | | | |
| Environmental index | 0.006** | 0.005** | | 0.008** | |
| | (0.003) | (0.001) | – | (0.002) | 00.02 |
| Social cohesion | | | | | |
| Trust in people | 0.151** | 0.217** | 0.174 | 0.129** | |
| | (0.054) | (0.026) | (0.130) | (0.079) | 00.75 |
| Important in life: friends | 0.211** | 0.107** | | 0.144** | |
| | (0.070) | (0.013) | – | 1 (0.072) | 01.04 |
| Extent of political corruption | –0.010 | –0.134** | | –0.111 | |
| | (0.039) | (0.014) | – | (0.075) | 00.04 |
| Individual fixed effects | | | | | |
| Age | –0.014 | –0.039** | –0.007 | –0.030** | |
| | (0.014) | (0.004) | (0.028) | (0.014) | – |
| Squared age | 0.022 | 0.050** | 0.017 | 0.046** | |
| | (0.014) | (0.004) | (0.030) | (0.015) | – |
| Female | 0.299** | 0.130** | –0.019 | 0.085 | |
| | (0.070) | (0.024) | (0.131) | (0.071) | – |
| Divorce | –0.368** | –0.504** | –0.462** | –0.246** | |
| | (0.115) | (0.054) | (0.278) | (0.139) | – |
| Number of children | 0.061** | 0.064** | 0.007 | 0.083** | |
| | (0.028) | (0.008) | (0.057) | (0.033) | – |
| Number of Obs | 1 743 | 25 119 | 767 | 1 688 | 1 743 |
| R-squared | 0.2638 | 0.2196 | 0.2320 | 0.2916 | – |
| Number of waves | 2 | 5 | 1 | 2 | 2 |

*Note:* Dependent variable is individual life satisfaction (1-10 scale). Entries are regression coefficients (standards errors)** significant at 0.05 level.

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