Labour productivity per hour worked (EU-27=100; 2013)
Labour productivity per person employed in manufacturing (1000 PPS; 2013)
Total exports as a % of GDP (2013)
Knowledge-intensive exports (% of total exports; 2012)
Exports of environmental goods as % of all exports of goods (2013)
Innovation Union Scoreboard (2013)
R&D performed by businesses (% of GDP; 2012)
Non-financial high-growth enterprises as % of all enterprises (2012)
Manufacturing GVA as % of total GVA (2013)
SME Access to Finance Index (SMAF; 2012)
Year-on-year growth of loans to non-financial corporations (%; Q1 2014)
Investment in equipment as % of GDP (2011-13)
Employment in knowledge-intensive activities (manufacturing and services) as % of total employment (2012)
% of employees in manufacturing with high educational attainment (2012)
Tertiary graduates in mathematics, science and technology per 1000 of population aged 20-29 (2012)
Energy intensity in industry and the energy sector (kg oil eq. / euro GVA; reference year 2005; 2012)
CO2 intensity in industry and the energy sector (kg CO2 / euro GVA; reference year 2005; 2012)
Electricity prices for medium-sized enterprises excluding VAT (euro per kWh; 2nd half of 2013)
OECD indicators of product market regulation / services (2013)
Trade integration in the single market (2013)
Satisfaction with quality of infrastructure (rail, road, port and airport) (1=underdeveloped / 7=extensive and efficient by int'l standards; 2012-13)
% of broadband lines with speed ≥ 30 Mbps (2014)
Time required to start a business (days; 2013)
Number of hours needed to comply with tax return rules across the EU (2013)
Legal and regulatory framework (0= neg. / 10= pos.; 2014)
Business environment score (1= best and 0 = worst; 2012-13)

Note: Early data for "% of broadband lines with speed ≥ 30 Mbps" refer to 2011.
3.26.1 Introduction and performance

Finnish manufacturing continues to be dominated by the electronics, metals, chemicals and forestry industries. It can be noted that recently the chemicals industry has managed to increase both its production and exports.

The framework conditions for a competitive economy are very good. Finnish research, innovation, education, business environment and public administration are ranked among the best in the world. However, the GDP growth forecast for 2014 is only 0.2% (1) and labour productivity and export performance have been disappointing.

The restructuring and downscaling of the electronics industry has made the gross value added of the economy significantly lower. In addition, unit costs (i.e. all costs per unit of output) increased considerably (60% in 2000-2012) in other industrial sectors, mostly reflecting rising wages. (2) As the GDP share of the electronics industry diminished, lower value added and higher unit costs in other sectors have had a detrimental effect on total productivity.

Recent moderate wage agreements are the first steps towards improved cost competitiveness. So far exports have reacted slowly, which conforms to a historical pattern determined by the product composition. The changed structure of exports resulting from the decline of the electronics industry, with fewer final and more intermediate products, might have contributed to this persistent pattern.

Exports are forecast to grow 2.7% in 2014, an improvement on 2013. Overall, the small number of large exporters with a limited product range has continued to act as a brake. (3) In the longer run, a more diversified and flexible economy should be able to react more quickly, in line with changing demand conditions.

The innovation performance at firm level provides several examples of world-class successes, but there are too few of them. To enhance innovation performance, investments in research and innovation need to be exploited more efficiently to produce new products and services.

In view of the sluggish responsiveness of the economy, there is scope for further structural reforms to boost competitiveness. In 2011-2012, Finland was close to EU average as a reformer. (4)

(1) All forecast figures are from the Commission 2014 spring forecast. Since then downside risks have increased due to geopolitical tensions.
(2) Etla, Suhdanne 2013:2.
(3) European Economy, Occasional Papers 177, March 2014.
(4) Economic Policy Reforms: Going for Growth 2013, OECD.
3.26.2 Access to finance and investment

Bank lending

Despite the gradual expansion of venture capital investment, bond issuance, alternative lending sources, and crowdfunding, bank loans continue to be the most important source of external funding. Finnish SMEs have relatively good access to bank lending, although about 40% of firms making use of external financing have noticed that loan conditions have tightened and about the same number felt that access to loans has become more difficult over the last year. (1) The continuing uncertainty about export prospects has kept investments low and external funding has mostly covered working capital needs.

Venture capital and other finance

To promote the growth of innovative firms, the government has increased the availability of venture capital considerably, in particular through fund-of-fund investments to leverage private equity funding – partly with asymmetric profit sharing. The EUR 230 million of government investment allocated for 2013-2017 is expected to raise more than a billion euro in venture capital investment in total.

Although the tax incentive for business angels (available in 2013-2015) does not seem to have raised the amount invested in 2013, more angels have indicated that they intend to use the facility in 2014. Angel investment totals about EUR 40-50 million; total early-stage investment in 2013 was EUR 280 million. (2)

Firm growth is also promoted through a programme (3) of ten accelerators comprising about 100 portfolio firms in total. About EUR 220 million of private funding has been raised for these firms in addition to EUR 70 million of public funding. Several of the accelerators have raised their own venture capital funds. The programme also provides competence development in marketing and management.

As equity investment in start-ups increases, better exit opportunities for investors become more important. These have been identified as an area requiring improvement, including changes in the tax treatment of listed firms.

Moreover, there has been an industry-led initiative to standardise the terms of bond issuance in order to facilitate the access of smaller companies to the fixed-income market. To the same end, a corporate bond marketplace was introduced in 2014.

The venture capital incentives together with other actions aimed at promoting growth finance mean that access to growth funding should be considerably improved.

Investment developments

Low business confidence and the uncertain outlook have limited investment, with gross fixed capital formation declining since 2012. Investment in equipment is also likely to fall this year as firms tend to invest more abroad than in Finland. This partially reflects the higher cost base, as exporters have been forced to compress their profit margins as domestic costs, including wages and energy, have eaten into their margins. The low level of investment is likely to limit future growth prospects. (4)

3.26.3 Innovation and skills

Innovation

Finland continues to be among the innovation leaders in the EU (with Denmark, Germany and Sweden), although ranked the last of these. The problem areas are the commercialisation of research, and internationalisation of the system. (5) Pressures on future performance include the recent downward trend in R&D intensity, which requires increased efficiency of the remaining investments. Lower R&D investment by businesses and the limits on public R&D investment mean that the national 2020 target of 4% is not likely to be achieved.

To speed up the restructuring of the economy, the government is focusing its actions on clean technology and bioeconomy.

Clean technology actions focus on increasing investment and creating demonstration projects.

(1) Suomen Yrittäjät – Finnvera – TEM: Pk-yritysbarometri 1/2014
(2) Finnish Venture Capital Association and Ministry of Employment and the Economy.
(3) The ‘VIGO’ programme, www.vigo.fi
Before the 2014 strategic update, the cleantech programme had been running for two years with R&D investment reaching EUR 1 billion per year. The programme has brought together firms working in different areas of cleantech, but its achievements have been limited by the difficulty of commercialising innovation, in particular finding the first customers for innovative products and services. (9) The intention is to address these issues with new actions from 2014 onwards.

Biocoeconomy actions seek to renew and develop the forestry industry competences through cross-sectoral innovation, venture capital, experimentation, and training. The demand side is also being addressed through market development and promoting sustainability.

The policy measures to improve innovation and productivity include the ICT 2015 programme, the forestry industry strategy, and the innovative cities programme. Further initiatives address sustainable mining, arctic competencies, health research and innovation, design, and cultural and creative industries. To get full policy benefits out of these programmes, quick feedback and policy adjustment mechanisms should be available.

The government has introduced a new channel for strategic research, where the priority is to contribute to produce new solutions for the challenges Finland faces. This new allocation redistributes some of the existing EUR 2 billion of R&D funding. However, it is unclear how close to market this research will be and to what extent it will facilitate achieving the commercialisation and internationalisation goals.

The six Strategic Centres for Science, Technology and Innovation continue to be essential innovation policy tools that have served existing firms well. (11) However, changes are being introduced to improve services for start-ups, and a revision of the number and specialisation of the centres is being carried out.

To increase the internationalisation of the innovation system, the government is using the international connections of Tekes, the Strategic Centres for Science, Technology and Innovation, and the Team Finland initiative. To increase the attractiveness of Finland for foreign students, researchers, entrepreneurs and managers, the government effectively could increase the effectiveness of the support services in place, and review the administrative burden.

The whole ecosystem promoting growth will be evaluated in about two years’ time. Currently, the sectors that seem to generate most new entrepreneurship are ICT (50%); clean technologies; and various manufacturing sectors. Many of the new successful firms are active in mobile device games and apps, (12) where competition is tough and product lifecycles short.

**Skills gaps**

In general, the excellent education system provides a competitive advantage. Although skills levels are very high, there are skills mismatches aggravated by structural change. The looming labour shortages make it essential that all human potential is fully used, raising participation rates and closing the skills gap between young natives and migrants. The government has announced initiatives to address these problems. (13)

### 3.26.4 Energy, raw materials and sustainability

**Energy use and prices**

The competitive market for electricity has kept prices among the lowest in Europe, but risks arise from the reliance on a single source for gas. Steps towards diversifying the supply of gas have been taken, including building a pipeline between Finland and Estonia, and there is a prospect of a regional liquefied gas terminal.

Policy is guided by the national energy and climate strategy seeking to limit the growth of energy use e.g. in buildings, transport and information technology infrastructure. A new law on energy efficiency is being prepared as part of implementing the Energy Efficiency Directive.

Adaptation to a low-carbon environment entails both costs and opportunities. Many of the costs arise from...

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(9) Ministry of Employment and the Economy data.
(12) Based on Tekes funding.
(13) Europe 2020, Finnish National Reform Programme 2014
environmental taxes, in particular on transport fuels. In 2012, environmental taxes contributed almost EUR 6 billion (about 7% of all taxes) to the treasury. Improved energy efficiency is promoted with voluntary agreements, used for both firms and public entities; these could be usefully complemented with stronger feedback and follow-up actions, helping to achieve the targets.

Resource efficiency

Besides the clean technology and bioeconomy initiatives, improving resource efficiency relies on the material efficiency programme, the forestry strategy, the programme for sustainable consumption and production, the strategy and action programme for conservation and sustainable use of biodiversity, and the national strategy for sustainable development.

The programme on material efficiency builds on resource efficiency audits and advice. It has been estimated that a reduction of at least 20% in the costs related to resource use could be achieved with a systematic process. (14) In particular, providing better support to SMEs and a more streamlined regulatory environment could bring tangible results.

Other sustainability issues

The current level of environmentally harmful subsidies is about EUR 4.5 billion per year, of which EUR 2.7 billion is classified as very harmful. (15) Reducing these subsidies is part of the government’s structural reform programme as it would help in achieving climate and environment policy goals, and providing incentives for econ-innovation.

There is also a programme, published in April 2013, for the sustainability of the mining industry. In view of the environmental risks linked of mining, it would be useful to evaluate the results of this programme as soon as feasible, and adapt policies if required.

3.26.5 Access to markets, infrastructure and services

Access to markets

The highly concentrated retail sector lacks competition and businesses face obstacles created by, for example, licencing rules, the regulation of large retail premises, and protection of existing firms. Unfortunately Finland has not made much progress in this area since 1998, unlike key competitors. (16) The government’s programme on healthy competition seeks to improve the situation, particularly in the retail trade, and its full implementation is an important aspect of enhancing business dynamics. (17)

Infrastructure

Productivity-related improvements in infrastructure include investments in improving railway capacity for goods traffic towards Russia.

Internationalisation

Traditionally, Finnish SMEs have been part of international value chains as suppliers to large domestic firms. This strategy has become less feasible than before as value chains have become more global, and as large Finnish firms have expanded abroad. The economy would benefit if more SMEs would expand and join global value chains without the intermediation of large domestic firms. However, this development is hampered by risk aversion, lack of relevant competencies and market knowledge.

To address these deficiencies, promote exports and attract foreign investment, publicly funded activities are being brought under a single umbrella, the Team Finland network. In addition, to boost exports in the short term, the government has proposed to more than double the availability of export credit to EUR 7 billion.

3.26.6 Public administration and business environment

Entrepreneurship and Small Business Act

Finland has not integrated the Small Business Act as such into national SME policy. However, the actions taken under the umbrella of industrial policy and competitiveness policy cover the priorities of the Act.

(14) Ministry of the environment, 2013
(15) Kestävää kasvua materiaalitehokkuudella, TEM 33/2013
(17) See the Council Recommendation on the National Reform Programme 2014 of Finland and delivering a Council opinion on the Stability Programme of Finland, 2014.
A national model for business transfers to facilitate the succession process has been developed with the Federation of Finnish Enterprises. Changes have been proposed to legislation on debt settlements to help entrepreneurs with debt problems.

Public procurement legislation will be revised by 2016 to implement the Procurement Directive. To encourage more SMEs to tender, a working group of business organisations is trying to identify the most important issues hindering access to public procurement.

A new smart procurement programme seeks to increase innovation in the built-up environment, health and well-being, and energy and environment. The government has also adopted the principles of promoting sustainable environmental and energy solutions in public procurement.

As the 2013 decision to lower the corporate tax rate to 20 % only applies from 2014 onwards, it is too early to estimate its effects on competitiveness.

**Administrative modernisation**

To make e-government services more widely available, the government is building a National Digital Services Infrastructure, which will be operational in 2015. It will facilitate the introduction of a national common digital identification solution, and the provision of better user portals for citizens, businesses and government agencies.

Meanwhile, the Enterprise Finland portal has been extended to include all business services and provide advice on financial problems. An e-service to register a limited liability company was introduced in 2013.

**Reducing administrative burden**

The business environment is ranked among the best in Europe, but recently only limited progress has been achieved in improving it. To lower the administrative burden of enterprises, the government is seeking to simplify licensing requirements, in particular sector-specific permits and those related to construction and environment. The Environmental Protection Act is being revised with a view to expanding the use of electronic permits and combining various environment-related ones. Regional authorities are encouraged to cooperate in their supervisory and permit policies. Moreover, the government has pledged to avoid increasing the administrative burden for the rest of its term.

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Note: Values have been scaled so that the best observation (Member State) gets 1 and the worst gets 0.

Sources: World Bank Doing Business; Intrum Justitia; OECD; World Economic Forum; European Commission

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On other efforts to take competitiveness into account in all policies, impact assessments are used to estimate the burden on enterprises created by legislation, but so far impacts are seldom expressed in monetary terms. Although the quality of the impact assessments is evaluated, quality problems are not a reason for stopping legislation from going forward. As ministries become more accustomed to doing assessments, the goal is to raise their quality.

3.26.7 Conclusions

The framework conditions for businesses are good in Finland, including research, innovation, education, and public administration. However, recent growth has been very sluggish, and developments in labour productivity and exports have been disappointing.

Sustainable, long-term improvements in exports and growth require a structural change towards a more diversified economy, with new high value-added products and services. Such redeployment of resources is slow and difficult, and improvements in capacity utilisation, wage moderation and efficient use of ICT in processes are required to bridge the gap in the short term.

To regain competitiveness, the government is seeking to achieve both the short-term improvements, and long-term structural change. Like many other countries, it is promoting a change towards bioeconomy and clean technologies. The effect of these programmes will depend on how well they can help Finnish firms to become part of competitive global value chains, and appropriate value from them.

Numerous reforms and extensive policy initiatives have been taken, but in some areas progress could be faster. These include the retail sector, where restrictions lower investment and productivity. Reducing environmentally harmful subsidies, and continuing to improve the energy and materials efficiency of the whole economy, would bring tangible short and long-term benefits.

Many of the government initiatives promoting innovation and growth come under its structural reform programme, increasing their consistency. However, the large number of recently introduced programmes means it is too early to judge whether in the long run these initiatives contribute to permanent structural change, leading to a resumption of stronger growth in productivity and exports. In addition, effective feedback and adaptation mechanisms would contribute to policy learning.