



Industrial Competitiveness Approach

Means to guarantee economic
growth in Finland in the 2010s

Publications of the Ministry of Employment
and the Economy
Innovation
9/2013



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Industrial Competitiveness Approach – Means to guarantee economic growth in Finland in the 2010s			
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<p>The objective of this document is to seek new sources of economic growth in Finland. They promote the objectives set for sustainable economic growth, employment and competitiveness in Prime Minister Jyrki Katainen's Government Programme, while also reflecting the EU2020 programme's goals for smart, sustainable and inclusive growth, set by the European Commission. This document also aims to provide feedback on the preparations for the Government's Foresight Report.</p> <p>The theme of economic growth has been discussed in several recently published reports, such as <i>Investointeja Suomeen (Investments to Finland, working group led by Jorma Eloranta)</i>, <i>Taloudellisten ulkosuhteiden verkosto (Network of External Economic Relations, working group led by Matti Alahuhta)</i> and <i>Pääomamarkkinat ja kasvu (Capital Markets and Growth, working group led by Kari Stadigh)</i>. These reports are only available in Finnish. Furthermore, the Finnish ICT Cluster 2015 working group (Pekka Ala-Pietilä) has suggested ways of improving economic growth in the field of information technology.</p> <p>As the business environment becomes more complex, it is becoming more difficult to implement industrial policy. Traditional national clusters are making way for global value chains and the national accounts are not always able to register this trend. The interests of businesses and the national economy are diverging. Essential components of economic growth, namely the amount of work input and development in the productivity of labour, will nonetheless remain the key factors of economic growth.</p> <p>Economic growth requires that the work input of private sector workers be raised to a sufficient level in relation to the size of the population. As the population increases and grows older, we must guarantee a sufficient workforce to secure Finnish society's welfare commitments.</p> <p>At the same time, the focus of economic policy must be directed towards increased productivity and success in global markets. From the viewpoint of increasing productivity, the following policy areas will be of crucial importance: well-functioning competition, securing national competitiveness, promoting structural adjustment which increase the rate of productivity, seizing global business opportunities and coordinated, target-oriented operations.</p> <p>Contact person within the Ministry of Employment and the Economy: Enterprise and innovation department/Martti Myllylä, tel. +358 50 396 0250</p>			
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Aim of this document

This document discusses the development of value-adding activities by the enterprise sector in Finland and the policy implication this imposes. Sustained success in global competition is crucial for the future well-being of the nation. Value networks are developing in such a way that old cluster based analysis is only partially valid. The previous policy document on industrial competitiveness dating from year 2006 needs revisiting.

In a small country an increasing number of companies needs to start activities in the global market place. This imposes adjustment to the policy toolbox priorities focused on encouraging companies to upgrade. Employment policy is closely linked to competitiveness policy. The ageing of the population poses particular challenges for Finland. In the end, only a performing and renewing market financed enterprise sector can maintain the basis for well-being and social progress.

With this analysis the Minister of Economy Jan Vapaavuori and the Minister of Labour Lauri Ihalainen are inviting the society to a discussion and further joint analysis. Adoption of concrete measures to cope with the challenges will follow.

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Abstract

Finland faces the challenge of guaranteeing economic growth and new jobs, both now and in the future. These have also been selected as main public policy objectives.

Technological and political developments have an impact on the operating environment in the global economy. It is now considerably easier for businesses to decentralise their operations geographically than it was a couple of decades ago. At the same time, their power to decide where they report their financial results has increased.

Traditional national clusters are making way for global value chains and the national accounts are not always able to keep up with this trend. The interests of businesses and the national economy are diverging. These phenomena also have an impact on the implementation of industrial competitiveness policy, making it more complex. While there are no easy solutions for every situation, this development still needs to be understood.

The growing success of the ICT sector involves some trajectories which are alarming from the viewpoint of the Finnish economy and which, at the time, went unnoticed. Finland's long-term average economic growth has slowed, and employment levels have not kept up with population development. In the private sector, which is not dependent on tax income, employment has not regained the levels it reached before the 1990s recession, although the population has grown by 400,000 since then. The decline in the workforce due to ageing is only beginning in Finland.

The objective of this document is to seek new sources of economic growth in Finland. These will promote the objectives set for sustainable economic growth, employment and competitiveness in Prime Minister Jyrki Katainen's Government Programme, while also reflecting the EU2020 programme's goals for smart, sustainable and inclusive growth, set by the European Commission. This document also aims to provide feedback on the preparations for the Government's Foresight Report.

The theme of economic growth has been discussed in several recently published reports by independent experts, such as *Investointeja Suomeen (Investments to Finland, working group led by Jorma Eloranta)*, *Taloudellisten ulkosuhteiden verkosto (Network of External Economic Relations, working group led by Matti Alahuhta)* and *Pääomamarkkinat ja kasvu (Capital Markets and Growth, working group led by Kari Stadigh)*. These reports are only available in Finnish. Furthermore, the Finnish ICT Cluster 2015 working group (Pekka Ala-Pietilä) has suggested ways of improving economic growth in the field of information technology. Promoting economic growth requires extensive commitment, a positive attitude, and coordination of operations of public authorities, as well as in society as a whole.

Policies supporting industrial competitiveness and their objectives must be developed in a way which guarantees economic growth in Finland. It is important both to be able to create value through Finnish work and to channel value from the global economy into Finland's national economy. The key value channels are earned (wages), capital and tax income. It would be in Finland's interests to participate in the international division of labour through high rather than low productivity jobs and tasks. It is equally important that we channel capital income into the national economy through ownership. Finland also needs a reasonable share of the tax revenue generated by international business. Our tax structure and level are significant in this respect. Value can only be channelled if we have businesses which are able to create (capture) value in global value networks.

Finland ranks high in various competitiveness rankings. Our strengths include an educated people and well-functioning infrastructure. Meanwhile, factors often cited as detrimental to the competitiveness of entrepreneurship include high taxes and rigid functioning of the labour market. Finland's competitiveness does not appear to be sufficiently transforming into economic success, which is why the message conveyed by these various reports must be evaluated systematically and critically. We should aim at improving our competitiveness and making the operating environment for trade and industry more inviting in practice. Genuine competitiveness manifests itself as growth and employment – both have room for improvement in Finland.

In order to maintain its welfare model, Finland must increase the volume of work input. New jobs are required for the creation of growth, particularly in the privately funded sector. Although the creation of high-productivity and high-salary jobs is the main objective, increasing the volume of work input is important in its own right. This will require the creation of new jobs in Finnish service production, for example. The labour market and social security system should be developed in such a way as to increase the number of jobs in the privately funded sector and maintaining their share of the population at a sustainable level.

The newest wave of productivity resonates with the changes in the division of labour, namely the transfer of workers between jobs. With countries specialising in different types of work as tasks are distributed between nations, it would be in Finland's best interests to aim for the most profitable tasks in global value chains. These are not limited to research and development task alone, for example. Rather, the significance of manufacturing as a development platform will increase. In this way, the manufacturing jobs could more easily compete of the high-value jobs in the value chain.

Structural change supporting this trend could be accelerated by removing sheltered, competition-free enclaves from the economy. The duties of public authorities must be defined in sufficient detail and the competition neutrality of public service provision must be ensured. Regional competitiveness must be improved. The productivity potential of each individual must be harnessed to the maximum. This requires rewards and encouragement, including on a personal level,

since several studies suggest that personnel is the greatest source of innovation. The labour market system must also be developed to correspond to the needs and possibilities of structural change created by the transfer of workers between jobs. Business subsidies granted by the public authorities must not inhibit structural change – quite the contrary.

Changes in the global economy call for new competencies and abilities. Globalisation increases business opportunities, but requires greater ability to adapt. Value creation within a company does not always need to be based on provision of physical products or services. Coordination expertise, brand management, R&D expertise, value chain management and the ability to benefit from digitalisation will open up a number of new means of carrying a profit.

An environment favourable to entrepreneurship will make business desirable and acceptable. In turn, this will provide fertile ground for new growth and internationalisation success stories. Public authorities and industrial competitiveness policy must focus on supporting the birth of such success stories. Finland needs more companies and individuals capable for international trade. Promoting and encouraging innovation activity increases the flow of projects based on research, technology and new business models. Industrial competitiveness policy must also promote the development of the capital markets. At the same time, it should be ensured that Finland is an welcoming investment market for businesses. Global challenges offer several traditional industries an opportunity for growth and renewal.

Finland needs a common goal that spurs growth; this will require the coordinated participation of the public authorities. If there are no major obstacles, all policy measures should support the growth objectives of the national economy. Cooperation across administrative boundaries must be increased to this purpose. For example, the Team Finland concept forges cooperation between various operators in Finnish society, for the purpose of promoting goals related to external economic relations, internationalisation of businesses, the attraction of foreign investments and Finland's country brand. Implementing the Team Finland project will require extensive insight into the operation of global value chains.

1 The purpose and objective of industrial competitiveness policy¹

Industrial competitiveness policy affects the operating preconditions for industry and commerce, their competitiveness and thereby opportunities for economic growth. Economic activity and growth take place within companies. Practitioners of policy must understand the operating environment and changes therein, developing the prerequisites for business activity whenever possible.

This document analyses the state of the Finland's national economy, the most important drivers of change in the operating environment, as well as the challenges facing economic growth and the related opportunities. This document also suggests measures and policies for attaining the objectives of the new industrial competitiveness policy.

The characteristics of economic growth have changed over the last two decades, and continue to change further, as new dimensions are added to the international division of labour. This document is primarily based on recent Finnish studies on the changes occurring in global value chains, indicating that an increasingly large portion of growth is created by immaterial sources. The scarcity of raw material reflects in various ways on the position and growth potential of developed countries. The requirements of sustainable growth are also having an impact on what economic growth consists of.

Healthy economic growth is indicative of a national economy being in a positive state, supporting the discovery of solutions to environmental challenges, for example. It also reveals a willingness to learn and capability for renewal. Maintaining the welfare state alone will require significant growth in gross domestic product. In our society systems are built on a growth lever. If economic growth slows, many essential structures will have to be rearranged.

As global economic structures change and Finland's economic growth diminishes, our economic policy objectives are becoming more topical than before. Our changing operating environment necessitates the continuous redefinition of Finland's interests. While the main responsibility for implementing industrial competitiveness policy lies with the Ministry of the Employment and the Economy (MEE), several other policy areas also play an integral role in the realisation of these objectives. It is therefore important that they can be made to support the same growth objective.

¹ This document discusses industrial policy from industrial competitiveness perspective. Here industry refers to value-adding activities of manufacturing and service sector companies alike. OECD gives the following definition: *"Industrial policy is any type of intervention or government policy that attempts to improve the business environment or to alter the structure of economic activity towards sectors, technologies or tasks that are expected to offer prospects for economic growth or societal welfare than would occur in the absence of such intervention i.e., in the market equilibrium."* This definition carries out quite well the understanding of the authors also. In fact, by using the term industrial competitiveness policy we mainly want to talk about our economic competitiveness and business environment improvement.

Consolidation of the macroeconomy is a cornerstone of steady economic growth. From the viewpoint of Finland's national economy, it is essential that the euro remains a steady currency and the Eurozone crisis is resolved. Common ground rules must be established, in order to prevent contagion from one country and continent to another. In this light, it is increasingly important that Finland has an influence in and through the EU.²

A general economic policy promoting a steady macroeconomy must be complemented by an industrial competitiveness policy which supports growth and competitiveness. An industrial competitiveness policy underlines the growth-supporting role of every economy-related policy area. It is therefore concerned with a broader range of question than only those related to industrial manufacturing. Since the 2008 economic crisis, the importance of a growth policy emphasising structural issues has increased. Both Finland and Europe need a roadmap for growth. These elements will provide the operating environment with the basis for future growth and renewal.

Increased productivity growth is the key objective of innovation policy. The most important means of achieving this include building up expertise and know-how and profiting from them commercially. The competitive and regulation environment play an important role in support of growth. Furthermore, the performance of financial and capital markets is a key factor in resource allocation and the realisation of innovations as products and services. Industrial competitiveness policy also includes the general promotion of entrepreneurship.

Meanwhile, labour policy impacts on the quantity and quality of human resources. It will become more important in the future, because changes in the structure of tasks will become an increasingly important driver for increasing the rate of productivity.

This document sets out to recognise policy areas which promote growth, "levers for growth", that policy-makers can use to achieve growth targets. Recent reports by independent experts have been taken into consideration. The MEE's own range of measures alone contains several key areas, which may support the achievement of growth objectives. These should always be used in a coordinated manner. The conclusions drawn in this document are also an attempt to cross the administrative boundaries. At any rate, public authority actions should be understood as part of the functioning of the markets, since this relationship too is bound to change gradually alongside change in business environment.

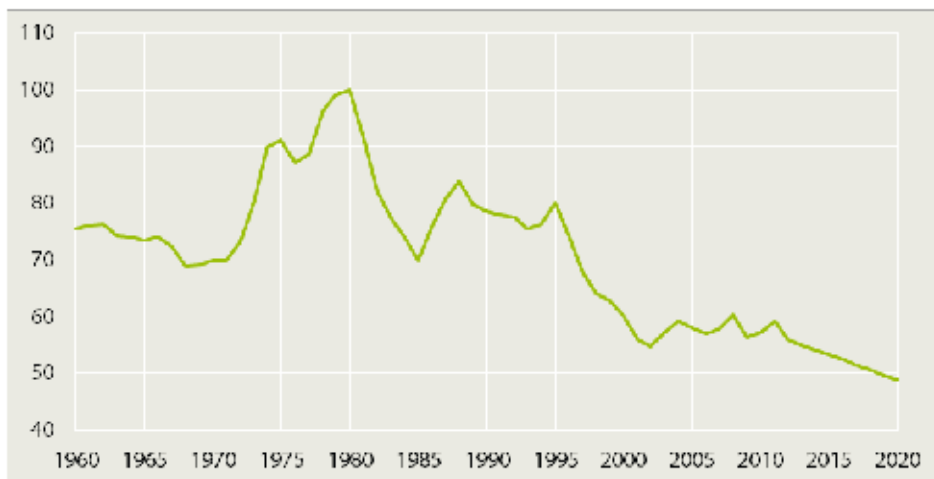
2 In addition to the monetary mechanisms the EU has exclusive competence in areas such as the enforcement of competition and State aid rule, trade policy and the conclusion of certain international agreements. It also has shared competence (e.g. internal market, research and development policy etc.) and the ability to perform activities supporting, coordinating and complementing the activities of Member States (e.g. industrial competitiveness policy). Additionally, it has the power to make the arrangements under which the Member States coordinate their policies (economic, employment and social policy).

2 The global operating environment is changing

In recent decades, combining with technological advances, deregulation in world trade and the economy have significantly shaped the general operating environment. Meanwhile, the global economy has grown by 2–3 billion people and continues to expand. As a cross-cutting technology, digitalisation is only taking its first steps and will continue to develop for decades. Environmental and energy issues and other global challenges are also affecting operating environments. Demand for energy and raw materials will increase, which is likely to cause prices to rise. Urbanisation is an ongoing, increasing trend which will be particularly notable in the great Asian economies. As the process of change speeds up, what was regarded as a strong position in the value chain yesterday may be long gone by tomorrow.

Fragmentation of global value networks is one of the key change trends. Businesses are decentralising their operations, setting them up in what they consider the best and least expensive locations, while clusters tied to a single point on the map are becoming less significant. Earlier, the most important value chain activities occurred within manufacturing. This situation has partly changed. Figure 1 illustrates the decline in the global market prices of industrial products in relation to the price level in developed countries.

Figure 1. Global market prices of industrial products have seen a 40 per cent decline in relation to the price level in developed countries since the year 1980 Source: Pajarinen, Miha, Rouvinen, Petri and Ylä-Anttila, Pekka (2012). Kenelle arvoketju hymyilee? Koneteollisuus globaalissa kilpailussa. Taloustieto Oy (Sitra 297).



Manufacturing now plays a smaller role in value chains as a whole, while activities supporting manufacturing have become more important. Figure 2 illustrates the significance of various tasks in the industrial engineering and management value chain. Brand management, R&D activities, design, marketing and other tasks typically yield the greatest value. This change is particularly relevant to global businesses, but is also increasingly applicable to the global division of labour as such.

Different countries are specialising in certain kinds of operations in accordance with their competitive assets, while seeking higher positions in the value chain hierarchy. For the time being, developed countries still have an advantage in high value added tasks. China has become the workshop of the world, but is also seeking to climb higher up the value chain. Other emerging economies are looking to compete with China to take their part of manufacturing jobs.

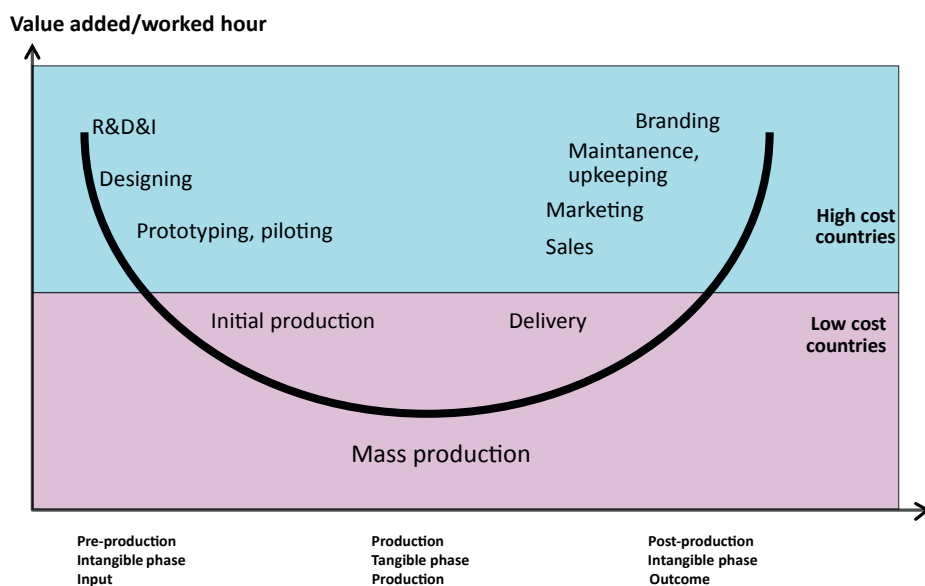
From the point of view of the national economy, the tasks that create the highest value are of huge importance. The production chain of Nokia's first generation smartphone (Nokia N95) is a good example of this. In 2007, Finland received some 40 per cent of the smartphone's value, although it was manufactured in China and sold in the United States. The same value creation chain reveals that only a few per cents of the phone's value ended up in China, the manufacturing country.

Industrial production has traditionally been part of the national interest. Although manufacturing remains one of the cornerstones of Finnish trade and industry, its position will have to be reconsidered. In this regard, simple solutions are not always ready at hand. From a global viewpoint, the value of industrial production is likely to increase, although its employment impact will fall due to better productivity.³ Producing goods in countries where labour is cheap is not always the least expensive choice, however, because production costs and the location of companies are affected by many factors at the same time. It is nonetheless important to note that the fragmentation of value chains is changing the structures of the global economy. Companies are at greater liberty to take advantage of the opportunities created by globalisation, while an increasingly narrow range of measures is available to national policy, by which operations such as manufacturing can be tied to one's own national economic area. This trend also renders futile to base trade policy measures for divisions such as import and export, or goods and services.

Success in the global economy is dependent on the rapid and flexible transferability to new tasks of production factor resources. Individuals must also be able to adopt new tasks. The transition towards higher-productivity jobs is being emphasised in the labour markets. Globalisation of the labour markets is also posing new kinds of challenges in terms of national policy.

3 McKinsey. *Manufacturing the Future, The next era of global growth and innovation*. 2012.

Figure 2. Tasks in the value chains of the global economy, classified according to the pre-production, production and post-production phases. (Source: Pajarinen, Rouvinen and Ylä-Anttila, Research Institute of the Finnish Economy (ETLA), 2010 & 2012.)



The findings of leading value chain research conducted in Finland suggest that, at different stages of the design and production chain, huge variety exists in value creation, depending on the product in question. Key conclusions drawn from the research conducted so far⁴ include notions such as the following:

- 1) In most cases, no good reason exists for opposing the service sector to manufacturing, since these two are often intertwined. Compilation of service sales statistics is often regrettably insufficient and should be improved.
- 2) Individual transactions are often recorded in international trade statistics according to their gross amount. This can lead to misleading results. The compilation of statistics is being developed in order to register value added.
- 3) Manufacturing remains important, but other factors – such as design expertise, the position within the distribution channel and brand management – may equal mass manufacturing in their potential to create value and a stable competitive position.

Fragmentation of value chains is closely related to the advance of digitalisation. We are currently moving away from building a digital service economy, towards benefiting from it in a concrete manner. Digitalisation is simultaneously becoming an

⁴ The analysis section of this document is largely based on Etlatieto Oy's recent global value network research results. We would like to extend our deepest gratitude to Pekka Ylä-Anttila, Petri Rouvinen, Jyrki Ali-Yrkkö, Mika Maliranta and Timo Seppälä for their valuable input throughout the preparation of this document.

increasingly important source of increased productivity. The impact of this change is already visible in production, and the entertainment and media sectors, for example. As technology continues to develop and propagates, it will pave the way for so-called systemic changes in several areas of life. Digitalisation is likely to revolutionise fields such as education and health care.

In the digital economy, the emphasis is on self-service, peer production, indirect earning methods and other, non-traditional forms of market exchange. The increasing importance of this phenomenon, termed the hidden economy, is difficult to grasp. Industrial competitiveness policy must take account of the dismantling of boundaries in the digital world, for example when decisions are being made on communications and immaterial rights.

The form and content of labour are changing in our digital operating environment. Taxation should strike a balance between incentivisation and fairness, even when there are great differences between individuals in terms of productivity. Work in multiple locations, work based on multiple earning sources, part-time work and entrepreneurship will also increase.⁵

In addition to the changes described above, as an operating environment the global macroeconomy is characterised by great uncertainty. Together with the increasing mutual dependency of states and economic players, this can lead to change, including sudden developments. For example, the debt crisis in the western countries is also causing problems for China, whose export and state-led economy is highly dependent on purchasing power in Europe and the US.

While globalisation is creating new opportunities for economic growth, it is also increasing levels of economic volatility. This, in turn, underlines the importance of being able to renew and adapt. The national economy should be rapidly able to direct resources to where they can be used in the most productive manner.

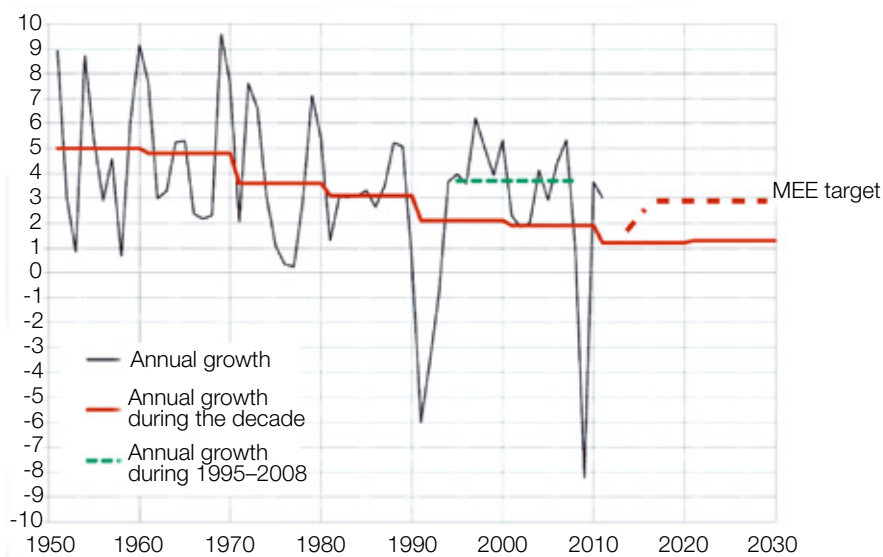
5 Matti Lehti, Petri Rouvinen and Pekka Ylä-Anttila: Suuri hämmennys. Työ ja tuotanto digitaalisessa murroksessa. Taloustieto 2012.

3 The Finnish economy – facing new challenges again

After the 1990s depression, the Finnish economy grew strongly until 2008. Between 1995 and 2007, GDB increased by an average of 3.7 per cent a year. This figure exceeded the average growth rate of developed countries by one percentage point, clearly surpassing the strong growth rate of the 1980s (Figure 3). Nevertheless, the average trend growth has ebbed throughout the decades in question. Although a similar situation exists in most OECD countries, a critical assessment is required of the structural causes for this downward trend. It appears that the success of the ICT sector prevented us from fully understanding the narrow basis on which our growth rested.

Finnish manufacturing industry pushed the so-called productivity frontier. In other words, our productivity per work input is among the best in the world. Although, from the 1980s until recent years, productivity growth has been excellent, it is now threatening to slow down, particularly due to the major decline in the ICT sector's impact on productivity. In 2009, GDP fell by 8.2 per cent. Despite growth since that year, in real terms production has not regained the level preceding the economic crisis. Export rates have also fallen, mainly due to the drastic decline in the export of ICT products. This is illustrated by the fact that in 2010, the value of high-tech product imports surpassed that of exports, for the first time since the compilation of statistics began.

Figure 3. GDP growth rate 1950–2030.



Source: Matti Pohjola: "Kasvukauden tilinpäätös", Kansantaloudellinen aikakauskirja 3/2011.

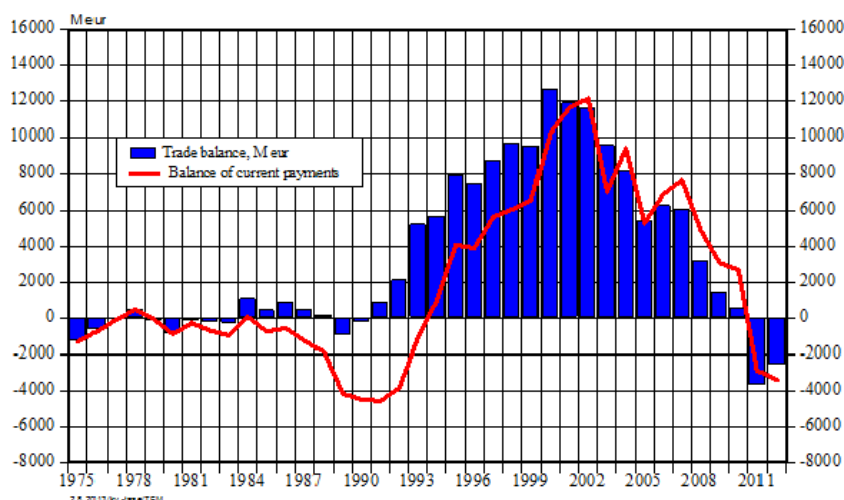
The 2008–2009 slowdown had a more severe effect on the Finnish economy than that of many other competing countries, because the recession coincided with a decline in the electronics industry. The electronic industry has lost significant market share, while the price of our export products in relation to import prices has fallen. Increases in oil and gas and other raw material prices are the primary factor underlying this change.

From the 1970s until the beginning of the 1990s, Finland's trade balance varied between surplus and deficit. The external position of a national economy can occasionally change greatly, and a deficit can be due to investments in economic growth. Trends since the early 1990s have been exceptional, providing a textbook example of changes in the global division of labour. The trade balance continued to grow steadily until the new millennium, the surplus reaching a level of 12 billion euros. Since then, the trade balance has seen a steady decline, ending once again in a deficit. Finland's current account has undergone parallel trends (Figure 4).

Led by Nokia, the ICT sector improved the trade balance until the beginning of the 2000s. Finland was manufacturing mobile phones for the international market, but also importing foreign goods for packaging, reselling them at a higher price. Finland treated these sales as exports. The situation has changed during the last ten years. Some value from Nokia's production is still channelled into Finland, but no longer through the export of goods. However, recent major structural changes in the Nokia cluster could change this situation rapidly.

This example shows how changes in the global division of labour affect the structures of single national economies. Finland previously imported and exported end products in the main. Since then, the emphasis has shifted to the quickly-changing logic of businesses which utilise fragmented value chains. One of the latest insights includes the fact that some major Finnish companies no longer necessarily register their profits in Finland.

Figure 4. Current account and trade balance.

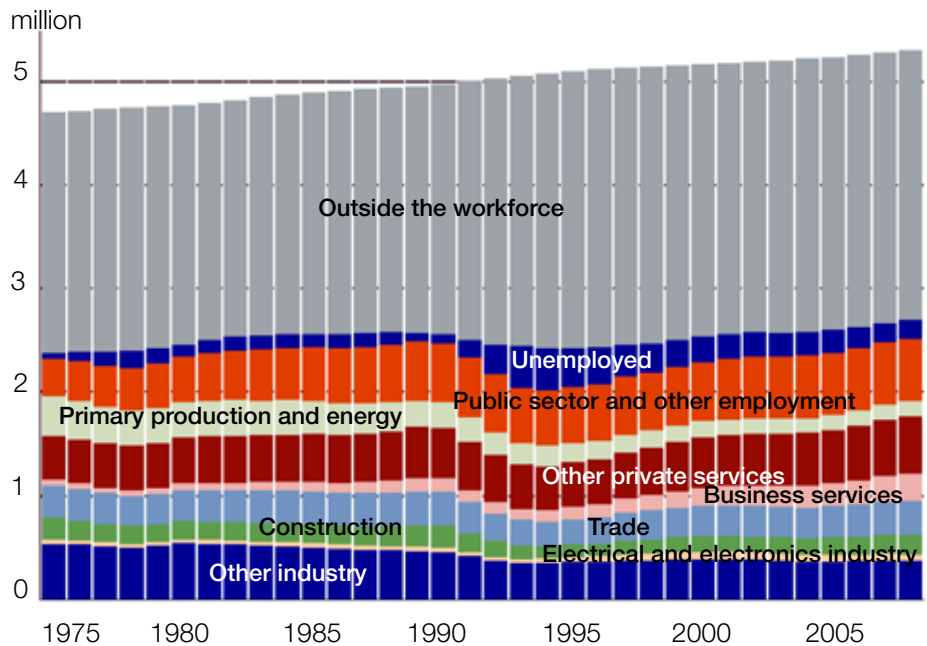


Source: the Bank of Finland and the National Board of Customs.

As earlier sources of value dry up, our industrial competitiveness policy should be able to orientate towards new ones. From the viewpoint of economic growth and economic restructuring, growth companies have become increasingly important to developed economies such as Finland. By international standards, the number of these in Finland is rather small. According to reviews, fewer than 700 companies employ over ten people and have an annual growth rate of more than 20%. Despite their small number, this group of companies is extremely important to Finland's economic growth. It has created over a half of new jobs created in companies employing more than ten people.

Our work input is bound to diminish as the working-age population begins to decline⁶. The number and proportion of people not participating in working life is already rising, at a time when the most dramatic demographic change still lies ahead. Unemployment rates have also remained high (Figure 5). Employment in the privately funded sector has still not regained the level it achieved before the 1990s depression, while the population has grown by 400,000 since then. Meanwhile, employment in the public sector has risen fairly steadily since the 1970s.

Figure 5. The labour market position and employment of the Finnish people, by main sector (million persons).



Source: Pajarinen, Rouvinen and Ylä-Anttila: "Missä arvo syntyy? Suomi globaalissa kilpailussa", Research Institute of the Finnish Economy (ETLA), 2010.)

6 Population statistics, Statistics Finland

The development described above has weakened the dependency and support ratios.⁷ In recent years, the support ratio has rested at around 2.0, although in 1980–1990 it was about 1.6–1.7. During the 1990s recession, the support ratio peaked at 2.5, and trend estimates suggest that it may reach this peak again by 2020.⁸ An ever smaller number of people will be “sustaining” more people than before. Improving the support ratio would require the creation of new jobs in the privately funded sector (Appendix 2).

If working time and workers' share of the population remain at their current levels, work input will diminish by an average of 0.4% per year during the current decade. If the growth of labour productivity could regain the level of the previous decade and reach an annual rate of 1.7 per cent in the 2010s, Finland would achieve economic growth of 1.3 per cent. This figure is clearly smaller than long-term estimates and the assumptions underlying the pension system, for example.

The key issue is whether we can slow down the decline in work input and speed up our economic growth. In order to successfully realise these goals, our production structure must be diversified and reoriented towards higher-productivity industries. We should also increase the work input. The MEE target depicted in Figure 3 illustrates the economic growth rate (about 2.5%–3%) at which we should consistently aim. If this trend level does not rise, the fiscal sustainability gap⁹ will be difficult to solve and the foundations of the current welfare state structures cannot remain on solid base.

7 Dependency ratio or economic dependency ratio refers to the ratio of those people who need to be sustained by the working population. Meanwhile, support ratio refers to those working in the privately funded sector as a proportion of the rest of the population.

8 McKinsey: “Työtä, tekijöitä ja tuottavuutta”, 2010.

9 Suggested estimates of the fiscal sustainability gap vary between 3% and 8% of GDP. Put simply, the fiscal sustainability gap measures by how much the financial position of a country's public economy must improve immediately, in order to avoid increasing the national debt.

4 Sources of economic growth

4.1 Work input and productivity

The equation behind economic growth is simple: more work input + better productivity. A higher rate of participation in work equals a higher number of people in labour force. In turn, higher employment of the labour force would improve the employment rate, resulting in economic growth and an improved dependency ratio. Employment in the privately funded sector plays a key role, since only through this are publicly funded operations possible.

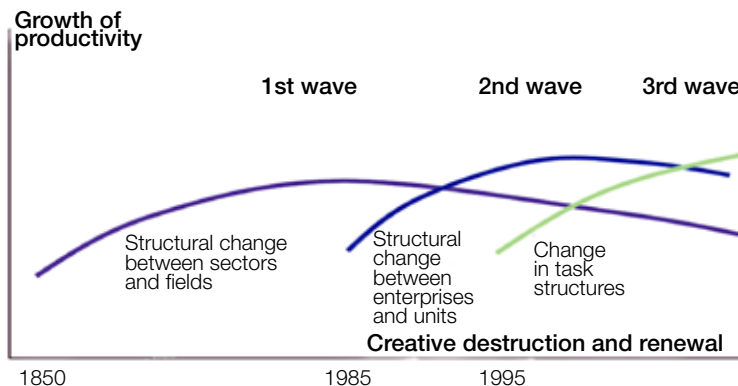
Productivity refers to output expressed as a proportion of the amount of input of various kinds. This is termed overall productivity, which can be divided into parts. The most frequently discussed part is labour productivity, which refers to output as a proportion of work input. Most long-term economic growth of developed countries can be explained by the rise in productivity created by new technologies and organisational models.

A significant share of productivity is also created by structural changes in the economy. Structural change may take place

- 1) between different sectors of the economy,
- 2) between companies and their units, or
- 3) within companies and other organisations as the internal structure of duties changes (Figure 6).

The lion's share of recent productivity growth in Finland has occurred within existing companies, but growth can also be initiated by a phenomenon known as creative destruction. This refers to the combined effect of the redistribution of market share between companies or units entering, leaving or operating in a given sector. In practice, effective competition plays a key role.

Figure 6. The long history of the main drivers of productivity growth.



Source: Pajarinen, Rouvinen and Ylä-Anttila: "Missä arvo syntyy? Suomi globaalissa kilpailussa", Research Institute of the Finnish Economy (ETLA), 2010.

Around two thirds of Finnish industry's total productivity growth can be explained by creative destruction. This has helped Finland to catch up with leading industrial economies and become one of the world's leading countries in terms of manufacturing productivity. In countries such as Finland, growth-oriented entrepreneurship is an efficient driver of creative destruction. It is also becoming more and more indispensable, if Finland is to remain among the best.

During the latest stage of globalisation, company units located in different countries specialise in different tasks. This reduces the benefits of single-location clusters. The concept of productivity potential is also changing; it increasingly refers to the transfer of workers between jobs as a means of achieving productivity growth.

Manufacturing and assembly are transferred to low-cost countries located close to their markets. In the electronics industry, for example, assembly does not account for a large share of total output, because value added is mainly created by other activities. As a matter of fact, the electrical and electronics industries are Finland's largest exporters of services.¹⁰

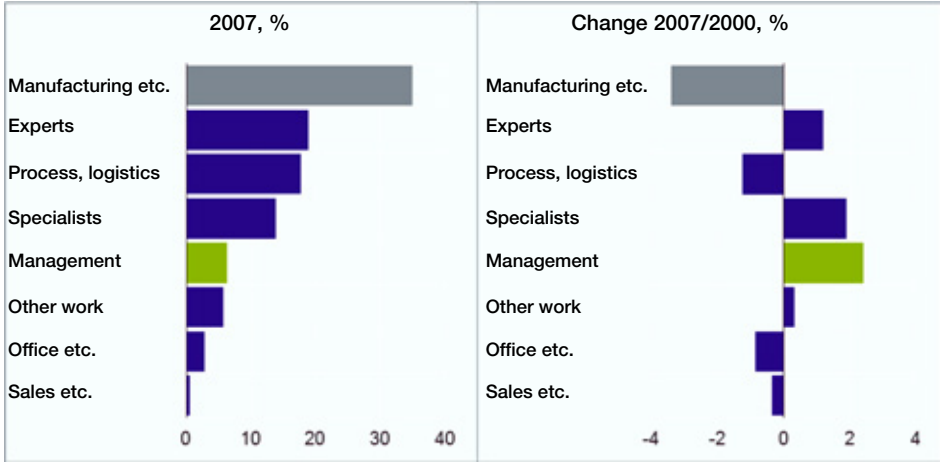
While brand management and product development often create the jobs with the highest productivity, deployment of product innovations also does so. Production of first product series is another source of such jobs, since it requires top Finnish process expertise. From the viewpoint of the national economy, as many workers as possible should work in high-productivity tasks, with better pay.

Changes in the structure of tasks are clearly visible in Finland. For example, as many as two thirds of mechanical industry workers are not directly involved in production. Around one in three people in the field are working in various expert positions (Figure 7). Actual production tasks constitute the group of tasks which has seen the largest decline during the 2000s, while the number of expert and management positions of various kinds has increased.

This change is partly related to the growing significance of service operations in manufacturing activities. As much as one third of the Finnish manufacturing industry's turnover and exports is already dependent on IT application functions. This sector may have remarkable growth potential in the future, due to the changing structures of Finland's ICT industry.

10 Mika Pajarinen, Petri Rouvinen, Pekka Ylä-Anttila: Uutta arvoa palveluista. ETLA 2012.

Figure 7. Occupational structure in the mechanical industry in 2007, and changes between 2000 and 2007. Two thirds of mechanical industry workers are engaged in service duties. Source: Pajarinen, Miha, Rouvinen, Petri and Ylä-Anttila, Pekka (2012). *Kenelle arvoketju hymyilee? Koneteollisuus globaali-ssa kilpailussa*. Taloustieto Oy (Sitra 297).



Policy-makers are faced with difficult questions due to this change. The world is growing increasingly complex, making the identification of clear solutions more and more difficult.

Finland’s economic success has been built on exporting the output of its industrial production. Export income has allowed Finland to invest in the development of production and to maintain relatively high living standards, even by international standards, involving the consumption of foreign goods. Furthermore, export income has provided the means of financing Finland’s exceptionally broad-based welfare services. Despite changes in the operating environment, structural change in the Finnish economy will continue to be based on our existing assets. For this reason, new openings should not lead Finland to abandon previously tried and tested expertise. It would nonetheless be advisable to find ways of complement this expertise by developing new sources of income, for example by offering high-expertise services. Key areas of industrial expertise will maintain their key position in the future. If Finland is to acquire tasks with high value added, our expertise must, at least on some level, apply to all stages of the value chain.

Although the goal is work with high productivity and high pay, from the viewpoint of flexible structural changes maintaining price competitiveness would nonetheless be indispensable.

In the global economy, global value network management expertise is associated with the most lucrative profit expectations. Apple is a good example of this. When a service is scalable and tradable, in principle astonishing productivity potential is just a mouse click away.

4.2 Value creation in global value networks

By controlling a critical part of the value network, a company can create or capture more value than other players in the same network. Control over the value network was once almost the preserve of product manufacturers. However, in the new millennia, the ship is steered by those who work at the customer interface, own a strong brand or, for example, hold critical patents. Such companies play a bigger role in channelling economic value into the national economy.

Some leading companies, such as Apple, Amazon and Ikea, do not produce any goods themselves. Instead, they are experts in benefiting from their brands, coordinating the way in which the global value chain operates around the brand and their products. As a consequence, these companies and the national economies in which they operate have the opportunity to gather a significant share of the profit and value created by the products they develop, design, produce and distribute. In other words, the success of these sample companies is not built on production processes, but rather on the management of customer relationships, brands and expertise.

Naturally, controlling the value network is in the interests of all companies. Industrial competitiveness policy previously gave regional clusters prominence as the foundation of competitiveness. Today, these clusters are fragmenting. With the largest companies operating on a global scale, the significance of industrial competitiveness policy emphasising regional clusters is dwindling. Most Finnish companies are unlikely to become the drivers of the global value network, but will nonetheless be important to the national economy, even if their roles do not result in exceptional value creation. However, more companies should seek to improve their position in the international market, in order to guarantee their profitability and ability to renew. On the other hand, clusters will not become totally irrelevant, since companies will be pulled along in the slipstream of the drivers of global value networks, allowing them to benefit from international business opportunities.

Production will continue to create new jobs directly and to have multiplier effects. In some fields, production and R&D activities benefit from being situated close together. If these sectors' production activities are moved elsewhere, R&D is bound to follow. Service businesses with an internationally strong position, such as engineering offices, may contribute significantly to maintaining the production network. Despite the rapid internationalisation of the service market, advanced synergies and centres of expertise may continue to exist between various internationally competitive companies.

Information box: Service innovations and immaterial assets as a source of economic growth

How and where is value created in the new global economy?

The global economy has seen the birth of a new global division of labour and logistical model for value creation. Asia's share of the world's industrial production is already larger than that of Europe and North America combined. The global division of labour and specialisation no longer necessarily follow the divisions between fields and sectors, but occur within them.

Complemented by low-cost logistics, the development of information and communication technology has allowed industrial production and value chains to fragment into increasingly small parts around the world. Countries and regions specialise in different operations and tasks according to their comparative advantage rather than by sector. The key issue is where the value added and high wage management parts of the value chains are located, what defines their location and who controls the value chain.

An increasing share of production value consists of compensation for immaterial assets: R&D assets, brand, leadership capital and various databases, for example. In other words, compensation is paid for new ideas and innovations – the most concrete examples of this being patent and licensing revenue. The key questions in the global economy concern where innovations are being created and who owns them. Most of the world's consumer electronics – such as mobile phones and computers – are being manufactured in China, but the countries where R&D and design take place and which hold the immaterial rights to the innovations receive a share of the product's value which is many times larger than that gained by the manufacturing country. Countries are increasingly competing for high value added tasks and the revenue generated by immaterial capital. Many countries use tax policy as a tool in such competition: income from innovations is subject to lower tax than other company income (model called the “innovation box”).

The value chain of a digital service provider – Case Whitevector

Founded a few years ago, Whitevector Oy is an innovative online and small but quickly growing service provider. This company is a good example of how immaterial assets (R&D, software) and service innovations can be used to create value in the international market and how the geography of value creation is determined.

Whitevector has developed a service concept and information system almost entirely based on open-source software and whose “raw material” consists of free content published in the social media and online discussion forums. Its services provide an almost real-time analysis of such material, providing clients with information on the attention and comments garnered by various products and services (brands). Information gathered by the service allows clients to develop their marketing, communications and products and services.

Whitevector value chain analysis shows that some 95% of the value of their services remains in Finland, although its “production” takes place abroad. This is an even greater share than the 40% of Nokia's smartphone value which remained in Finland after the telephone had been designed there, before being manufactured in China and sold on the US market.¹⁾

Two key factors lie behind the value created by Whitevector and its geographical location. Firstly, creating a service requires significant immaterial investments in order to put the business idea into practice: investments in the development of services and tailored software. An R&D&I project – an immaterial investment – is at stake. Secondly, once produced, the service includes almost limitless scalability benefits: for next to zero extra costs, it can be scaled to almost any size. After the initial investment has been made, practically the only costs incurred are due to Internet access.

Messages for industrial competitiveness policy makers

The new logic for global value creation and the Whitevector caseⁱⁱ⁾ used to illustrate it contain some important messages for industrial competitiveness policy makers. Countries such as Finland have specialised, and will increasingly specialise in, operations and tasks which require high-quality education and expertise. A significant share of such capital is being created through the value added associated with international value chains and networks. All countries are competing for high value added positions in the value chain, but also for the profits of the companies involved.

The distribution of profits is partially based on transfer pricing and the incentives provided for companies to report their profits in certain countries. In the case of services and immaterial rights, the rules are not as simple as they are in the foreign trade of goods. Companies have a choice. The most concrete decisions facing companies concern patent and licensing revenue: where is the ownership of immaterial rights located and where is their revenue reported? As an increasing share of business activities is based on knowledge capital, influencing these issues is becoming the core of industrial competitiveness policy.

i) An analysis of the value creation and value distribution related to Nokia's N95 smartphone's is given in Pajarinen, Rouvinen and Ylä-Anttila (2010), *Missä arvo syntyy? – Suomi globaalissa kilpailussa*.

ii) Case Whitevector is based on Mikko Rummukainen's Master's thesis (2012), *Where is value created within the global value chain? Case Whitevector Ltd*, published at Aalto University School of Business. This thesis forms part of Etlatieto Oy's Finland and Finnish Companies in Global Value Networks research project.

Information box: Value creation, value capture or value channelling?

The term 'value capture' refers to new opportunities for deriving greater benefit from global value networks than that gained from 'value creation'. In this document, companies' business activities are mainly referred to as value creation, while emphasising the "capturing" opportunities created for businesses by the fragmentation of value chains. On the other hand, the channelling of value refers to sources through which economic value is transferred into the national economy (earned income, tax income, ownership-related income, etc.).

Value creation is undergoing continuous change, which is posing a challenge to the preconditions of success in the global market. Manufacturing still plays a key role in creating such value, but its success is also founded on continuous renewal. Traditional, physical signs of wealth, such as smokestacks as landmarks of production machinery, are losing their importance.

However, manufacturing related tasks remain important in all countries. The most valuable tasks in the value chain are often connected to manufacturing or scalability of operations. Frequently subject to international competition, service jobs in particular are often connected to industrial jobs. With manufacturing industry moving to new locations such as Asia, there is the risk that this will be followed by higher-value parts of the value chains or tasks requiring the highest competence levels, such as product development. Changes are also taking place in the structure and contents of the highest-value tasks of value chains. What is cutting edge technology today may be produced in bulk tomorrow. In international companies, the production of first series and mass manufacturing may occur in different geographical locations. In order to remain successful, Finland must be able to offer expertise in the new growth industries, which will motivate companies to select Finland as the location of their activities flowing from R&D to production.

In the future, industrial jobs will mainly be created in regions with high competence levels, because there is demand for workforce with a good command of automation technology, modelling, simulation, ICT and precision tools. The number of tasks which require mid-level competencies will diminish, while it has been estimated that jobs which require a low educational level will see a slight increase. Productivity of industrial jobs will continue to grow. In advanced economies, manufacture industry's share of total jobs has already been declining for some time, and this trend is likely to continue. Nonetheless, it has been estimated that the value of industrial production will increase on a global scale as well as in the advanced economies.

In light of the rapid development of globalisation models, Finland needs to develop its competitive assets in a versatile manner. Companies are continuously seeking experience and precise knowledge of the most effective and least expensive way to organise production management. Some companies who transferred their operations abroad have also returned to Finland.

Global production chains are changing substantially, as ICT enables a greater level of global linking within companies' operations. 3D printing, or additive manufacturing, is changing industrial processes. Future technology will enable the combination of mass manufacturing with the benefits of tailoring. Apart from 3D printing, other key technologies will include material and semiconductor technologies. System biology is expected to emerge as a new technology and benefit industry in new ways.

As ICT technologies mature and are able to integrate different equipment, they will create interdependent ecosystems. Industrial operations of the future will be built on ICT systems. ICT will no longer be a support function, but the "lifeline" of industrial operations. The so called big data will simultaneously become the new key raw material. The importance of virtual production will be increasingly traded alongside material welfare. It has been estimated that the (data-based) Internet economy is the strongest growing sector.¹¹ Estimates also suggest that, by 2025, half of all value will be created digitally.¹² Both combined with production and alone, data is enabling economic growth.

New technologies only provide a brief competitive asset. Maintaining a position in the value chain is only possible if some of the product's features can be protected or are difficult to copy. Intellectual property rights (IPR) expertise is becoming more important and the pressure being directed against countries which are guilty of breaching IPR agreements is increasing. Nevertheless, competition will necessitate the continuous updating of expertise and capabilities.

This fragmented task structure will lead to surprising transitions in the future, as companies make investment and location decisions according to their own strategies. Public authorities will rarely be informed of these decisions in advance. Companies do not always transfer everything they can at once. But when they deem it necessary, the results are often surprising. Nonetheless, it should be noted that

11 OECD
12 Tivit

the relocation of Finnish manufacturing operations abroad may still benefit the Finnish economy. These positive effects are created by factors such as the transfer and acquisition of expertise and capabilities. Faced with the decentralisation of industrial operations, it is in a national economy's interest to maintain and develop abilities throughout the value chain. With respect to manufacturing industry investments in the new operating environment, it is particularly important to invest in customer relationship management, supply chain management, production and its interfaces, sales management and marketing.

The operating logic behind a resource-based manufacturing industry is often different to that of a knowledge-based one. If a national economy is in possession of natural resources, it should consider ways of benefiting from them. Increasing value added is the key to success.

The US, for example, seems to have adopted the development of advanced technology manufacturing as one of its strategies. Research institutes are focusing on new technologies and conscious efforts are being made to surround these institutes with ecosystems based on interaction between research and industry. Meanwhile, in Germany for example, industrial success has been built on factors such as high quality.

5 Industrial competitiveness policy focus areas supporting economic growth

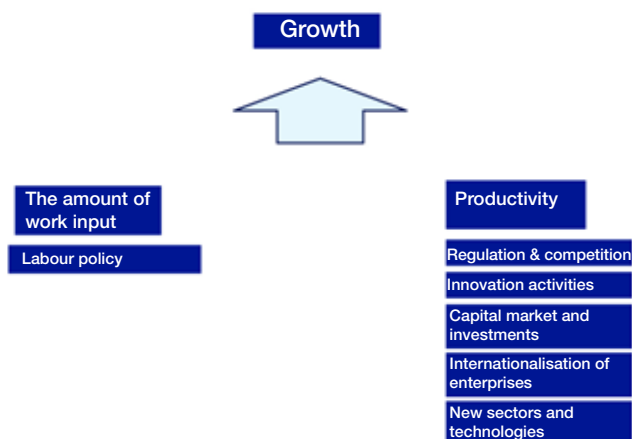
In light of the analysis presented above (sections 1–4), Finland will face the challenge of waning long-term growth. GDP growth is tied to the amount of work input and the number of people employed by the privately funded sector. Changes in the global business environment will create new challenges: value chains are fragmenting and it is becoming easier to move work to locations considered optimal from the viewpoint of the entire production process. This change also represents a huge opportunity.

Finland's success has been based on an export-oriented strategy which has benefited from the opening of the world market. The operational preconditions of the export industry must be guaranteed in the future, but the changing operating environment also necessitates an updated growth policy. Finland's interests should be defined in light of the new operating environment, taking account of changing circumstances, but old, tried and tested policy recommendations should not be abandoned as such.

General operational preconditions could be developed by influencing the nature of the international market and operating environment. To achieve this, Finland should raise the efficiency of activities involving its external economic relations and international influence. While a stable macroeconomy is an essential building block of growth, Finland should also identify unique solutions which will improve the competitiveness of both the nation and Finnish companies, making Finland a more attractive business environment.

Figure 8 illustrates structural policy areas which fall under national decision-making power and promote growth. In this respect, the quantity and quality of work input has direct impact. There are also means improving growth in productivity, although this is somewhat more complicated. The policy applied should form a coherent whole which benefits the overall industrial competitiveness policy. Supporting growth will benefit everyone. Subordinating growth to other objectives should be well and transparently founded.

Figure 8. Sources of growth and areas of growth policy



In line with the above, industrial competitiveness policy should be strengthened for the purpose of promoting economic growth. Key areas:

1. Improving the Finnish operating environment's attractiveness and general competitiveness.
2. Increasing the amount of work input.
3. Supporting structural changes which improve productivity.
4. Taking advantage of new growth opportunities in the global environment.
5. Improving the effectiveness and compatibility of various policy measures.

The contents of these five areas will be discussed in further detail below. After the previous industrial competitiveness policy document was published in 2006, globalisation has gone further and changed form. The financial crisis, which began in 2008, has made an overall reconsideration of this issue necessary. Figure 9 illustrates the way in which the new approach will complement the earlier contents of the industrial competitiveness policy. New elements include the challenges and practices created by globalisation, for example. They emphasise experiments, immaterial investments, the significance of structural change, and value creation opportunities as industrial competitiveness policy measures.

Figure 9. New growth policies

Challenges and dimensions of growth policy	Earlier notions	New, complementary notions, new challenges
Globalisation	Export-led growth, opening new markets	Value creation (capture) and channeling economic value into the national economy. Coordinating the value chain may be more profitable than the production and export of goods.
Competitiveness	The competitiveness of key sectors is important	Competitiveness is insufficient if there are no markets for products. Competitiveness emphasises new kinds of expertise.
Innovations and renewal	Investments in technological expertise	Experimental, listening to the market's reactions.
Labour force	Demand for labour force increases, enabling economic growth	The input of each worker should be "freed up for the best possible" use. Expertise and education are improved on all levels. National collective agreements emphasise the need to conclude local agreements and take account of company-level needs.
The nature of investments	Increasing fixed investments and putting more weight on R&D investments	The significance of immaterial investments will increase further. Investments must support structural change. A competitive operating environment will guarantee sufficient levels of investment.
Focus areas	Innovations, investments, infrastructure, energy production	Value creation in the value chain, internationality, growth environment, competition, customer relationship management.
Target groups	Sectors, clusters	Growth-oriented companies; increasingly also individuals. (Gradual convergence of employment and industrial competitiveness policy.)

5.1 Strengthening general operational preconditions, and competitiveness

5.1.1 Competitiveness

In the most recent competitiveness survey conducted by the World Economic Forum (WEF), Finland was placed third after Switzerland and Singapore, leaving Sweden behind. Our education and innovation systems are often ranked as being good and efficient, even enviably so. Another important competitiveness assessment ranked Finland in the top 17 (Institute of Management Development, IMD).

At the moment, Finland's high competitiveness is not being transformed into growth and employment in the best possible way. Furthermore, competitiveness surveys do not guarantee future success. In a situation where companies have better opportunities to locate themselves and report their financial results in whichever

country they wish, Finland must remain the kind of country where companies want to set up their headquarters and report their profits. Despite our assets, Finland also has clear weaknesses.¹³ Some recent surveys also suggest that we are losing ground in the price competition with our key competing countries. Quite recently, decisions have been made to tackle these questions.

WEF highlights high taxes and inflexible labour markets as the key problems weakening the prerequisites for business activity in Finland. These issues were also discussed in independent expert reports (**Eloranta** and **Stadigh**). Factors such as a small domestic market and low levels of local competition are weaknesses which need to be solved.

Finland's competitiveness must be systematically developed, by tackling the weaknesses highlighted by competitiveness surveys in a thorough, analytical manner. Until now, high rankings in overall evaluations have lulled policy-makers into a false sense of security. This needs to change. The correct way to read competitiveness reports is to learn from our weaknesses and systematically improve our competitiveness. Genuine competitiveness manifests itself as economic growth and employment. The current Finnish labour markets are efficient in many ways. However, it appears that their efficiency could be improved in order to guarantee the competitiveness of the export sector and employment for less productive labour force, for example.

1. ***We must improve our competitiveness. We should pay systematic attention to the analyses and results provided by international competitiveness surveys, particularly to those policy sectors where Finland's ranking is weak. Monitoring and analysing Finland's competitiveness will be regularly considered by the Cabinet Committee on Economic Policy, as part of the implementation and follow-up of the Government's growth programme.***

5.1.2 Finland and the future of its manufacturing industry

The changing nature of manufacturing was discussed in section 4.3. Manufacturing production skills and actual production activities in their various forms are important, because they are fundamentally connected to other activities in the value chain. In addition to general industrial competitiveness policy definitions, Finland needs strategic thinking in order to improve its industrial activity.

13 Finland was ranked 3rd in the recent WEF survey which assessed some 110 aspects and covered about 140 countries. Although Finland is ranked among the best in most aspects, it does not do quite as well in some areas. Finland is not among the top 50 in the following areas:

- strength of investor protection (52), fixed telephone lines (65), gross national savings (68), government debt (93), intensity of local competition (68), extent and effect of taxation (99), total tax rate (73), time required to start a business (66), agricultural policy costs (56), imports as a percentage of GDB (83), flexibility of wage determination (137), hiring and firing practices (80), foreign direct investment and technology transfer (87), domestic market size (52), foreign market size (56) and local supplier quantity (87).

The key objective must be to keep the value added of Finnish work high, guaranteeing our economic adaptability in ever-changing conditions. Other aspects of industrial production should also be considered, such as security of supply and general security.¹⁴

Public authorities have often implemented poor policies by “picking winners”, resulting in a number of examples of public investment errors (*government failure*). A horizontal industrial competitiveness policy emphasises the self-direction of the market. This is also a good starting point as regards industrial operations – stepping away from it needs to be well justified. The market does not always yield optimal results (*market failure*). Public interventions have often been justified by the need to support external influences, by spreading expertise and know-how. Finland’s innovation policy has revolved around investments in the creation of expertise and abilities.

If activities take place on market terms, they can support those sectors in which Finland has strengths. At the front line, it may be reasonable to defend old competitive assets and create and consolidate new ones, if this is supported by the global market situation. Finland should consider whether it would be possible to create more ecosystems built around R&D and industrial production. For example, these ecosystems could operate and develop around our most important raw materials, such as wood and minerals. Existing tools (e.g. the Strategic Centres for Science, Technology and Innovation) must be continuously evaluated, in order to discover whether they have led to the creation of genuine industrial and commercial success stories. A recent study¹⁵ suggests that Finland should target its investments at the development of supply chain management, production and the related interface, human resources management, and management of sales and marketing. The key question is whether the Finnish operating environment is sufficiently competitive when companies are considering whether to make investments which would result in their renewal?

The outlook for Finland’s success is promising, because the role of expertise in areas such as the ICT sector will be emphasised in industrial activities. ICT expertise is a generic skill applicable to all fields, meaning that is beneficial not only to manufacturing, but also to other sectors of economic activity. At the same time, it is necessary to maintain and improve manufacturing by ensuring that the national economy includes sufficient competencies to benefit from the new key fields in industrial specialisation. The goal should be to build a “road map” aiming at reforms in the manufacturing sector.

14 For example, the European security and defence industry is currently seeking to integrate, but at least until now, common markets have not advanced as swiftly in sectors essential to national sovereignty as in other sectors. Globalisation is slowly changing this, because due to the need to gradually begin sharing and developing resources together.

15 Deloitte.

2. ***Finland must begin a strategic dialogue on its new industrial competitiveness policy and create a “road map” aiming at reforms in the manufacturing sector. Its manufacturing capacity and national competitiveness must be developed, particularly in fields considered Finland’s natural assets. Different policy sectors must ensure that the Finnish manufacturing industry enjoys competitive conditions considered equal to those of industries in key competing countries. For example, dialogue provides means of identifying obstacles to industrial success, a stronger industrial basis, means of industrial renewal and means of increasing the value of operations.***

5.2 New jobs in the privately funded sector

Finland must discover means of slowing down its declining work input and pursue moving into a new phase of growth as soon as conditions permit. The number of people employed by the privately funded sector has not regained the level enjoyed prior to the 1990s depression. In the peak year of 1990, the privately funded sector employed 1.94 million people. In 2011, the corresponding figure was 1.78. During this period, the population has grown by some 400,000 people and the working-age population by some 200,000. The greatest challenge posed by ageing still lies ahead. Furthermore, the size of the working-age population (those aged 15–65) will begin to decline (Appendix 1). Creating new jobs in the privately funded sector and finding workforce to fill these positions will be important.

The economic dependency ratio refers to the ratio of people who need to be sustained by the part of the population which is in work. However, from the perspective of the financial base, not all jobs are equal. The only way to fund jobs in the public sector is to ensure that the privately funded sector offers enough employment to fund public sector jobs. The support ratio (see Appendix 2) also reveals how many people working in the privately funded sector are sustaining the rest of the population.

Although Finland’s employment rate is relatively high by international standards, it has fallen behind from those of key competing countries (Sweden, Denmark, Germany) in recent years. In 2011, this was 68.6%, and Statistics Finland reported an unemployment rate of 7.8%. So-called registered unemployment and “broad unemployment” are higher than the official unemployment rate. For example, broad unemployment includes those participating in labour market policy interventions (an average of more than 100,000 persons) and those receiving unemployment pension (average of 30,000 persons).

There is some labour supply potential among the disguised unemployed, people on disability pension, the unemployed, the under-employed and students. Around 100,000 people are currently in disguised unemployment, while around

265,000 receive disability pension (some of whom have workforce potential). The unemployed number some 250,000; about half of this figure is due to broad structural unemployment. There is also further labour supply potential among the under-employed, for example involuntary part-time workers. The labour supply potential among students is not very high, however. Other labour supply potential is more difficult to harness in the labour market.

In all, Finland's total labour supply potential is fairly high. As demand for labour increases, the quantity of labour supply does not immediately constitute an obstacle – but if the economic situation remains weak over a long period, there is the risk that an increasing number of people, who used to be potential labour force, will have difficulties in finding employment, for example due to structural unemployment.

Several factors are affecting demand for and the supply of labour. Our labour market and social security system should be developed with the goal of increasing the number of privately funded jobs. Obstacles to finding employment and employing people must be dismantled. Policy measures implemented to this end must be consistent and have a long-term focus. Long-term and high-level benefits must be addressed in particular, because they may also render their recipients more passive. Immigration policy could also be used to guarantee that companies have the experts they need.

The Government has already agreed on some measures, and is preparing further ones, whose aim is to improve employment. The growing number of people aged over 65 will significantly increase demand for public services (Appendix 1), raising the pressure to increase publicly funded jobs¹⁶. In this situation, if Finland wants to significantly influence the development of the support ratio, which guarantees the financial base of welfare services, it must prepare for a larger number of people working in the privately funded sector. From the viewpoint of growth, people who work should be employed in positions with the highest productivity and pay possible. The productivity of public services must also be increased in various ways. Furthermore, it should be remembered that, as part of increasing the work input, the employment of people with lower productivity potential must be promoted. Low-productivity work also benefits economic growth. Remaining outside work and entrepreneurship do not.

16 See the long-term employment forecast of the Government Institute for Economic Research.

Information box: Labour market reforms agreed during the current Government term

At a plenary session held on 31 May 2012, the Government issued a resolution on securing the functionality of the labour market and labour supply. This resolution lays down the measures and structural reforms needed in order to secure the functionality of labour market and labour supply, for the purpose of supporting economic growth, employment and welfare. The Strategic Programme for Structural Change and Well-functioning Labour Market will act as the coordinating body implementing the Government Resolution, until the end of the current Government's term. It is also possible to prepare new labour policy measures within the framework of the programme. In 2013, the Government's mid-term review will assess the realisation of the Government's labour policy objectives.

The Government aims to increase the employment rate of people aged 15–64 to a total of 72% and to lower unemployment to 5% by 2015. An employment rate of 75–80% is the long-term goal. The objective of the Government Resolution is to support the principle of fluent transition between jobs, promote the continuous renewal of business and working life, and to make full use of the workforce's potential. The agreed measures include:

- renewal of the labour policy service system
- securing labour policy resources
- investigating what kind of obstacles the benefit systems and the services associated with them currently present to employment
- development of the model for managing structural change situations, into a uniform national operating model
- better integration of services improving the quality of working life and services developing companies' business expertise
 - emphasis on work as a priority
 - securing the resources of services for jobseekers
 - development of support measures for those in the weakest position
- cutting the unemployment rate of immigrants by half, by improving the implementation of the Government Integration Programme

On 22 March 2012, labour market confederations approved the proposals for measures concerning working life and the social security of wage earners, i.e. the agreement concerning the extension of working lives, for consideration by the Government. For example, the agreement concerning the extension of working lives stipulates that the following reforms will enter into force in 2014–2015:

- early old-age pension will no longer be available
- the age limit for part-time pension will be raised to 61 for those born in 1954 or later
- the efficiency of the earnings-related pensions scheme will be improved
- the unemployment security system will be improved, for example by reducing the number of levels of compensation to two; the maximum duration of earnings-related allowance will become dependent on the length of the person's work history and participation in active measures; the employment condition will be shortened to a uniform six months for all groups
- the age limit for the extended unemployment allowance will be raised by one year for people born in 1957 or later.

Other agreed measures include procedures to raise the average retirement age in accordance with the Government Programme's objectives (62.4 years by 2025). The pension reform will enter into force from the beginning of 2017.

3. *Increasing the number of privately funded jobs must be selected as a common objective of all labour and industrial policies. At this stage, the goal will be the creation of 200,000 new privately funded jobs by the end of the next Government's term of office (2019). The relationship between the number of privately funded jobs and the sustainability of public funding will be analysed further and the employment objective adjusted accordingly. This objective must become a priority within the MEE's group strategy, within the goals set for MEE-related players and in other policy sectors.*

5.3 Structural change is also a driver of productivity

Because structural change plays a major role in the growth of the economy's productivity, the policy applied must promote structural renewal (Figure 9). Structural change likely to improve the productivity of work could, for example, be achieved by supporting the gradual transfer of workers to higher productivity tasks (Figure 6).

From the viewpoint of economic growth, it does not matter whether these tasks are in the export or domestic market, for example. Economic growth is possible in both cases. Information technology and the related productivity potential are important growth factors in all sectors.

Promotion of structural change based on the transfer of workers between jobs makes it increasingly important to integrate labour and industrial competitiveness policy, and to engage in cooperation. The outlook for the renewal of policy measures is promising, since labour and employment policies both lie within the remit of a single ministry.

5.1.3 Competitive pressure supports economic growth

Functioning of competition

Functioning market competition is a basic prerequisite of productivity growth, both in domestic and international markets. Competition encourages production factors (labour, capital, natural resources) to transfer to the locations which offer the highest profit expectations. Regulation plays an essential role in the development of a competitive operating environment. This does not only affect the cost structure of companies, but also competition between companies, innovation opportunities and ability to adapt to the demands of export markets. Appropriate regulation realises its goals with the lowest costs possible, does not distort competition and leaves room for innovation. Regulation can also support the operating preconditions of

export operations, for example. When applied correctly, regulation can help to create forerunners in a sector.

Most legislation with a fundamental effect on business activities is based on EU legislation. This makes it important that Finland has influence within the EU. Nevertheless, national legislation has an important impact on business activities and is required for the application of EU legislation.

Almost every ministry prepares legislation which affects business activities. Some such legislation is also prepared at international level. However, the primary purpose of regulation is rarely related to industrial competitiveness policy, and its main impacts on industrial competitiveness policy can easily be disregarded. This situation could be amended through a more efficient impact assessment of legislation. For example, assessment of its effects on companies remains insufficient in spite of good instructions. The effects of existing legislation on business activities should be assessed in closer detail and from a wider perspective.

Public services have great productivity potential. Given their large size, changes in their productivity significantly affect the productivity of the entire economy. Ensuring competition neutrality would be one means of improve productivity, including in the public sector.

- 4. *Full and effective realisation of the Government's programme for promoting healthy competition. This programme will strengthen the competition neutrality of public economic operators in markets, remedy distortions of competition caused by legislation and increase competition in fields such as wholesale and the food sector.***

The labour market and structural change

The productivity growth thanks to the structural change created by the transfer of workers between jobs, i.e. changes in the nature of tasks, will set a special challenge to labour markets. Harnessing people's personal creative potential as well as possible represents a complex challenge, even in daily working life. Individuals often treat divergence from familiar paths as a risk. The interests of the employer and the employee do not always meet. Transferring employees gradually towards higher-productivity tasks is only possible if obstacles to gradual upgrading are removed. The labour market model should promote workers' mobility in the best possible way, efficiently support competence development, and support the preconditions for growth in the long term, without compromising the employers' competitiveness.

It will be necessary to encourage employees to seek higher-productivity jobs. Among workers, this will require professional mobility and readiness to face changes. Functioning wage competition is a key factor promoting this kind of mobility.

5. *Means to enable professional mobility and personal risk-taking must be promoted on a broader basis. Development of measures such as transition assistance (muutosturva) and improved possibilities for re-education also promote the transfer of workers between jobs in a way which increases productivity.*

State aid policy

Public industrial activity and privileges granted by the public authorities can distort private business. Although aid for companies in difficulty may preserve jobs, they can also slow down the necessary structural adjustment. Mobility and placement of those workers who have been made redundant during structural changes should be accelerated by means of efficient employment services, versatile education and the promotion of entrepreneurship, for example.

During structural change, companies should only be granted public aid if it is used to create alternative new financially sustainable business. Finland's industrial competitiveness policy must adopt the principle of emphasising the functioning of markets and limiting public aid interventions to situations where market failures require correction. Furthermore, the state should actively and critically monitor funding systems and discontinue all aid which is ineffective or distorts the markets. Cooperation and exchange of information between public players must be increased.

6. *As agreed by the government on spending limits, public enterprise subsidy is used for purposes associated with promoting growth and renewal, according to the enterprise subsidy system reform currently under preparation. Forms of support that maintain inefficient structures and distort competition will be discontinued by the end of 2013.*

Regional competitiveness

Regional competitiveness is built on the competitiveness of companies in the region. Regions with a versatile industrial structure are not as vulnerable to sudden change as those with a monolithic structure. The competitiveness of business activities and their ability to renew requires movement of labour within and between regions. When business and innovation activities are being developed, attention should be paid to strengthening cooperation between regions. Wherever a structural change supports the creation of centres with a versatile population base and industrial structure, it also supports economic growth.

- 7. *The objectives of the new Structural Funds programming period 2014–2020 are regional renewal and major strengthening of the role of innovation policy. Particularly important funding criteria will include the reduction of fragmentation, renewal of regional industrial structures, increased regional specialisation and mutual competition for good projects.***

5.3.2 Development of capital markets

Performing capital markets are essential to promoting structural change and guaranteeing resources for productivity growth. In Finland, the financing of enterprises – SMEs in particular – is still largely dependent on bank credit.

The larger the enterprise, the more important equity based financing becomes. Performing and efficient capital markets, which provide equity based financing, are an important success factor for enterprises aiming at rapid growth, and in the new technology and business markets.

The Finnish capital and investment markets are generally versatile and meet the needs of a variety of enterprises. However, the size of the markets poses a problem. The deeper and more active the markets are, the better they are able to cater for enterprises' funding needs. Internationalised enterprises can also benefit from international capital and investment markets.

The stock exchange has been growing smaller for several years, mirroring diminished economic growth and demand for funding. Finland saw an exceptionally small number of listings in the 2000s. The stock exchange has lost its appeal as a source of risk financing. Revitalising the stock exchange would involve several factors. There would need to be greater demand for funding. Recovery of economic growth is also needed. Furthermore, investment in shares would need to appeal more to investors and more enterprises need to become listed on the stock market.

Multilateral trading facilities (MTF) are alternative marketplaces which are subject to lighter regulation. MTFs make it easier for companies to hold initial public offerings and obtain funding from the public. First North Finland is an example of an MTF operating in Finland. Few Finnish companies have been attracted by this alternative, setting the situation in Finland apart from that of other countries.

The situation is also weak regarding capital investments in start-ups and growth companies. In recent years, important funds have left Finland's capital investment market. The attractiveness of investments is further hampered by the increasingly tight regulation of investors and capital investment funds, low income from investments and the uncertain economic outlook. The markets are resting on the shoulders of a few players. Public sector financial institutions should take active measures in order to develop these.

Availability of loan financing, both now and in the future, is being significantly reduced by the weaker position of banks in Europe and their tightening regulation

(Basel III/CRD IV). As a result, the company-specific risk premiums of investments are increasing, and the importance of alternative funding for companies is being emphasised. Large enterprises can seek funding on the capital market, but it is practically impossible for SMEs to seek financing in form of securities. It is therefore essential to guarantee that, in the future, Finnish enterprises' opportunities to obtain funding equal those of enterprises in key competing countries.

An operating environment which favours entrepreneurship and risk-taking, combined with incentivising, neutral taxes on investments are key means of activating the capital market. Tax incentives for growth companies and for private capital investors also support these objectives.

The importance of special public financing for long-term financing will grow significantly, necessitating an improvement in Finnvera's risk-taking ability. Public export funding must also be developed in a way which allows public measures to efficiently complement market-driven funding and to guarantee that Finnish enterprises (including SMEs) compete on a level playing field with those of competing countries. Public funding complements the markets. It is targeted at start-ups and growth enterprises in particular.

8. *The functioning of financial markets must be supported by a variety of means in order to improve the efficiency of the domestic capital markets. The objective is to support private financial markets, significantly increasing the share of private funding. At the same time, measures should be prepared in order to support enterprise funding in the form of securities, while increasing its appeal. The sufficiency of Finnvera's domestic and international funding must also be guaranteed, as should the international competitiveness of export funding. Private capital investment in growth enterprises should be supported by means of tax incentives. The financing programme proposed by the Finnish ICT Cluster 2015 working group should be implemented, securing sufficient funding for start-ups and growth enterprises.*

5.4 The global economy is a great opportunity

5.1.4 Industrial competitiveness policy supports value creation

As stated above, the decentralisation of global value networks has gained speed due to changing technology and opening markets. The share of digital products is on the rise, and digital marketplaces are increasingly common places for value creation. Our industrial competitiveness policy, which traditionally concentrates on local clusters, must be renewed to take into account these developments. Contrary to what the

cluster-oriented way of thinking suggests, the success of enterprises, sectors or the national economy does not always require industrial production. Companies only need a value chain position which creates sufficient revenue, thereby enabling the development of new capabilities.

Public players must make it a priority to support those enterprises which are investing in the development of international business and aiming to capture more demanding tasks in the value chain. Policies need to highlight those Finnish operating models which reflect this transformation and success therein. The boldest enterprises and their achievements form the best way of promoting new openings oriented towards value creation and “capturing” opportunities.

All choices in the market are made by enterprises, but industrial competitiveness policy-makers should ask themselves what decisions they could make in order to support enterprises’ ability to grasp and understand business in the global age and to improve the growth potential of the entire economy. They should also analyse industrial competitiveness policy in order to determine whether it has evolved to emphasise issues which belong to the past.

Erroneous policies are particularly harmful, because they may waste resources and render structures inflexible, when enterprises need to be able to constantly reinvent their roles in value creation and become forerunners in new business practices.

Although the fragmentation of value chains is opening up new opportunities, it also poses challenges by making the world more complex and creating new types of risks. The tempo of business operations is accelerating, while the average lifespan of an enterprise is growing shorter. National economies are facing new kinds of risks which must be systematically assessed.

What are the characteristics of modern business and what do they require? This is the basic question. Even relatively small enterprises can achieve global success these days, because they no longer need to control the entire value chain, from design and production to sales. Furthermore, market positions can change rapidly, because enterprises no longer need to be large to attain a certain market position.

New industrial companies with strong resources are continuously emerging to challenge others on the market. This is also the case in the traditional domestic market for Finnish enterprises and in the EU’s internal market. Success requires constant development, knowledge of global business and markets and technology expertise. High-level education and a performing innovation environment will therefore remain valuable in the future.

Changes are occurring rapidly. It appears that in order to adapt to these, policies must support the reform of business structures and the labour market. Such matters have been discussed in this document. The need to react swiftly to changing markets appears to be consolidating the position of market- and user-driven policy, at the expense of strong public services.

The contents of industrial competitiveness policy should be developed in a way which supports structural change and places an emphasis on “sounding” the market. To meet this end, when measures and resources are being allocated, priority must be given to enterprises and projects boldly aiming for growth. Finland should also aim to better understand the success factors behind those companies that are capturing value, while developing an industrial competitiveness policy which encourages value capture. In order to realise this goal, Finland must develop a new way of thinking and new operating models, and disseminate the examples set by successful companies.

Through transfer pricing and other mechanisms, enterprises have many means of selecting where they report their financial results. Corporate tax rates are therefore an important competitive factor in the face of international competition. Since corporate taxes are difficult to lower on a large scale, several countries have implemented special tax incentives which lower taxation of revenue, particularly that of revenue based on R&D activities. These measures are often contrary to the principle of simplification of taxation and tax neutrality, but are nonetheless justifiable from the national economy’s viewpoint. In conclusion, changes in the global economy will call for greater discussion of the fiscal structure and tax rates.

- 9. *The fragmentation of value chains and the digitalisation of the economy are changing Finnish enterprises’ operating environment, both in Finland and in its export market. Industrial competitiveness policy must support enterprises’ ability to respond more effectively to this challenge. The objective is for the state to actively promote the ability of Finnish enterprises to benefit from the opportunities created by global value networks. As a means to this end, corporate taxation will be developed to resemble that of competing countries, ensuring that the taxation of revenue from immaterial rights in Finland is on the same level as in competing countries.***

5.4.2 Turning competence into innovations and business

An educated people is a key resource in achieving economic success. Most productivity growth is explained by growth in competencies and the ability to benefit from this.

Education and research policy focus areas have a significant impact on the success of businesses. Changes in the global operating environment are emphasising the importance of international competencies, such as language skills and cross-cultural understanding. Finland must focus its scarce resources on ensuring that selected units in universities reach international top level. Rationalisation of the education system will create the necessary savings without compromising overall quality.

Increasing expertise and abilities, and transforming them into commercial success and profitability growth, must be selected as the main priorities. The ability

to cultivate knowledge and competencies into successful business forms the core of innovation policy, which must support companies' competencies at all stages of the value chain (development of technology complemented by design, branding, IPR, etc.). It is necessary to promote international networking and create models for value creation for Finnish enterprises.

The Research and Innovation Council policy guidelines for 2011–2015 highlight focus areas for the development of the innovation system. One of its key objectives is to ensure that Finland becomes one of the leading innovator countries in selected fields. The innovation policy reform has therefore been solution-oriented, emphasising the desire to experiment and ecosystem thinking.

This solution-oriented approach challenges the Finnish economy to seek solutions to global environmental and energy issues, for example. Global challenges open up opportunities for experimentation, while the structural changes in the forest industry and ICT sector are an invitation to consider the development opportunities presented by ecosystems. Both sectors have been driven forward by flagship companies which have had little desire or ability to seize small-scale economic potential. Enterprise ecosystems created around forest and ICT expertise could increase the economy's adaptability, resulting in international growth success stories.

Regional and thematic centres of expertise are important to the realisation of innovation policy objectives. They create closer cooperation between companies and other players, by sharing good practices and initiating shared activities whose aim is to start up new businesses and speed up internationalisation. Expertise is geographically scattered around the country, but centres of excellence are bringing it together, creating innovation networks.

The international appeal of these centres is a result of high competence, sufficient resources (critical mass of expertise) and their status as a forerunner in the field they are developing. Forerunner status is attracting international top experts and enterprises in the field to Finland. In order to achieve this goal, the results of centres of excellence must be continuously compared to prime international examples. Large urban areas' international appeal and role as drivers of economy will be strengthened by a set of policies which support centres of excellence. Prepared in cooperation between ministries and the largest cities, these policies include the new INKA innovation policy programme, growth agreements and a negotiation procedure, among others.

- 10. *Innovation policy should be build around improved productivity, expertise and capabilities. Direct financial support should be targeted at radical innovations and projects which are expected to have a highly positive impacts on society. A simultaneous objective is to increase the number of innovative enterprises, for example by means of tax incentives.***

5.4.3 Promoting entrepreneurship

Economic growth is created in enterprises. No concrete economic growth is achievable without entrepreneurship and enterprises. An entrepreneur takes a financial risk and expects it to yield a financial profit. Everyone can become an entrepreneur, but the benefits of scalability can only be attained through specialisation. Finland is considered to have a particular need for growth enterprises. A frequently used criterion for growth enterprises is their ability to rapidly increase employment.

Positive attitudes are important to entrepreneurship. Such attitudes should be visible in the form of society encouraging citizens to become entrepreneurs. Taxation is one of the key means of achieving this.

An encouraging attitude towards entrepreneurship should be increasingly visible in society's attitudes towards entrepreneurs' failures and the consequences. Legislation will play a crucial role in this respect and it is recommended that the development of insolvency legislation be continued. This allows society to benefit from the knowledge capital of unsuccessful entrepreneurs.

For a small enterprise, a decision to employ workforce is often very important in terms of its resources. Their employment potential could be improved by facilitating the hiring of new employees.

For a country like Finland, growth- and internationalisation-oriented entrepreneurship is an indispensable precondition for economic growth. Finland has fewer growth enterprises than the best-performing reference countries. The innovation system should turn research and competition into high-quality growth entrepreneurship which meets international criteria. It should also be ensured that more companies invest in renewal which results in higher productivity.

SMEs are facing an extensive change of generation in the coming years, as the entrepreneur-owners of the baby boomer generation retire. Finding new owners to continue businesses will constitute both a major industrial competitiveness policy challenge and an opportunity. In the hands of new owners, many promising enterprises may take risks, aiming for growth and internationalisation which are crucial to the whole of Finland. Small employers' ability to adapt to situations such as major economic changes are largely based on the flexibility of the entrepreneur's personal finances and work input.

- 11. *Entrepreneurship - particularly in the case of growth and employer enterprises - is an indispensable contributor to economic growth. The consequences of unsuccessful entrepreneurship should therefore be relaxed, for example by reviewing insolvency legislation. Obstacles to enterprises' growth and ability to employ people should also be removed.***

5.4.4 Turning Finland into an attractive investment destination

Both fixed and immaterial investments increase production and productivity, changing the production structure. When companies invest, they ponder their likely return on investment (ROI). Policies at national economy level should also ensure that investments are directed at targets with the highest long-term profit expectations, from the viewpoint of growth in profitability.

Since investments are mostly made in industrial enterprises, this group of companies, an important target group of industrial competitiveness policy, accounts for a major share of economic growth. In 2012, fixed investments in Finland by companies in the manufacturing industry grew slightly, but still failed to achieve their average level. The investment outlook for 2013 is exceptionally uncertain. Investments are expected to take a new downward turn¹⁷.

The global fragmentation of task structures is changing the role of investments as a driver of economic growth. Product development, the successful launch of new products and brand management, among others, are increasingly important parts of value creation. The strategy of Finnish enterprises has increasingly been involved in increasing employment and turnover abroad. National industrial competitiveness policy must harness this trend for Finland's benefit. To attain such an objective, policies are required that attract direct capital and tax income into Finland. Given the fact that enterprises have increasingly good opportunities to report their profits in different countries, policies face the challenge of increasing Finland's appeal in this respect. A key means of doing so involves the level of corporate taxation.

Finland has traditionally been highly competent in process-based production, but the fragmentation of task structures is gradually reducing the value of this approach. Investments in low-productivity task structures may even slow Finland's economic growth in comparison to competing countries. We should nonetheless maintain our industrial strengths and continue to develop them alongside the immaterial parts of the value chain. Account should also be taken of the connection between fixed investment and security of supply.

In February 2012, Senior Advisor Jorma Eloranta submitted suggestions on how to improve Finland's appeal as an investment destination for enterprises. He proposes five strategic theses and forty recommended measures. All of these strategic theses and measures support the preconditions for economic growth, regardless of the importance to Finland of production-related investments. Eloranta's suggestions have been well received by Finnish businesses.

Another important factor behind economic growth is investment through corporate acquisitions, which might become an essential growth lever if, by making well-planned corporate acquisitions abroad, Finnish companies are able

17 Investment survey 1/2013, Confederation of Finnish Industries.

to acquire operations which support internationalisation. Finland currently lacks internationalisation competencies – a skills shortage which must be addressed.

Direct foreign investments are beneficial to the national economy. This is especially true when investments increase competition, create new high-productivity jobs or serve as a channel for new technology. The Team Finland network aspires to make Finland more attractive to foreign investment. Furthermore, the recently published national investment strategy aims to increase the number of investments and attract them to sectors which considered strategic. For example, Finland will implement a fast track whose purpose is to speed up the preparation of and administrative procedures concerning major foreign investment projects. Coordination between different players will be increased. Finpro's Invest in Finland (IIF) agency will develop a service concept for creating connections between growing and internationally oriented SMEs and foreign investors. Its purpose is to obtain capital for SMEs from international investors. Growth companies could also introduce themselves collectively during delegation journeys or start-up accelerator and growth enterprise conferences, for example.

12. *A good competitiveness and business environment will attract investments. A special fast track will be built for foreign investors investing in sectors considered strategic. This fast track will speed up the preparation of and administrative procedures concerning major investment projects. The Team Finland network will build internationalisation services for Finnish companies – services which take into account the opportunities offered by global value networks.*

5.4.5 Examples of value creation opportunities related to certain technologies and sectors

The starting point for industrial competitiveness policy lies in the fact that public authorities are not equipped to pick winners – whether technologies, enterprises or sectors are in question. When competition is healthy, production factors move to sectors with the largest profit expectations. The purpose of industrial competitiveness policy is also to create favourable conditions for new and renewing sectors.

Innovativeness, growth-orientedness and the desire to operate internationally can be viewed as “discriminating” criteria in modern industrial competitiveness policy. In light of Finland's current stage of development and the boundaries set by globalisation and digitalisation, a policy is recommended which enables new enterprises to enter a given sector and challenge its market leaders.

Public authorities must act proactively, recognising potential growth sectors and technologies. For example, the steering of education and research is in many ways based on anticipation.

The following subsections offer examples of fields where Finland has traditionally had high competence and assets, and which are likely to remain important in the future.

The ICT cluster – structural change creates opportunities

The ICT sector has been the driver of Finland's growing productivity, export and R&D activities since the 1990s. This sector is currently undergoing major structural change, due to the changes in Nokia's and Nokia Siemens Networks' (NSN) market positions. On a Finnish scale, this structural change is very large, also affecting highly educated professionals. As a result, Nokia, NSN and their subcontractors have reduced their workforce from some 24,000 to 15,000 people, and Nokia has announced that it intends to make another 3,700 persons redundant in 2013. The scale and nature of this structural change is tremendous enough to shake the preconditions of the entire technology- and innovation-based economic growth scenario.

In its report, the Government-appointed Finnish ICT Cluster 2015 working group suggested a ten-year growth programme. The purpose of this programme would be to combine infrastructure, research, funding and practices in order to build new growth. The working group has made the following critical first-phase proposals: 1) building a uniform national IT service architecture, 2) setting up a ten-year research, development and innovation programme, ICT 2023, 3) launching a new financing programme, and 4) ensuring the use of long-term development methods. The working group also proposes that an ICT expert group be established in the Prime Minister's Office. This group would monitor and speed up the implementation of measures and suggest growth new paths whenever necessary.

ICT competence is a form of generic capital which can benefit almost any sector. Finland should ensure the rapid re-employment within Finland of the experts left unemployed due to this major structural change.

Particularly noteworthy is the fact that one of the key reasons behind the fragmentation of global value networks – a phenomenon discussed in this document – is ICT technology. It is likely that ICT technology will also remain vital to economic growth in the future.

13. *Turning the structural change of the ICT sector into an opportunity requires radical action in two areas:*

- *The current tailspin must be halted by maintaining the competencies of those who have become unemployed, by means of re-employment, education and new business activities.*
- *The growth opportunities of SMEs must be strengthened in line with the proposals presented by the ICT Cluster 2015 working group.*

New growth from the cleantech sector, green economy and natural resource economy

Global energy and environmental issues are waiting for solutions. Energy consumption is on the rise, while greenhouse gas emissions are subject to increasingly strict limits. This is affecting energy prices, forcing us to develop renewable energy solutions. Not only the global carbon cycle, but also the phosphorus, nitrogen and water cycles have been disturbed in many areas. It has been estimated that the world will run out of phosphorus required for food production before it runs out of oil. In addition to the production of clean energy, energy efficiency and water purification, phosphorus management and recycling is very likely to become a key business area in the future. Finland is already one of the world's leading clean technology countries, but competition on the world market is becoming fiercer. We must therefore launch new solutions faster than before.

The natural resource economy is estimated to hold significant growth potential. Non-renewable energy and material resources are running out, environmental problems are worsening, and the world's population continues to grow. These issues can only be resolved by radical changes to production processes, the use of materials and lifestyles. *The bioeconomy* is solving many of these challenges, and has the potential to become an important sector in Finland.

According to experts, new products by the *forest industry* could raise its value by 6 billion euros (22%) by 2020. The forest industry could expand its current operations to composites, biofuels, biochemicals and the service business. For example, the modern packaging sector and radio frequency identification technology offer significant opportunities to increase the value of processing. Several oil-based products (plastics, textiles, etc.) could be replaced by breaking down wood fibre and manufacturing it into new products. Ten years from now, the forest industry structure may be radically different. There seems to be room for small, innovative, agile enterprises between the large flagship companies.

Global demand and higher prices have resulted in increased *mining activity* in Finland over the last few years, as it has become profitable to invest in less rich mineral deposits. New ore mining methods have also contributed to this trend.

Key questions concerning the expansion of mining activities include funding, the supply of workforce, environmental issues, logistics and energy costs. Finland appears to be rather competitive in all of these areas. Finland's national economy could gain more value if ore was also further processed in Finland. It is also important to critically monitor the prices at which Finland and other countries in possession of natural resources are willing to allow foreign investors to use these assets.

Cleantech solutions, such as resource-efficient processes, water treatment and recycling and minimisation of atmospheric emissions make it possible to build an environmentally responsible extractive industry. This would also create technological solutions for the global market. Innovation activities support the development of cleantech solutions, which have global market potential

and could also benefit the Finnish mining industry. They might also create the preconditions for an economically, socially and environmentally sustainable extractive industry, the export of solutions and internationalisation of companies. In Finland, the extraction industry is characterised by strong growth. Finland also has the preconditions to further develop both its mining industry and the related competencies (e.g. mining technology companies). The mining industry could receive significant private investments (up to more than 2 billion euros) and create 4,000 new jobs by 2020.

In addition, the global *travel market* and the Finnish tourism trade will grow, be profitable and succeed in competing for international tourist flows. Finland must develop its numerous assets further, while also addressing its weaknesses. Tourism services are created in locations whose nature and culture appeal to tourists, which are accessible and offer a functional service structure. Public authorities could support the creation of such locations by means of purposeful planning, land use planning and investments. Tourists flows could be attracted and income generated by tourism-themed campaigns targeted at selected audiences and based on Finland's assets, special characteristics and motives. In 2011, the added value generated by tourism amounted to some 4.5 billion euros, 2.8% of Finland's GDP. When compared to added value elsewhere, that of tourism was larger than the food industry's and almost twice as high as agriculture's. Determined development of the tourism trade could help alleviate the cyclical economic effects of a concentrated export trade.

14. *The CleanTech sector aims for success stories and new business on a global scale. Investments should not be made in R&D only, but also in demonstrating and commercialising new solutions. Introducing new technologies into use should be accelerated through experimental regions, forerunner municipalities and centres of expertise, for example by using public procurement as a means of introducing new technologies into use. The objective of this would be to direct at least 1% of public procurement at state and municipal level towards implementing new cleantech solutions by the end of 2014. This objective will be gradually rendered more ambitious. The benefit provided by the natural resources industry to the national economy will be strengthened.*

Business based on immaterial goods, including services

Finland's strengths have traditionally been in the field of technical planning, for example. An increasing share of added value in the industrial sector is being generated by services. Services are accounting for a greater share of world trade. This emphasises the importance of services which are not directly connected to products or production plants. Finland has several assets which will enable enterprises to succeed in this. The importance of virtual and digital products is increasing rapidly.

Meanwhile, the transformation of economic activities is placing a special emphasis on the importance of the *creative industry*. Use of the industry's expertise, products and services in other industries has become an important competitive factor. Traditional production factors are now complemented by a new, increasingly important production factor consisting of immaterial factors such as knowledge, competence, creativity and an emphasis on meanings. Finland's competitiveness policy should take account of this trend, ensuring that benefits are gained from it. From a corporate viewpoint, competences related to this phenomenon should be harnessed by understanding consumers' cultural, emotional and ethical needs and preferences.

Finland has several unique cultural aspects which might gain international popularity similar to those of Sweden and which are also addressed by the national competitiveness policy. Tourism could also benefit from Finland's globally recognised achievements in the cultural and experience sectors. Brands and impressions are critical success factors in this business, as demonstrated by the Moomins and Angry Birds.

5.5 Energy policy

Reliable and affordable energy supply is a key precondition of the Finnish economy, due to factors such as Finland's industrial structure and remote location from its main markets. Most energy policy is jointly formulated within the EU, together with other Member States, the Commission and the Parliament. It would therefore be essential to have a timely, close influence on these decisions. Even at their best, national decisions on taxation and other matters can only alleviate or support the national effects of policies defined by the EU.

As part of the common objectives set by the EU, Finland must increase renewable energies' share of the final consumption of energy, from its current 33 to 38 per cent by 2020. Furthermore, Member States are required to increase the share of traffic biofuels to 10 per cent of all fuel consumption by 2020. Finland has doubled this goal. Finland is currently on a development path towards these objectives. Finland is also implementing the objectives laid down in the Energy Efficiency Directive.

Emission reduction obligations are divided into targets for activities which fall under the EU's common emission trading sector and activities excluded from it. By 2020, the emission trading sector (electricity, district heating, energy-intensive industry etc.) must reduce its emissions by 21 per cent from the level of 2005. The EU's internal emissions trading will ensure that this objective is attained, while also increasing the energy costs of the industries participating in the trading of emissions, such as the process industry and industries that rely on electricity. It is likely that the costs caused by emissions trading and the purchase of emissions allowances will not increase as much during this decade as previously expected. However, this

will depend on the way the EU adjusts the amount of emission allowances to the related needs.

By the year 2020, Finland must reduce its emissions from operations which are excluded from emissions trading by 16%, from the 2005 level. Such operations include road transports, agriculture, small and medium-sized manufacturers relying on fuels, individual heating of buildings, etc. In order to achieve this objective, Finland has had to and will need to implement measures such as stricter construction standards, tax incentives for renewing the vehicle stock and directing the traffic, promotion of renewable energy, etc. This objective will not be easy to reach, but it is nonetheless achievable.

The 2008 climate and energy strategy has been currently being updated. The updated strategy and Finland's energy policy will combine the requirements set by energy supply, efficiency and environmental acceptability. It is no longer possible in every case to seek a compromise between these objectives. Instead, they should all be fulfilled.

The updated strategy will assess and define means of guaranteeing increasing use of renewable energy, energy savings, better energy efficiency, greater energy self-sufficiency and reduced emissions. The strategy will also take account of the MEE's clean energy programme. The programme aims to attain the related energy goals, promote the export of clean technology, reduce the negative impacts of energy imports on the national economy and guarantee self-sufficiency in the sourcing of electricity.

In the 2020s, Finland should be self-sufficient in terms of electricity, while also participating in the European electricity market. Finland's gas network should also be connected to the EU-wide gas network and the supply of gas should be more secure than now. Finland could produce bio-based traffic fuels and other energy products, both for national use and exports. Electricity prices could remain moderate and competitive until the 2030s.

In line with the objectives set by the European Council, in 2011 the Commission published the Roadmap for moving to a competitive low carbon economy in 2050 and the Energy Roadmap 2050. These roadmaps suggest ways of reducing emissions by 80–95 per cent from the 1990 level. Finland will also complement the Government Programme with a road map extending to 2050, suggesting what is expected of Finnish businesses and citizens and discussing the opportunities and threats posed by the new energy future. It is already clear that energy use, production and systems will be completely renewed by then.

- 15. *The goal of the energy policy is to integrate the requirements set by energy supply, efficiency and environmental acceptability, and the growth of business opportunities in the environmental business sector.***

5.6 Coordination of industrial competitiveness policy increases its effectiveness

International cooperation and cooperation in the EU

It should be noted that, in addition to domestic factors, Finland's competitiveness will be strongly affected in the coming years by various external factors resulting from the structural change in the global economy, factors both economic and political, such as the development of regulations within the EU's internal market and outside Europe. Finland must therefore not only pay attention to domestic industrial competitiveness policy, but also to external influencing and its strengthening.

Most industrial competitiveness policy-making affecting Finland takes the form of international cooperation. Decisions made in the European Union are the single most significant source of international regulation, but other international cooperation also has an impact on Finland's position. Climate, energy and environmental issues have been gaining more weight lately. Trade and industry have felt "surprised" by certain issues affecting their competitiveness. The most topical example of this is perhaps the sulphur directive which will enter into force in 2015. Finland's objective must be to guarantee competitive conditions which at least equal those in other countries. This also represents an opportunity to actively benefit from the latest changes in the global operating environment.

The Europe 2020 strategy aims to improve the preconditions of smart, sustainable and socially inclusive growth. This strategy and its flagship projects are crucial to industrial competitiveness policy, returning the development of competitiveness to the core of such policy.

From Finland's viewpoint, it is important that the strategy supports growth which is not reliant on support measures which distort competition, and that looks further ahead than the current financial problems. Other goals which are important for Finland include the structural development of the financial market, full-scale participation in the internal market, finding solutions which improve the operating preconditions of start-ups, and internal digital market.

The success of Finnish enterprises primarily depends on their own choices and the way in which the Finnish operating environment supports their renewal. Enterprises must become bolder as they aim for markets outside the EU and, in particular, those whose growth is rapid.

New opportunities are being opened up by the fact that Russia has joined the World Trade Organisation and the Free Trade Agreements negotiated by the EU. The development of the Chinese and other Asian markets is also important. It is in Finland's interests that trade and investments are not hindered on protectionist grounds. The EU is well equipped to become a leading example of how to benefit from sustainable and socially inclusive growth, if such objectives are set in good time and in a transparent manner.

Due to the financial crisis in Europe, the financial market is faced with pressures to regulate issues such as the cost and availability of money. Finland must be active in keeping regulation at a reasonable level. Instead of imposing an unreasonable cost burden on Finnish enterprises, regulation should be a factor enabling new businesses.

16. Finland should strengthen its influence within the EU in the field of industrial competitiveness policy. This includes lobbying in international forums and placing EU regulation's effects on competitiveness at the core of lobbying efforts. The objective would be to subject all EU initiatives to an impact assessment (impacts on the operating preconditions of Finnish industry and trade) at the earliest possible stage. Finland will also actively influence the modernisation of the EU's industrial, manufacturing and trade policy.

The global economy provides infinite business opportunities but requires new capabilities and operating methods. Old operating methods and small steps are no longer enough, because the weakening support ratio and slowing growth are rapidly eroding Finland's welfare system.

This vicious circle can be halted by taking bold steps in order to improve the support ratio, while benefiting from the opportunities offered by the global economy and driving structural change. It would be easy to create indicators for these objectives: the support ratio must improve and Finland's GDP must increase in the long run.

Promoting sustainable growth is a national priority. Different players must therefore make a combined effort to promote growth. According to the division of labour within the state administration, general industrial competitiveness policy is under the remit of the Ministry of Employment and the Economy. However, administrative and sectoral boundaries should be crossed for the purpose of developing Finland's industrial competitiveness policy. A suitable impact can only be made if activities are coordinated.

The Government will also make issues pertaining to its industrial and growth policies the focal point of horizontal decision-making. We are already assessing regional policy, equality and environmental policy issues, for example. The success and competitiveness of Finnish businesses is an equally important perspective. Assessing the impacts on competitiveness must be made part of all public preparations.

Coordination of international industrial competitiveness policy activities which reach beyond Finland will be improved during 2013. In May 2012, the Government accepted an Action Plan on External Economic Resources, whose key objective is to increase the coordination of such activities. Economic external relations refer to

work which affects Finland's external operating environment (e.g. trade policy and development of the EU's internal market) and supports the internationalisation of enterprises, foreign investments, Finland's country image and country promotion. In the future, special attention will be paid to the changes in the operating logic of global value networks and Finland's opportunities to benefit from such changes. Forecasting should also be improved.

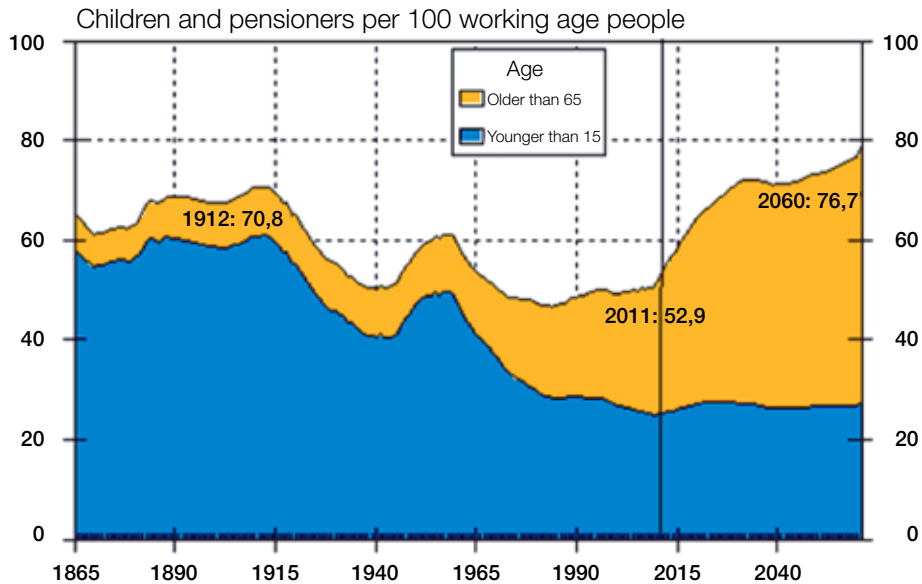
Finland should also have the courage to try out new industrial competitiveness policy methods and systematically re-evaluate public measures and investments from the viewpoint of their effectiveness. The results should then be used to make the necessary changes to the measures' content and structure. This document describes challenges, opportunities, objectives and measures on a general level. Putting them into practice will require a shared vision and practical work.

- 17. The objective is to form a shared vision of the general conclusions presented in this document (e.g. between the Economic Council, the Government, stakeholders). Concrete measures, responsible parties and an implementation schedule will be defined (ministries, the Government). The objectives laid down in this document and the necessary measures will be addressed during the government discussion on spending limits in spring 2013. Thereafter, the entire set of measures and growth policy actions will be monitored every three months by the Government's Cabinet Committee on Economic Policy.***

Appendix 1

The challenge posed by demographic trends to the growth of the national economy.

Dependency ratio 1865–2060. Source: Statistics Finland 2012.



The population of Finland by age group 1900–2060 (2020–2060: projected figures)

Year	Generations, total	0–14	15–64	65–	0–14%	15–64%	65– %
1,900	2,655,900	930,900	1,583,300	141,700	35.1	59.6	5.3
1910	2,943,400	1,049,400	1,724,500	169,500	35.7	58.6	5.8
1920	3,147,600	1,051,000	1,908,300	188,300	33.4	60.6	6.0
1930	3,462,700	1,018,300	2,227,200	217,200	29.4	64.3	6.3
1940	3,695,617	995,599	2,464,107	235,911	26.9	66.7	6.4
1950	4,029,803	1,208,799	2,554,354	266,650	30.0	63.4	6.6
1960	4,446,222	1,340,187	2,778,234	327,801	30.1	62.5	7.4
1970	4,598,336	1,118,550	3,052,298	427,488	24.3	66.4	9.3
1980	4,787,778	965,209	3,245,187	577,382	20.2	67.8	12.1
1990	4,998,478	964,203	3,361,310	672,965	19.3	67.2	13.5
2000	5,181,115	936,333	3,467,584	777,198	18.1	66.9	15.0
2010	5,375,276	887,677	3,546,558	941,041	16.5	66.0	17.5
2020	5,631,017	932,596	3,425,603	1,272,818	16.6	60.8	22.6
2030	5,847,678	936,712	3,415,342	1,495,624	16.0	58.4	25.6
2040	5,984,898	923,027	3,495,360	1,566,511	15.4	58.4	26.2
2050	6,095,858	940,800	3,515,618	1,639,440	15.4	57.7	26.9
2060	6,227,635	948,631	3,523,775	1,755,229	15.2	56.6	28.2

Source: Population statistics 2012, Statistics Finland

Appendix 2

Support ratio calculation

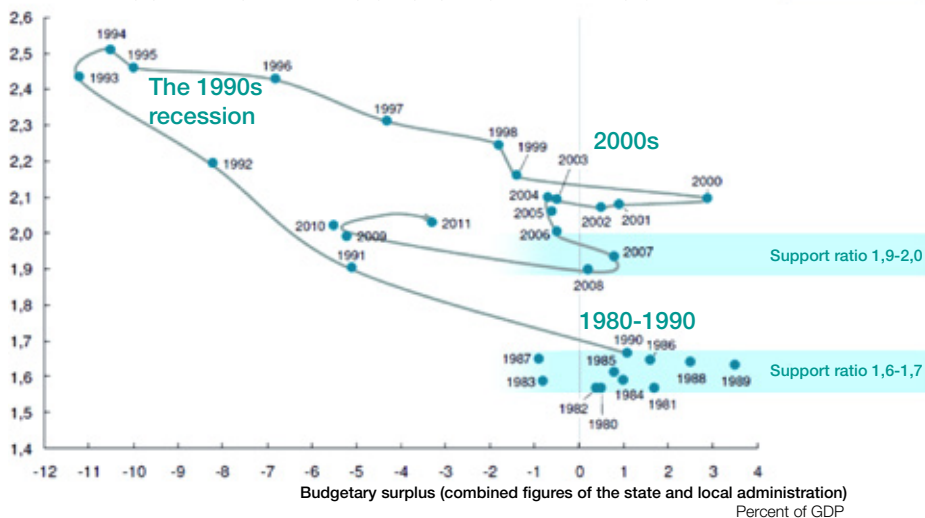
Support ratio 2007–2011					
	2007	2008	2009	2010	2011
Population	5,300,484	5,326,314	5,351,427	5,375,276	5,401,267
Employed people	2,492	2,531	2,457	2,447	2,474
Privately funded sectors	1,834	1,867	1,789	1,779	1,782
Others	3,466,484	3,459,314	3,562,427	3,596,276	3,619,267
Support ratio	1.89	1.85	1.99	2.02	2.03
Budgetary surplus (state + municipalities)	0.8	0.2	-5.2	-5.5	-3.3
(Privately funded sector = all sectors except O, P and Q.)					
Source tables					
	Employed people, 1,000 people				
	2007	2008	2009	2010	2011
	2,492	2,531	2,457	2,447	2,474
A, B Products of agriculture, forestry and fishing; mining (01–09)	118	119	119	115	110
C-E Manufacturing; electricity, water supply, waste management etc. (10–39)	446	443	406	388	384
F Construction (41–43)	174	186	175	172	176
G Wholesale and retail trade services; repair services of motor vehicles and motorcycles (45–47)	305	311	296	298	303
H Transportation and storage (49–53)	151	153	153	156	147
I Accommodation and food services (55–56)	84	88	85	83	83
J Information and communication services (58–63)	95	95	94	95	99
K, L Financial and insurance services; real estate services (64–68)	70	71	70	71	75
M, N Business services (69–82)	250	253	244	250	253
O Public administration and defence services; compulsory social security services (84)	119	117	116	117	116
P Education (85)	168	165	164	174	179
Q Human health and social work services (86–88)	370	382	388	379	396
R–U Other services (90–99)	135	136	138	139	141
X Unknown sector (00)	6	12	9	12	11
	2007	2008	2009	2010*	2011*
	Deficit	Deficit	Deficit	Deficit	Deficit
	Percentage of GDP	Percentage of GDP	Percentage of GDP	Percentage of GDP	Percentage of GDP
State	1	0.6	-4.5	-5.3	-2.9
Local administration	-0.2	-0.4	-0.7	-0.2	-0.4
Social security funds	4.5	4.1	2.7	3	2.8

The support ratio is related to the public sector's budget balance - in recent years, the balance has been attained with a support ratio of 1,9-2,0

Support ratio

Number of other population and public sector employees per privately-funded sector employee

UPDATED 2012

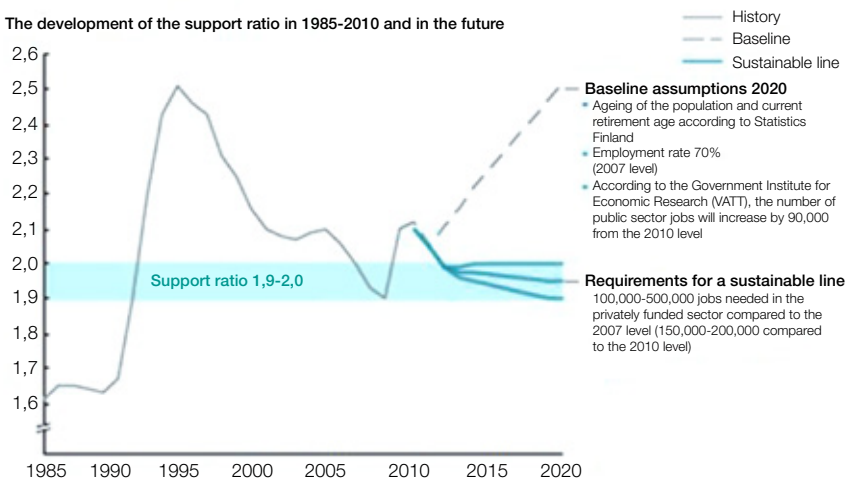


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Figure 3

Reaching a sustainable level requires more jobs

The development of the support ratio in 1985-2010 and in the future



Tekijät Författare Authors		Julkaisuaika Publiceringstid Date	
Janne Känkänen, Pekka Lindroos, Martti Myllylä		Lokakuu 2013	
		Toimeksiantaja(t) Uppdragsgivare Commissioned by	
		Työ- ja elinkeinoministeriö Arbets- och näringsministeriet Ministry of Employment and the Economy	
		Toimielimen asettamispäivä Organets tillsättningsdatum Date of appointment	
Julkaisun nimi Titel Title			
Elinkeino- ja teollisuuspoliittinen linjaus – Suomen talouskasvun eväitä 2010-luvulla			
Tiivistelmä Referat Abstract			
<p>Tässä linjauksessa Suomelle etsitään uusia talouskasvun lähteitä. Linjaus edistää pääministeri Jyrki Kataisen hallitusohjelman tavoitteita kestävästä talouskasvusta, työllisyydestä ja kilpailukyvyistä. Samalla se heijastelee Euroopan komission Eurooppa 2020 -strategian tavoitteita älykkäästä, kestävästä ja osallistavasta kasvusta. Linjaus pyrkii olemaan myös yksi syöte hallituksen tulevaisuusselonteon valmistelussa.</p> <p>Talouskasvun teemaa on valotettu viime aikoina useissa eri selvitysmiesraporteissa. Niitä ovat esimerkiksi <i>Investointeja Suomeen (Jorma Eloranta)</i>, <i>Taloudellisten ulkosuhteiden verkosto (Matti Alahuhta)</i> ja <i>Pääomamarkkinat ja kasvu (Kari Stadigh)</i>. <i>ICT 2015 -työryhmä (Pekka Ala-Pietilä)</i> ehdottaa toimia tietotekniikan alalla talouskasvun edistämiseksi.</p> <p>Toimintaympäristön monimutkaistuminen vaikeuttaa myös elinkeinopolitiikan toteuttamista. Perinteiset kansalliset klusterit väistyvät globaalien arvoketjujen tieltä, eikä kansantalouden tilinpito aina pysty seuraamaan kehitystä luotettavasti. Yritysten ja kansantalouden intressit eriytyvät. Tästä huolimatta talouskasvun keskeiset komponentit, työpanoksen määrä ja työn tuottavuuden kehitys säilyvät jatkossakin talouskasvun avaintekijöinä.</p> <p>Talouskasvu edellyttää, että yksityisrahoitteisella sektorilla työskentelevien työpanoksen määrä tulee saada riittävälle tasolle suhteessa väestön määrään. Työn tuottavuuden kasvun kannalta kilpailun toimivuus, kansallisesta kilpailukyvyistä huolehtiminen, tuottavuuskasvua edistävän rakennemuutoksen edistäminen, globaalien liiketoimintamahdollisuuksien hyödyntäminen sekä koordinoitu ja tavoitteellinen toiminta ovat jatkossa keskeisiä.</p>			
Työ- ja elinkeinoministeriön yhdyshenkilö: Elinkeino- ja innovaatio-osasto/Martti Myllylä, puh. 050 396 0250			
Asiasanat Nyckelord Key words			
Elinkeinopolitiikka, kasvu, työllisyys, kilpailukyky, globaalit arvoketjut			
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		Toimielimen asettamispäivä Organets tillsättningsdatum Date of appointment	
Julkaisun nimi Titel Title			
Riktlinjer för närings- och industripolitiken. Vad som behövs för ekonomisk tillväxt i Finland under 2010-talet			
Tiivistelmä Referat Abstract			
<p>I dessa riktlinjer söks nya källor till ekonomisk tillväxt för Finland. Riktlinjerna främjar de mål i regeringsprogrammet för statsminister Jyrki Katainens regering som avser hållbar ekonomisk tillväxt, sysselsättning och konkurrenskraft. Samtidigt återspeglar de målen i Europeiska kommissionens Europa 2020 -strategi för smart och hållbar tillväxt för alla. Riktlinjerna avser också att vara en insats i beredningen av regeringens framtidsredogörelse.</p> <p>Temat ekonomisk tillväxt har under den senaste tiden belysts i flera olika utredningsmannarapporter. Sådana är till exempel <i>Investeringar i Finland (Jorma Eloranta)</i>, <i>Ett nätverk för externa ekonomiska relationer (Matti Alahuhta)</i> och <i>Kapitalmarknad och tillväxt (Kari Stadigh)</i>. <i>Arbetsgruppen ICT 2015 (Pekka Ala-Pietilä)</i> föreslår åtgärder för att främja den ekonomiska tillväxten i informationsteknikbranschen.</p> <p>Omvärldens tilltagande komplexitet försvårar också genomförandet av näringspolitiken. De traditionella, nationella klustren ger vika för globala värdekedjor och nationalräkenskaperna förmår inte alltid följa med utvecklingen på ett tillförlitligt sätt. Företagens och samhällsekonominns intressen går isär. Trots det kommer de centrala komponenterna i den ekonomiska tillväxten, dvs. arbetsinsatsen och arbetsproduktivitets utveckling även i fortsättningen att vara nyckelfaktorer i den ekonomiska utvecklingen.</p> <p>Ekonomisk tillväxt förutsätter att arbetsinsatsen av dem som arbetar inom den privatfinansierade sektorn fås på en tillräcklig nivå i förhållande till folkmängden. När folkmängden ökar och befolkningen samtidigt åldras är det nödvändigt att se till att det finns tillräckligt med arbetskraft för att trygga det finländska samhällets välfärdsåtaganden.</p> <p>Samtidigt bör man i näringspolitiken främst rikta uppmärksamheten på produktivitetstillväxt och framgång på den globala marknaden. Viktiga faktorer för en ökad arbetsproduktivitet kommer även i fortsättningen att vara en fungerande konkurrens, omsorg om den nationella konkurrenskraften, främjande av sådan strukturomvandling som ökar produktiviteten, ökande utnyttjande av globala affärsmöjligheter samt en samordnad och målinriktad verksamhet.</p> <p>Kontaktperson vid arbets- och näringsministeriet: Närings- och innovationsavdelningen/Martti Myllylä, tfn 050 396 0250</p>			
Asiasanat Nyckelord Key words			
Näringspolitik, tillväxt, sysselsättning, konkurrenskraft, globala värdekedjor			
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Industrial Competitiveness Approach

Means to guarantee economic growth in Finland in the 2010s

This report pays attention to the changing global economic environment and its implications to the Finnish industrial competitiveness policy. The gradual adjustment of the economic environment does not require the renewal of the old political thinking entirely. However, in order to meet the new challenges, Finnish policy-makers must be able to see the new needs and act accordingly.

The purpose and objective of industrial competitiveness policy is discussed in the first chapter. Chapter two discusses the global operating environment. Especially, the increasing importance of global value chains is underscored. Chapter three looks at the Finnish economy and the new challenges it faces. Chapter four assesses the new sources of economic growth. Finally, chapter five looks at the main levers available for public policy to increase economic growth.

The report identifies a need to accelerate the pace of structural adjustment in the prevalence of global competition. The advent of digital economy and the increasing importance of global value chains calls for reassessment of traditional cluster focused policy frameworks.

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