

Erkki Liikanen: The growth of Finland – from a small, underdeveloped country to one of the world's high tech elite

Remarks by Mr Erkki Liikanen, Governor of the Bank of Finland, at the 1st Forum Sortim al Món "Strategies for the internationalization of Catalan companies", Barcelona, 26 March 2007.

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Introduction

During the last 150 years Finland has experienced a remarkable transformation from a poor agrarian economy to a modern information society. In the process, it has developed an advanced welfare state, adapted to globalisation and joined the European Union.

Finland's growth experience is, of course, far from unique: a similar pattern of success is shared by all mature industrialised countries and more recently also by the newly industrialised countries in Asia and elsewhere. At the same time, there are features in Finland's experience which may make it especially interesting.

One feature is speed. Growth started later in Finland, and was subsequently more rapid, than in other Western European countries. In the 1860s, Finland was a very poor and underdeveloped country, behind most other European nations. Most of the population was employed in agriculture. The state of the agriculture was backward, and the short growing season and disadvantageous weather conditions made harvests uncertain. As late as in 1867-68, Finland experienced a severe famine, losing one tenth of its population through starvation and diseases. This was the last major peacetime famine in Europe. According to historical national account estimates, Finland's GDP per capita in the 1860s was only 40 per cent of that of England and some 50 per cent of that of the average of Western European countries.

After the 1860s, the Finnish GDP per capita has grown at a rate of 2.2 per cent per annum, while that of the present EU-15 has been 1.7 per cent per annum. This difference in the growth rates may seem small, but cumulated over a long period it really makes a difference. From 1860 to 2000, Finland's GDP per capita has been estimated to have grown 21-fold, whereas the GDP per capita of the EU-15 countries grew "only" 11-fold.

Today, Finland's GDP per capita has reached and even exceeded the average Western European level, implying that the catching up process is over. Nevertheless, Finland's economic development continues to proceed at a relatively rapid pace. In some branches of the industry labour productivity now exceeds the level of leading industrial countries, including the United States. Finland has – together with the other Nordic countries – also succeeded in combining economic efficiency with an equal distribution of income and a low incidence of poverty.

In this presentation, I discuss the successful evolution of the Finnish economy a small underdeveloped economy to one of the world's high tech elite. How has it been possible? I want to stress two points.

First, while the growth of the Finnish economy has attracted attention only recently, its transformation from a backward agrarian economy to a modern and efficient welfare economy has been a long and gradual process. This process has taken at least 150 years, the period for which accurate statistical data are available, and there is some evidence which indicates that its roots go back even further in history. There is a strong element of continuity concerns in legislation, the form of society as well as many public institutions and civil servants which continued to function virtually unchanged even though the circumstances chanced radically.

Emphasis on the creation of human capital also goes back to the educational reforms of the 19th century, and it has resulted not only in well educated labour force but also in many key inventions such as GSM technologies or the Linux operating system, for example. And throughout Finland's growth period the governments have understood the importance of a competitive open sector for a small open economy and tried to keep the business climate favourable.

The second point I want to stress, in addition to the element of continuity, is that Finland's success has by no means been historically inevitable. Its situation could now be very different if events had played themselves out slightly differently. This is evident from a comparison with the neighbouring Baltic countries or Poland. Chance may have played its part. However, one of Finland's strengths has

perhaps been its ability to adapt to changes in external circumstances and even to crises. At least occasionally, luck has been aided by pragmatism and good political judgement.

Factors behind success

(1) *Institutional continuity*

One factor of economic development, which only recently has received the recognition it deserves, is the quality and credibility of institutions such as law, money, and the integrity of administration. The importance of these things is now frequently given as an explanation why some less developed countries with seemingly abundant resources have failed to take off economically.

Finnish public institutions at least have shown a remarkable degree of continuity through our history. Especially the legal system, and the structure of administration have continued to function virtually undisturbed through many dramatic circumstances, including the critical years of 1917-18, and 1939-44. There have been changes, of course, but these have almost always taken place by gradual evolution rather than through abrupt regime shifts.

Finland obtained its national institutions after Russia conquered Finland from Sweden in 1809, Napoleon having encouraged the Russian emperor Alexander I to make war on Sweden. While that war was still in progress, the emperor proclaimed Finland's "elevation to the national status" and convened the first Finnish diet. He agreed, by way of an experiment, to become a constitutional monarch of Finland, even though he was an autocrat in Russia. Finland was made into an autonomous state called the Grand Duchy of Finland, ruled according to an old Swedish constitution.

As a Grand Duchy in the Russian Empire, Finland retained its previous Swedish legal system, its Lutheran religion, and Swedish as its official language. A Finnish central government and institutions of national administration were created, including the Bank of Finland – now world's fourth oldest central bank. With the exception of a Governor-General, the representative of the Emperor, all civil servants in the administration of the country were native Finns.

In the late 19th century, constitutionalism and a rather stiff sort of legalism were increasingly identified with national survival, as safeguards against the mounting pressure for assimilation to tsarist Russia. At the turn of the century, the country's institutions were under a real threat of dissolution. At the same time, however, real democratic development begun. In 1907, universal suffrage was introduced and the first democratically elected parliament was elected. First women parliamentarians in the world were also then elected.

Finland proclaimed its independence in December 1917, shortly after the Bolshevik coup in Russia. In January 1918 a bloody civil war broke out between "whites" and "reds", with Bolsheviks supplying assistance to the reds, and Germany to the whites. Politically, the issue was whether Finland should follow Russia on the road to revolution or not. The whites won, of course, and democracy prevailed, but the war marks arguably the worst crisis ever of the Finnish tradition of the rule of law.

However, in view of the horrors of the civil war, the country returned to its democratic ways surprisingly quickly. Even the political left could return to normal parliamentary life in only a year after the war. The 20's and the 30's were in Finland decades of social integration and the consolidation of democracy. A number of far-reaching social reforms were successfully implemented. In the 1930's, when much of the continental Europe fell under the sway of different dictatorial regimes, Finland stuck to its democracy, looking to its Scandinavian neighbours for models for social development.

The continuity of national institutions was remarkable also during the Second World War and its aftermath. In 1939-1944, Finland lost two wars to the Soviet Union and had to make heavy territorial concessions in two peace treaties. However, Helsinki was the only capital of a European belligerent country, apart from Moscow and London, which was not occupied by a foreign army during the war. Also, the Finnish parliament continued to work uninterrupted throughout the war. Despite of losing the war in the end, Finland retained its independence, even though its room for manoeuvre in foreign policy was severely limited, especially in the years immediately after the war.

The development of the Finnish society in post-war decades was characterised above all by two challenges, the building of a modern, industrialized welfare state, and developing a *modus vivendi* with the powerful Soviet neighbour. These policy goals were not independent. The building of a modern welfare state required economic growth, which had to be based on exports and integration with the

other Western market economies. However, the country could hardly risk getting into conflict with the Communist superpower, which might, it was feared, put an end to Finland's policy of economic integration with the West. Finnish policy was a delicate balancing act, as if walking on a tightrope.

In the end, however, Finland was the only western neighbour of the Soviet Union to retain its democratic constitution, its multi-party democracy, the rule of law and a free market economy. These national institutions stayed intact. In a way, the miracles of the 1910's and the 1930's, the survival of the rule of law and democracy, were repeated in the late 1940's as Finland managed to hold on to its democratic course, despite difficult circumstances. The value of this stability for economic development and growth cannot easily be overestimated.

(2) Free trade and internationalisation

Another success factor for Finland has been a proactive attitude towards the internationalisation of the economy. As a small country, with not very many natural resources, Finland has always been dependent on foreign trade for its economic development and welfare. This fact is so obvious that it was understood quite early, and as a consequence the economic policy of the country has traditionally been export-oriented, and very eager to develop economic linkages with international markets, to the extent political realities have allowed.

Finland's early efforts to develop its economic links with Western European countries were exemplified by the creation of the Finnish monetary system and its integration with the countries of Northern and Western Europe in the 1860's. The aim of the reform was to replace the depreciating rouble-denominated currency of the time with stable money, convertible to metal. A new currency, the markka, was introduced in 1860, fixed to silver in 1865 and finally tied to the gold standard in 1878. The currency was made equal in value with the French franc.

As a stable currency, the markka provided for decades favourable conditions for capital imports, the increase of foreign trade, financial development. It was also important politically, not least because of its significance as a national symbol. However, the basic motivation for the currency reform was not political (separatist) but instead economic (integrationist).

After the 1860s, Finland embarked on the road of industrialisation by exploiting its forest sector, its hydropower potential and its rural labour reserve. A slow but persistent convergence of Finland's per capita output and standard of living with those of the other Western European countries started. The acceleration of GDP growth was largely based on expanding exports of forest products. The main market for exports was Western Europe, as before, even though consumption goods were exported to Russia.

The interwar period, Finland started to catch up quite rapidly with the leading European economies, diversifying its economy in the process. On the eve of the Second World War the GDP per capita was about 60 per cent of that of England and almost 80 per cent of that of France. England was the main foreign trade partner of Finland in the 1920's and 1930's. In spite of the Great Depression, which was milder in Finland than in continental Europe, output growth in the interwar period was more rapid than before the war in all major sectors of the economy.

After the Second World War, the new sensitive relationship with the Soviet Union and the policy of neutrality in the Cold War prevented Finland from accepting Marshall aid or considering EEC membership. Despite these political constraints, economically Finland was already in the 1950s integrating fast with the West. Although the trade with the Soviet Union was important, it never dominated Finland's foreign trade. About 70 per cent of foreign trade was directed to Western Europe.

From the economic point of view, it was especially valuable that Finland was able to join the Western multilateral organizations, such as GATT, the IMF already in the late 1940's and early 1950's. This was a necessary prerequisite for participating in the Western multilateral trade regime and having a convertible currency – which was achieved in 1959. In order to promote its trade and commercial interests further, Finland participated also in the West European trade integration, joining the European Free Trade Association (Efta) as an associate member in 1961, and concluded a free trade agreement with the EEC in 1973.

The collapse of the Soviet Union made it finally possible for Finland to join the Western European family. In 1990 it became apparent, that Sweden and Austria – which were also neutral Efta members – were aiming for full membership in the EC. This prompted Finland to make up its mind about applying as well. [In order to prepare for the EC membership, the Finnish Government announced in

the autumn of 1990 that military articles in the Friendship, Co-operation and Mutual Assistance Treaty of 1947 between Finland and the Soviet Union had expired as a consequence of the re-unification of Germany.

In March 1992 Finland's application of the EC membership was submitted to the Commission. Accession negotiations were concluded in 1994. After a referendum, in which a clear majority, 57 per cent of the voters, voted for the membership, Finland became a member of the European Union as from the beginning of 1995, simultaneously with Sweden and Austria.

After the extremely traumatizing experience of financial instability in the beginning of the 1990's, with its currency and banking crisis, the Finns put great value on monetary stability. It was therefore logical that Finland joined the euro area in 1999, in the first group of countries to do so. Membership in the euro area has naturally facilitated the further internationalization of the economy and opened deeper financial markets for the benefit of Finnish firms and institutional investors. It has also provided a degree of monetary stability unprecedented in the history of the country, certainly important for sound investment decisions and improvement of productivity.

(3) *The Eastern dimension*

As I have already pointed out, Finland geographic position, next to Russia, has influenced its economic and political history in many ways. For the Finnish economy, Russia has been both a challenge and an opportunity. Already in the late 19th and early 20th century, easy access to Russian markets accelerated economic growth in Finland. Because of geographical proximity, the Finnish economy has been influenced by the ups and down of that huge market ever since.

After the Russian revolution, and Finnish independence, trade all but stopped, but after the Second World War, the economic linkages again became significant. Finland had to pay war reparations to the Soviet Union. These were to be paid mostly in the form of products of engineering and shipbuilding industries, in effect forcing the development of this sector. Until then, Finland's exports had consisted largely of the products of the wood-processing industry. However, when reparations ended, in the early 1950's, Finland had an engineering industry the products of which were much in demand in the Soviet Union, willing to pay for these products mainly with energy and other raw materials.

The Finnish-Soviet trade was carried out in barter terms, with a bilateral clearing arrangement. Engineering products remained important in Finland's export to the Soviet Union, but in the 1970s Finland also carried out large construction projects in the Soviet Union. In the 1980s more than half of the export to the Soviet Union consisted of consumption goods. The bulk – about 80 per cent – of imports from the Soviet Union was crude oil. The barter arrangement facilitated Finland's adjustment to the oil shocks of the 1970's and the early 1980's, because the increased oil bill could be paid for with Finnish industrial products. However, the barter arrangement also made some Finnish industries very vulnerable to the fate of the Soviet economy. In 1991, the Soviet system was no more, the barter trade had suddenly disappeared, and the trade relationship with Russia had to be rebuilt almost from scratch.

In the early 1990s, after the collapse of the Soviet trade, Finland encountered a severe economic crisis, with GDP declining by some 15 per cent in only two years' time. This was followed by a fast recovery, and by the year 2000, Finland's output per capita has again exceeded the average level of EU-15.

Now, Russia emerging as one of the fastest growing economies of the world, Finland's Russian trade is booming again and Russia is, once more, one of our biggest trade partners. In addition to producing a variety of goods of the Russian market, Finland has also become a significant channel of transit trade for Russian imports. This has been facilitated by our excellent port and transportation facilities close to the Russian border.

(4) *Investment in human capital and educated labour force*

Entering a phase of innovation-driven development has presupposed the interplay of several fundamental factors, including an efficient education system, a consistent and predictable policy environment, and a sound basic infrastructure. Most of these preconditions were in place before the 1990s.

Generally speaking, the development of the educational system in Finland since the early 19th century has involved three processes: expansion, increase, and integration. Over the decades, the increasing

emphasis on education has been variously motivated by values such as nationalism, social equality, and economic growth.

Equality of opportunity regardless of gender, region, and socioeconomic background are fundamental values in the Finnish basic education system. All basic education, as well as most of higher education, is publicly financed, and free of charge to the student. The ideal of educating and training everyone regardless of his or her social status was already evident already in the very early developments of an education system in Finland.

Mobilisation of human resources and equality in opportunity to pursue higher education after the compulsory basic education were further much improved in the 1970s, not least through a gradual implementation of the comprehensive school system, the regional expansion of the university system, and the introduction of a financial aid system for students. The system is now integrated in such a way that the option of higher education, even at the university level, is open also for graduates from vocational schools.

The efficiency of the Finnish basic schooling system has been reflected in the OECD's Programme for International Student Assessments (the PISA study), which measures the knowledge and skills of 15-year-old students. In the last assessment in 2003, Finland kept its top position in reading, but was now on top also in sciences and second after Hong Kong in mathematics. Finland's performance in the PISA ratings has often been referred to as an example showing that it is possible to succeed both in terms of quality of results and equality of opportunities in learning.

As regards higher education, Finland has recently been doing rather well, although only a generation ago the number of university students was not especially large. Now, however, the share of working age population with higher education is higher in Finland than in other EU member states, with the exception of Ireland, even though not as high as in the US. In 2000, 32%, of the total workforce in Finland had achieved tertiary education, while for the EU15, the average was 24%. Today, about 45% of each age cohort go to university. The share of women is especially high.

An educated labour force has fostered innovation and increased the innovation absorption capacity. Also, the growing supply of science and technology graduates has helped to keep the salaries of researchers and engineers working in the ITC cluster moderate, in spite of the strong increase in demand. At the same time, estimates indicate that the return on investment in education has remained high, implying that the demand for educated labour has kept pace with the rapid increase in supply.

(5) *Investment in research and development*

A very important feature of the Finnish "miracle" of the 1990's and thereafter has been the spectacular rise of the ICT industry, especially mobile telephony. The large share of the ICT sector in Finnish exports and the economy as a whole explains an important part of the country's rapid productivity growth since the 1990s. The rise of the Finnish ICT sector has attracted a lot of attention from many countries and governments which would like to enjoy a similar positive transformation.

An important milestone in the rise of the ICT cluster was the early liberalisation of the telecommunication sector in Finland, which heightened competition, drove prices down, and led to the growth of mass markets for wireless communication, providing a test laboratory for the equipment industry. Standardisation among the Nordic countries, in particular the common Nordic NMT standard of mobile telephony, gave an early start for the internationalisation of the mobile telecommunication industry. The later GSM standard was a result of a European research and standardisation effort, and opening of the telecom market in Europe gave access to new entrants in telecom services. As a consequence, integrated and technologically advanced mass market for wireless communication was created in the whole of Europe. As early starters, the Nordic telecom equipment manufacturers were well positioned to respond to the growing demand.

A necessary condition for success is that there has been in Finland, at least since the 1980s, a consistent commitment by decision makers, private and public, to foster an innovation-driven economy. Successive governments have invested in a lot research and development. As a result, the total research and development expenditure in Finland is 3.5% of GDP, highest in Europe after Sweden, and higher than in the United States. The government has contributed a third of the total while private sector has answered for two thirds of the Finnish R&D outlays. An important part of the research has focused on the ICT. Public agencies, foundations and universities have promoted open R&D cooperation with private companies. Finland and the Finnish companies have also been active participants in EU research programs.

The ICT sector is not the only one to improve its productivity in a big way, however. Banking is another industry worth of attention. It is actually a lesson on the connection of competition with productivity. Finland had a major banking crisis in the early 1990's followed by an almost complete restructuring of the sector. The number of the bank employees and branches was reduced to a half in the process. Due to competitive pressure the banks had to change their business models. The banks had invested a lot in information systems, ATMs and telephone-based services already before the crisis. In the more competitive 1990's, the earlier IT investments were put in efficient use while new Internet-based services took off as well. The productivity of the banking sector accelerated and contributed in a significant way to the remarkable Finnish growth performance of the last decade and a half.

(6) Sound public finances and a strong current account

The Finnish fiscal policy tradition displays an aversion to deficits. For instance, a key ingredient of the growth policies of the 1950's and the 1960's was that the government sector was a big saver and generally in surplus. The funds generated by government saving were then used for structural policy purposes, such as financing of infrastructure projects, or to recapitalise government owned basic industries, or for lending to private companies. There is an interesting parallel with the growth policies followed by some East Asian NICs some decades later.

By the 1980's, government-led industrialization gave way to a more market-oriented approach. However, the policy of sound public finances was clearly evident. Unlike many OECD countries, Finland weathered the oil crises and the stagflation period of the 1970's and the early 1980s without accumulating a large government debt burden. The situation was shaken only by the economic crisis of the early 1990's, when large deficits suddenly emerged. However, these were corrected in by large expenditure cuts (cumulatively about 8 per cent of GDP in 1991–1999) and by limited tax increases. By 1998, the general government sector was again in surplus.

In recent years, fiscal policy has been effectively based on explicit policy rules such as spending limits covering the whole electoral term. As a result of prudent fiscal policies, the general government sector has been in surplus for more than a decade. The surplus ratio is at the level of 2-3% and is expected to remain so. The Stability and Growth Pact of the EU has not played a large role as an argument in the Finnish fiscal policy debate. The surpluses have been motivated more by the need to provide for the ageing of the population and the anticipated growth of pension expenditures.

Parallel to government surpluses, the Finnish current account has also posted large surpluses since 1994. The emergence of current account surpluses is a marked difference with the past. Besides competitive open sector and strong growth of exports, the persistent current account surpluses reflect a decline in the investment ratio after the crisis of the early 1990s. The corporate sector has adopted a more cautious investment policy, reducing its debt exposure and increasing its capital buffers. Productivity of investment seems to have increased significantly as well.

Another conspicuous part of the balance-of-payments developments of the last years has been the unprecedented growth of both inward and outward portfolio investment ever since Finland joined the EMU. As a consequence of international diversification of investors' portfolios, non-residents' holdings of shares in the Finnish Stock Exchange rose to over 70% of the total market capitalisation already in 2000. This greatly reduced the exposure of the Finnish economy to the ICT asset price bubble at the turn of the century, as much of the risks were born by foreign investors.

(7) Established social dialogue

Finland is one of the countries where institutionalized social dialogue between labour unions, employers' organizations, and the government has a major role. This dates back to the late 60's and 70's when the Finnish labour market was quite restless because of political fighting between Social Democrats and Communists over the control of the unions. Also, better control of inflationary wage claims was seen as vital because of the recurrent balance of payments and competitiveness problems of the Finnish economy at the time. The incomes policy framework instituted in those days has proved quite durable, and in the recent decades has made the Finnish labour markets highly organized and consensus-oriented.

Nation-wide collective wage agreements have been rather the rule than an exception and they play a relatively prominent role in shaping the relationship between employee and employer. The agreements have contributed to relatively moderate wage increases and low inflation while also compressing wage

differentials. In return to wage moderation, the unions have been guaranteed a voice in the formulation of social policy and labour market legislation.

Established social dialogue has actually been helpful in the implementation of some reforms. Recently a major pension reform was agreed between employees, employers and the government. In the reform, which has already been implemented, two early-retirement schemes were abolished. There will be a longevity coefficient linking pensions to life expectancy, and benefits will be calculated on the basis of the whole lifetime income and not the last working years only, as earlier. The system is closer to being actuarially fair than before. This has improved the sustainability of the pensions system, and strengthened incentives to work, but challenges still remain.

The challenge for the future is how to retain wage moderation while taking productivity differences between industries and firms into account. Even the unions increasingly recognize that work is becoming more abstract and knowledge-based, and that today's global market often forces very rapid changes on firms. It seems that a widely shared view in the labour markets now is that the collective agreements need to become more flexible and allow more scope for local, firm-level negotiations.

(8) Capacity to act

At a fundamental level, the economic and also social success of societies depends on their ability to adapt to and take advantage of changing circumstances. If anything, the importance of flexibility has only increased in the last years. It is generally acknowledged, almost a cliché, that today's world of globalization requires of societies a degree of adaptability which is a big challenge for any society to achieve.

For various reasons, the Finnish political system has, in the recent years, been able to respond to emerging challenges in a surprisingly smooth way. One reason for this may be the hard lesson which the country learned during the economic crisis of the 1990's. The crisis proved that it is much better to face up with realities and act in a timely manner than to try to live in denial of unpleasant facts. Another reason may be the Finnish culture of consensus-based politics, which includes also the labour unions for instance.

An example of how this has worked in Finland is the country's nuclear energy policy. The country has made rather tough commitments in terms of CO₂ emissions in the context of the Kyoto protocol. The use of fossil fuels must be strictly limited in the future. On the other hand, the Finnish economy is relatively energy intensive, because of the climate, and economic growth puts creates pressure for energy production.

In this situation, increasing the nuclear power capacity emerged as a sensible and indeed necessary part of the solution. There was an intensive public debate of our energy policy, and in the spring 2002 the Government took a positive stand on adding another reactor in Finland's nuclear power capacity. The decision was submitted to the parliament which approved the project after a tight vote. However, the public opinion has respected the leadership shown by the government and has subsequently become more favourable. Recently increased awareness of the risks of adverse global climate change has only increased the popular approval of the chosen course.

Risks and policy challenges

I have mentioned a number of success factors which I believe have been instrumental for Finland's good economic performance. However, past performance as such is no guarantee for future success and there is no reason for complacency. There are significant risks and policy challenges in the horizon for the Finnish economy. I will mention just two of them.

One important concern is the terms of trade, which, in recent years, have deteriorated and have been predicted to continue to do so. This phenomenon has to do with the structure of the Finnish exports. The prices for ICT products are generally falling, globally, due to technology developments and competition from low-cost countries. Also the price developments in the forest sector have been rather weak.

The result of the secular decrease of the Finnish terms of trade is that a very large part of the fruits of increasing productivity is actually transferred abroad, to the buyers of our products. Year by year, they get the products at lower relative prices than previously. This means that our real national income, in terms of goods which we import, tends to rise by less than our GDP and productivity statistics would

indicate. Politicians and labour market partners in Finland must realise that, because of the structure of our exports, we cannot increase our costs and our expenditure as fast as our economy grows, measured by the GDP.

One way to react to this challenge is to try to keep ahead in the global productivity race, something which the Finnish export companies have been quite successful so far. Continuous productivity improvements are necessary, but not sufficient in the long term. Quantitative improvements must be complemented by qualitative change as well, adding more value into our exports. Instead of just producing more and more, Finland must change the composition of its export basket to include more and more sophisticated goods and services. The past record of Finnish engineers in developing new and advanced products is actually very good, but the future seems to require even deeper change, emphasizing the creative content in products, business solutions and marketing, in addition to technical features in the narrow sense.

Another crucial problem for Finland is the ageing of its population. This is due to the very strong baby-boom of the years 1945–1950. Even though ageing is a challenge for many European countries, Finland is now encountering the problems earlier than the other European nations. In just two years' time we are reaching the point when age cohorts leaving the labour force are bigger than the cohorts entering it.

As the labour force is starting to diminish, maintaining sustained and reasonably strong economic growth will be increasingly difficult. This underscores the necessity of paying a lot of attention to labour productivity: in the emerging area of a declining labour force, productivity increases are emerging as the only source of economic growth. One way to spur productivity is to remove obstacles from effective competition in the services sector, for instance. The adverse change of our population structure also requires that, in social and tax policy, as well as in education, incentives to work must be given high priority.

The effects of an ageing population are felt on public finances as well. Expenditure on pensions and on the care of the elderly increases dramatically as the population gets older. As far as pensions are concerned, the Finnish economy is better prepared than most of our European partners, thanks to the accumulation of considerable funds even in the mandatory public pension system. Also, recent pension reforms have gone some way towards reducing future pension costs, by postponing the average retirement age and by certain other means. But despite this, the costs will increase very rapidly relative to the anticipated growth of the economy as a whole. At the same time, the room for financing extra expenditure by rising taxation is limited by concerns of not creating disincentives for work.

The only possible conclusion is that we must improve the productivity of the public services, and health care in particular. Currently, many issues regarding the governance, organization and management of health care are hotly debated in Finland, which is a promising sign that we are beginning to understand the seriousness and urgency of this formidable challenge.