



Ranked Finland

Education, expertise, labour force, economy,
and ICT in international comparisons

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Finland the model pupil

What does an elephant think about Finnish people? In the spirit of this question, we have mapped how well Finland does in international comparisons. And we do rather well indeed.

Finland and the other Nordic countries are ranked among the top countries in astonishingly many statistics; whether it is the business environment of the ICT companies, innovativeness of the people, or the percentage of people with a university degree.

Even though international comparisons and statistics do not fulfil the high quality requirements set by scientific research, many of them are carefully and thoughtfully created reports with strict boundary conditions, the results of which should not be dismissed with a shrug.

These comparisons have a great significance at least to Finland's country brand. This prestige should be utilised more systematically than what we have so far been able to do.

The Nordic welfare society seems to have features that improve the quality of life of citizens and the competitiveness of companies. For example, high education, very little corruption, and functional infrastructure have been beneficial for companies.

One should be happy and proud of this success. However, the victory at last year's World Championship will not help this year's games. The giants, such as China and India, have quickly caught up with the Nordic countries also in the field of expertise. This is already visible in, e.g. the Programme for International Student Assessment (PISA). It can also be seen in the figures regarding higher education; in just China alone the universities have more than 1.5 million post-graduate students.

The rapid development of Asia is bound to diminish the competitive advantage of the Nordic countries. If, e.g. Finland's labour markets and bureaucratic practices make us an expensive

country without clear competitive advantages, our previous achievements have been built on sand.

We must take the Asian challenge seriously and unite, because we cannot beat them. However, there is no need to let this situation bring you down either, because this challenge is also a possibility for Finland and the whole world economy. It is, however, essential to find out what our strengths are, how long-lasting they are, and which areas we should develop the fastest.

Sometimes predictions have a tendency to become true when we believe in them strongly enough. If we believe in our abilities to succeed, we are more likely to succeed. If we do not believe in our success, how could anyone else believe it either?

Finland has been wealthy and wise enough to build working infrastructures and social mechanisms, where the distribution of work between the private and public sectors is well balanced. However, there is a lot to improve in the utilisation and adaptation of the advanced operational environment.

It could be said that we have a lot of information, but we could have more wisdom. I hope that this publication in its part will make it easier to see where we now are. And that we can use it to turn the future into something we want it to be.



Jukka Viitasaari
Director
The Federation of Finnish Technology
Industries





The competitiveness of Finland in 2012

Education, expertise, labour force, economy, and ICT

Despite the state-of-the-art technology, Finland's educated people have to suffer from inferior service. International comparisons can also paint this kind of picture. Finland that has also been ranked the best country in the world does remarkably well in most comparisons. Unfortunately its people, who find it hard to take compliments, are self-critical about all of them. However, the statistics and comparisons provide even surprisingly good results.

Good life

Finland's international success begins already in the comprehensive school, which has been praised in the PISA and by foreign media. Finns are also eager to study at the university; sometimes so eager that it takes way too long for them to graduate. However, our universities are not ranked among the top international schools.

Education improves the quality of life here in the backwoods of Europe. Healthcare and clean environment are also internationally appreciated, even though we are annoyed by the long queues at the health care centres and wary of fake doctors.

Our clean environment, however, is rather dark, which might be one of the reasons why Finnish people consume so much alcohol. This in turn results in violence, and thus Finns are more likely to die a violent death than other Western Europeans.

Measured by the international yardstick, Finns are honest and incorruptible. However, the electoral support scandal, among other things, has caused many people to lose their trust in the honesty of the decision makers.

Functional economy

Our thrifty people have kept the national economy in good condition, at least in European standards. This remote country with five million inhabitants does not really attract foreign investments, even though the surveys say that we are one of the most competitive countries in the world. There have also been claims that Finland is the most innovative and the most technologically advanced country in the world.

Finland is in many ways an easy environment for entrepreneurship. Our legislation works but the taxation system is time-consuming for companies. Funding is a bottleneck especially for new companies. In Finland, interest in starting one's own company is also small in comparison with the rest of Europe, even though it is on the increase. However, Finns feel more positively towards entrepreneurship than any other EU citizens. Although unlike the other EU citizens, Finns are more interested in the independence it brings rather than the possibility to earn more. Do Finns dream of entrepreneurship because they do not like regular work? This may be an indicator of a bigger need to develop management.

Digital economy grows

Finland has improved its ranking in reports that compare the ways different countries utilise ICT. Finnish citizens and companies received praise for their ability to use ICT. Moreover, Finland provides in many ways a good operational environment for ICT companies.

According to numerous studies, the biggest challenge is that the public administration offers the citizens poor online services. Furthermore, the government provides them few possibilities to participate, even though modern technology would give many tools to do so.

Finland's human capital is praised in many studies. Finland and the other Nordic countries do extremely well in most international comparisons. So, the Nordic social model has many characteristics that are also advantageous for business. However, a big concern for the future is connected to the speed at which the Nordic countries are losing their competence advantage. Human capital increases rapidly in, e.g. China and India, where the price level is clearly lower and working life less rigid than in Europe. This can already be seen in e.g. the outsourcing of ICT jobs to these countries.

A few examples of Finland's rankings in 2010–2012

Comparison	Finland's rank
Best mathematical skills (OECD's PISA)	6
The least corrupted countries (Transparency Int.)	2
The most competitive countries (WEF)	4
The most innovative countries (R. Florida)	1
Best business environments (Forbes)	13
The most networked countries (WEF)	3
Countries with the best online services (UN)	19
The best digital economies (Economist Intelligence Unit)	3
The ICT environment (BSA)	2
The best countries (Newsweek)	1



1. Life in Finland

1.1 Finnish comprehensive school bears comparison with the others

Ever since the end of the 1990s, the Finnish educational system and especially our basic education has attracted a lot of positive attention abroad both for its quality and equality.

The goal of the free educational system is to offer children and young people as equal development opportunities as possible despite their wealth and social standing. It is also viewed as the foundation of Finnish well-being and Finland's international competitiveness.

The high quality of Finland's basic education is also evident in international comparisons. The most well-known of these is the Programme for International Student Assessment (PISA) by the OECD, which measures the school skills of 15-year-old students. Finland has been among the top three countries in it throughout the 21st century – in literacy mathematics, and natural sciences.

Asia excels in mathematics

PISA, the average scores in mathematics		
1.	Shanghai (China)	600
2.	Singapore	562
3.	Hong Kong (China)	555
4.	South Korea	546
5.	Taiwan	543
6.	Finland	541
7.	Liechtenstein	536
8.	Switzerland	534
9.	Japan	529
10.	Canada	527
The OECD average		496

Source: OECD PISA 2010

Finland's results in the latest study were also excellent, even though the previous number 1 spots were not attained this time. In reading skills, Finnish students ranked 3rd in the global comparison. They were 6th in mathematics, and 2nd in natural

sciences before the Asian techno-economic areas that have leapt into the forefront.

The other Nordic countries are clearly below Finland in the PISA statistics. For example, Sweden's overall ranking was just 19th in the latest study. An interesting fact is that the comprehensive school model came to Finland from Sweden in the 1970s.

The next PISA will be carried out during 2012. The future challenge for Finland is to maintain the homogeneity of basic education while municipal economy tightens. Furthermore, the socioeconomic backgrounds of schools and homes have started to become more unequal.

1.2 Too long study time

For a long time, the business sector has demanded extra effort on teaching handicraft skills. In recent years, the upper secondary school and the vocational school have been approximately equally popular among young people. In 2011, about 64,000 young people finished their comprehensive school.

Even though we have invested a lot in the secondary level studies and the degrees following them, a large number of young people only have the basic education. For example, 17 per cent of 25-year-old people do not have a degree after the basic level. With 30-year-old people, the corresponding figure is a bit over 14 per cent.

There are also gender-specific differences. 90 per cent of 30-year-old women have at least the secondary level degree. With men, this figure is 82 per cent.

Moreover, girls also complete their studies more frequently than boys.

Finnish young people and young adults are active students. For example, more than 40 per cent of 20–29-year-old and 15 per cent of 30–34-year-old people are still students.

Both of these percentages are higher than in the rest of the OECD countries. It is an indication of both the industrious nature of Finns and the inefficiency of the Finnish educational system. Studies are also often prolonged for financial reasons if there are no jobs available.

The median age of people graduating from the university of applied sciences is 25.1 years, and the median age of those with a higher university degree is already 27.3 years.

1.3 Finland is quickly becoming more sophisticated

According to the annual Education at a Glance report by the OECD, the number of university degrees is rapidly increasing, and the pace is the fastest in the developing economies of Asia.

Even in Finland, the percentage of people with a university degree has increased rapidly among the younger generation (25–34-year-old), and it is high even in global comparison. According to the report, over a third of the Finns within this age group had acquired a degree from a university or a university of applied sciences in 2009. The corresponding percentage in the other OECD countries was on the average 28 per cent.

The most advanced was Norway, where nearly half of the 25–34-year-olds had a degree.

25–34-year-old people with an academic degree in 2009 (In Finland Bachelor's and Master's)	
Norway	45%
The Netherlands	37.5%
South Korea	37.5%
Great Britain	35.5%
Finland	35.5%
Denmark	35.5%
Poland	35%
Sweden	34%
The USA	32%
Germany	19%
The OECD average 27.5%	27.5%

Source: Education at a Glance 2010

In the international comparison of universities, the superiority of American schools is nearly overwhelming. Only the traditional British places of learning, Cambridge and Oxford, can compete with them.

The only Finnish campus found among the top 100 is the University of Helsinki, which can be found, e.g. on the Academic Ranking of World Universities by the Jiao Tong university in Shanghai and the Higher Education list by The Times newspaper from Britain.

The other Finnish schools found on various lists are the universities of Oulu, Turku, Tampere, and Eastern Finland, as well as the Aalto University. From Swedish schools, Karolinska Institutet, Uppsala, and Stockholm reached the top 100.

The goal of the development strategy by the Research and Innovation Council of Finland is to create a truly international and appealing university and researcher community by 2015. According to the Council, this calls for renewing the operational principles and methods at schools and universities, and among investors.

“We must aim at finding young and promising researchers and keeping them in Finland as well making the graduate schools and the research career system more international, and promoting the export of education and expertise”, the Council’s strategy states.

1.4 Finland’s aim of becoming the most competent nation

At higher levels, education has also become an international competitive advantage. The Finnish Government plans to make Finland the world’s most competent nation by 2020. By then, Finland should be ranked among the top OECD countries regarding central competence assessments for young people and adults, the small number of drop-outs, as well as the percentage of people with a higher education.

The proposed methods to accomplish this include bringing education up to date as well as improving the quality, efficiency and success-rate of schools and universities. Education policy is ever more clearly built on the principle of lifetime learning.

This calls for even easier transfers from one educational level to another and from there to working life. We must also make schools and companies collaborate more closely with each other and ensure that education better meets the prevailing labour market needs.

For already several years, technical fields have tried to attract female students, but with poor results. Another big challenge is the young immigrants, only a small minority of whom continue to study at the secondary level. And many of those who do drop out of the upper secondary school or vocational school because of poor language skills

The cost of education in 2008 (% of the GDP)	
Japan	4.9%
Germany	4.9%
Great Britain	5.7%
Finland	5.9%
France	6.0%
Sweden	6.3%
Denmark	7.1%
Norway	7.3%
South Korea	7.7%
The OECD average	5.8%

Source: Education at Glance 2010

1.5 Longer and better life than before

In recent years, the Nordic welfare state model has shown its strengths in both education and the comparisons that measure the quality of life that also take into consideration other factors than mere economic growth.

When using these indicators, Finland, alongside with the other Nordic countries, has reached the top ten in many international comparisons.

For example, in the OECD’s Better Life index, Finland reached the 9th position in the spring of 2011. Out of the other Nordic countries, above Finland were Denmark, Norway, and Sweden, which ranked 3rd after Australia and Canada. The evaluation criteria included, e.g. housing quality, life expectancy, habitat, education, and unemployment rate.

In recent years, similar results have also been demonstrated, e.g. in the satisfaction surveys by Eurofound and the Legatum institute.

The most publicised is the comparison published in the summer of 2010 by the American weekly magazine Newsweek, in which Finland was ranked the best country to live in out of a hundred countries. The magazine compared, e.g. education and healthcare services, quality of life, economic development, and political stability.

Even though good quality of life also consists of other than financial factors, education, meaningful work, and a reasonable salary level are clearly connected to it. This also transpired in the Suomalaisten hyvinvointi 2010 (Wellbeing in Finland) report by the National Institute for Health and Welfare (THL).

According to this report, young people want their life to be meaningful and the middle-aged emphasise the ability to cope with work, everyday life, and financial troubles. Over 50-year-old people desire to be as healthy as possible while working and also to retire while still healthy.

According to the THL study, about 80 per cent of Finns consider their quality of life to be least good until the beginning of their old age (70 yrs.).

The future challenges of Finnish wellbeing and the quality of life include coping with workload, prolonging working life, youth employment, and public healthcare. We must find solutions to all of these amidst poor economic growth, lower tax revenue, aging population, and worsening dependency ratio.

1.6 Even healthier lifestyle

Nowadays Finns have a longer and healthier life thanks to improved living conditions and dietary habits, as well as the national investments in public health and sickness prevention. The availability of healthcare services has also improved.

Consequently, Finnish life expectancy has increased since the 1970s, reaching approximately the same level as the rest of Europe. The female life expectancy is 83 and the male 76 years.

The situation is still improving, even though the differences between different social classes and educational levels are still evident. The Finns with better education and high income have several years longer life expectancy than the lower social classes.

Depression as the price of success

Healthier diet and reduction of smoking have improved especially the heart and cardiovascular disease statistics. However, the improved standard of living has replaced these with other problems. Approximately 50 per cent of Finns are overweight, which clearly increases the risk of, e.g. adult-onset diabetes. Mental problems have also increased, and they are ever increasingly behind people's disability pensions.

Another risk factor is still alcohol, the total personal consumption of which is already 10 litres per year. However, its consumption has slowly decreased and is close to the EU average. In the Nordic comparison, Finland shares the top position with Denmark. Finland is also the number 1 Nordic country in alcohol-related deaths, liver diseases, and poisonings, which is a clear indication of alcohol abuse and binge drinking.

Alcohol also makes Finland's homicide statistics more depressing, even though their numbers have slowly decreased since the turn of the millennium. Out of all EU countries, Finland is in the 6th place in homicides per capita. In eight out of ten cases, at least one of the parties has been intoxicated.

A lot of homicides (murders, manslaughters, etc. per 100,000 inhabitants)		
1.	Lithuania	8.76
2.	Estonia	6.60
3.	Finland	2.34
4.	Bulgaria	2.27
5.	Romania	2.08
6.	Czech	2.03
7.	Ireland	2.00
8.	Belgium	1.97
22.	Sweden	1.06

Source: Eurostat



1.7 The Nordic countries are the least corrupted

For a long time, Finland has been one of the least corrupted countries in the world.

In recent years, the Transparency International organisation, which monitors the corruptibility of government officials and politicians, has ranked Finland among the six least corrupted countries.

In the 2011 ranking, Finland shared the second position with Denmark before Sweden, Singapore, and Norway. It was only preceded by New Zealand.

Finland returned to the top of the least corrupted countries	
1	New Zealand
2	Denmark/Finland
4	Sweden
5	Singapore
6	Norway
7	The Netherlands
8	Australia
9	Switzerland
10	Canada

Source: Transparency International's global corruption report 2011

According to the same study, corruption is most common in Africa south of Sahara (led by Somalia). Corruption thrives also in North Korea.

According to the reports by Transparency International, the most eager export companies to offer bribes are the Russian, Chinese, Mexican, and Indian companies.

Corruption gnaws at Finland

Finland is not as clean from corruption as previously estimated. As a foretaste of this, we have had, e.g. the electoral support scandal and a few cases among the Finnish export companies.

Gloomier economic prospects and the financial crisis add pressure and create opportunities for corruption. In Finland, bribery within the business sector is only revealed when a request for an investigation is submitted to the authorities.

These reveal, e.g. that an ex-employee who is about to start a new company is the usual suspect in the breach of confidentiality cases.

In Finland, corruption is most commonly associated with 'old boy' networks, through which people try to influence politicians, government officials, and through them decision making. It is most often targeted at zoning, construction, and public acquisitions.

According to the spring 2011 progress report by Transparency International, Finland has only had moderate success in the fight against international corruption. Law enforcement authorities and prosecutors need better training and guidance to investigate international bribery cases. The report also states that civil servants and tax authorities should be given sufficient guidance on detecting and reporting suspicions of bribery.

In the poll published by the European Commission, one third of the Finnish respondents believed, that there is corruption in both the municipalities and the Government. One fourth of them considered corruption a serious problem.

This result is good in comparison to the rest of the EU, because four out of five EU citizens consider corruption to be a major problem for their countries.

This situation is hardly made easier by the recent research findings, which show that Finnish people's trust in democracy has plummeted. According to the November 2011 survey on Finnish political parties by TNS Gallup, 35 per cent of the respondents had doubts about it, whereas half a year ago this figure was 24 per cent.

In Finland, still over half the population believe in the functionality of democracy, in the EU this figure is only 21 per cent. Corruption costs the EU EUR 120 billion annually, which is almost as much as its yearly budget.



2. Finnish economy

2.1 Good competitiveness

Finnish economy is in a moderately good shape, considering that Europe has been hit by a debt crisis. Our competitiveness is based on our adaptability and the specialisation of our export industry in suitable technologies and gaps in the market.

According to the report by the Research Institute of the Finnish Economy (ETLA), the motives for foreign companies to come to Finland are based on people's honesty and reliability, working infrastructure, technological expertise of the companies, stable society, and high level of education. These should enable us to succeed also abroad.

Finland's competitiveness is ranked rather high in international comparisons. In 2011, Finland was 4th in the Global Competitiveness Report by the World Economic Forum (WEF). Finland climbed three spots higher, losing to Switzerland, Singapore, and Sweden, but beating the USA, Germany, and the Netherlands.

The famous school of management education, IMD, in its World Competitiveness Yearbook, considers Finland to be the 15th most competitive country. Even though we are now four ranks higher, we are way behind Hong Kong, the USA, Singapore, Sweden, and Switzerland. Finland's ranking has not changed much, as we were in the 17th place in 2007. When we examine different categories, we can see that our infrastructure is excellent (6th) and our government and business efficiency strong (14th and 15th). However, we ranked 37th in economic performance, dropping by five ranks since 2007.

Our rankings varied from report to report. However, Finland achieved satisfactory results even in the worst competition. It is also worth noticing that the rise of Asia can already be seen in the comparisons.

Hong Kong, Singapore, and Taiwan ranked high on both lists. These small hungry tigers of Asia attempt to meet and even exceed the traditional industrialised countries.

The most competitive countries in the world		
Country/economic zone	Rank 2011	Rank 2010
Switzerland	1	1
Singapore	2	3
Sweden	3	2
Finland	4	7
The USA	5	4
Germany	6	5
The Netherlands	7	8
Denmark	8	9
Japan	9	6
Great Britain	10	12
Hong Kong SAR	11	11
Canada	12	10
Taiwan, China	13	13
Qatar	14	17
Belgium	15	19
Norway	16	14
Saudi Arabia	17	21
France	18	15
Austria	19	18
Australia	20	16

Source: WEF: The Global Competitiveness Report



2.2 The most innovative country in the world

Research Professor **Richard Florida** claims that Finland is the world's leading nation for innovation and technology. He says that the top spot in the Global Technology Index is based on the following measures:

- 1. place: Scientific and engineering researchers** (number per capita)
- 3. place: Economic output devoted to research and development** (percentage of GDP)
- 4. place: Innovations** (patents per capita)

Finland at the forefront of technological development				
Country	Research-ers	R&D invest-ments	Patents	Techno-logy index
Finland	1	3	4	1
Japan	3	4	2	2
The USA	7	6	1	3
Israel	-	1	5	4
Sweden	2	2	6	5
Switzerland	11	5	3	6
Denmark	5	9	9	7
South Korea	16	7	-	8
Germany	13	8	7	9
Singapore	4	11	11	10
Canada	9	13	8	11
Norway	6	18	18	12
Austria	14	12	13	13
France	15	10	16	14
Australia	8	17	17	15
Belgium	17	14	15	16
The Netherlands	18	16	12	17
Great Britain	-	15	14	18
New Zealand	10	25	20	19
Ireland	19	23	19	20

Source: The Atlantic Cities, www.theatlanticcities.com

The Forbes Magazine's Best Countries for Business (2011) ranked Finland in the 13th place, putting Ireland, Denmark, Sweden, Norway, Great Britain, and Belgium in front of us from the European countries. In this listing, Switzerland, the Netherlands, and Germany fell behind us. Forbes also studied the most innovative companies in the world. The best Finnish company on this list, which puts emphasis on the average sales and net income growth within a period of five years, was KONE (39th). The value of this accomplishment is emphasised by the fact that there are no other Finnish companies among the top 100.

Finland is a decent country for business	
Country	Rank
Canada	1
New Zealand	2
Hong Kong	3
Ireland	4
Denmark	5
Singapore	6
Sweden	7
Norway	8
Great Britain	9
The USA	10
Australia	11
Belgium	12
Finland	13
Switzerland	14
The Netherlands	15
Estonia	16
Luxemburg	17
France	18
Mauritius	19
Israel	20
Germany	21

Source: www.forbes.com

2.3 Some industry disappears

Our open EU economy, which relies heavily on export, is sensitive to economic fluctuations, and can no longer resort to devaluation of the currency. The safety valves of our economy are the Russian market, especially the St. Petersburg area, and transferring production outside of Finland. Our location next to Russia is a clear advantage for many foreign companies operating in Finland. However, if the situation in Russia stabilises, some of the foreign companies in Finland may move to, e.g. St. Petersburg.

Our domestic industry has rapidly transferred its production outside Finland, for example, to China, India, Brazil, Estonia, Poland, and Russia. This improves their competitiveness, but some of the domestic employment opportunities disappear. We also acquire more and more services and labour force from the other side of the border, e.g. foreign transport companies and construction workers.

However, transferring the production and outsourcing outside of Finland have in some cases resulted in problems with quality, manageability, and increased costs. Ever increasingly, companies are thinking about moving their operations back in Finland or elsewhere in Europe. Additionally, the availability of experienced labour force has improved in Finland. At the same time, tightening municipal economy has forced the municipalities to develop favourable operating conditions for entrepreneurship

2.4 The EU attractive for investors

According to the 2011 European Attractiveness Survey by Ernst & Young, the EU area is the second most attractive direct investment destination after China. The EU's share of the foreign direct investments matches its share of the world's GDP, i.e. 26 per cent.

Great Britain and France are still favoured by investors, but they are losing market shares to Germany as well as the cost-competitive Poland, Hungary, and the Baltics.

The leading sources of FDI in Europe are the USA, Germany, and Great Britain. China and India provide just six per cent of all projects.

In 2010, the number of the FDI projects within the EU increased by 14 per cent, and they helped create c. 137,000

new jobs. The greatest number of projects in Europe come from business services, software, machinery, and automotive. Among the EU's strengths, identified by the 812 respondents, are a high-quality and diverse labour force, a society that emphasizes social responsibility, a predictable business environment, and a leading-class capacity in research and innovation.

The respondents were mostly concerned with Europe's low economic growth, high taxes, and high public debt, as well as the lack of cohesive EU political and economic governance.



2.5 Invisible Finland

How did the Scandinavian countries do in the survey by Ernst & Young? Only Sweden ranked among the 15 biggest countries with its 77 projects. The Stockholm County was ranked the 13th most attractive urban region for FDI in Europe. Finland or the Helsinki area were not even mentioned in the survey.

Finland has good reasons for becoming an attractive investment destination, because investors consider ICT and clean technology, which are well suited for Finland, as interesting drivers of growth. However, Finland's attraction as an investment destination is diminished by high taxation and remote location.

According to the Kauppalehti newspaper (Dec. 14, 2011), Minister of Economic Affairs, **Jyri Häkämies**, has said: "The investments directed at us and the governmental efforts for acquiring investors are clearly smaller than in our most important competing countries."

2.6 Competitive advantage through taxation?

In its 2010 survey, The Central Chamber of Commerce introduced numerous interesting points of view regarding the competitiveness of the manufacturing industry. The Finnish corporation tax rate is higher than that of our competitors, which has significantly reduced Finland's competitiveness. The Central Chamber of Commerce considers the one percentage point reduction set for 2012 to be not sufficient. They feel that the corporation tax should be lowered to 20–22 per cent.

This survey also brought up the OECD's economic growth project, which states that shifting the emphasis of taxation from corporate and income taxes towards consumption and property taxes will increase the GDP.

The amount of corporation tax revenue can vary greatly from year to year. Ministry of Finance estimated it to be EUR 5.3 billion in 2011. In the point of view of short-term bookkeeping, Ministry of Finance may have a different opinion regarding the need for tax reduction than The Central Chamber of Commerce.

Our economy is more immaterial than before. The industrial sector has also started generating income from services, such as maintenance and software. The increase of services will also increase immaterial investments, for example, in product development, software, and personnel. These companies also saw the biggest increase in productivity.

Our tax system primarily takes into consideration material investments. This has slowed down the growth of immaterial capital during the last 10 years. Therefore to secure our competitiveness, this area needs to be re-evaluated in corporate taxation.

The downside of our neutral corporate tax system is its sensitivity to economic fluctuations. The companies in export-dependent Finland have problems reacting to economic fluctuations. There have been some discussions on the so-called carry-back system, in which a company retroactively applies net operating losses to preceding years' income to reduce tax liabilities. Within the EU, carry-back is used by Germany, France, Holland, Great Britain, and Ireland.

According to the Doing Business database by The World Bank, Finland ranked 11th in the ease of doing business out of 183 countries. However, tax procedures take too much time,

which put us in the 71st position in that category. Regarding the ease of doing business, we were clearly beaten by Great Britain and Denmark, but at the same level as Sweden.

In Finland, the industrial sector is further burdened by heavy energy taxation on electricity and transportation in addition to corporation taxes.

The ease of doing business	
Country	Rank
Singapore	1
Hong Kong	2
New Zealand	3
The USA	4
Denmark	5
Norway	6
Great Britain	7
South Korea	8
Iceland	9
Ireland	10
Finland	11
Saudi Arabia	12
Canada	13
Sweden	14
Australia	15
Georgia	16
Thailand	17
Malaysia	18
Germany	19
Japan	20

Source: The World Bank

2.7 Tax competition not slowed down even during the recession

Even though the EU tries to harmonise the tax legislation, its projects are frozen because of the required unanimous vote by the member countries. And although recessions limit the debt-ridden public finances' eagerness to compete, the tax competition requires active participation from Finland. As a very peripheral part of the EU, Finland is often left empty-handed, as funds, companies, and investments disappear elsewhere.

Tax competition becomes more important as the significance of services increases at the expense of the manufacturing industry. This is because service companies can easily cross the border – whether it is to conduct their business or relocate their HQ. For example, Estonia attracts companies and entrepreneurs with its tax policy that supports strengthening the company's balance sheet by only taxing when the money is taken out of the company. At the same time, it has very moderate tax percentages. According to the Finnish Embassy in Estonia, more than 4,600 Finnish companies operated in Estonia in the autumn of 2011, and approximately 500 new ones are founded every year.

Sweden has also changed from a mad taxman into a country that supports the change of generation by not taxing the inheritors. At the same time, it has reformed the corporate rules of the game to create an appreciative environment for work. Sweden also has a larger labour force reserve and wider range of industries than Finland.

Is Finland's only tax weapon the lighter income tax rate for foreign experts working in Finland?

Can Finland's main competitors offer companies tax benefits that are not available in Finland?

Tax differences in neighbouring countries			
Country	Corporation tax	Largest income tax, %	General VAT %
Finland *	26.0%	53.0%	23.0%
Sweden	26.3%	56.6%	25.0%
Estonia	21.0%	21.0%	20.0%

* Finnish corporation tax 24.5% in 2012
Source: Deloitte, Corporation Tax Rates 2011

2.8 New funding system to help export activities

Funding is still a challenge for Finland's growth. Finland cannot provide large amounts of capital for technology investments, and we are not a particularly attractive country for new direct investments within the EU. Our successful companies easily end up being bought by international corporations because they lack funding and because change of generation is too expensive.

Because of low interest rates, raising capital by going public has not been possible in recent years. The available money has been acquired from private financial institutions and investors. However, as the financial market tightens, the sources of funding dry up.

Finland tries to improve the competitiveness of export companies by, e.g. making Finnvera's funding options more versatile. In 2010, the share of publicly supported funding for export was about six per cent.



2.9 National economy

Finland has reduced its indebtedness and managed its economy so well that the international credit-rating agency Standard & Poor's assigned us the best possible rating AAA in 2011. This excellent rating helps us acquire more affordable funding for our national economy than many competing countries. Finland is one of the strong eurozone economies, the public debt of which is small in comparison to the GDP. However, it is worth noting that our neighbours Sweden and Estonia have even less debts than us.

Finland has still moderate debts					
Debt % of GDP					
Country	2007	2008	2009	2010	2011
Finland	35.2%	33.9%	43.3%	48.3%	53.6%
Sweden	40.2%	38.8%	42.7%	39.7%	39.2%
Denmark	27.5%	34.5%	41.8%	43.7%	51.4%
Germany	65.2%	66.7%	74.4%	83.2%	76.9%
Great Britain	44.4%	54.8%	69.6%	79.9%	80.3%
Estonia	3.7%	4.5%	7.2%	6.7%	10.9%
Greece	107.4%	113.0%	129.3%	144.9%	135.2%
Italy	103.1%	105.8%	115.5%	118.4%	120.0%
Spain	36.2%	40.1%	53.8%	61.0%	70.1%

Source: Eurostat, The Economist

Even though the World Economic Forum (WEF) predicts moderate growth for the developing market and the developing countries, it on the other hand predicts a slow or regressive economic development in the USA, Japan, and Europe. The slow growth of the GDP should still be enough for controlling unemployment during economic slowdown.

In Finland, the national production still saw a slight growth in August–September, 2011 in comparison to the same period in the previous year. When observing this as a long-term trend, we are clearly below the high season of 2007–2008, but also above the slump of 2009–2010. Many research facilities predict a recession for the year 2012.



2.10 The economic outlook of industry

In 2011, the economic outlook of industry plummeted within the whole EU, including Finland. During the latter part of the year, industrial production volumes only grew in metal industry, and they fell in the forest and electronics industries.

Growth slows down even in Finland			
Country	Change in GDP %		
	2011 p*	2012 p	2013 p
Finland	3.1	1.4	1.7
Sweden	4.0	1.4	2.1
Denmark	1.2	1.4	1.7
Germany	2.9	0.8	1.5
Great Britain	0.7	0.6	1.5
Estonia	8.0	3.2	4.0
Greece	-5.5	-2.8	0.7
Italy	0.5	0.1	0.7
Spain	0.7	0.7	1.4

Source: Eurostat
*) p = prediction

According to the preliminary data, Finland's balance of trade showed a deficit of c. EUR 3.5 billion at the end of 2011.

Finnish foreign trade in 2011 (Preliminary data for the year 2011)		
Year	Export, Meur	Import, Meur
2011	56,605	-60,165
2010	52,439	-51,899
2009	45,063	-43,655

Source: National Board of Customs

To prosper, Finland must import and export even more, earn better, and attract more competent foreign labour force. This is only possible with attractive and functional technologies, products, and services, as well as inspiring and supportive operational environment and attitudes.

The future of the Finnish economy is still strongly based on good education and our technology industry. In practice, Finland relies on export, concentrating on just a few industries: ICT, forest, and mechanical engineering industry, as well as shipbuilding.

According to Statistics Finland, the unemployment rate in October 2011 was 7.0 per cent. At the time, we had 9,000 fewer unemployed jobseekers than a year before. Within a year, 8,000 more people had acquired jobs.

The future risks for the Finnish economy are, e.g. diminishing tax revenue, indebtedness of the country and the municipalities, the most rapidly aging population in Europe, and long-term unemployment among young people who are in danger of becoming alienated from society.

2.11 Entrepreneurship and growth enterprises

The Vice President of European Commission **Antonio Tajani** said in the European attractiveness survey by Ernst & Young that it is easier to create 23 million new jobs in Europe by adding one employee in each company than by trying to add 3,800 new jobs in each large company that employs more than 6,000 people.

However, the problem in Finland is that too few companies seek the kind of growth that Tajani hopes to see. According to the Growth Enterprise Review by the Ministry of Employment and the Economy, only one fifth of new entrepreneurs seek significant growth. It is perhaps ominous that outside of Finland the desire to grow was this low only in Greece.

Low interest in growth		
The percentage of growth seekers among new entrepreneurs and those interested in entrepreneurship in 2008–2010		
Country		%
1	Iceland	50
2	Israel	47
3	Ireland	46
4	South Korea	44
5	The USA	43
6	Denmark	42
7	Slovenia	40
8	Belgium	33
9	Great Britain	32
10	France	31
...		
16	Finland	22
17	Greece	22

Source: Kasvuyrittäjäyyskatsaus 2011 (Growth Enterprise Review) by Ministry of Employment and the Economy

However, general attitudes towards entrepreneurship are more positive in Finland than in the rest of the EU. Out of all EU nationalities, Finns have the strongest belief in entrepreneurs as creators of new jobs as well as new products and services that

benefit us all. This is visible in the EU poll, answered by more than 26,000 people from all EU countries and a few important competing countries.

Furthermore, Finnish and Danish people are quicker than the rest of the EU citizens to dismiss the claim that entrepreneurs only think about their own wallets. This can also be seen in the answers by those who consider entrepreneurship to be better than paid labour. For Finns, the reason for choosing entrepreneurship is exceptionally rarely the possibility to earn more money.

Finns are not lured by the money

I think that the possibility to earn more is important for entrepreneurship (includes a few selected countries)

Country	% of the respondents
Hungary	60
Lithuania	48
Romania	39
Estonia	34
Poland	32
Great Britain	26
Italy	22
Spain	14
Sweden	12
Germany	12
Finland	4

Source: European Commission

Finland has more than 300,000 companies, 99 per cent of which are small. They employ approximately half of the Finns and generate c. one third of the net sales of Finnish companies. There are about 650 large companies that employ more than 500 people but generate approximately 50 per cent of the companies' net sales.



3. Digital Finland

3.1 Digital Finland improves its position

Finland has improved its ranking in the Global Information Technology Report by the World Economic Forum (WEF). In the 2010–2011 report, Finland rose to the 3rd position after having been 6th in the three previous ones. The latest report covered record-breaking 138 economies.

The WEF has produced the report in collaboration with the Swiss Insead since 2001. The report measures the degree to which various countries across the world leverage modern technology for enhanced competitiveness and improved living conditions.

The latest report especially emphasises ICT's ability to change the society. The creators of the report emphasise that ICT has revolutionised the methods with which individuals, companies, and the Government handle affairs. Digital networks connect communities the same way as roads connect villages and cities. When the ICT industry and political decision-makers collaborate, for example, in the field of healthcare or education, it is possible to come up with profound improvements in productivity and competitiveness.

The authors of the report give four recommendations to foster transformational ICT:

- Recognize one's 'value zone', the place where frontline employees interact with the customers
- Create trust through transparency, so that people care enough about their organisations to seek and seize opportunities to generate innovative and value-creating solutions.
- Invert the organisational pyramid, as an acknowledgment that frontline employees are the ones typically creating value for their organization and empower them to do that
- Nurture new leaders, often younger employees who eschew hierarchy and thrive in the collaborative environment required to solve today's problems.

The most networked countries The Networked Readiness Index 2010–2011		
Country	Rank 2010–2011	(Change in rank)
Sweden	1	0
Singapore	2	0
Finland	3	+3
Switzerland	4	0
The USA	5	0
Taiwan	6	+5
Denmark	7	-4
Canada	8	-1
Norway	9	+1
South Korea	10	+5

Source: WEF 2010–2011

Finland had the best results in the individual readiness and usage. Furthermore, the aggressive and unprejudiced way our companies seek new business opportunities received praise. The only exception was the public sector (government) and its way of utilising ICT. Finland was among the top 10 in all the other categories except the public sector, where it ranked 24th.

Finland's ranking in different categories The Networked Readiness Index 2010–2011	
Overall ranking	3
Market environment	6
Political and regulatory framework	4
Infrastructure environment	9
Individual readiness	3
Business readiness	3
Government readiness	10
Individual usage	2
Business usage	8
Government usage	24

Source: WEF 2010–2011

3.2 Poor service for smart people with good equipment

The United Nations Global E-Government Survey 2010 reveals that the Finnish Government is a rather mediocre provider of e-services. The survey rated the e-services of 157 countries. This time, Finland took the 19th place, which was four places lower than in the previous survey made two years earlier.

It was a lousy victory for Finland that all Nordic countries dropped a few steps. The biggest Nordic faller was Sweden, which was last time number one but now found itself in the 12th place.

The biggest climber was Bahrain, which rose to the 13th place from the 42nd place in the previous comparison. South Korea took the top spot. And now that Singapore took the 11th place, we can say that Europe's lead has also been curtailed in this area.

The availability of e-services	
Country	Rank
South Korea	1
The USA	2
Canada	3
Great Britain	4
The Netherlands	5
Norway	6
Denmark	7
Australia	8
Spain	9
France	10
...	
Sweden	12
...	
Finland	19

Source: The UN



This survey was somewhat tragicomical for Finland. Finland climbed among the top 20 because we have modern equipment and educated people. However, the services available for the educated people and people's possibilities to participate are really poor.

Finland shared the 2nd place in the category of human capital, and was 16th in telecommunication infrastructure. However, we ranked 30th in the comparison of e-participation, below Kyrgyzstan and Mongolia. (The film character Borat's home country Kazakhstan can be found in the 18th place). Regarding our online services, we were in the 32nd place after Uruguay and Lithuania.

This survey proves that many countries want to find out people's opinions ever increasingly through polls, surveys, and blogs. Feedback is sought through the internet, and social media is utilised ever increasingly. In the USA, for example, more than two million people follow President **Barack Obama's** Twitter feed.

The citizens ever increasingly express their opinions especially on the environment, healthcare, and education.

Regarding the e-services, the authors of the survey divided the countries into four groups. In the least developed group, the government provides online information on public affairs, laws, and regulations. At the top i.e. the fourth level, the government uses two-way communication. It asks people's opinions, and e-services travel seamlessly between different Ministries. In this group, thinking has changed from government-centric into citizen-centric.

For the time being, Finland is far from the top level. However, the Ministry of Transport and Communications has taken a

step towards interaction: It asked for individual opinions on the future challenges of transport policy. It plans on utilising these opinions when creating the report on transport policy. Citizens could express their thoughts by email, and the Ministry promised to inform people about the preparation of the report on their internet and Facebook pages.

The good news is that once again Finland has taken a few steps in the right direction. In the 2008 comparison, Finland ranked 45th in e-participation. However, we still have a long way, for example, to the 21st place we held in 2003.

3.3 Finland progresses, the administration has trouble doing so

The survey by the English Economist Intelligence Unit also shows that Finland has improved its position in the comparison of digital economies. However, it also shows Finland's inefficiency.

For over a decade, The Economist has in collaboration with IBM assessed the quality of different countries' ICT infrastructure and the ability of the consumers, companies, and governments to utilise ICT. The survey uses over a hundred separate qualitative and quantitative criteria to assess the countries. The latest comparison from 2010 included 70 countries.

In this survey, Finland rose to the 4th position, a clear improvement considering that we had not even appeared on the list for several years. The rise might have been partially caused by the changes in the indicators, which made the quality of broadband connections more important, whereas previously the survey had emphasised the number of connections.

In addition to connectivity, Finland also did well in an important category, i.e. the ability to adopt ICT. In the 2008 survey, we ranked 15th in the consumers' and companies' ability to adopt ICT. In the latest survey, we took the 4th place.

Finland has improved its position in the comparison of digital economies.

Adoption means, among other things, how consumers use the internet for online purchases and the extent to which consumers and businesses use the online services offered by the public sector.

In general, the scores of the top-tier countries are so close to each other that their exact position in the comparison does not really matter. In spite of this, it is worth noticing that our neighbouring country, Sweden, has for several years been ranked in front of Finland in the comparison by the Economist.

The research report also brought forward that the Finnish legislation considers internet access a basic human right. According to a recent poll by the BBC, 87 per cent of people across 27 countries believe this should indeed be the case.



The digital economy rankings 2010			
Country	2010	2009	Score
Sweden	1	2	8.49
Denmark	2	1	8.41
The USA	3	5	8.41
Finland	4	10	8.36
The Netherlands	5	3	8.36
Norway	6	4	8.24
Hong Kong	7	8	8.22
Singapore	8	7	8.22
Australia	9	6	8.21
New Zealand	10	11	8.07

Source: The Economist Intelligence Unit 2010

Finland in the digital race				
Country	2010	2009	2008	2007
Finland	4	10	13	10
Sweden	1	2	3	2
The USA	3	5	1	2

Source: The Economist Intelligence Unit 2008 and 2010

Finland's results in different categories	
Categories (Category weight)	Finland's rank
Infrastructure (20%)	3
Business environment (15%)	5
Social and cultural environment (15%)	5
Legal environment (10%)	11
Government policy and vision (15%)	19
Consumer and business adoption (25%)	4
Overall ranking	4

Source: The Economist Intelligence Unit 2010

3.4 Are we missing the ICT strategy?

The ability of the Finnish companies to utilise ICT solutions is also demonstrated in the Smart Company survey by Sonera and Cisco. According to the survey, the Finnish companies and other organisations utilise ICT well in mobile work, virtual meetings, and social media. In these areas, Finnish companies are better than the Swedish ones.

On the other hand, Swedes are better at serving their customers in the way that they want.

The old ways of thinking still prevent organisations from gaining productivity advantages that ICT would be able to bring. This is also affected by the classic 'learn it yourself' syndrome: The organisations invest in new equipment, but the personnel is not given enough guidance on how to use it. Furthermore, communications are very poor.

3.5 Companies receive information online

The Finnish companies are well informed by the government officials in comparison to many other European countries. Companies also send e-forms to government officials. This is demonstrated by the assessment of 27 EU countries published by Eurostat in December 2011.

However, since this is a top-down survey, it does not explain how much influence companies can have on corporate projects online. It is also worth noticing that the top three positions in the comparison by the UN went to countries outside Europe.

Europe will face challenges trying to maintain its position.

Businesses' use of e-government			
Country		Interact with public authorities online (% of the companies)	Obtain public information online (% of the companies)
1	The Netherlands	97	48
2	Lithuania	93	92
3	Finland	87	92
4	Greece	87	82
5	Poland	87	81
6	France	86	86
7	England	85	80
8	Latvia	85	82

Source: Eurostat



3.6 Finns use the internet

Finnish people are experienced internet users in comparison to many other European countries. According to the statistics by Eurostat, nine per cent of the 16–74-year-old Finns have never used the internet. This figure is the smallest in Sweden where only five per cent are 'internet virgins'. In Romania, this figure is 54 per cent and in Greece 46 per cent.

3.7 Excellent conditions for the ICT industry

Good news for Finland is that the operating conditions of the ICT industry are considered excellent; Finland was ranked 2nd after the USA in the comparison of 66 countries by the international software organisation, BSA, which examines the conditions in six fundamental categories.

According to the BSA, the industry needs a healthy business environment, state-of-the-art ICT infrastructure, dynamic human capital, healthy research and development environment, strong legal environment, and sufficient public support for industry development.

A surprise for Finland was that it was not ranked among the top 10 in human capital, which in nearly all comparisons is Finland's greatest strength. A minor surprise was also that Finland's best ranking was in the R&D environment comparison (4th). Furthermore, Finland ranked 6th in legal environment.

Our modest success in human capital can be explained by the fact that the review strongly emphasised the salary level and the flexibility of labour legislation. The authors of the review stressed that Europe will face challenges when trying to maintain its position in the future.

Countries such as India have an abundance of cheap labour force, the competence of which is constantly improving. The position of China and India may still improve significantly if they develop, e.g. their copyright legislation closer towards the western way of thinking.

The ICT environment in different countries			
Country	2011	(2010)	Score
The USA	1	1	80.5
Finland	2	2	72.0
Singapore	3	9	69.8
Sweden	4	3	69.4
Great Britain	5	4	68.1
Denmark	6	8	67.9
Canada	7	10	67.6
Ireland	8	5	67.5
Australia	8	7	67.5
The Netherlands	10	5	65.8
Israel	10	13	65.8

Source: BSA



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DIGI.FI – The ICT branch group of the Federation of Finnish Technology Industries (www.digi.fi)

The ICT branch group, i.e. DIGI.FI consists of all the ICT member companies of the Federation of Finnish Technology Industries. The DIGI.FI's Board of Directors can also accept member applications from other companies and associations that operate in Finland.

The units of the member companies employ c. 52,000 people. The net sales of the companies in Finland are more than EUR 7 billion.

DIGI.FI's board of directors in 2012

Chairman: Ari Rahkonen, General Manager, Microsoft Oy
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