

## **Finland as a top destination for innovative entrepreneurs**

Tan Nguyen

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<b>Student Number</b>	<b>Type this only in the assessment version submitted to thesis advisors.</b>		
<b>Email</b>	Hltan2003@gmail.com		
<b>Professional Spec.</b>	<input type="checkbox"/> Mar	<input checked="" type="checkbox"/> Fin	<input type="checkbox"/> SCM <input type="checkbox"/> HRM
<b>Thesis Advisor = Assessor 1</b>	<a href="#">Mika Mustikainen</a>		
<b>Assessor 2</b>	<a href="#">Anne Arkima</a>		
<b>Opponents</b>	<b>Opponin Date:</b> <a href="#">19.05.2014</a>		
	<b>Opp. 1: Substance &amp; Methods:</b> Uyen Nguyen <b>Opp. 2: Technical:</b> Markovics, Kinga		
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<p><b>Author or authors</b> Tan Nguyen</p>	<p><b>Group or year of entry</b> 2010</p>
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<p>In recent decades, Finland has tried to be the destination of innovative business of Europe. With the collapse of Nokia, Finnish Governors now run faster to improve competitiveness of not only other high growth firms but also seed and pre-seed companies, which is possible to lead the world in the future. In order to provide a general image of Entrepreneurial Innovative Economy of Finland, this report is written following Haaga Helia Guideline.</p> <p>This thesis is also written for requirement of Haaga Helia University of Applied Sciences as a 15-credit program every student has to complete to graduate.</p>	
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# **1 Introduction**

## **1.1 Background to the thesis**

Nowadays, Innovation and Entrepreneurship have acted as the main driving force of economic growth in developed and developing countries. According to various researches for start-up companies in Finland, I have recognized the rise of start-up companies within Finnish innovation industry. Through this report, I intend to provide a general picture of innovation and entrepreneurship within Finland for readers as entrepreneurs and financer; that they can have deeper understanding about these issues in order to invest money, energy and future in Finland.

## **1.2 Demarcation**

This paper focuses on three main sectors: Entrepreneurship, Innovation and Financing for Entrepreneurial Innovative venture.

Entrepreneurship: I will display news, information and data to provide Finland image as a potential host for entrepreneurs.

Innovation: Key data and information will be displayed to provide an Innovative Economy of Finland.

Financing for Entrepreneurial Innovative venture: This part will display main sources of Funding for research and innovation in Finland

## **1.3 International aspect**

The report aim to display the competitiveness of Innovative Entrepreneurial economy of Finland compared to other countries in Europe and in other continents. In other words, it shows potential of Finland to be the center of Innovation in the future to attract not only entrepreneurs but also funding parties, angels and prospective customers on the world.

## **2 Theoretical Framework**

To provide a picture of potential Finnish innovative entrepreneurial economy, the forces behind entrepreneurial economy trend and the National innovation system will be discussed with collected data from various reliable sources. This chapter introduces these two main theory used in this report.

### **2.1 The forces driving entrepreneurial economy**

In *Essential of Entrepreneurship and Small Business Management*, Norman M.Scarborough displayed the significant elements of a great entrepreneurial economy.

Entrepreneurs as heroes

Entrepreneurial education

Demographic and economic factors

Shift to a service economy

Technology advancement

Independent lifestyle

E-commerce and the World Wide Web

International Opportunities

### **2.2 The National Innovation System**

#### **2.2.1 What is Innovation**

Scarborough (2011, 51.) defined innovation as the ability to apply creative solutions to problem and opportunities to improve human's life. In other words, GreenHalgh and Rogers (2012, 04.) explained innovation as the application of new ideas to business activities of a firm such as products, processes or other aspects in order to increase "value" which aim to achieve higher value added for the firm and benefits for consumers or other firms. "Innovation is the specific instrument of entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service." said Peter Drucker (Hordward H.Stevens, 1995, 51.).

There are two important definitions of Innovation:

Product innovation: a new product introduction or a important qualitative change in an existing product

Process innovation: a new process introduction of creating goods and services

There is a third category of innovation, which is organizational change within the firm. However, it can be explained as a type of process innovation.

### **2.2.2 The National Innovation System**

Goto (2000, 104.) explained the national innovation system comprising industry, university and the government. These three fundamental sectors not only work independently but also interact with each other in order to develop an innovative economic.

**Universities:** these organizations are responsible to take on basic sciences and technology research, which are the main role in finding new knowledge and develop the knowledge base. Scientists and technicians trained by these organizations will be not only the key of innovation for business and government but also the next generations of the universities

**Government:** The governors are responsible to design and apply policies which advocate innovation within a nation and global. They can invest in universities and public research of the universities by tax revenue and support subsidies for business R&D. In addition, the governors can order researches from the universities for public segment such as defence and health.

**Business:** Companies apply R&D consequences into developing new commercial products base on the sciences knowledge base within restriction and opportunities of business environment and R&D policy. Then new products and innovations can be introduced and supply to the demand of customers and markets. By providing innovative products or solutions for undiscovered needs of markets, entrepreneurs take a chance to become a large firm in future if successful.

### **3 Research methods**

#### **3.1 Research process**

In order to complete this thesis, the process of doing a dissertation introduced by Colin Fisher is applied by its logical content and detailed explanation. The process consists six following phase:

Phase 1: Choosing a topic and designing the project

Phase 2: Writing a critical literature review

Phase 3: Developing concepts, conceptual frameworks and theories

Phase 4: Collecting and analysing research material

Phase 5: Interpreting research material and drawing conclusions

Phase 6: forming arguments and writing up the dissertation

(Colin Fisher, 2010, 6.)

#### **3.2 Research method:**

Documentary research is applied for this thesis. In documentary research, researcher uses documentary material to access to a different point of view of a different problem compared to the origin. Using this research method, database will be secondary data.

#### **3.3 Data**

The Data collected and used in this report is mostly secondary data. Second data is data which is already collected for some other purpose. Second data can be raw data or published summaries from other authors. Secondary data is chosen because of several advantages that are appropriate with author's situation. It is convenient for author that it saves time and money; all study design and data collection are already completed. Because the topic covers really complicated theory and aspect therefore it could take few years to collect the necessary data with limited resource. The secondary data mostly

collected from prestigious authors from government or public organizations may have higher quality than primary data from a polytechnic student.

## **4 Research Findings and discussion**

### **4.1 Driving forces of Entrepreneurship in Finland**

#### **Entrepreneurs as heroes:**

In video game area, Rovio Entertainment and Supercell has been the idol of entrepreneurship in Finland. With highly successful image Angry Bird, Rovio transformed to a giant in games entertainment through games sales and brilliant brand sales. The rise of Clash of Titan also supported entrepreneurship within Finland after after a Japanese telecom company SoftBank paid \$1.5 billion for a 51 per cent of the company. Nowadays, these two companies become great supporter for Finnish entrepreneurs; Rovio is mainly supporting Start-up Sauna while a funding company founded by Supercell CEO Ilkka Paananen will finance for domestic start-ups.

"Ilkaa Paananen, Supercell's CEO, points out that Finland has spent years preparing for its current success. Helsinki started to host a festival for gamers in the early 1990s. Today the festival is so popular that the organisers have to rent the city's biggest ice-hockey stadium, with room for 13,000, and still turn people away. Kajak University offers courses in video games. Finns have a comparative advantage in the four things that make for great games—blood-soaked storylines (all those sagas), bold design, ace computer programming and what might be politely called “autistic creativity”." (The Economist, 2013)

#### **Entrepreneurial education**

From 2007 to 2013, the Finnish National Board of Education (FNBE) funded 7.6 Million Euro for "Driving Change through Entrepreneurship Education and Competence", a development program aimed to improve effectiveness of entrepreneurship education and strengthen the competence of teaching staff in Finland. FNBE was responsible to the Finnish Ministry of Education and Culture. (Langreo, June 2011)

Finland focuses to train entrepreneurship for citizens since primary education level. The Enterprise Society was established with incredible and creative factor, the mobile learning environment, which connects schools, business sector, municipality, university and parents together. TES and real companies cooperate to provide an Enterprise Society where primary pupils can act their role as an enterprise and a customer. (Richard Chiu, 2012)

### **Shift to a service economy**

Service sector of Finland provided 72.9% of the jobs and 70.1% of the Gross Domestic Product in Finland. The highest employment in service area was belonged Uusimaa region, which includes the Helsinki metropolitan area. The biggest employment sector within service area was health and social service sector.

### **Technology advancement**

By the strong development of technology on the world within a decade, nowadays people can run their business at home with supporting of modern machine such as personal computer, laptop, and lazer printers. In the past, small companies had no chance to install the hardware comparing with of higher budget from large firms. The introduction of open source software and cloud service on Internet has allowed small companies adapt the newest technology through a broadband connection.

### **E-commerce and the World Wide Web**

On November 2013, Statistic Finland released the figure of using information and communication technology by individuals. There were 85% of population from 16 to 89 can use the Internet. There were 27% of people from 75 to 89 can use the Internet. In the past three month, 44% of Finns had made online purchases or online orders. The number of people use Internet of Finland was higher most of European countries except other Nordic countries, Netherland and Luxembourg. (Statistics Finland, 7 November 2013)

Table 1: Prevalence of Internet Usage and certain purposes of use in 2013 (Statistic Finland 2013)

**Prevalence of Internet usage and certain purposes of use in 2013**

	Used the Internet in the past 3 months	Uses the Internet usually several times a day	Used Internet banking in the past 3 months	Bought over the Internet in the past 3 months	Followed some social network service in the past 3 months	Sent a filled-in form to an authority or public service provider in the past 3 months	Watched broadcasting companies' web television services in the past 3 months	Has a smartphone in own use
	Percentage share of population							
Aged 16-24	100	76	78	55	87	42	75	80
Aged 25-34	100	88	98	70	78	62	81	81
Aged 35-44	99	80	98	69	67	63	75	74
Aged 45-54	97	67	92	52	41	44	64	59
Aged 55-64	85	52	80	29	26	34	51	45
Aged 65-74	65	33	55	16	13	21	37	25
Aged 75-89	27	8	22	3	3	5	12	5
Men	88	65	80	45	44	43	60	60
Women	83	57	77	44	49	40	58	51
Total 16-89	85	61	79	44	47	41	59	56
Total 16-74	92	66	84	49	51	45	64	61

The increasing number of people using Internet has been a great opportunities for companies to approach their target customers easier. E-commerce is going to be the

top trend of marketing which improve competitiveness of start-up companies with a small budget.

### **International Opportunities**

"According to Statistics Finland's data, Finnish enterprises had business activity in 4,883 affiliates located in 119 countries in 2012. Measured by the number of personnel, the activity of affiliates abroad concentrated in Europe and Asia." (Statistic Finland, 17 April 2014)

Globalization has given Finnish enterprises a great chance to expand their firms through geographical boundaries and economic boundaries. However, it consists of various dangers and problems from political and cultural issues. Entrepreneurs can control it successfully with following strategies:

- Researching foreign market thoroughly
- Focusing on a single country initially
- Utilizing government resources designed to help small companies establish an international presence
- Forging alliances with local partners

(Scarborough, 2011, 32.)

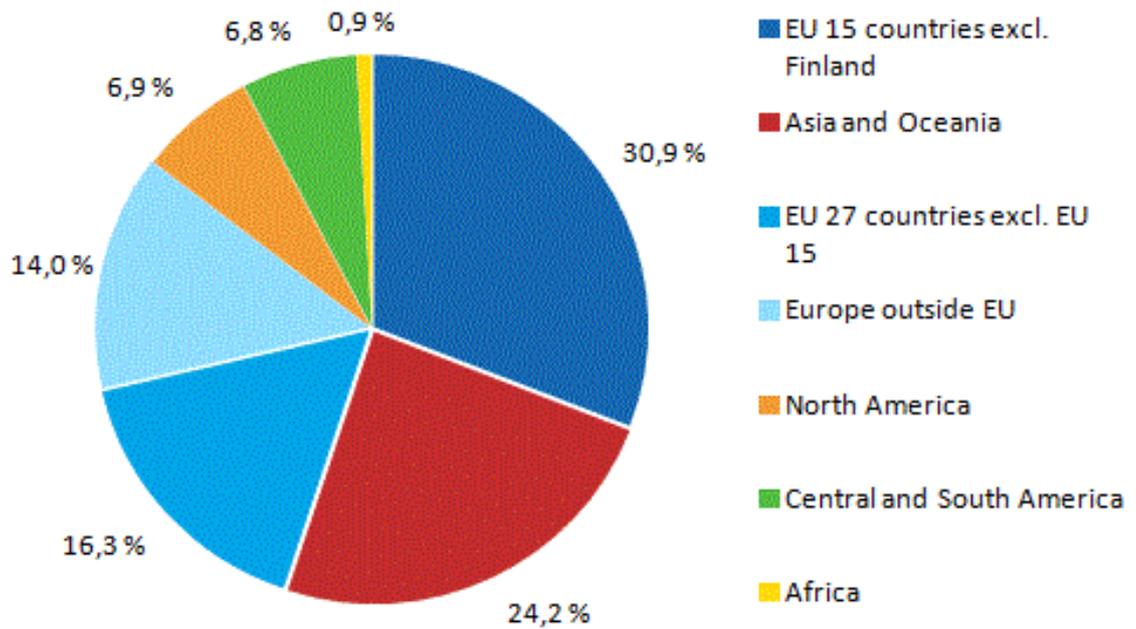


Figure 1: Personnel in affiliates abroad by country group in 2012 (Statistic Finland 2014)

## 4.2 Finnish Innovation system

### 4.2.1 Universities

Finland has focused on modifying education and science policy objectives on both national and international scale with expectation of developing framework conditions for research and improving the quality and effectiveness of researches.

In 2012, central government R&D funding decided to finance strongly for universities; the amount of fund for universities was 583.3 million euro and equaled 29% of total fund.

In Finland, the amount of students going to university has raised sharply in recent decades. The number of university student climbed to 167,200 in 2013, compared to only 20,000 in the early 1960s. In 2009, Finland was the second after Switzerland in the number of PhD degrees awarded per one million people while Sweden was the third.

Table 2: Number of PhD degrees awarded per one million population and percentage of degrees

Countries	No. of PhD degrees per one million population	Percentage of PhD degrees awarded to women	No. of PhD degrees per one million population	Percentage of PhD degrees awarded to women	Change in no. of PhD degrees per one million population (%)
	2004	2004	2009	2009	2004–2009
Switzerland	375	38	442	42	18
<b>Finland</b>	<b>268</b>	<b>45</b>	<b>308</b>	<b>52</b>	<b>15</b>
Sweden	306	45	304	50	-1
Austria	299	40	273	43	-9
Ireland	169	46	272	46	61
Norway	165	40	224	46	36
Denmark	146	36	211	43	44
Netherlands	165	39	200	42	21

Source: Eurostat Statistical database, Science and technology, May 2012. Population data source OECD Statistical database, Country statistical profiles, June 2012.

NB: The countries are listed in the order of the 2009 number of PhD degrees per one million population. Data only available from 2004 onwards.

#### 4.2.2 Government

In 2010, Finland was ranked the third in R&D investment (7.6 billion dollars). Two higher positions were Netherland invested 12.8 billion dollars and Sweden invested 12.5 billion dollars. In other hand, Finland was the highest country in R&D expenditure per capita; every Finn invested 1400 dollars for nation's R&D.

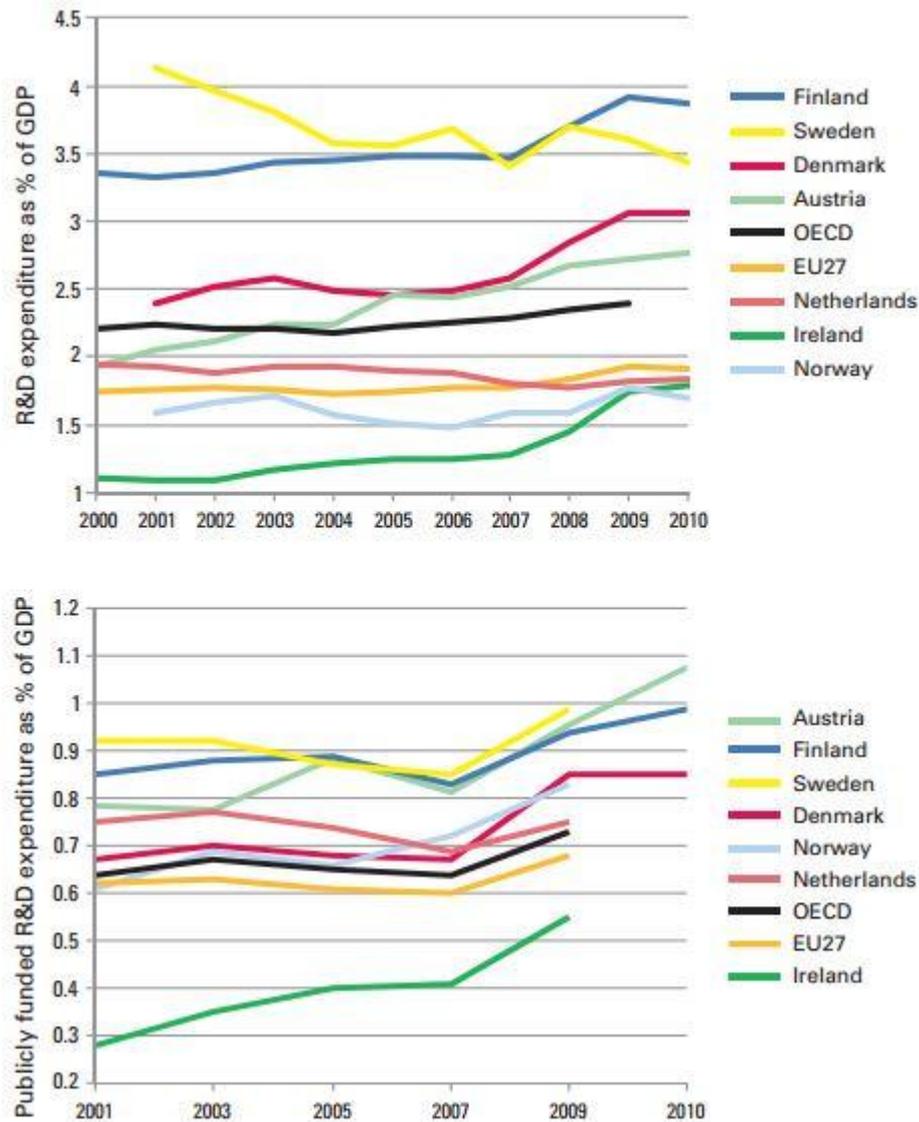


Figure 2: . R&D expenditure as a percentage of GDP in 2000–2010 and publicly funded R&D expenditure as a percentage of GDP in 2001–2009/2010 (OECD Main Science and Technology Indicators MSTI 2011/2 dataset)

Finnish government has been focusing on research and funding for research activities for a long time. Finnish government has applied broad-based innovation policy and provided an open environment for new policies. The Finnish Funding Agency for Technology and Innovation (Tekes) has become the biggest funding agency financing for research and innovation of enterprises within Finland to introduce their achievement. Furthermore, Tekes also support high-growth firms in commercial promotion.

In addition, Finnish government has design several programs to push the development of companies belonged to pre-seed category such as the Foundation for Finnish Inventions, the TULI programme, and the Technology Incubator Programme (Appendix 1)

### **4.2.3 Business**

Evaluating the effectiveness of research and innovation is one of the most difficult problems for parties in order to improve a competitive innovative economy. There are various variables should be concerned in order to predict if a research or innovative process would be successful in future.

In 2014, 21 start-up companies in Finland is chosen for top 100 Start-up company in Europe by Red Herring. This program has a high status that hundreds of companies from each continent try for a top 100 position. The Finnish companies in top 100 are AppGyver, Avansera, Boomlagoon, CBTec, Coder-ship, Diktamen, Fingersoft, Hibox Systems, Indoor Atlas, Invesdor, Musopia, NearMe Services, Nexs-tim, Piceasoft, Runteq, SingOn, Smarp, SN4Mobile, Tespack, Valopaa and Youlapse. (Good News from Finland, 2014)

Helsinki Business Hub reassessed a report that announced Finnish Hi-tech companies attracted 231.7 million euro of venture capital in 2013. Finland displayed a great jump in invested amount, compared to figure of 2012 and 2011 that were at €124,5 million and €112,7 million respectively (Helsinki Business Hub, 2014). This figure proved that Finland innovation system got success in improving competitiveness of Finnish enterprises in Innovation sector that made Finland becoming a host of future business.

## **5 Conclusion**

### **5.1 Key findings**

Base on showed data, Finland can be evaluated as one of the top innovative countries in the world. Accompanying open innovative environment and supporting policy for research and innovation created by Finnish Ministry of Employment and Economy,

Finland has become an attractive host for entrepreneurs to invest their future in. The rise of innovative entrepreneurship has caught funding organizations' eyes example the acquisition of Supercell worthed 1.5 billion dollars.

## **5.2 Limitations and Further research ideas**

This report is limited by that the author only uses secondary data to discuss objectives. Readers only see the point of problem through figures and summaries but opinion of Top entrepreneurs of Finland or CFO of innovation funding organization. The limitation is also from the authors since I do not have much knowledge of economy and innovation according to Haaga Helia bachelor program.

In the future, I intend to investigate further about this topic and expand it with primary data.

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## Appendices

The Foundation for Finnish Inventions dates back to 1971 (and even to the '50s when its predecessor within the Finnish Culture Foundation started its activities). The Foundation is a private law based foundation, but its activities are mainly financed from the government budget through the Ministry of Employment and the Economy. The Foundation has a country-wide network of agents who help screen promising inventions for support and further development, based on 15 Centres for Economic Development, Transport and the Environment that started operating on January 1st, 2010, and innovation agents in universities and polytechnics. It also uses a network of business angels for spurring its best cases to develop the business idea. Support can be given to the inventions made by individual citizens, university researchers, and micro-enterprises. The Foundation grants two types of funding. First, it can grant a small-scale support ranging from 1000 to 2000 euro for initial phase developments. This support can, for instance, be used to develop a prototype. This support type does not need to be paid back. Second, the Foundation can grant support for patenting, product development, and commercialization costs, with the support ranging from 2000 to 200 000 euro. This type of support is required to be paid back in case the project is commercially successful. Since the beginning of 2005 The Foundation has followed the EU de minimis rule.

The TULI programme supports projects in two phases: first, searching for and evaluating new, research-based business ideas in the local innovation environment; and, second, piloting the ideas with the greatest potential towards commercialisation. In practice, the latter phase usually means hiring some third-party consultant to work on the idea, by, for example, conducting a preliminary market survey or preparing an initial business plan. Realisation of the technology-based business idea can take place either in a new firm or in an established firm as a new business area. TULI is managed and co-ordinated by the government agency Tekes (Finnish Funding Agency for Technology and Innovation), though there are plans to move part of the activities to the Foundation for Finnish Inventions. TULI has an extensive network of commercialisation experts who work at universities seeking and evaluating new

research-based ideas with innovation potential. TULI has a decentralised organisation and has eight regional centres located near major universities and research institutes in Finland.

Technology incubators differ from the activities of the Foundation for Finnish Inventions and the TULI programme in that they do not grant money and in Finland do not make investments in the firms accepted within the incubator but rather provide premises and services to start-ups. There was a specific Technology Incubator Development Project (Yrke) in 2003-2008., coordinated by Sitra, the Finnish Innovation Fund<sup>3</sup>, together with the Ministry of Trade and Industry (currently, the Ministry of Employment and the Economy), Tekes, T&E centres<sup>4</sup>, and local and regional authorities. The Finnish Science Park Association TEKEL was also a background organisation involved in the project. The objective of the development project was to increase the number and improve the quality of new competence-based enterprises. A specific focus in the programme was on pre-incubator processes offering entrepreneurs an opportunity to ascertain the viability of the business idea and to assess their own motivation early on before they would have made considerable investments in a start-up. The programme had a further objective to develop a funding model for incubator activities. In Finland the funding of the activities of technology incubators has largely been based on the EU structural funds. This has led to a situation in which funding has been characterised by discontinuities and uncertainties and funding targets have been changed into innovative projects.

After the development project the development activities of technology incubators were moved under the responsibility the Finnish Science Park Association's (TEKEL) business development team. A majority of the funds for the activities of the incubators comes from public sources, but mostly from local sources (e.g. the municipalities, especially big cities, finance these activities). The Ministry of Employment and the Economy also grants support through its T&E centres.

Sitra is an independent public fund under the supervision of the Finnish Parliament promoting the welfare of Finnish society.

Sitra's responsibilities have been stipulated by law.

4

The Employment and Economic Development Centres (T&E Centres) provided expertise and regional services of the Ministry of Employment and the Economy, the Ministry of Agriculture and Forestry and the Ministry of the Interior.

Customers (firms, but also public organisations) also had access to the services provided by Tekes (the Finnish Funding Agency for Technology and Innovation). These centres were merged with a few other regional services into Centres for Economic Development, Transport and the Environment as of January 1st, 2010.