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ILKKA SUSILUOTO

Portrait of the Helsinki Region

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Ilkka Susiluoto, tel. +358 9 169 3688
www.ilkka.susiluoto@hel.fi

Portrait of the Helsinki region

Ilkka Susiluoto
University of Helsinki
Department of Economics
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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1. INTRODUCTION

The last decade of the 1900's saw strongly varying economic developments in Finland. Until 1990 a boom prevailed, caused by the international economic developments, the liberalisation of financial markets and by the economic policy of that time. In the early 1990s, rapid growth turned into a deep economic depression due to a stagnation in the global economy, a collapse in Finland's eastern trade as the Soviet Union disintegrated, as well as pursued domestic policy. In the worst depression years 1991-93 Finland's national product fell by ten per cent on aggregate, and unemployment reached unprecedented levels. 1994 saw signs of a new rise of the Finnish economy, a rise which continued strongly throughout the 1990s – when Finland also became a member of the European Union. With this rise, the country's industrial structure changed as the leading export industries, namely paper and pulp and metal industry, were joined by the electronics industry as leading motors of economic growth in Finland. In 1996-2001, average GDP growth was 4.4 per cent. Unlike earlier periods of rapid growth, this last one has been more regionally selective: strong population and job increase has taken place in only a handful of urban regions, first and foremost in the Helsinki region (Susiluoto and Loikkanen 2001).

In 2001, an economic downturn was observed in Finland as well as in the world economy. However, in the latter part of 2002 the Finnish economy is expected to recover, as exports of electronic products and other manufacturing will increase. A new forecast of June 2002 gives a 2 per cent growth for this year, almost 4 per cent for 2003 and a 3 per cent average for 2002-2006 (Elinkeinoelämän tutkimuslaitos 2002). Basically the Finnish economy is in a good state, and several global competitiveness reports have recently placed Finland at the top.

The Helsinki region is the only large urban region in Finland, although in the global scale a fairly modest one. The region's share of Finland's geographical area is less than one per cent, while almost a quarter of the country's population lives there, and 30 per cent of Finland's national product is produced in the area. In other words, the region is modest on an international scale but still by far the most important agglomeration in Finland, a feature typical of Nordic capitals. As witnessed by the strong recent growth of the Helsinki region it is diverse and efficient, attracting business and inhabitants alike. The region has performed very well in several international and national comparisons of quality of living, competitivity and efficiency; these results will be dealt with in more detail below. The production structure is modern, and Helsinki now hosts an IT cluster of impressive scale, partly due to the early liberalisation of competition. The most important single engine of the economy is Nokia, the world leader in mobile phones.

Future international developments will have their impacts on the region. The probable enlargement of the European Union from 15 to 27 member countries will give both challenges and possibilities. It is a widely held view that Estonia and Poland may be among the first new members, while Latvia and Lithuania will follow later. With the enlargement the countries around the Baltic are expected to form a notable and growing economic area with new opportunities for co-operation. The St. Petersburg region with its five to six million inhabitants will increase the economic weight of the Baltic; the other foreign metropolises

close to Helsinki are the Stockholm region (2.5 million people), Tallinn (0.5) and Riga (1.2), while the distance to Copenhagen, Berlin, Hamburg and Warsaw is somewhat longer.

2. REGIONAL STRUCTURE AND POPULATION OF THE REGION

The Helsinki region consists of 12 municipalities, Helsinki, the capital of Finland, being the centre of the economy and the labour market. Helsinki is a versatile city with more than half a million people and a diversified economy. Being the capital of the country, it is the home of the most important political and economic decisions, and it also has among other things a large and varied supply of cultural services and lively street life.

On the west side of Helsinki lies the municipality of Espoo, a city of over 200 000 inhabitants, hosting the Technological University as well as a notable concentration of high technology research and production. North of Helsinki is Vantaa, about the same size as Espoo and hosting the Helsinki-Vantaa international airport. The small and wealthy town of Kauniainen is within Espoo's borders. These four municipalities together constitute the Helsinki Metropolitan Area (HMA). In this area, the Helsinki Metropolitan Area Council (YTV) has a special position in certain planning and co-operation activities; this will be dealt with more later. The outer part of the Helsinki region consists of the remaining eight municipalities, with a total population of some 250 000. All the above mentioned parts of the Helsinki region have shown a rapid population growth in he last decade.

In addition to the above there is a NUTS 4 concept of the Helsinki region, with a population only slightly below the above Helsinki region. For simplicity these two concepts will be used interchangeably in the text. Data availability has governed the choice between the regional definitions in different circumstances; this does not have a notable effect on the general results. Also the Uusimaa Province, a somewhat larger unit than the region should be noted. The provinces form the NUTS 3 level in Finland, and they have a specific role in regional development planning.

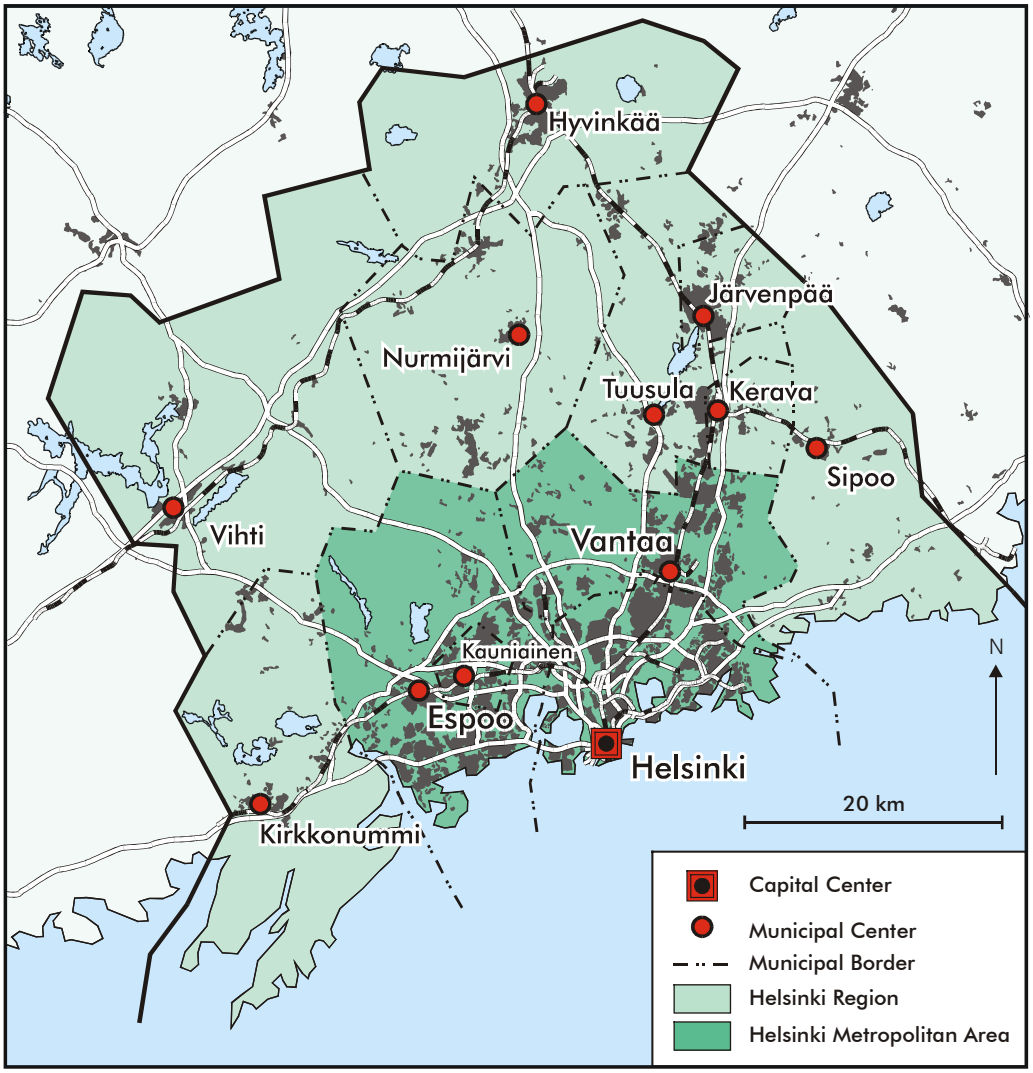
Table 2.1 Population in 2001, Helsinki region and Finland

Helsinki	560 000
Espoo	217 000
Vantaa	180 000
Kauniainen	9 000
Helsinki Metropolitan Area (HMA) total	965 000
Other Helsinki region	249 000
Helsinki region total	1 214 000
NUTS 4 Helsinki Region	1 198 000
Uusimaa province (NUTS 3)	1 318 000
Finland	5 195 000

2.1. Overall urban and regional structure

Geographically, the Helsinki region can be characterised with some average figures. The land area of the region is some 3000 sq. km., or less than one per cent of all Finland, but almost a quarter of the Finnish population (1.2 million out of 5.2) live there. The average population density is about 400 persons per sq. km., but in the "inner part" of the region, Helsinki Metropolitan Area, more than 1200 persons and in the outer part only around 100 persons. Both the Helsinki region and the Metropolitan Area are less densely populated than the largest urban regions in the other Nordic countries, not to speak of many other large European cities.

Figure 2.1 The Helsinki region



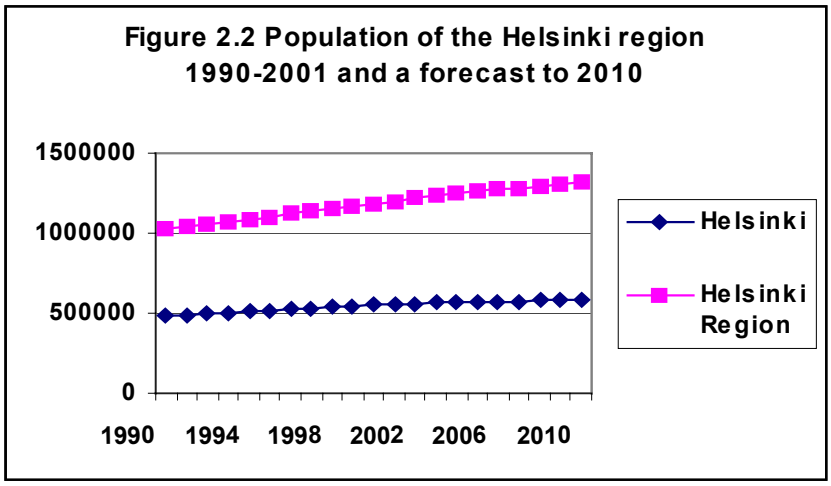
The community structure in Finland has simultaneous tendencies of concentration and de-concentration. Concentration is seen in the still ongoing urbanisation process, which started relatively late in Finland. Population is now growing in the largest cities and decreasing elsewhere. But at the same time de-concentration of community structure is taking place in these cities. This is the case also for the Helsinki region, where the urban area has spread as a finger-like structure, following the railways and main roads. However, outside the four municipalities of Helsinki Metropolitan Area, notable dense population is only found along the main railway going north from Helsinki. In the outer part of the Helsinki region housing is centred into a few separate communities. On the other hand, the region is gradually developing into a multi-layer network with specialised sub-centres and sub-regions with also some zone-type development, mainly found about 15 kilometres from the centre of Helsinki (the so-called Zone III ring road). Housing and commercial services de-concentrate, while jobs tend to over-concentrate into the centre of the region.

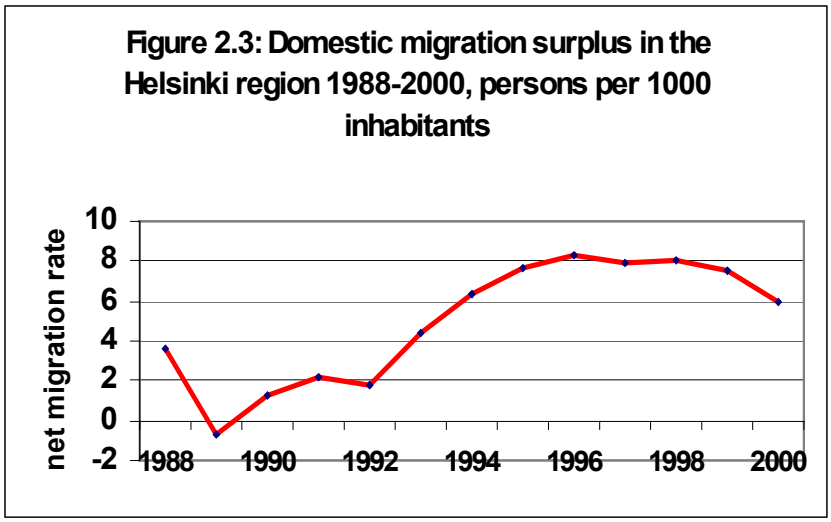
Commuting from the outer parts of the region is on the increase and the geographical labour market area grows larger. This has also brought longer travel-to-work times. Factors connected with this are typical: benefits of a more diversified job structure together with lack of reasonably priced housing in the centre, improving public traffic and increasing private car ownership. It has been expected that increasing distant work might slow down the growth of commuting, but thus far its effect has been modest. This has been the case even though almost half of workers in the region over 30 years of age might have a partial opportunity to distant work, according to a recent study (Tilastokeskus 2000).

2.2 Population and demographics

The Helsinki region has a population of 1.2 million, and its core region Helsinki Metropolitan Area (consisting of the municipalities Helsinki, Espoo, Vantaa and Kauniainen) almost a million. While population hardly increases at all in the rest of the country, the Helsinki region has been facing an annual population growth rate of almost 1.5 % per cent, making it now one of the fastest growing urban regions in Europe. Some three fifths of this growth is due to a migration gain, while the rest consists of a natural population increase.

The region has a long and practically uninterrupted history of domestic migration surplus. The in-migrants tend to be well-educated young people entering their work life and looking for a good job, most easily found in the large and diversified labour market of the Helsinki region. The average income level of in-migrants is modest at the time of migration, but in a few years' time they tend to reach the income of the base population and even surpass it (Laakso 1998). Having a recent education they contribute to the region's economic dynamism and competitiveness. In 1996 to 1999 the region had an annual domestic migration gain of some 9000 persons, but in 2000 the figure was somewhat lower, 7000 persons or 6 persons per 1000 inhabitants.





Due to this in-migration and the relative high fertility level connected with it, the population's age structure is fairly young, while the share of working age population is high compared to many other cities. Only 11 % per cent of population is 65 years or older. Consequently there presently is a great demand for resources in children's day care and education. But according to forecasts the population gradually starts to grow older in the future, causing a labour shortage in health care and social services (Pääkaupunkiseudun yhteistyövaltuuskunta 2002).

By European standards, the number of foreign-based population has traditionally been low in the region, as well as in Finland as a whole. A clear relative increase took place however in the 1990's as their number grew in the region from 12 000 to 42 000, amounting now to some 3.5 per cent of the total population. The largest groups of in-migrants come from Russia and Estonia. Connected with this, the use of foreign labour has been increasing at a swift rate in the last two years. Some two fifths of work permissions for foreigners were given in the Helsinki region in 2001, and half of this population group in Finland resides in

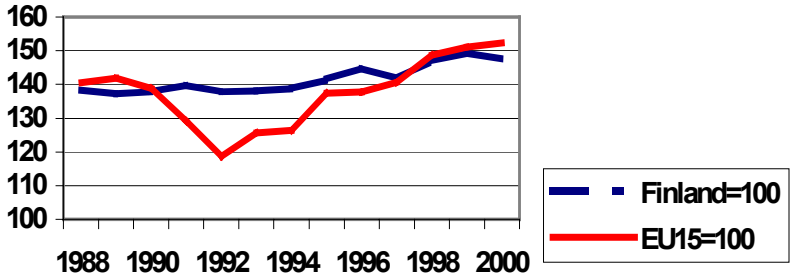
the Helsinki region; thus there is a clear relative concentration. The number of the region's foreign-based population is expected to increase in the future.

3. REGIONAL ECONOMY, AN OVERVIEW

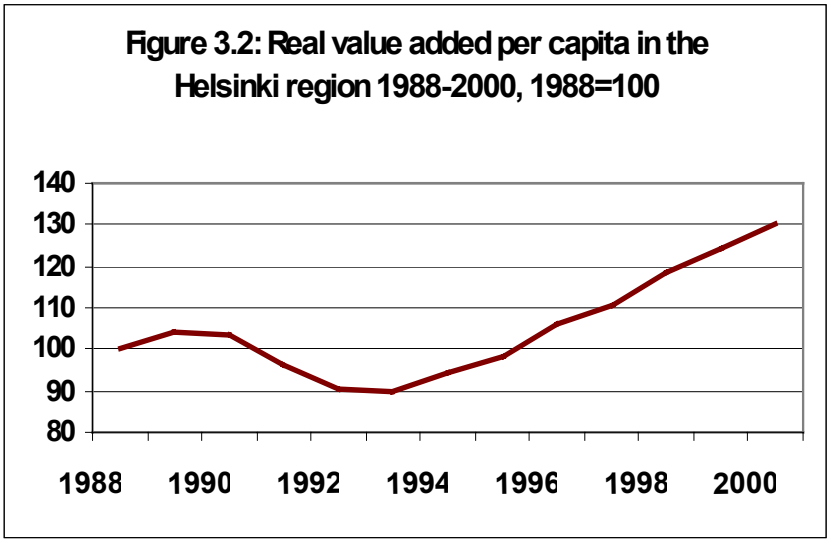
3.1 Production

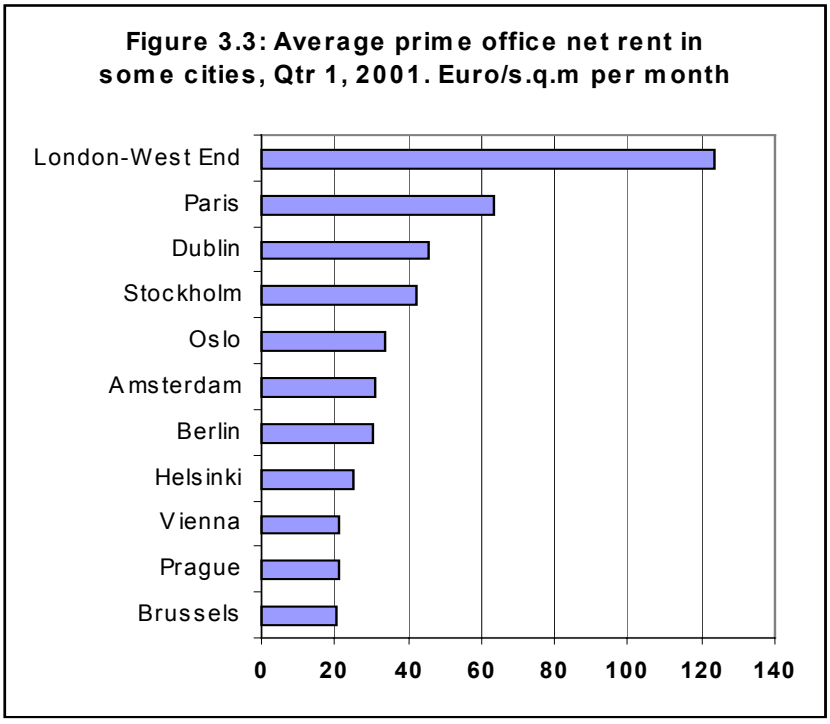
Average real annual growth of value added per capita has been 2.2 per cent in 1988-2000 in the Helsinki region. In the latter half of the 1990's the growth rate was considerably higher, from 1995 to 2000 as high as 5.8 per cent on average. This was also due to the process of recovery from the economic crisis of the early 1990's. In the first half of the 1990's the relative per capita value added of the Helsinki region deteriorated strongly, compared to the EU average. In 2000 however the region's GDP per capita was more than 50 per cent above EU average. In 2000, the relative economic growth of the region slowed down somewhat, compared to the late 1990's. In 2000 Helsinki region's total value added in current prices was 38.3 billion euro, corresponding to some 32 300 euro per capita. With and index of 100 for Finland, per capita value added was 147.6 in the Helsinki region in 2000, and 33.6 per cent of Finland's national product was produced in this area, internationally a very high figure for a capital region.

Figure 3.1: Value added per capita in the Helsinki region 1988-2000, Finland and EU15=100



As we have already noted, the present economic strength of the Helsinki region is also reflected by other indicators than value added. Employment growth is one of such indicators. The Finnish economic crisis took some 100 000 workplaces from the region in the first half of the 1990's and altogether it can be stated that this crisis was as hard here as in most other parts of the country. However since then the increase of employment has been fast in the region, 4.7 per cent annually in the latter half of the 1990's.Two out of five new workplaces in Finland have lately taken place in Helsinki region, and the region has gained over 150 000 jobs since 1995, in net terms.





Unemployment was high in Finland during most of the 1990's, almost 17 per cent at its highest in the midst of the recession in 1994. Nor was the situation much better in the region. Due to rapid regional growth there has however been a great improvement, and general unemployment level (4.4 per cent regionally in IV/2001) is no more an urgent problem in Helsinki.

However, long-time unemployment still persists. This is connected with marginalisation, social problems and widening income differences, presenting a real challenge for the region.

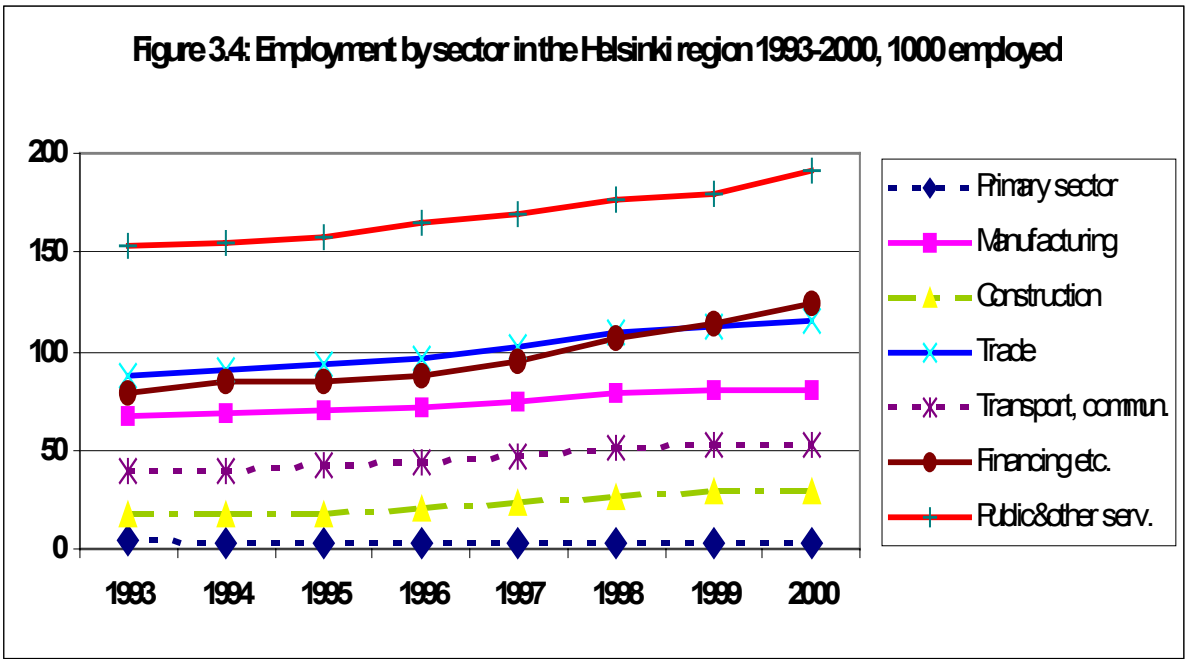
As a consequence of the recession in the early 1990's, some 14 300 persons had been unemployed for more than a year in the region still in the end of 2001. This is too high a figure to be acceptable, even though the number of long-time unemployed is decreasing (Helsingin kaupungin tietokeskus 2002 b). It is demanding task to bring back to working life people with a long history of unemployment, especially as this group tends to be aged and with a fairly low level of education not necessarily corresponding to the needs of today's work life.

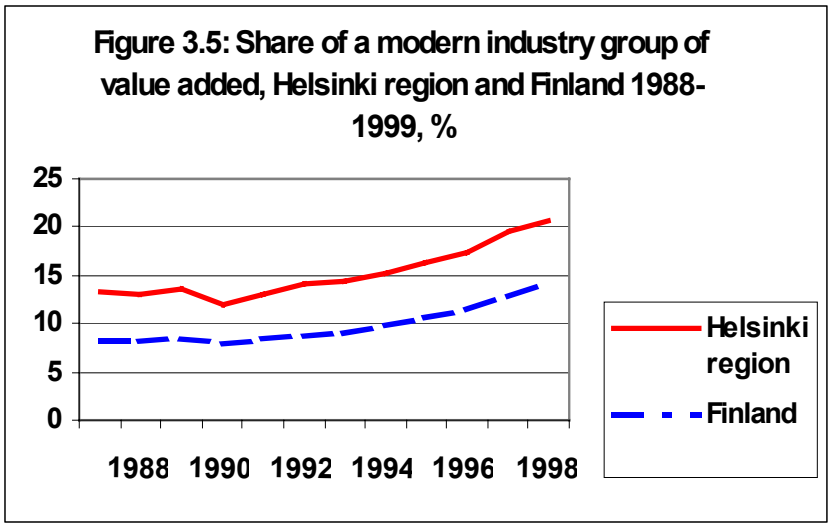
The nature of employment relations is gradually changing in all of Finland. Work contracts that used to be untypical have recently become typical, a trend that seems to be especially clear in the Helsinki region. Instead of permanent full-time work, shorter and temporary contracts together with part-time and seasonal work now form the majority of new contracts (Pääkaupunkiseudun yhteistyövaltuuskunta 2002)

Vacancy rates and rent level of office space interest international businesses considering establishing themselves in a new region and country. Vacancy rates of business premises are low in Helsinki at present. According to Catella Property Consultants, they were less than two per cent for all the three main types of premises in 2000 and 2001. During most of the 1990's local vacancy rates were higher, especially for office space. Prime office net rents are moderate in Helsinki and somewhat lower than in the three other capital regions of the MUTEIS study, even though the differences are not large (Jones, LangLaSalle and KTI).

3.2 Sectoral structure and the information sector

Typical of large cities, the industrial structure of the Helsinki region is strongly service dominated. Four out of five employed work in some part of the service sector. Relative growth has been fastest in financing and business services. The Helsinki region has a strong profile of private offices, expert work and management,. The most important central government decisions are made in Helsinki, the capital. The share of primary production is negligible, as could be expected.

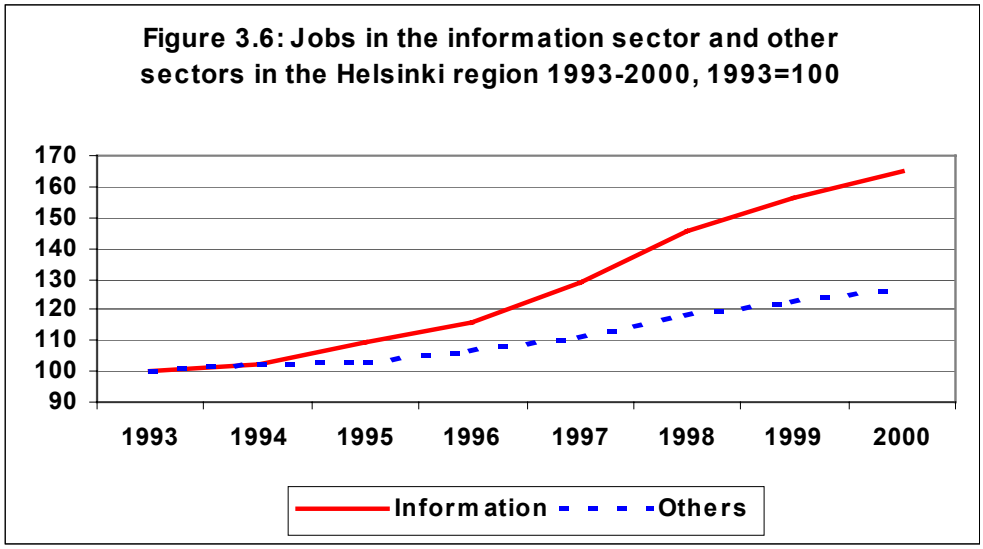


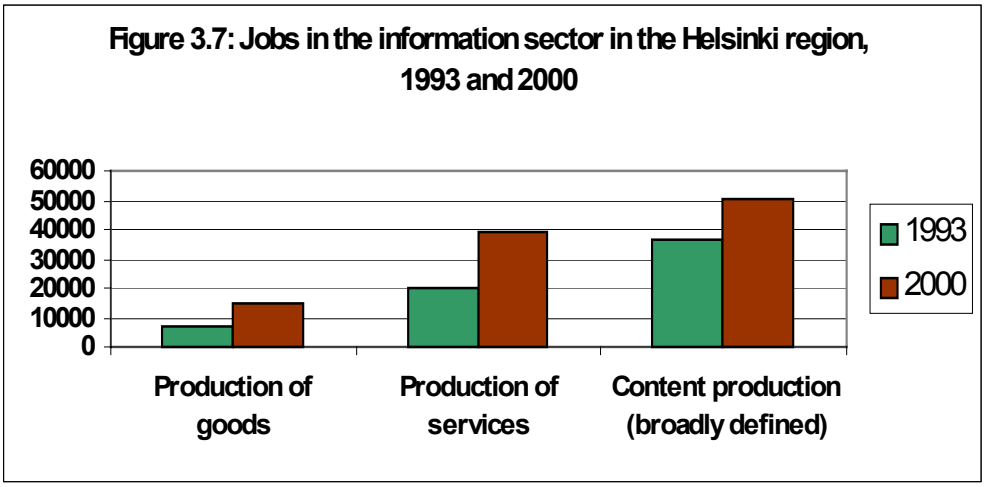


When comparing regional economies it is interesting to see how much certain modern industries are represented in their industrial structures. Such industries may be innovative by nature, applying or disseminating new technologies. Or they might be important in making the division of labour deeper and more effective in the region, thereby enhancing productivity. In figure 3.5, three groups of industries are represented and their total share of regional value added is calculated. These industry groups are manufacture of electrical and optical equipment, post and telecommunications as well as business activities, research and development. We can see that the share of these industries is notably higher in the Helsinki region than in Finland on average. Secondly, the shares have been rising, especially after the mid-1990's. All the above-mentioned three sub-industry groups have grown quite fast in the Helsinki region in the late 1990's.

The information sector is another interesting and topical concept, defined in various ways in different studies. In figures 3.6 and 3.7 the definitions of information goods and services production are based on an OECD recommendation from 1998, whereas content production is defined by international and domestic expert discussions. Information sector jobs are strongly concentrated into the Helsinki region and into Helsinki metropolitan area in particular. Almost half of these jobs in Finland are in the Helsinki region. The information sector has been an important driving force behind the region's growth since the mid-1990's. This sector, together with production based on high level technology keeps up a diversified service structure and a high level of economic activity.

Availability of competent labour has recently become a problem in the information sector, but also in some other parts of the service sector. We can thus state that there is a two-sided problem in the labour market: a fairly large number of long-time unemployed together with a shortage of labour in a part of the system.





3.3 Large construction projects in the Helsinki Metropolitan Area

The largest single construction project ever realised in Finland is the Kamppi centre at the heart of Helsinki. Its planning process has taken several years and it has been very demanding because of the very central location of the area in Helsinki. Helsinki City Council approved the construction plan for the area in April 2002, construction will start in August 2002 and will take five years to complete. Two underground bus terminals will be built, one for long-distance traffic and the other for local traffic, as well as an underground market hall. The area will also include high class dwellings, a 5-6 floor department store and office space, as well as a green park with cafes and restaurants. The street level will be car-free; this makes it possible to take the pedestrians' needs into account.

In addition to Kamppi centre, a number of large construction projects can be found in Helsinki Metropolitan Area. According to Pääkaupunkiseudun yhteistyövaltuuskunta (2001), there are two clear regional concentrations either under way or at the planning stage.

The first of these areas, the Aviapolis, is south of Helsinki-Vantaa airport some 15 kilometres north from the centre of Helsinki, near Ring road III (see also chapter 7 and the Helsinki-Vantaa airport). The Aviapolis planning area comprises some 9000 work places and extends until 2020. Construction of the Technopolis technology centre, the first part of Aviapolis is about to start. The Technopolis firm realizing the project also owns in the Oulu region a technology centre specialised in medicine and biotechnology.

The second concentration is closer to Helsinki centre, starting from Espoo and extending to Pitäjänmäki in Western Helsinki. In addition to the above, several other projects are also IT-oriented, like the Nokia office building in Ruoholahti very near the centre of Helsinki, two separate high tech centres in its vicinity and the second phase of Innopoli (Innopoli II) in Otaniemi, Espoo.

However the present economic downturn together with the weakening prospects for the IT sector have made the realisation of several office construction projects uncertain in the Helsinki Metropolitan Area. As an economic upturn is expected later this year, also regional construction activity is likely to recover to some extent.

3.4 Regional competitiveness, efficiency and growth prospects

Two recent Finnish studies have addressed the relative domestic efficiency and competitive position of the Finnish regional economies. Firstly, efficiency of the private sector of regions was assessed by using Data Envelopment Analysis (DEA), a method more frequently applied to the evaluation of public services. In this study, value added and personal income were the economic outputs of the regions. These were assessed against the differing resource backgrounds of the regions, labour, capital, knowledge base and public services being the resources. The idea is that differences in the resource backgrounds or "starting points" of the regions should be taken into account in the evaluation: the rich region may not automatically be the efficient one (Susiluoto and Loikkanen 2001). In the second study, relative domestic competitiveness of the Finnish regions was assessed. A general index of competitiveness was constructed, using information of some 20 factors relating to human capital, innovativity, agglomeration and accessibility. High efficiency or competitiveness was seen as vital background factors for future economic success for the regions in these studies.

In both studies the Helsinki region rated first, comparing all the Finnish regions. Helsinki region's relative efficiency score was 99.3 out of 100 possible in 1988-1999, the scores for other regions ranging from 67 to 98. In particular the margin between the Helsinki region and other larger Finnish cities was fairly clear. What comes to competitiveness, the Helsinki region seems to take advantage of its agglomeration size. Next after Helsinki, the highest competitiveness was generally attained by the other notable university cities of Finland.

Metropolitan growth in the 1990's as well as future growth prospects are analysed in a recent work by the ERECO Institute and Cambridge Econometrics. Altogether 45 metropolises in 20 European countries are in the study, including the Helsinki region from Finland (The European Economic Research Consortium and Cambridge Econometrics, 2001). According to the result, the metropolises of Europe differ significantly with respect to growth rates. There is no clear geographical pattern in the location of the most rapidly growing regions, but the geographical fringes of Europe are well presented in the top category. Helsinki, Stockholm and Oslo in the North, Dublin in the West, and Madrid and Athens in the South all belong to the top group of growing metropolises during 1995 - 2000 (Laakso 2002).

During the period 1995 - 2000 Helsinki was second after Dublin in the growth ranking based on gross value added, employment and population. Helsinki's rank was 3 with respect to value added growth, also 3 with respect to population growth, and 10 with respect to employment growth. According to the study, Helsinki's rapid growth was based on the recovery from the severe recession of the years 1991 - 1993 as well as the exceptional success of the information and communication technology sector. The growth of the region is expected to continue after the temporary slowdown of the year 2001 but at slower rate than in the second half of 1990s. However, there are future risks in Helsinki, as the rapid growth of the ICT cluster has made the city highly dependent on the growth of this particular sector. Consequently the economic success of the Helsinki region will depend on the future of the local ICT sector (Laakso 2002).

4. FLAGSHIP FIRMS, KEY PROJECTS AND THE ICT SECTOR

4.1 Flagship firms

Nokia is the leading supplier of mobile phones in the world and also a leading supplier of mobile, fixed and IP networks. A broadly held company with listings on six major exchanges, its net sales totalled EUR 30.4 billion in 2000. The firm altogether employed over 60,000 people, of which 28 000 were in mobile phones and 24 000 in Nokia networks. In Finland the number of employees amount to some 25 000, of which 10 000 in the Helsinki region. Nokia had production locations in 10 countries, research and development in 15 countries, and its sales covered over 130 countries in 2000.

Nokia is a very important firm for both the whole Finnish national economy and for the Helsinki region. It has been the leading engine in the growth of the ICT sector in Finland, transforming the economy of the country and modernising its export structure. Also in the Helsinki region the direct and indirect growth effects of Nokia (and more generally the ICT sector) are great; for example a notable part of all new office space construction in the area has lately been Nokia- and ICT-connected. Other indirect benefits include the emergence of the region as a favourable location for international business also more generally. This demonstration effect is expected to have positive impacts on the region's long-term development.

The Nordic banking group **Nordea** is the largest financial services group in Scandinavia, with significant positions in Nordic banking markets: 40 per cent in Finland, 25 per cent in Denmark, 20 per cent in Sweden and 15 per cent in Norway. In Finnish life insurance Nordea's share is 35 per cent. Its customer base is the largest in the Nordic countries, including 9.7 million personal customers, 1 million corporate customers, of which 500 large. In Internet banking and e-commerce operation the group has some 3 million customers.

Nordea has altogether 460 production sites in Finland, employing 12 000 people. Within the municipality of Helsinki alone the number of employed persons can be estimated to be around 3000-4000.

As a merger of several Nordic banks Nordea is of a recent origin, for only in December 2001 the retail banks in the four Nordic countries started to operate under the Nordea brand. The Finnish partner was Merita Bank, created in 1995 when another Finnish bank, Kansallis-Osake-Pankki merged with Unitas Ltd, the holding company of Union Bank of Finland, and the banking activities of the two banks were merged.

Listed on the Helsinki Exchanges since May 1999, when it was established through a combination merger, **SanomaWSOY** is Finland's leading media group and also the largest company in the media field in the Nordic region. The net sales of this firm totalled EUR 1.7 billion in 2001, and its employees now number as much as some 18 000.

SanomaWSOY's companies have a long history in the Finnish media dating back to the nineteenth century. Publisher Werner Söderström Corporation (WSOY) was founded in 1878, and newspaper company Sanoma Corporation in 1889. Both companies have played an important and prominent part in Finland's cultural development over the years.

SanomaWSOY's sectors now extend from news and information to books, learning solutions and entertainment. Its two main national newspapers, Helsingin Sanomat and Ilta-Sanomat, are the largest in Finland, particularly the former having a dominant position and being quite important in public opinion formation. The group also publishes the business oriented daily Taloussanomat, several leading regional papers in South-East Finland as well as Keltainen Pörssi, Finland's leading free ad publication. Sanoma Magazines is today the fifth-largest magazine publisher in Europe, publishing magazines in 10 countries; in five of these, the firm is the market leader. WSOY is Finland's largest publishing house and the market leader in general literature, educational materials, and a number of specialist publications.

4.2. Some key development projects

The idea of the ambitious **Arabianranta** construction project, launched a decade ago, is to attract companies and people interested in design and art. At the same time the area will make up the ultramodern and much-publicised Helsinki Wireless Virtual Village, whose broadband and wireless network's infrastructure will offer businesses and residents a modern working and living environment. This project is now moving forward in the place where the city of Helsinki was born, at the base of the old smokestack of the Arabia plant 5 kilometres north of the centre of Helsinki. The objective is for a centre of creative activity to take shape

around the enclosed street, the same way that car dealerships are concentrated in certain areas and furniture stores in others. Although the companies in that case compete with one another, they also benefit notably by attracting a greater number of customers.

Arabianranta is an example of close, partnership-like co-operation between businesses, the City, and the national government, and numerous parties are involved in it. The City of Helsinki considers the project a sensible investment, as Helsinki is wanted to become an expertise-based metropolis. Arabianranta will also include a modern information and library centre, Aralis, serving the nearby area, but also acting as a national and international library. Housing for about 7000 new residents is going up in the area, and, when complete, the new business portals will provide jobs for a couple of thousand workers. The City has taken these needs into account in its mass transit plans. In the first phase, a light-rail route will be extended into the area, bringing people from downtown Helsinki. Investments have also been made in the area's amenities by improving the condition of the historic environment's shoreline.

Innopoli is a concentration of high-tech research, training and business facilities at the Otaniemi Science and Technology Park, the latter also including the campus of the Helsinki University of Technology, about 20 minutes from downtown Helsinki. The surrounding Otaniemi Area is home to 5000 technical research and product development professionals from all around the world, as well as some 11 000 students. Innopoli itself, together with its affiliate Incubator, is a 22 000 sq. m. complex, providing over 200 technology-based tenant companies with space, synergy and practical help. Innopoli prides itself on a full range of business services, such as top-of-the-line communications connections, legal advice, marketing enterprise and conference facilities. Innopoli has also organised the Spinno program, whose objective is to create new and viable technological enterprises. Also a mentor program has been created to provide support to new businesses. In this program tested leaders of established companies share their knowledge and expertise with newly-hatched entrepreneurs. In April 2002, The European Commission nominated Innopoli and Otaniemi Science Park as members to the Club of Excellence Network, the aim of which is to co-operate in the field of producing and developing innovative enterprises.

Helsinki Science Park is located in the Viikki district of northern Helsinki, 9 kilometres from downtown Helsinki and 20 minutes from Helsinki-Vantaa international airport. Construction work at the Science Park began in the mid-1990s, and will continue until 2010. The Science park is next to the university campus, home of the University of Helsinki Biocenter, the Faculty of Science and the Faculty of Agriculture and Forestry. There are more than 1000 research scientists and technicians working in several top research groups and individual companies in the fields of biotechnology, pharmacy, biomedicine, diagnostics, food and environmental technology. Helsinki Science Park Ltd. is a joint venture of the Finnish government, the University of Helsinki, the City of Helsinki, SITRA - a major VC Fund - and a number of industrial federations.

The new business centre and a new incubator are under construction and will be completed in the beginning of 2003. There will be offices, laboratory facilities and a modern GMP pilot plant in the building with a total floor space of 13000 square meters. Viikki’s main

residential area is Latokartano, where the first residents moved in 1997. Over the next ten years, some 800 new residents are expected to move to Latokartano annually, and in the 2010s, Viikki is expected to have a total population of 13,000.

In addition to Viikki Campus, Helsinki Science Park Ltd. also operates in the new medical research centre in Meilahti. Helsinki Science Park and its collaborating partners provide assistance in patenting and licensing, business management, international marketing and financing.

The Biocenter of the University of Helsinki, built in 1995, is also located in the Viikki Campus. The Biocenter is an important part of the Helsinki Science Park, and currently it is a home of four major teaching and research institutes of the University of Helsinki. The Institute of Biotechnology is an independent research institute of the University. The firms include Alkomohr Biotech Ltd. and a research unit of the Orion-Farmos corporation. Many of the research groups co-operate with major Finnish enterprises including Valio, Medix biochemica, Kemira, the Enso group, and MetsaSerla, with an important objective of identifying research results suitable for commercial exploitation.

Medical research in Finland is currently at a high international level. A centre of excellence for medical research and training, **Biomedicum Helsinki** is situated on the Meilahti campus of the University of Helsinki, 3-4 kilometres north-west of the city centre. Biomedicum collects together investigators and research groups to perform cutting edge research on current important problems in medical sciences and to facilitate new drug development. It is the aim of Biomedicum to attain an important liaison function between academia and industry. State-of-the-art research facilities are provided to some 1000 investigators and graduate students in residence as well as an high-class environment to medical and dental students for the first two years of Medical School. Financial support is provided by the University of Helsinki, the University of Helsinki Central Hospital, the neighbouring cities of Helsinki, Espoo and Vantaa, the State Real Property Authority, but also private industry sponsors part of the research.

4.3 The ICT sector

The importance of the ICT and related sectors for regional growth in Finland has often been pointed out. The Research Institute for the Finnish Economy (Elinkeinoelämän tutkimuslaitos, 2001) noted that the electronics industry accounted alone for a third of Finnish GDP growth in the late 1990's, and the strong growth of telecommunication products contributed to the division of Finland's economic growth into two regional groups. In a few mainly southern NUTS3-regions with a concentration of telecom (including Helsinki) growth was fast, while the rest of the country showed slower growth rates. Even though employment is not expected to increase much in this sector, due to strong growth of productivity increase, indirect regional growth effects are expected to be notable.

In this chapter some short notes are made of the telecom cluster in the Helsinki region. A thorough description or analysis is not aimed at, as the ICT sector and the cluster will be further studied in the MUTEIS project.

The existence of a telecom cluster in Helsinki has been noted in several studies, in part already several years ago. In an international comparative study of nine European cities by van den Berg, Braun and van Winden (1999), telecom sector was chosen as the object. It was concluded that Helsinki hosts a telecommunication cluster of impressive size. According to the study, early market liberalisation, a rich tradition in high technology engineering and a favourable "network-friendly" culture were features behind the emergence of the cluster, and good potential was also seen to exist for its future growth. Considering points improvement, organising capacity at the metropolitan level was seen to fall short in some respects. No integral vision and strategy regarding telecom and new media at the metropolitan level was found, potentially hampering the dynamics of the cluster and leading to unused possibilities for synergy.

As to the special nature of Helsinki region's ICT cluster, Pekka Ylä-Anttila (2001) compares it with the widely known 'great banana' (covering an area from London via Randstad through industrial areas of Germany and Switzerland to northern Italy). In addition to the 'banana' , there seems to be a small Nordic 'potato' covering the metropolitan areas of Stockholm and Helsinki. The major difference between these two ICT blocs is that that the industrial activities of the 'banana' are more focused on information technology (IT), whereas the 'potato' is more focused on communication technology (CT) (Ylä-Anttila 2001). Altogether it is clear that ICT-related businesses in Europe are concentrated around major urban centres, which makes regional success of the sector important also for nations.

Small technology firms in Helsinki metropolitan area were the object of the study by Hanna Paakkolanvaara (2002); the firms could typically be seen to belong to the ICT cluster. Small firms were chosen as the object of the study because it is generally known that their role in technological development is higher than their size and general share of activity implies. Representatives of firms and experts of the sector were interviewed, and some interesting results appeared in the study. The interviewed sectoral experts (working in public organisations, research institutes etc.) saw incubator activity, public support and municipalities as much more important than the firms did. Actually, municipal government was experienced to be fairly distant to everyday work by the firms. The interviewed firm representatives were not too well aware of the services provided by the region's cities. Municipal borders were not seen as too important; rather the whole Helsinki economic region was seen as one functional unit, only with some administrative limitations caused by city borders.

The strongly dominant role of Nokia has often drawn attention, causing high economic risks but making possible high returns. This holds for the whole country, but to some extent it is certainly true also for the Helsinki region, despite the region's versatile production structure. The determination to develop Arabianranta Art and Design Centre, Viikki science park and Biomedicum can be seen as attempts to answer this problem at a local scale. In addition to decreasing the risks of one-sidedness by finding totally new growth sectors, also promoting diversity within the development of the ICT sector might be important.

5. SEGREGATION AND SAFETY

5.1. Social segregation within the region

The past development of the Helsinki region seems somewhat exceptional in international terms: in contrast to the international debate on how to interpret growing urban inequalities, the development of the Helsinki region has been characterised by a slow but steady levelling out of spatial socio-economic differences. Two major national political factors are connected to this balanced spatial structure, where the distribution of the underprivileged is spatially scattered rather than concentrated in few selected areas. The first one is the Nordic welfare state, which has kept income differences to a minimum, and the second is strong city planning. A major trend in city planning in Helsinki has been a close connection between housing policy and social policy. The aim has been to prevent housing shortages as well as social segregation. As a result, at the turn of the 1990s, the region was in the best socio-economic balance of its recorded history.

Even if the policy of social mixing has been present for decades and has produced exceptionally homogenous city structures, recent studies suggest that the trend has turned: socio-economic differences between housing areas have been slowly increasing. This has happened with no political turn that could account for it. The Finnish version of the Nordic welfare state survived well over the depression and its aftermath, and the political pursuits of the City of Helsinki have persistently been designed to prevent the emergence of segregation. And yet a historical turn toward increasing inequality has been emerging (Vaattovaara 2002).

In Helsinki the main driving force is the new economic growth of the information sector, which emphasises the role of education as a labour market resource. As a result, the growth lifts up different areas at a different pace, depending mainly on the educational standard of the population. The less educated and more working-class areas are lagging behind, and the western areas with a better -educated population are leading the upswing. Consequently, the already existing educational divide of the city is gradually breeding both unemployment and income differences.

New analysis on the nature and background of the turn strongly suggests that it is linked not only to the exceptional severity of the depression, but especially to the new nature of economic growth of the late 1990s. It seems that growth based on information technology and the globalisation breeds urban inequality even in political conditions that are specifically designed to prevent this from happening (Vaattovaara 2002).

The turn started with the deep depression of the early 1990s. The eastern suburbs of Helsinki, built during the strong wave of urbanisation in the 1960s and 1970s, were somewhat underprivileged already at the time they were built. In the beginning of 1990s, unemployment hit these residential areas, where the population was older and less educated and had a mostly working class background, the hardest and the fastest. Not only did unemployment grow more quickly and with more intensity in these areas; recovery from unemployment also started several years later than elsewhere, and the recovery has been

slow. What also is exceptional now is how the differentiation has continued during the economic upswing of the late 1990s (Vaattovaara 2002)..

On the whole, however, recovery from the recession has been rapid – acting as the second phase in the development toward a more differentiated city. The number of jobs has reached the same level as before the recession. The information sector has been the main engine of economic growth in the Helsinki region after the depression. Most companies in the new information sector have been located in the centre of the city or in its western parts, surrounding the Technical University. Practically all firms responsible for the new growth in the region are located around the bay of Ruoholahti, i.e. in the western armpit of the peninsula of Helsinki.

Additionally, this new growth has clearly strengthened the interrelation or link between a high level of education and high income. A historical analysis of the development of the region has revealed a slow educational divide starting already in the early 1960s. If the educational status of an area is described on the basis of the proportion of people with a university degree, the educational social structure of the city has, with time, become more and more polarised. The further west one goes, the higher the proportion of inhabitants with a university degree. As the link between high education and high income has, during the 1990s, become stronger, this previously created educational divide has begun to produce growing spatial income differences (Vaattovaara 2002).

It seems that during the 1990s the desirability of the eastern parts of the Helsinki region has diminished and the desirability of the west has grown with the main dividing line being linked to the educational standard of the migrant population. Incoming migration works selectively: the eastern and north-eastern parts of the region are clearly in a different position compared to the south and the west. In the west, over one third of the incoming migrants have a university degree, but in the eastern and the north-eastern parts of the region, the proportion is about one-tenth.

In other words, it seems that negative trend of underdevelopment is evolving in the east: the relative impoverishment of the population is reflected in the low desirability of the area and vice versa. It seems that both the companies involved in the new economic growth and the well-educated migrants prefer the west, and new elite districts have begun to develop on the basis of the information economy (Vaattovaara 2002).

5.2 Safety and crime in Helsinki

In the light of international comparisons Helsinki can be characterised as a safe city. Unlike many other metropolises street safety is at a high level, there being no tradition of heavy street violence. Largely due of the fact that the differences between social classes are still moderate in Helsinki, Helsinki is relatively a safer city than is usually imagined by inhabitants.

The number of cases of reported assault and battery per inhabitant decreased in the 1990's in Helsinki. The absolute numbers increased somewhat, but this was due to the clear population

growth. Street violence and violence in pubs has not increased, rather the increase in absolute numbers of reported violence has taken place in private homes. There are annually some four cases of capital crime per 100 000 inhabitants of 15 years and older, a figure that has remained constant for a considerable period.

At the national level, assault and battery are more common in Finland than in Denmark and Norway, but less common than in Sweden. There are more homicides per capita in Finland than in the rest of Scandinavia, but in a larger international comparison Finland does not stand out in any particular way. In Finland homicide is usually a matter partly of male social outcasts and alcoholics, partly of tragedies between couples (Tuominen 1999).

It is difficult to get a reliable picture of the temporal development of crime. The number of cases reported to the police is a central source of information, but we cannot really tell whether an increase in reported cases is due to a real increase in crimes or just to increased reporting. Also definitions of crime change with time. In addition to statistics on reported crime, victimisation studies have been conducted; in these people are asked about becoming victims of different types of crime.

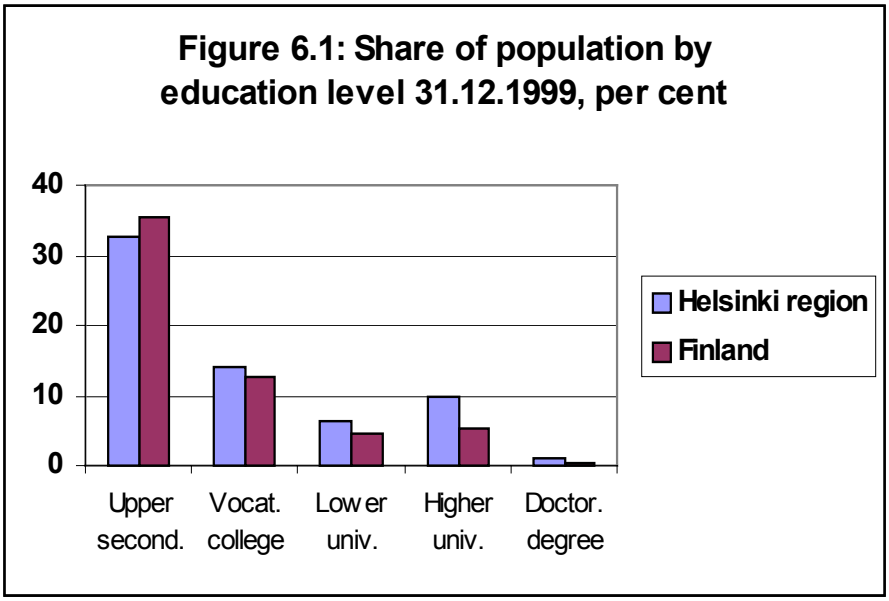
Altogether people are more afraid of violent crime than necessary, and actually this unnecessary fear increased in the 1990's (Koskela 1999). This may be largely a media effect, caused by headlines and violent entertainment. Fear of crime is only partly the result of rational knowledge and thought - emotional factors play a more important part in people's cognitive orientation in these matters (Tuominen 1999).

6. HUMAN RESOURCES AND EDUCATION

6.1 Education level of work force

The Helsinki region has the widest supply of different types of education in the country, covering all educational types and levels. This is important for the region, as its modern industrial structure places high educational requirements on the labour force. Finland has altogether 20 universities throughout the country, all state-run and engaging in both education and research. The Helsinki region hosts eight universities with some 60 000 students, consisting of one multidisciplinary institution, three specialist institutions and four art academies. The University of Helsinki with its more than 37 000 students in 2001 is the largest. The region's share of all university students is two fifths, while its share of post-graduate degrees is even somewhat larger.

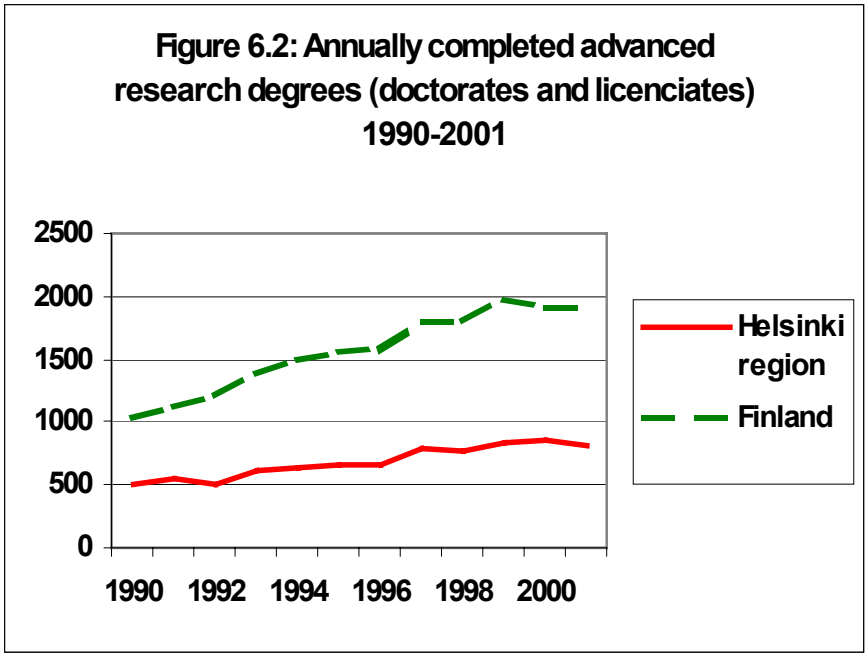
As to post-graduate studies, technological sciences are the largest group in the region, due to Helsinki University of Technology (2600 post-graduate students and 50 % of the whole country). Still, the largest numbers of postgraduate degrees come from Helsinki University (Helsingin kaupungin tietokeskus 2001).



Education level of the region's inhabitants is higher than in the rest of Finland, a fact that is most clearly visible in higher education. Shares of population with at least a vocational college education (13-14 years of education) are higher in the Helsinki region than in all Finland (figure 6.1), and for higher university degree and doctorate-level degree Helsinki's shares are about double compared with national ones. The shares in the figure are calculated from population of 15 years and more of age. The educational level is expected to rise further as a result of strong growth in the number of students completing qualifications at polytechnics. Also the migration gain in well-educated young labour force contributes to the educational level of the region (Pääkaupunkiseudun yhteistyövaltuuskunta 2002).

In 1995 a new system for post-graduate schooling was created in Finland, with the purpose of shortening the time needed for doctoral studies and for compiling a thesis. This system has proved to work well, for the number of academic dissertations has notably increased while the average age of the doctoral candidates has come down from its former, fairly high level. Thus it can be said that an effective system has been found to produce highly qualified labour force for both research and development purposes and for other academic tasks (Helsingin kaupungin tietokeskus 2001).

Also another new educational system emerged almost simultaneously in Finland; this is the polytechnic. Studies for a degree at a polytechnical institute take some four years to complete and they have a more vocational orientation than university degrees. The polytechnics of Helsinki, Stadia, is the second largest in the country with some 8000 students and 30 educational programs.



6.2 Use of ICT in the Finnish educational system

Information on ICT use in education is mainly available on national level only. Schools in Finland exploit information technology in their teaching and practically all educational institutes are connected to information networks. It was the ambition of the Ministry of Education to give all schools in Finland access to the Internet by the end of 1999. According to a survey conducted in September 2000, this task was fulfilled, and as a result all comprehensive schools, upper secondary schools, vocational schools, vocational colleges and universities in Finland have Internet access.

In September 2000, the number of computers in comprehensive schools, upper secondary schools and vocational schools totalled 125 000, of which 95 000 were primarily in student use. Vocational colleges had a total of 33 000 workstations and universities had altogether 50 000 workstations. The number of students per workstation in educational use is 11 in comprehensive schools, 13 in upper secondary schools, 4 in vocational schools and vocational colleges, and 13 in universities. No major regional differences are reported in the number of computers in schools and other educational institutes (Statistics Finland 2001).

6.3 Threat of skills gap in relation to ICT

It has been suspected that the new information technology might marginalise a lot of people from society because of their "skills deficit". Information networks are claimed to create new forms of social interaction, which one can only participate in while in the networks. On the other hand, there is growing concern for network addicts who become alienated from

genuine social relationships because they "live" in an artificial world and virtual relationships.

The vast majority, or two-thirds, of the adult population in Finland meet the literacy criteria set for the continuous learning demanded by the information society in different spheres. However the literacy level of one adult in three may not be adequate to succeed in the information society, while the ability of one-tenth of the working age population, or 320,000 persons, to understand the contents of documents and the like is so deficient that it may hamper everyday life and finding employment, as well as increase the risk of becoming marginalised (Statistics Finland 2001). Educating and integrating this group of people into the information society will be an important policy task, and in its implementation the tradition of the Nordic welfare state is likely to be important. This problem also has clear connections with the development of the Helsinki region, in particular with the question about social segregation within the region, which was already dealt with in chapter 5.

7. ACCESSIBILITY AND INFRASTRUCTURE

At the level of international accessibility, effective transport connections and facilities are important for Helsinki, to ensure future competitiveness. The disadvantageous geographical location of the region with respect to Europe makes this fact particularly important. An efficient transport network and logistics of the Helsinki region can cut geographic distances in an economic sense and thus shorten the natural advantage of the world's power centres, thus cutting the actual distance of the Helsinki region from major world markets in terms of loss of time (Hjerppe 2001). One important target is to strengthen the position of the region as a gateway between the European Union and Russia, a task whose importance was already realised in the 1990's. Of the infrastructure projects aimed at improving the area's international accessibility the development of the airport area is the most important, together with concentrating the harbour operations for cargo traffic at a new port in Vuosaari.

As concerns domestic accessibility, the Helsinki region is in the economic heartland of Finland, and has good connections to all other major centres of the country. Tampere and Turku, the two other major domestic regions are less than 200 kilometres from Helsinki, the travelling time being about two hours. Flight connections between Helsinki and other parts of Finland are also good. These are especially important for more distant places like Oulu, which is some 600 kilometres north of Helsinki. Good domestic accessibility towards Helsinki is of greatest importance to all the regions of the country, as Helsinki is the main centre.

The Helsinki-Vantaa airport is by far the most important airport in Finland with its national and international connections. Its share of Finland's air passenger traffic is some 70 per cent, and the share of international air passenger traffic in Finland around 90 per cent. The airport is located 15 km to the north of the centre of Helsinki and it is maintained and developed by the Civil Aviation Administration, which operates as a Finnish state enterprise. It has two runways, a third runaway soon coming into operation, and two adjacent terminals,

international and domestic. The airport has been developed particularly with an eye to the increased volume of international transit flights. The International Air Transport Association (IATA) has recently ranked the Helsinki-Vantaa airport in the top three of the world.

The Helsinki -Vantaa Airport is Finland's only international TEN-linked airport with regular direct flights to Finnish destinations and to numerous cities in Europe, North America, Russia, the Baltic Countries and the Far East. The development of the airport and its related services forms part of the gateway-strategy of the Helsinki Metropolitan Area. The intention is to make the region a more attractive location for foreign companies intending to exploit its position as a gateway between eastern and western Europe.

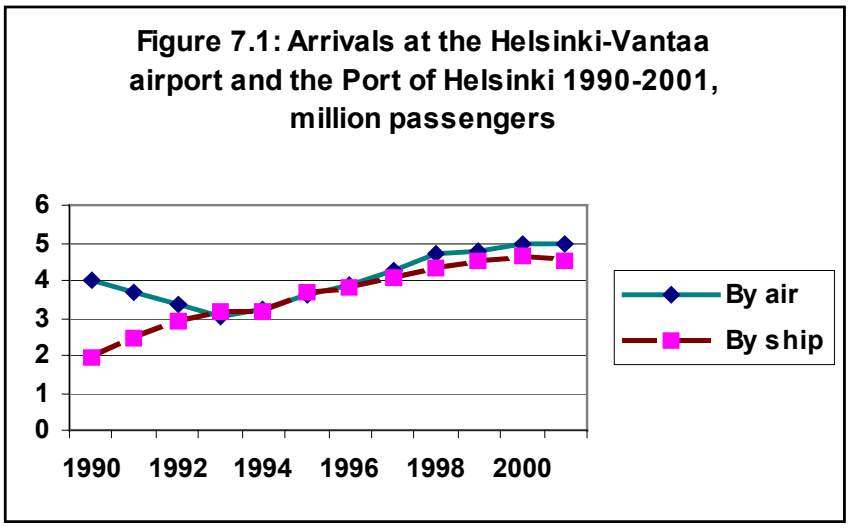
Passenger traffic has increased rapidly at the Helsinki-Vantaa airport after the mid-1990's, and the increase in arrivals was 38 % in 1995-2000 (figure 7.1). The annual number of passengers passing through the airport exceeded 10 million on the last day of 2000, including both arrivals and departures. The share of international carriage in passenger traffic was over two thirds, and seven out of ten passengers of international scheduled traffic travelled to other EU countries. Rapid growth of passenger traffic is expected also in the coming years. As to freight traffic, the Helsinki-Vantaa freight terminal is the largest in Scandinavia: a total of 96 000 tonnes of freight and mail were handled in 2000.

The Aviapolis in the vicinity of the airport is one of the largest construction projects in the Helsinki region, see also chapter 3. 3.

The port of Helsinki is the largest port in Finland and the second largest in the Nordic countries. It is specialised in unitised cargo traffic, or services of large volume traffic directed to exporting firms. Regular and dense traffic together with efficient stowage are among the strengths of the Helsinki harbour. Helsinki has also the liveliest passenger harbour in Finland, with good connections to e.g. Tallinn, Stockholm and Travemünde. The most popular destination is Tallinn, whose passenger volumes have strongly increased in the 1990's, Stockholm coming second. Over 9 million passengers (arrival and departures) and more than 10 million tons of cargo pass annually through the port of Helsinki.

Cargo volumes are expected to increase in the future in Helsinki. To cope with this situation, a new harbour is planned to be built in Vuosaari, on a 1.5 sq. kilometre area at the place of a former shipyard. Also a business park with some 4000 new jobs adjacent to the harbour is planned. The plan has two obvious advantages for the central business district of Helsinki. First, a large amount of space in the area would be freed for residential and office use. This space would be enough to meet the needs of some 20 000 residents in a situation where the Helsinki region is facing a large and continuing migration surplus. Secondly, traffic congestion in the area would be eased, as heavy truck traffic generated by the harbour would move farther from the city. However, the traffic connections of the port would go through Porvarinlahti area, which is under the Natura conservation plan; this has slowed the final decision to build the new harbour. At present, the port of Helsinki's development project is however showing progress. In January 2002, the Ministry of Environment approved the regional plan and the urban development plan for Vuosaari. At this stage, it appears that

some parts of the port construction will start as early as 2003, which will allow the commencement of port traffic in 2008 (Port of Helsinki info 18.3.2002)



Concerning **accessibility within the region,** public transport is important, consisting of trams and metro in Helsinki, local buses and trains. The region's public transport is among the best in Europe, and its services are an essential part of residents' everyday life. Helsinki Metropolitan Area Council (YTV, see below) has an organising role in public transport of the Metropolitan Area.

Every day some 800 000 trips are made by public transport in the Helsinki Metropolitan Area, while the amount of trips with private vehicles is 1.1 million. The share of public transport within the Helsinki Metropolitan Area is now 40 per cent, a very high figure, and it has remained roughly the same in the 1990's. 70 per cent of all work-based traffic to the centre of Helsinki is made by buses, local trains, trams or the underground. The region has a uniform public transport ticket system with two types of zones: intra-municipal and inter-municipal within the Metropolitan Area, the latter ticket being valid for the whole HMA and for all types of public transport. Also light traffic network is generally good, even though bicycle connections in the centre of Helsinki as well as in the fringe areas call for some improvement.

Largely due to the efficiency of public transport, the number of private cars is not too high, 360 for 1000 inhabitants in the Helsinki Metropolitan Area. This is a somewhat smaller figure than in the other Nordic capitals or in the rest of Finland. In the HMA three out of five households have a car. However, the long run increase in private car trips has been notable in the region.

Traffic safety is at a good Nordic level, and in particular accident risk is smaller in the Helsinki Metropolitan Area than elsewhere in the country. In the HMA, some 5 000 traffic accidents are annually reported to the police, the number of deaths being 20 to 25. Despite of

increasing traffic the number of accidents has clearly fallen in the 1990's, from 9000 to 5000 in the 1990's (Pääkaupunkiseudun yhteistyövaltuuskunta 2002).

Even though public transport in the Helsinki region is at present very efficient, it is important to progress with regional traffic projects as a whole. So far the region has altogether managed to solve its transport problems reasonably well despite the challenges of geography (the centre of the region lies on a coastal peninsula surrounded by the sea). Still, traffic has increased fairly fast in the last few years, and in the future traffic problems may present a bottleneck for development in the region. The decentralising tendencies of the community structure together with the rising income level tend to increase transport needs; also the share of passenger cars may increase in transport. These facts may cause problems especially during rush hours in the metropolitan region, where congestion problems already exist to some extent. A cohesive community structure would here be advantageous to limit the amount congestion. As the realised transport system is one of the factors affecting community structure, it has been an objective for planning to develop a transport system that supports a cohesive structure. Investments into the local rail network and to keeping up and improving the quality of public transport will be needed in the future.

8. QUALITY OF LIVING, ENVIRONMENT AND HOUSING

8. 1. Environment, culture, general quality of living

In this chapter a few notes are given on the state of the environment and on Helsinki as a culture city. In addition the results of two recent studies on the quality of living and the inhabitants' opinions about public services are summarised briefly. The first study is the international quality-of-living comparison by William K. Mercer and the other one is a new survey conducted by the city of Helsinki.

Considering the effects on the health of inhabitants, state of the environment is generally good in Helsinki, even though the region's rapid growth in itself may weaken the situation. Emissions from separate production sites are under control and adverse effects caused by energy production and manufacturing have decreased. Breathing air is good compared to many other cities of similar size. Limits given for the quality of air by EU directives have not been exceeded in the Helsinki region. Catalytic converters and modern fuels have decreased for example carbon monoxide in air, but on the other hand the Finnish norms for nitrogen oxide and particles are often exceeded in the largest traffic routes. Today, some 250 000 of the region's inhabitants live in areas with more than 55 dB noise, streets being the most frequent cause. Combating the environmental effects caused by increasing traffic is an important planning task for Helsinki as well as for any other city (Pääkaupunkiseudun yhteistyövaltuuskunta 2002).

One of the strengths of the region is the abundance of green areas available for all, even inside the borders of the city of Helsinki. Of particular importance is the Nuuksio national park area, found in 1994, about 30 kilometres north-west of Helsinki. This 37 sq.km. area

with some 40 lakes and bonds is a popular resort among the region's inhabitants. Together with several adjoining green areas it forms a large, continuous whole largely in natural state, something that capital regions rarely have.

The variety and level of **cultural services** is good in Helsinki. The Finnish National Opera is of a high class and has a new house near the centre of the city. There are also two full-size symphony orchestras, the Finnish Radio Symphony Orchestra and Helsinki City Symphony Orchestra. Altogether these three important musical institutions gave more than 350 concerts and opera performances in 2000. There are 58 cinemas, ten theatres and a large number of museums in Helsinki alone and Helsinki citizens are active users of these services.

The Finnish public library system is among the best in the world. The Helsinki region alone has altogether 103 libraries, which gave out 20.3 million loans in 2001, or 17 loans per inhabitant. The total number of borrowed books and the number of loans per inhabitant are growing.

Helsinki was also one of the **European cultural capitals in 2000**. The cultural year was the largest single group of events in Helsinki since the Olympic games in 1952, with 5.4 million visitors, 500 projects and a total budget of 50 million euros. According to a survey, more than a quarter of Helsinki citizens increased their participation to cultural events in 2000 due to the cultural year (Keskinen 2002), women being more active than men. Younger participants favoured free events while middle-aged citizens attended those with an admission fee. A good fourth of Finns (1.3 million people) and over 70 % of residents in the metropolitan area personally attended at least one Year of Culture event. These figures do not include those who watched broadcasts of the Year of Culture events on television, web site visitors, those who participated in art education projects or those who encountered environmental art. The City of Culture events in Helsinki were also carried out in other European Cities of Culture, with an additional 500 000 visitors (City of Culture Foundation in Helsinki 2001)

As to **general quality of living assessment**, a recent international comparison is available. In the report by William K. Mercer, the well known French consulting company, Helsinki rates sixth in a comparison of more than 200 cities (Mercer 2001). Helsinki shared the sixth position together with Frankfurt, Auckland and Copenhagen. High level public infrastructure and public transport system, good flight connections, clean air and civil activity in developing the city were seen to be at top level. The analysis was based on 39 quality of life criteria for each city including political, social, economic and environmental factors, personal safety and health, education, transport and other public services. The aim of survey was to assist multinational companies in assessing international hardship allowances for their expatriate workers.

Finally, a new study was recently published concerning **Helsinki inhabitants' opinions of public services** (Keskinen 2002). Comparable surveys on this subject have been conducted in Helsinki since 1983, a rare accomplishment even internationally.

Table 8.1 Helsinki's global rating in some quality-of-living subcategories, according to William K. Mercer (Mercer 2001).

Airport	6
Traffic congestion	7
Theatrical and musical performances	8
Air pollution	9
Schools	9
Variety of restaurants	9
Sport and leisure	9
Internal stability	10
Hospital services	10
Daily consumption items	10

Helsinki citizens were very content with public transport, library services, markets, various cultural services and safety of residential areas in 2001. The results for the most important basic services such as child day care, schools and health centres were also good. In 2001, citizens were most discontented with such factors as availability of rental housing or a detached house and care for the elderly. Altogether opinions have remained fairly stable over the years, even though it seems that the overall economic situation is reflected in the way people use and value public services, as people tend to be more critical in good times.

8.2. Housing in the Helsinki Metropolitan Area

The following section on housing concerns the Helsinki Metropolitan Area only, and it is based on the forthcoming article by Loikkanen and Lönnqvist (2002).

Historically, Finland and the Helsinki metropolitan area were lagging behind West European countries both in income level and housing conditions. Subsequently, there has been progress in both respects but despite this, a housing gap still exists relative to other countries. As for the 1997 situation in Nordic capital cities, Helsinki is lagging behind the other ones. The number of square meters per inhabitant was in Copenhagen 46, in Oslo 43, in Stockholm 38, and in Helsinki only 33. The number of queuing households per vacancy in social rental housing was about 3 in the whole country and 5 in the Helsinki Metropolitan Area.

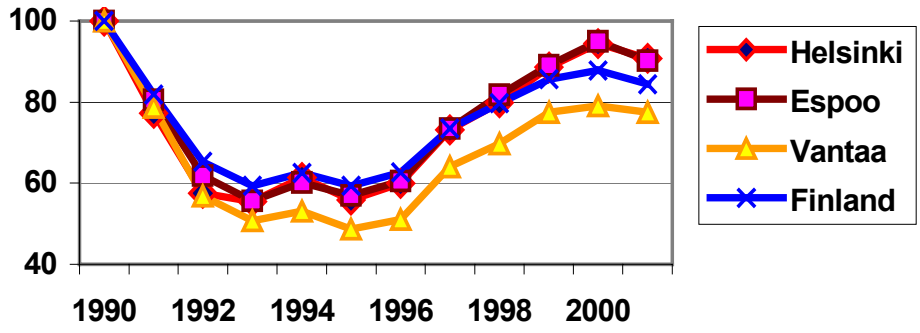
These figures suggest that there is a hidden unsatisfied demand which will realise if the supply side and other institutions will make it possible. As the region is expected to grow even in the future, the challenges for housing will also continue. The main future challenge for Finnish housing policies and institutions still is how to get more housing (space and quality) out the money households' devote for housing purposes in order to reach what has been achieved with a similar resource use elsewhere.

In early 1990s when Finland experienced the deep economic recession, housing production, which had peaked in 1990, fell drastically. Also in the Helsinki Metropolitan Area housing production fell sharply - in 1996 less than 6.000 dwellings were completed. Since then production has recovered, but it is still insufficient relative to the increasing demand which

stems from the rapid population and income increase. In the 1990's housing production in Helsinki, but to some extent also in the other Helsinki Metropolitan Area municipalities, concentrated on municipality-owned rental dwellings. Only 30 % of production in that period was owner-occupied dwellings. Production of privately financed rental dwellings has not really started at all despite abolishment of rent control and tax reforms. (Loikkanen and Lönnqvist 2002).

Two types of tenure, owning and renting dominate in Finland, while other tenure forms like housing co-operatives have a minor role. As to tenure types the Helsinki Metropolitan Area differs noticeably from the national average. In 2000 rental dwellings accounted for almost 47 % of housing stock in Helsinki and about 42 % in HMA, but only 31 % in Finland. Owner occupancy is still the major tenure form in HMA, but it has lost some of its dominance over the last ten years. Right-of-occupancy dwellings are a new phenomenon in Finland; the system was established in 1990. In 2001, there were 26 300 right-of-occupancy dwellings in the country, half of them in the Helsinki Metropolitan Area. (Loikkanen and Lönnqvist 2002).

Figure 8.1: Real price index of flats in Helsinki, Espoo, Vantaa and Finland 1990-2001, 1990=100



The size structure of housing stock varies between the Helsinki Metropolitan Area cities. In Helsinki small dwellings dominate, as over 60 % of the stock consist of small dwellings (1 or 2 rooms and a kitchen or kitchenette). In Espoo the respective share is less than 40 % and in Vantaa it is about 45 %. The relative share of large dwellings, 5 rooms or more, is in Espoo almost threefold relative to Helsinki. Helsinki as a regional centre also has the oldest housing stock in HMA. About two fifths of the housing stock in Helsinki is built before 1960, in Espoo and in Vantaa only a tenth.

During the last 15 years, house prices have been very volatile in the region. In 1989 real house price level was double to that of 1970 and only a few years later it sunk again well below the 1970 level. In 2000-2001 the index was at the level of 160. Current demand

pressures are evident as housing production lags behind. In Helsinki, average housing price level is currently some 60 % above the national level. (Loikkanen and Lönnqvist 2002)

9. GOVERNANCE: ACTORS AND VISIONS

The economic crisis of the early 1990's hit also the Helsinki region hard. In addition to all the difficulties that followed, there was also at least one positive result: a growing awareness for internationalisation and new visioning, perhaps first and foremost in Helsinki. The visions for the future made by the three cities of the Helsinki Metropolitan area (Helsinki, Espoo and Vantaa) are first briefly presented. In addition to these cities, there are of course many other active actors (including the other municipalities), and it would not be meaningful to try to introduce them all. However, The Helsinki Metropolitan Area Council, The Uusimaa Regional Council and Helsinki Region Marketing will be briefly presented, as well as Culminatum, an important organisation responsible for implementing the Centre of Expertise Programme in the region.

9.1. The three cities of the Helsinki Metropolitan Area

As noted above, the **City of Helsinki** was activated by Finland's severe economic recession in the first half of 1990's. One result of the awakening was Helsinki's first **internationalisation strategy,** initially formulated in 1995 and exemplifying new attitudes regarding co-operation and development. The city's long run success was perceived to depend on education, science and research. In addition, cultural and environmental factors were seen as important. The strategy includes several practical and large activities and projects that were initiated or implemented, including the Centre of Expertise Program, Helsinki Science Park, the Art and Design City, Biomedicum and the European City of Culture Project 2000 (see above). Regarding communications and logistics several projects connected with the strategy are presently under way, including the Helsinki-Vantaa airport and the new harbour planned for Vuosaari; also these have been dealt with earlier.

The city has also stepped up its **co-operation with the University of Helsinki** in many areas. Six professorships for urban research in different fields from economics to urban history were founded at the University, and top executives of the city and the university meet regularly. In addition a council for general co-operation in Helsinki's urban research exists, with representatives of the city, Helsinki University, Helsinki Business School and Helsinki University of Technology. The city has also recently signed co-operation agreements with Helsinki Business School and Helsinki University of Technology, and mutual interaction in urban research with these latter institutions is also expected to increase.

Helsinki's western neighbour **Espoo** has grown rapidly during recent years, and now has approximately 214 000 inhabitants; growth is also expected to continue. In its own municipal vision, Espoo emphasises its position as a city of high technology, education, culture, research and innovation that functions as a part of the metropolitan region. Espoo hosts Helsinki University of Technology, the Otaniemi Science and Technology Park with all its

research institutions, as well as the Innopoli research centre. The key values in the Espoo vision are customer orientation, tolerance, innovation, partnership and cost-effectiveness.

Vantaa is Helsinki's northern neighbour with a population of approximately 178 000 inhabitants. Well being and safety, sustainability, competitiveness, the ability of the local economy to react to changes, flexibility in the supply of public services and local democracy are the primary factors in Vantaa's vision. In the overall strategy for the Helsinki Region, Vantaa wishes to be the logistic node in the new Northern European business centre. Vantaa's logistic importance is connected with having the Helsinki-Vantaa airport in its area; the development of the airport and its related services are an essential component of Helsinki Metropolitan Area's gateway strategy. An extensive new business park, Aviapolis, has been planned near to the airport.

The tendency of regional economic activity to centralise into the largest cities poses challenges not only to the declining regions but to the Helsinki region as well. Additional services have to be provided and investment is needed in the expanding regions. The costs and financing of growth are closely related to the relations between municipalities and national government. Especially Helsinki, Espoo and Vantaa calculate that they are made to pay an increasing share of the lagging regions' financial problems.

An important step for discussing and solving these problems has been taken in the Urban programme for the Helsinki Metropolitan Area competence and cohesion. The making of this programme was started by the mayors of the HMA cities and by executive directors of the HMA Council and the Uusimaa Regional Council in October 2000. The aim is to strengthen competitiveness, knowledge and citizen participation in the region, and three priorities have been chosen: strengthening of high competence and multidimensional knowledge base, strengthening of individual competence through social means, and strengthening of social inclusion, participation and social cohesion. In addition to the organisations mentioned above, also Ministry of the Interior, Culminatum and the Association of Finnish Local and Regional Authorities are represented in the project (Helsingin kaupunginkanslia 2002). As an example of public discussion, the mayors of the six largest Finnish cities (including the three HMA cities) recently demanded a stronger and more direct relationship with Finnish central government, to discuss matters like the organisation of educational and other services, tax questions and large investment projects (Helsingin Sanomat 20.4.2002)

9.2. Other actors in the region

The Helsinki Metropolitan Area Council (YTV) has a special position in certain planning and co-operation activities in the region, being unique of its kind in Finland. The operational jurisdiction of the Council includes the municipalities of Helsinki, Espoo, Vantaa and Kauniainen, and its main task is to promote the development of the metropolitan area by providing services for public transport, waste management, air quality management and development planning. In planning the role of the Council is not binding, but rather limited to co-operation and research work. It should also be noted that the members of the Council are not elected directly by voters but by the municipalities; this is also the case for the

Uusimaa Regional Council (see below). The function of the Council is based on a special act. To promote regional co-operation and safeguard balanced development in the region the Council prepares so-called Co-operation Plans (YTO) approximately every five years.

The most recent of the Co-operation Plans is **The Helsinki Metropolitan Area Vision 2020**, based on an assumption of annual population increase of 8000 persons. Net inbound migration is expected to be rapid, a significant number of migrants being young, approximately 20-25 years of age. Natural population will account for less than half of annual population growth. The vision aims at an ecologically, socially and economically sustainable urban region. The industrial structure would focus on R&D work and production based on top-level expertise and sophisticated technology, supported by high quality services. Convenient accessibility by all modes of transport is seen as important. High-priority goals also include equality and social responsibility as well as a high environmental standard and natural diversity.

Finland's Regional Councils are joint statutory municipal authorities. They operate as regional development and regional planning authorities in their NUTS 3-areas and are thus the units in charge of regional planning and the safeguarding of regional interests. There are 19 regional councils in Finland. **The Uusimaa Regional Council**, having by far the largest population basis among the regional councils, draws up a **long-term strategic plan** (maakuntasuunnitelma) for its region every four years. This strategic plan has a 25-year horizon, and it is prepared in co-operation with local municipalities, local state organisations, business community organisations, companies, trade unions, civic organisations and citizens. Presently a new strategic plan "Uusimaa 2025" is under preparation. Statements to the draft of the plan were recently obtained from 72 different organisations, and it is the purpose to submit it for approval during Autumn 2002. According to the vision in the draft plan, "Uusimaa will be the most competitive, the safest and the most enjoyable metropolitan region in northern Europe". Ten strategic choices are given in the plan, the three first concerning international networking, supporting competitive growth sectors and developing education. The rationale behind all these three choices is to improve the region's economic competitivity (Uudenmaan liitto 2002).

At the national government level **The Finnish Ministry of the Interior** is a central actor. The debate about national urban policy as an explicit policy area in Finland started in the middle of 1990's, partly as an implication of the corresponding European debate. The first Finnish Urban Policy Committee was appointed by the Government for a period of three years, 1997-1999. The second committee called Committee for Regional Centre Development Programmes and Urban Policy is appointed until February 2003, with an additional task of following the growth and the special role of Helsinki region, and finding policies and ways of co-operation that help to solve the region's growth problems. Cities, universities, research centres, associations of municipal and regional authorities and the Chamber of Commerce are represented in the committee, as well as several ministries.

The idea behind the **Centre of Expertise Programme**, launched in 1994, is to focus local, regional and national resources on the development of internationally competitive fields of know-how. The Programme covers the whole country and it is carried out in regional

Centres of Expertise, appointed by the Council of State, that work closely with universities and companies in their respective sectors. The Ministry of the Interior has an important role in the national co-ordination of the Centre of Expertise programme.

The Helsinki Region Centre of Expertise Programme consists of five separate Centres of Expertise: Adaptive Microsystems (located at Otaniemi Science Park in Espoo), Gene Technology and Molecular Biology (at Helsinki Science Park), Cultural Industry (Cable Factory in Helsinki), Software Product Business (Innopoli in Espoo) and the Centre of Expertise for New Media (Helsinki University of Art and Design at Arabianranta, Helsinki). The second period of the programme was launched in 1999 and will continue until 2006. The programme establishes effective channels of innovation-oriented communications for selected fields of know-how; this enables enterprises to take advantage of the expertise, research findings and technology of the region's universities, institutes of higher education and research facilities. The aim is to produce new, internationally competitive commercial operations, thus helping to ensure that the Helsinki Metropolitan Area holds its own against international competition and retains its status as the country's principal engine of economic growth.

The Centre of Expertise Programme is implemented by **Culminatum Oy Ltd**, a co-operative organisation whose task is to promote transfer of technological innovation from the conceptual level, through the research phase and onwards to the production level. This goal is achieved by increasing co-operation between the scientific community and companies and by co-financing various projects. The shareholders of Culminatum are the Helsinki Region's universities and vocational universities, the cities and chambers of commerce of the Helsinki Metropolitan Area and the Uusimaa Regional Council.

The city councils of the Helsinki Metropolitan Area have assigned responsibility to Culminatum Oy for preparing a science and technology strategy for the region and a common development strategy for the universities and associated business operations. Noteworthy examples of this work include the feasibility study conducted in spring 2001 into establishing an international information technology university in the Helsinki Metropolitan Area and the preliminary examination of the Uusimaa 2000 decade expertise land use strategy. Investigative work for both of these projects is continuing at Culminatum. Culminatum also provides practical support for starting firms by looking for academic research results potentially eligible for commercial utilisation. In this "Innotuli"-project, researches are aided financially in order to make it possible to set up a firm. The educational Spinno program has to the purpose of giving basic abilities to entrepreneurship. The Spinnoseed financing project invests in firms starting in high technology business. Also a mentor program is in use.

10. USE OF ICT PRODUCTS IN FINLAND AND IN THE REGION

Nationally, Finland ranks high in the world in terms of use of and access to ICT. Consequently, it has sometimes been regarded as an information technology laboratory and sometimes as a model country of information technology. It has also fared well in several international comparisons of competitiveness. Many of the assessment criteria in such comparisons relate to such structural aspects of economic competitiveness that change only slowly. Development of technological infrastructure, efficiency of public administration, quality of education and productivity of labour force, for example, are factors in which overnight changes are unlikely

Empirical explorations have indicated that country-level specialisation on ICT has increased in the 1990's, and there seems to be a clear tendency of ICT related production and innovation to cluster geographically. Finland, together with Ireland and Sweden, is a good example of European countries currently specialised in ICT production. Particularly in Finland the role of ICT has grown substantially during the past decade. In the beginning of the 1990's, Finland was one of the least ICT specialised industrial countries; now it is amongst the most ICT-intensive countries in the world. This is remarkable especially as the rankings of most countries have changed relatively little (Ylä-Anttila 2001).

However it is often stated that the use of ICT products is at least as important for the development of a country than the production side, as the adoption of new technologies changes both economic and social life. Most information concerning the adoption and use of ICT is available only at a national level; however some notes are also given below concerning the Helsinki region.

As to **wired telephone** networks, Finland has a number of inter-linked networks run by different operators. Concerning ISDN lines, there were some 199 000 basic rate access and 8 600 primary rate access lines in use at the end of 2000 in Finland, ISDN accounting to one-fifth of all wired telephone lines. The number of ADSL connections at the end of 2000 was around 10 000, with an additional 10 000 connections reported to have been taken into use by businesses during the first half of 2001. (Statistics Finland 2001).

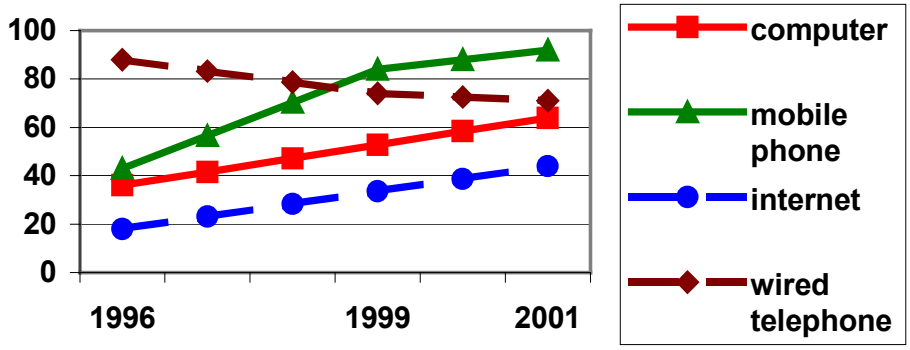
Finland and the other Nordic countries have long been in the lead in terms of **mobile phone** connections. There seem to be no great regional differences the spread of mobile phones in Finland, but rather ownership rates are high everywhere. In the Helsinki Metropolitan Area, over 90 % of households had a mobile phone in 2001, compared with some 40 per cent five years earlier. Such development has been exceptionally fast even by international standards. The number of mobile phones increased rapidly in Finland until the year 2000, but after that the growth rate has slowed down, for the number is already quite high. Apparently there seems to be a saturation rate approaching. During its short history, the ownership of a mobile phone has surpassed that of many other types of household equipment in Finland, as was already foreseen in the late 1990's.

The large majority of Finnish mobile communications network customers now use GSM, Finland having three country-wide GSM 900/GSM 1800 networks. Maintenance of the last NMT network will finish at the end of 2002.

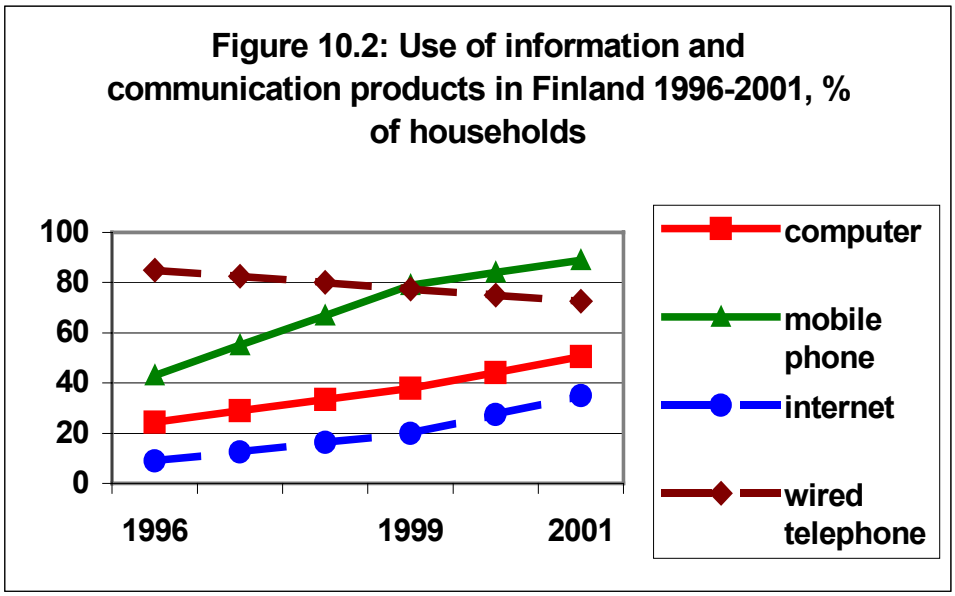
The mobile telephone improves accessibility considerably, making it easier to maintain social networks and manage daily affairs. It facilitates co-operating and doing things together spontaneously. Analogue networks and today's digital networks will soon be succeeded by third-generation communications (UMTS). Introduction of UMTS in Finland is planned to take place in 2002. UMTS will allow considerably faster data transfer and transmission of moving images.

The following figures 10.1 and 10.2 are based on the article by Virtanen (2001).

Figure 10.1: Use of information and communication products in Helsinki Metropolitan Area 1996-2001, % of households



The degree of computerisation may be regarded as a measure of the level of the development of a society's technical infrastructure. As to the number of computers per 100 population in 2000, Finland (57.3) ranked third, after the United States (58.1) and Sweden (57.6). In the number of computers per 100 white-collar workers Finland was seventh, with Norway leading (Statistics Finland 2001). In 2001, Finland has moved to a new era, what comes to the computerisation of homes. Now more than half of Finns have a computer at home. Here regional differences can be found. In 1996 a home computer was much more common in the Helsinki Metropolitan region than elsewhere in the country, and this difference has more or less remained. In 2001, almost two thirds of households had a computer in the region; in all Finland about one out of two (Virtanen 2001). Nationally computerisation is connected with education level and age. In families with academic education the ownership rate is twice as high as in the lowest educational group. Another problem is that among elderly people (over 65 years) computer ownership is hardly increasing at all. These structural features point to the threat of social division in the use of new technology.



What about people who do not yet have a computer? Are they going to get one? In his respect clear differences exist between regions, especially in families. In Helsinki region two thirds of families without a computer reported that they are going to buy one, while in the rest of the country more than three fourths said they do not need one, according to a recent study (Virtanen 2001). Such a development would increase differences between regions, what comes to computer ownership.

In mid-2001 44 per cent of households, or almost 200 000 of the 450 000 households in the Helsinki Metropolitan region had an **internet access**, and every sixth household had at least an ISDN-level connection at home. The majority of Helsinki families enjoyed an internet connection and the networking process is now progressing fast in the region. Differences between Helsinki and the other Finnish regions is clear also what comes to networking, the capital region leading the development (Virtanen 2001).

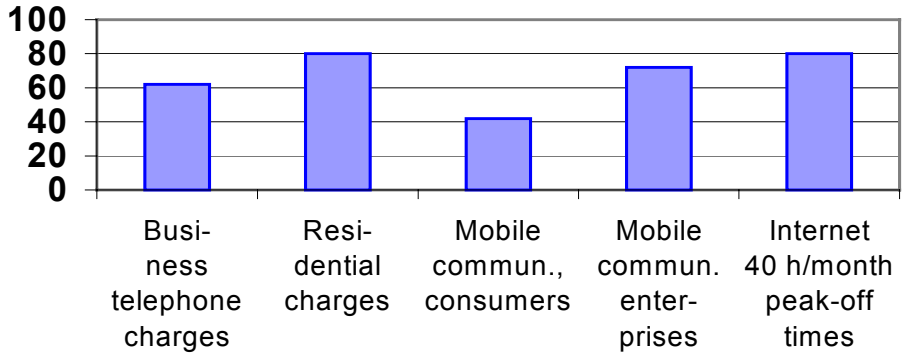
As could be expected, the number of **traditional telephone lines** has come to a halt in Finland, and actually the rate of traditional phone ownership is decreasing. Also here, the capital region is reacting before most others, as the more modern alternatives are gaining ground.

Distant work is one of today's practical opportunities for an employee using modern technology. Great expectations have been based on it, ranging from the future development prospects of peripheral regions on a macro scale to wider possibilities of choice for the individual. According to EU statistics, almost a fifth of employed people in the Helsinki metropolitan region occasionally does distant work, for example once in a month. The attitudes towards this possibility are most positive among employees under 40 years of age. An employee doing distant work is typically male, well-educated and has a good salary, for whom the distance between home and regular work place is long, 9 kilometres on average. However distant work has until now not revolutionised economic and work life in the region.

Telecommunication charges is a factor affecting among other things the development of adoption rates. These charges are the are still moderate in Finland, though no more among the lowest in the OECD countries. Several types of charges were below the OECD average, including household mobile phone and data transfer charges. In Finland, revenue gained from mobile phone charges exceeded local calls already in 1997. (Statistics Finland 2001)

How much then does Finland **invest in information society infrastructure**, compared with other OECD countries? In such comparisons Finland does not rate at the top in OECD countries. Measured as a proportion of GDP in 2000, Finland (3.0 %) is at the same level with France and Germany, while United States is leading (5.5 %) and Sweden comes second (4.8 %). Measured per capita the picture is much the same, with the U.S leading (1 635 Euros) and Finland in the middle group (723 Euros) (Statistics Finland 2001).

Figure 10.3: Telecommunication charges in Finland, OECD average = 100. August 2000. Source: OECD Communications Outlook 2001



The Finnish model for introducing new information and communications technology into use has been much applauded - and quite deservedly so. The rapid progress has been achieved here by respecting and making the most of the best welfare state traditions, not by breaking them up. It is to be hoped that the model will also be sustained, for a large number of the population, and maybe also some small enterprises, may face exclusion from the activities of society if availability of services via the traditional set ups based on the wired telephone and over-the-counter contact are cut back too drastically. The challenge of the producers of network services is to create contents that arouse interest in even those who feel they could never find in the web anything that is interesting or entertaining (Statistics Finland 2001).

11. CONCLUSIONS

The economic and social position and development prospects are generally speaking good in the Helsinki region. The region's economic growth has been rapid since the mid-1990's and jobs have been created in large numbers. This is also likely to continue. While growth of the Finnish national economy will be some 2 per cent this year, medium-term growth forecast is 3 per cent, exports will show a good growth and also unemployment is expected to decrease. National economic development will of course have a strong influence on the region. But on the other hand the prospects of the Helsinki region strongly affect the whole country, due to the region's large size and dominant role.

The overall industrial structure of the Helsinki region is modern and varied. The information sector is very strong and the traditional infrastructure functions well. Obviously, the region's competitiveness is good compared with the rest of Finland, but within the Western European context as well. The region has a relatively strong position despite its location on the outskirts of the European Union. The skill and education foundation is very good. In the labour market overall unemployment level is reasonable, but long-term unemployment still presents a problem. At the same time there is lack of skilled labour in several fields.

The economic recession in the early 1990's taught various actors in the region the virtues of co-operation. The lessons learned from the economic crisis was a common understanding that a region the size of Helsinki's commuting area would not be successful in the international arena unless the parties involved joined forces. Consequently, a number of organisations for co-operation have been founded, and existing organisations have become more actively involved in finding ways to stimulate the local business community.

Structural changes combined with the strength of the region have resulted in a concentration of the Finnish economy in the Helsinki region and this trend is likely to continue. One implication of this is that the travel-to work area has extended in the region. In Finland as a whole, economic growth is now primarily occurring in a handful of urban regions.

In large part, the crucial challenges of the region are those of a growing economy. Population increase is expected to be rapid and more housing is needed, also to provide for growing per capita demand. Compared with many other countries with a similar standard of living, housing space per resident is relatively small in the region. Growth will also bring about increasing traffic and longer commuting times, especially as the community structure spreads; this will also place a strain on the environment. There is also a potential conflict between the necessity of construction and the need to preserve unbuilt areas for recreational use. These challenges are the kind of issues whose solution will require the co-operation of many parties.

A high-priority challenge in today's economy will be the creation of new strong clusters to complement the telecom cluster. This will be necessary to avoid an excessive dependence on a single sector. Many current development projects in the Helsinki region have that goal, including science parks and innovative local clusters. Developing co-operation between local actors, universities, research institutes and the business community is another major

issue, also connected with the diversification of he regional economy. It is also good to remember that the use of new technologies is in the long run likely to be more important than production, emphasising the use of adoption and diffusion.

Growing social differentiation in the region is another emerging problem, even though the situation still is relatively good by international standards. According to recent studies, the increasing social differentiation is connected with the growth of the information sector. New jobs require new skills that those who have a low education lack. Many people are currently prosperous, but some are practically unemployable. The integration of population groups threatened by social exclusion may become a crucial long-term challenge. Growing contingents of foreign nationals form yet another target for integration policy.

Still in the future, the Helsinki region will have good opportunity to stand out as a region whose international appeal is based on a clean environment and a high level of safety, together with an economy powered by a high general level of education and a modern production infrastructure. The presently existing innovation-friendly environment, strong universities and research institutions will be necessary for future competitiveness. Here, the concept of a learning city is one useful frame of reference. The elaboration of even better transport and telecommunications is one important means to achieve the objectives for the region’s development.

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