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Urban Economic Development Policy in the
Network Society

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Esipuhe

Väitöskirjan tekeminen on ainakin minun tapauksessani ollut monivaiheinen, opettavainen, innostava, mutta myös työläs ja joskus raskaskin prosessi. Päällimmäiseksi tuntemukseksi jää silti ehdottomasti itse oppimisen ilo, ja varsinkin jaettu oppimisen ilo useiden kollegoiden, työkavereiden ja yhteistyökumppaneiden kanssa. Jälkikäteen on mielenkiintoista myös tarkastella tapahtumia, jotka olivat johdattamassa minua kohti innovaatiomaantieteen - James Simmie'ä mukaillen - tutkimusta. Varsinkin kun tutkimuskin käsittelee polkuriippuvuutta eli aikaisempien tapahtumien suuntaavaa merkitystä kehitykselle. Ensimmäinen tunnistettava etappi matkalla tapahtui keväällä 1989, kun silloinen Tuotekehitys Oy Tamlinkin projektipäällikkö Veli-Matti Vuori palkkasi minut, tuohon aikaan teekkarin, kesätöihin, mikä myöhemmin johti tuotekehityksen riskejä käsittelevään diplomityöhön ja työskentelyyn innovaatioiden parissa. Teoreettisemmin elinkeino- ja innovaatiopolitiikkaa lähestyin ensimmäistä kertaa syksyllä 1990 tultuani Kokoomuksen teknologiatuimikunnan sihteeriksi, joka professori ja kansanedustaja Martti Tiurin johdolla työsti näitä aiheita. Hänestä sainkin sitten oivallisen kannustajan ja tukijan tieteellisiin ja vähän muihinkin toimiin, mistä lämmin kiitos.

Varsinaisesti ajatuksen väitöskirjan tekemisestä keksi TEK:n (Tekniikan Akateemisten Liitto) johtaja Pekka Kähkönen. Hän onkin ollut tärkeä junailija monissa innovaatiotutkimuksen hankkeissa, joissa olen ollut mukana. Parhaimmat kiitokset tuestasi Pekka. Tutkimuksen tekemisen alkuun minua johdattelivat 1990 –luvun puolivälissä TKK:n teollisuustalouden professorit Martti M. Kaila ja Erkkö Autio, jonka kanssa yhteistyö on ollut aina yhtä vaativaa. Ennen aihepiirin lopullista kiteytymistä sain päätökseeni filosofian opinnot Tampereen yliopistossa. Kaikkein hyödyllisimmäksi olen monessa tilanteessa havainnutkin teoreettisen filosofian opiskelun, ehkä juuri siksi, että siihen ei sinänsä liity hyötyyn tähtääviä näkökulmia. Lämmin kiitos ohjaamisesta ja opetuksesta professori Juha Vartolle sekä professori Olavi Borgille, jolle suoritin valtio-opin ja tulevaisuuden tutkimuksen opintoja.

Ajatus väitöskirjasta iti työskennellessäni PrizzTech Oy:n ja Finn-Medi Tutkimus Oy:n toimitusjohtajana, ja kumpaisenkin yhtiön hallituksen puheenjohtaja, apulaiskaupunginjohtaja Aulis Laaksonen ja apulaisjohtaja Heimo Holli, kannustivat tieteelliseen työhön, mutta vasta tullessani syksyllä 1997 Tampereen kaupungille elinkeinojohtajaksi kaikki palaset loksahdivat vihdoin kohdalleen. Työhön liittyvä kiinnostava aihepiiri sekä kaupunki-seutujen kehittämisen alueella uudenlaista tutkimusta tekevä professori Markku Sotarausta olivat yhdistelmä, jonka myötä asiat lähtivät rullaamaan. Markku on ollut näinä vuosina vaativa ja aktiivinen ohjaaja, hieno yhteistyökumppani ja uusia ajatuksia jatkuvasti kehittävä innostava keskustelijä. Parhaimmat kiitokseni, samoin kuin Senten piirissä vaikuttaneille tutkijoille siitä, että olen voinut kokea olevani osa tutkimusyhteisöä. Kaupunginjohtaja Jarmo Rantanen antoi myös täyden tukensa tutkimukselleni ja järjesti tarvittavat virkavapaudet.

Intellektuaalisesti olen tietysti kiitollisuuden velassa valtavalle määrälle tutkijoita, joista erikseen on syytä mainita professori Manuel Castells, jonka virtojen tila –käsitteestä tuli yksi tutkimukseni kulmakivistä. Professori Ikujiro Nonaka on puolestaan auttanut ymmärtämään tiedon käsitettä uudella tavalla, mutta myös aina yhtä ystävällisenä ja välittömänä hän edustaa minulle esimerkkiä viisaasta ihmisestä. Lisäksi haluan kiittää KTT, johtaja Seija Kulkkia sekä FT, professori Harry Schulmania analyttisistä ja oivaltavista esitarkastuslausunnoista.

Väitöskirjaprojektin loppuvaiheessa siirryin YIT Rakennus Oy:n palvelukseen kehitysjohtajaksi. Haluan kiittää esimiestäni toimitusjohtaja Ilpo Jalasjokea sekä YIT:n konsernihoitajaa, vuorineuvos Reino Hanhista tuesta ja kannustuksesta.

Tutkimustani on leimannut sen tiivis kytkeytyminen työtehtäviini, joiden yhteydessä on usein käsitelty myös teoreettisia kysymyksiä. Kiitokset siis ”työpareilleni” eli Finn-Medi Tutkimus Oy:n silloiselle kehitysjohtajalle ja nykyiselle toimitusjohtajalle Matti Eskolalle, silloiselle Tampereen kaupungin keskustajohtajalle ja nykyiselle Traff Finlandin toimitusjohtajalle Mikko Närhelle sekä YIT Rakennus Oy:n projektijohtajalle Wisa Majamaalle. Mikkoa kiitän muutenkin tuesta ja todellisesta kumppanuudesta jo 10 vuoden ajalta.

Vaimoni Leena on kantanut päävastuun kotitaloudestamme ja siten mahdollistanut harrastukseni, mistä kunnioittavat kiitokseni. Kiitokset ansaitsevat myös vanhempani, jotka ovat aina kannustaneet opiskeluun.

Taloudellista tukea olen saanut tutkimukseeni Kunnallisalan kehittämissäätiöltä, missä käytännön järjestelytkin ovat sujuneet joustavasti asiamies Veli Pelkosen kanssa. Kunnallisalan kehittämissäätiön ohella haluan kiittää myös Jenny ja Antti Wihurin Säätiötä taloudellisesta tuesta. Erityisen iloinen olen siitä, että TEK, yksi tärkeimmistä heimoistani jo yli 10 vuoden ajan, otti julkaistavakseen väitöskirjani. Työn ulkoasun viimeistelystä esitän parhaimmat kiitokseni HM Nina Mustikkamäelle sekä tutkimussihteeri Minna Virtaselle.

Tampereella 1.7.2002

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Abstract

Information society development and globalisation in many ways influence the environment of economic actors such as individuals, companies, urban regions, and states. With the many changes taking place, urban regions are confronted by a new kind of environment characterised by, for example, global competition for the location of companies and skilled labour as well as an emphasis on knowledge, expertise, and innovations as sources of economic growth. This new environment forces the urban regions to constantly develop their competitiveness in a new way. The study has analysed the development and economic development policy of an urban region within the framework of the global information society, or network society. The network society has been interpreted with the help of the concept of space of flows launched by Castells. The competitiveness of an urban region has been defined as an urban region's ability to attract the flows important to it.

The study consists of five separately published studies (articles) and an introductory summary article, all strongly connected to the space of flows and the urban regions' competitiveness and the elements contributing to that competitiveness. The aim of the study is to investigate and develop the theory, approaches, and models of urban regions' competitiveness and economic development policy in order to support the development of Finnish urban regions and help renew their economic development policy. The study contains both theoretical and empirical elements. The method used can generally be characterised as hermeneutic or interpretative and the interest of knowledge is practical. The material used in the study is mostly qualitative. The subjects and cases of the study are the main Finnish urban regions of Helsinki, Jyväskylä, Oulu, Tampere, and Turku.

The study has resulted in the creation of new or improved generally applicable concepts and approaches to support the analysis and development of urban regions. They include space of flows, urban region competitiveness, comprehensive economic development policy, innovative milieu, and *Ba* of the urban region's development network. The results of the study can also be illustrated by describing the shift in the urban region economic development policy. In this transition, for example, the operational environment of development activities changes from national to global; the type of operational environment moves from space of places towards space of flows; the development policy shifts from subvention policy to competitiveness policy; the target business structure becomes managed cluster-based specialisation rather than all involving multiple structure; the focus of development turns from the operational environment to a comprehensive development of the

competitiveness of an urban region; and marketing strategy changes from infrastructure marketing to image marketing and brand creation. The organisation of development of an urban region becomes more and more network-based and the (learning) development network takes the stage as the essential actor.

Tiivistelmä

Tietoyhteiskuntakehitys ja globalisaatio vaikuttavat monin tavoin taloudellisten toimijoiden kuten yksilöiden, yritysten, kaupunkiseutujen ja valtioiden toimintaympäristöön. Tapahtuvan muutoksen myötä kaupunkiseudut ovat joutuneet uudenlaiseen toimintaympäristöön, jolle on ominaista esimerkiksi globaali kilpailu yritysten ja osaavan työvoiman sijainnista sekä tiedon, osaamisen ja innovaatioiden korostuminen taloudellisen kasvun luojina. Tämä pakottaa kaupunkiseudut uudella tavalla jatkuvasti kehittämään omaa kilpailukykyään. Tutkimuksessa on tarkasteltu kaupunkiseudun kehittämistä ja elinkeinopolitiikkaa globaalin tietoyhteiskunnan eli verkostoyhteiskunnan viitekehyksessä. Verkostoyhteiskuntaa on tulkittu Castellsin virtojen tila – käsitteen avulla. Kaupunkiseudun kilpailukyky on määritelty sen kyvyksi vetää puoleensa kaupunkiseudun kannalta tärkeitä virtoja.

Tutkimus koostuu viidestä erillisestä osatutkimuksesta (artikkelista) sekä johdanto- ja yhteenvedoartikkelista, jotka kaikki kytkeytyvät tiiviisti virtojen tilaan sekä kaupunkiseudun kilpailukykyyn ja sen elementteihin. Tutkimuksen tehtävänä on tutkia ja kehittää kaupunkiseutujen kilpailukykyyn ja elinkeinopolitiikan teoriaa, lähestymistapoja sekä malleja tukemaan suomalaisten kaupunkiseutujen kehittämistä ja elinkeinopoliittista uudistumista. Tutkimus sisältää sekä teoreettisia että empiirisiä elementtejä. Käytettyä menetelmää voidaan yleisesti luonnehtia hermeneuttiseksi eli ymmärtäväksi ja tiedonintressiä käytännölliseksi. Tutkimuksen aineisto on pääosin laadullista. Tutkimuksen kohteena ja sovellusesimerkkeinä on käytetty suuria suomalaisia kaupunkiseutuja (Helsinki, Jyväskylä, Oulu, Tampere ja Turku).

Tutkimuksen tuloksena on synnytyt kaupunkiseudun analysoinnin ja kehittämisen tueksi uusia tai tässä tutkimuksessa edelleen kehitettyjä konsepteja ja lähestymistapoja, jotka ovat sovellettavissa yleisesti kaupunkiseutuihin. Näitä ovat virtojen tila, kaupunkiseudun kilpailukyky, kokonaisvaltainen elinkeinopolitiikka, innovatiivinen miljöö sekä kaupunkiseudun kehittäjäverkoston *Ba:t*. Tutkimuksen tuloksia voidaan havainnollistaa myös kuvaamalla siirtymää 1990 –luvun kaupunkiseudun elinkeinopolitiikasta 2000 –luvun alun elinkeinopolitiikkaan. Tällöin esimerkiksi kaupunkiseudun ke-

hittämisen toimintaympäristö muuttuu kansallisesta globaaliksi, toimintaympäristön tyyppi paikkojen tilasta virtojen tilaksi, kehittämissä politiikan tyyppi subventiopolitiikasta kilpailukyky politiikkaan, tavoiteltava elinkeinorakenne monipuolisesta hallittuun klusteripohjaiseen erikoistumiseen, kehittämisen kohde yritysten toimintaympäristöstä kaupunkiseudun kilpailukyvyyn kokonaisvaltaiseen kehittämiseen sekä markkinointistrategia infrastruktuuri-markkinoinnista imagomarkkinointiin ja brandien rakentamiseen. Kaupunkiseudun kehittämisen organisoituminen tapahtuu yhä enemmän verkostojen muodossa ja keskeinen kehittämistoimija on kaupunkiseudun (oppiva)kehittäjäverkosto.

Juha Kostiainen

Urban Economic Development Policy in the Network Society¹

¹ Translated from Finnish by Hannu Tervaharju (This article is in Finnish in the appendix)

1

The changing operational environment of urban regions

”Change is the only constant” is one of the most commonly repeated claims in the social discourse of the past few years. This claim would appear justified in light of the pace of development during the past twenty, and especially the past ten years. It is commonly accepted that the information society has quickly replaced the industrial society. While this view is generally accepted, the situation is not necessarily the same as regards the content of the information society. It has been suggested that within the information society information becomes the dominant production factor and that the productive paradigm will change. Services in general have become increasingly important and global communications technology has brought people closer together; information professions expand and some experts predict that the enormous amount of available information will create separate information realities¹. (Sotarauta and Kostiainen 1999.) During the last decades information and communication technology has undeniably played a central role in shaping change, but the fact that information itself has become the most important production factor lies at the core of this change. Information that is important in itself as content may naturally also be related to technology or its application. In this context it is essential to make a distinction between the concepts of information and knowledge. According to the classical definition, knowledge is a truth, justified belief, whereas information does not necessarily possess these qualities². It can also be said that knowledge is information that has been given a meaning or an interpretation. The growth of information

¹ On the concept of information society and the development of information society theory, see Webster 1995, Hautamäki 1996 ja Kasvio 2001.

² On a more detailed description of the concepts, see Niiniluoto 1989.

and communication technology has had great importance in making the development of the information society possible and in accelerating its pace.

Another "megatrend", globalisation, is linked to the development of the information society. Webster (2001, 261) defines globalisation as a growing and accelerating process wherein various economic, industrial, and intellectual relationships become interdependent and connect globally as the time-space ratio diminishes. Global relationships influence us all, for example, through the food we eat, the media we observe and the ways we work. Information and communication technology has also hastened globalisation, as it has made possible the worldwide distribution of various contents in an efficient, cheap, and fast way. Castells (1996, 66) sums up the difference between the information society and globalisation by observing that in the information society the competitiveness of economic actors hinges on their ability to produce, process, and apply new information. Globalisation, on the other hand, deals with the worldwide organisation of the economy's core processes (production, consumption, etc.) and their components (capital, information, etc.). However, Castells emphasises the strong intertwining of these two phenomena¹. Hautamäki (2001, 17) has summarised the general features of globalisation as follows:

- **dependency**; regional economies are profoundly dependent on each others' development and trends
- **mobility**; people, capital, goods, and services move regardless of borders

The current change has also been characterised as postmodern, the next development stage of modern society. Bauman (1996, 21), writing about the enchantment of the postmodern world, describes postmodern as a licence to do whatever one wants and an encouragement not to take too seriously anything that someone else does. In a postmodern world, a person must pay attention simultaneously to all directions as well as to the speed with which things are changing. The individual may experience existence as a life sentence inside a shopping mall and, contrary to one of the key insights of Western philosophy, may not take on a permanent self but instead engage in a constant constitution and reconstitution of the self (Bauman 1996, 21, 197).² In the postmodern society a person is therefore first and foremost an individual – an individual who is increasingly aware of his/her environment and choices, and at the same time, at least in principle, an ethically more responsible actor, because he/she alone is the ultimate foundation of the choices made.

¹ On globalisation, see e.g. the final report of SITRA's extensive research programme (Väyrynen 1999) and Mannermaa 1998.

² Examples of postmodern texts: see Lyotard 1985, Virilio 1998 and Baudrillard 1995.

The postmodern era ushers in the end the age of the great stories, the meta-narratives of religion, enlightenment philosophy, and modernity and therefore a person's external foundation for choices or ethics disappears.

From an economic point of view, knowledge, expertise, innovation, skill, and learning have become the central factors influencing change. Already by the 1980s, evolutionary economics¹ emphasising technological change and innovation and the new growth theories provided an alternative to neo-classical economics. Evolutionary economics has regarded the technological change of the information society as the development of information and communication technology. Notably Paul Romer has attempted to formalise the new views in mathematical terms; according to him, economies with the most extensive reserves of human capital will grow the fastest (Romer 1990, 99). He has also stressed that, contrary to the more traditional kinds of capital, knowledge has an increasing marginal return; in other words, it can grow without limits (Romer 1986, 1003). Romer accurately summarises the core of knowledge-based economies when he states that research, inventions, and innovations are overwhelmingly important factors of economic growth and that the commercial products created as a result of these activities differ fundamentally from conventional products (Romer 1993, 562). In the same spirit, Lundvall and Johnson (1994, 26) have called the new economic operational environment the learning economy, by which they refer to a new techno-economic paradigm typified by widespread use of ICT², flexible specialisation, innovation as the central competitive factor and learning as the central ability. In the development of the knowledge-based economy one of the most important concepts and tools has been the innovation systems, both on the national and regional level³. These ideas became visible in official Finnish science, technology, and economic development policies during the early 1990s⁴.

With these changes, the opportunities for nation-states to control the economies within their own territories have deteriorated (Webster 2001); regions rise from within them to become a more central part of the world economy (Ohmae 1995, Scott 1996). One of the paradoxes of the information society is the fact that although ICT makes it possible to work without regard

¹ On evolutionary economics, see e.g. Dosi et al. 1988, Lemola 2000 and Simmie 2001a.

² ICT = information and communication technology

³ On innovation systems, see e.g. the final report of SITRA's extensive research programme (Schienstock and Hämäläinen 2001), Kostiainen 2000 and Edquist 1997.

⁴ See e.g. Katsaus 1990: Tiede- ja teknologiapolitiikan suuntaviivat 1990 –luvulla, Kansallinen teollisuusstrategia sekä Tiedon ja osaamisen Suomi – Kehittämisstrategia.

to time and place, companies of knowledge-intensity in particular gather in expertise centres (Hautamäki 1996, 16). One important reason for this concentration is the tacit knowledge at the core of the innovation process (Nonaka and Takeuchi 1995, Kostiainen 2002), which, in spite of all the new technology, is only mediated through face-to-face interaction. Furthermore, the increasingly rapid modification of the information makes rapid utilisation possible only to those who have participated in the creation of the information (Lundvall and Borrás 1997, 28). The concentration of expertise is important for the success of a place, but Webster (2001, 272) emphasises that the image of the place is also important. According to him, the importance of places used to be based on physical location (Gibraltar, for example), but today the image is the key, as the importance of space as such has diminished. Jensen (1999) has suggested that the information society has already passed its peak and a new form of social order, the dream society, is emerging. Instead of information and knowledge, the dream society is governed by the visual and by images, but also by stories, myths, and legends. In this way the learning economy transitions into the experience economy, where the seller is a stager and the buyer is a guest (Pine II and Gilmore 1999). Consistent with postmodern thought, in the dream society, the importance of image and brand gets even more emphasised (Kostiainen 2001).

The compact overview above will probably suffice to strengthen the notion that we live in the middle of constant change. Depending on the point of view, certain trends emerge in this change that define the operational environment of the economic actors. These trends include, for example, an emphasis of the significance of information, learning, and innovations; cultural pluralism; growing importance of communication; increasing movement of all kinds and the change of the meaning and role of places. Equally clear is the strong interaction and intertwining of the change components, or "megatrends", mentioned above. The interaction might be described by the following chain of deductions, which could just as easily start from another point along the chain. In the information society, the importance of information as a production factor gets emphasised. ICT makes the global spreading of information as well as other production factors more efficient, which in turn increases the importance of information. The growing importance of information in turn promotes globalisation, because the increasing information-intensity in products and services drives up development costs and thereby necessitates a wider market. When it is easier and easier to receive information about the chances for choices, the readiness for making more versatile choices than before also increases, at least in principle, promoting

postmodern multiplicity. Information as the most central production factor is a prerequisite for innovations, the likelihood of which is increased by global deregulation or by conscious efforts to liberate markets and to increase competition, for example. In this way the various factors grow stronger through their mutual interaction, but it is very difficult to say which came first. Tacit knowledge lends an interesting colour to this whole since its transference as a local process would seem to offer urban regions one opportunity for independent development and global connection free from the terms dictated by external forces. While the change described here is general in itself, it involves cities in particular, as innovative activities concentrate precisely in cities and are both the first producers and first applicers of the innovations¹. Cities are also, as it were, laboratories, where it is possible to observe the changes (Ilmonen 2000, 27).

From the point of view of cities and regions the change spells major challenges: how to create an environment that promotes learning and the birth of new innovations? How to attract to the region knowledge-intensive activities that create added value? How to create and maintain an image that would persuade skilled labour to move into a region? How to root the present inhabitants and companies to the soil of the region? The last concern involves, for example, several Finnish municipalities and cities that face a constant threat of out-migration. According to Castells (1999, 11), cities and regions have to find their own specific roles within the information society. Finding that role is not necessarily easy, and, as Väyrynen (1999, 180) observes, the cities themselves have increasingly taken on the responsibility for the search, as the state has limited means to influence their development in a global world.

This dissertation thesis analyses the economic development policy, development, and competitiveness of cities and urban regions within the context of the global information society or, to use Castell's (1996) term, the network society. This study aims to develop a new approach to study urban economic development policy based on the concept of competitiveness. It also seeks to help urban regions develop sound practices. The study moves in several fields of science and research, such as marketing, network theory, knowledge management, sociology, social and economic history, (evolutionary) economics, economic geography and urban studies. Simmie's (2001a, 11) term "geography of innovation" also describes this study well.

¹ For a more detailed description of the role of cities and metropolitan regions, see e.g. Andersson 1987, Seppälä 1986, and Simmie 2001b.

The salience of place, the urban region, connects the different perspectives of the analysis, and therefore the study as a whole belongs to the field of regional studies.

As a whole this dissertation thesis is compiled from five separately published articles and an introductory summary article. The articles are *Competitiveness and Urban Economic Development Policy in Information Society* (Kostiainen 1999), *Helsingin, Oulun ja Tampereen kaupunkiseudut innovatiivisina miljöinä* (Kostiainen 2000), *Kaupunkimarkkinointi globaalissa kilpailutilanteessa. Esimerkkeinä Jyväskylän, Tampereen ja Turun kaupunkiseudut* (Kostiainen 2001), *Learning and the "Ba" in the Development Network of an Urban Region* (Kostiainen 2002), and *Great Leap or Long March to Knowledge Economy: Institutions, Actors and Resources in the Development of Tampere, Finland* (Kostiainen and Sotarauta, forthcoming). This introductory summary article presents the general framework of the study (Chapter 2), the task and aims of the study (Chapter 3), the methods and research material of the study (Chapter 4) and the results of the study (Chapter 5).

2

The general framework of the study

According to Alasuutari (1994, 69), observations in social scientific research are studied only from a single, explicitly determined point of view. This specific point of view is called the theoretical framework. The specific point of view of this study is constructed around two central concepts: the space of flows and the competitiveness of urban region¹. The general framework has been developed in the article *Competitiveness and Urban Economic Development Policy in Information Society* (Kostiainen 1999). The following analysis is based on this article, unless stated otherwise.

Manuel Castells (1996) has described the new economic order with the terms informational and global, emphasising the intertwined nature of these features. Castells calls the global, informational society the network society, where dominating activities and processes are increasingly organised inside networks and where network participation and network dynamics are critical sources of power. The modern network society is constructed around various flows, for example flows of capital, flows of information, flows of technology, flows of images, flows of sound, flows of symbols, and flows that express organisational interaction. By flows Castells refers to purposeful, repetitive and programmable exchange and interaction between physically disjointed actors. The flows are manifestations of the economic, political, and symbolic processes that dominate our society.

The developing information technology enables an increasingly rapid interconnection of various flows by diminishing the time-space ratio. Castells (1996) describes the change by stating that we have moved from a space of places to a space of flows. Castells' flows are transferred through information

¹ Each article of the study has a theoretical framework of its own, but a link to the urban competitiveness and the space of flows is common to them all. These concepts form the general point of view, i.e. general framework, of the study.

networks, but it is also possible to describe the movement of people and companies with the help of the concept of flow, as I have done in the article mentioned above. In that case the transportation networks promoting mobility also receive an important role in the space of flows, along information networks. Information and transportation networks form the first layer of the space of flows when Castells' heuristic model is developed in this way.

The second layer of the space of flows is constructed around nodes and hubs – in other words, places are also needed. The hubs promote fluent communication, and strategically important activities are situated in the nodes. Both hubs and nodes are organised hierarchically, according to their relative importance. The importance does not mean the formal power position or physical characteristics of the place; instead, it refers to the whole consisting of the mental and material resources of the place's actors. The importance is a relative phenomenon changing constantly in time, and in a dynamic space of flows the importance of a place may decrease rapidly, whereby the place may drift outside important networks. No permanent competition advantages adhere to the space of flows. The third layer of the flows consists of power elites that control the activities taking place in the space of flows. In the space of flows, places interact in the shape of flows, and thus the network society can be described as the "flowing world" (Castells 1996.) of Figure 1:

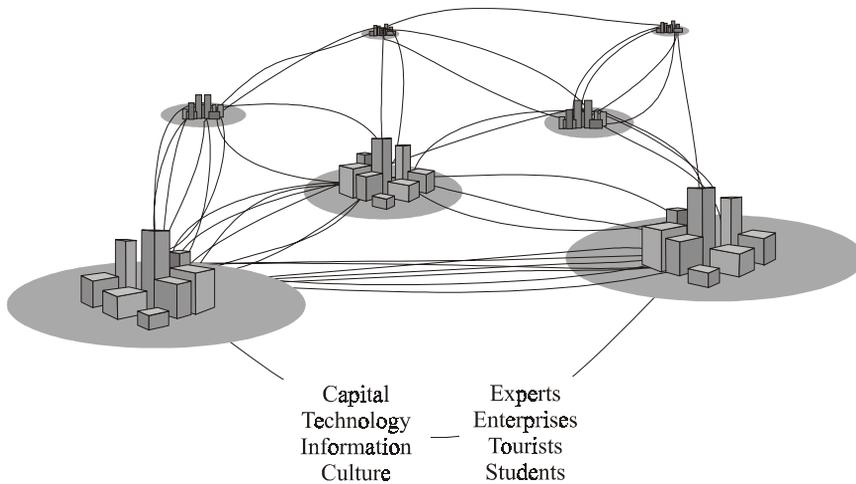


Figure 1. Flowing world (Sotarauta 1999, 141).

The central property defining the space of flows is dynamics. The flows move through hubs and nodes, but when the importance of a place changes, the flows rapidly route elsewhere. Another important factor is little "friction"

between communication and physical streams, a comprehensive and working infrastructure. The space of flows as such is a global phenomenon, but places have great importance within it. It does not lack places, even if its operational logic does.

In order for places or urban regions to prosper in a flowing world, in order for them to draw in the flows important to them, they need to be attractive. In a global space of flows, no place can be attractive to all flows. This means that the places have to make choices about precisely what kinds of flows they attempt to attract. While developing their attractiveness, places need to specialise in order to appear truly attractive to at least some of the flows. As Nordström and Ridderstråle (1999, 185) have pointedly described, in the new situation stars attract stars, and losers attract losers, and individuals, companies and regions are all players in the great global game of attraction. In order to win in the game of attraction, an urban region has to be competitive. As regards the space of flows, and in this study in particular, competitiveness means ...

an urban region's ability to attract the flows of information, technology, capital, culture, people, and organisations important to it as well as its ability to maintain the inhabitants' quality of life and living standards and to create innovative environments that enable the companies operating in the urban region to promote their own competitiveness.

The concept of competitiveness has previously been linked mainly to companies, but in the past ten years it has also been linked first to nations¹, then also to regions². The concept of urban regional competitiveness links the success of the urban region to the space of flows and also highlights the importance of expertise and innovativeness as they relate to information society thematics in the form of an innovative operational environment.

The concept of competitiveness of an urban region has been developed for several years at *Sente*, the Tampere University Research Unit for Urban and Regional Development Studies. Linnamaa (1999) has suggested that urban region competitiveness consists of six elements: infrastructure, human resources, quality of living environment, institutions, efficient development networks, and membership in networks. The elements of competitiveness can be divided into two principal types – structural competitiveness and dynamic competitiveness. According to Linnamaa (1999), structural

¹ See e.g. Porter 1991 and Ministry of Finance's Suomi taloudellisena toimintaympäristönä – report of 1998. World Economic Forum (www.weforum.org) and the Swiss IMD (www.imd.ch) annually publish a report on the countries' competitiveness.

² In addition to Kostiaainen 1999, see e.g. Linnamaa 1999 and Huovari et al. 2001.

competitiveness consists of factors that define the framework for development within the urban region; dynamic competitiveness for its part is related to interaction between the actors, the ability of the actors to learn and to create innovations through co-operation. The elements of competitiveness are interdependent.

The concept of competitiveness of an urban region has evolved in Sente's research projects, and the latest version is presented in Sotarauta's (2001) article *Kehittämispelit ja kaupunkiseudun kilpailukyvyn kahdeksas elementti*. Within it, the "competitiveness cube" takes the form of Figure 2.

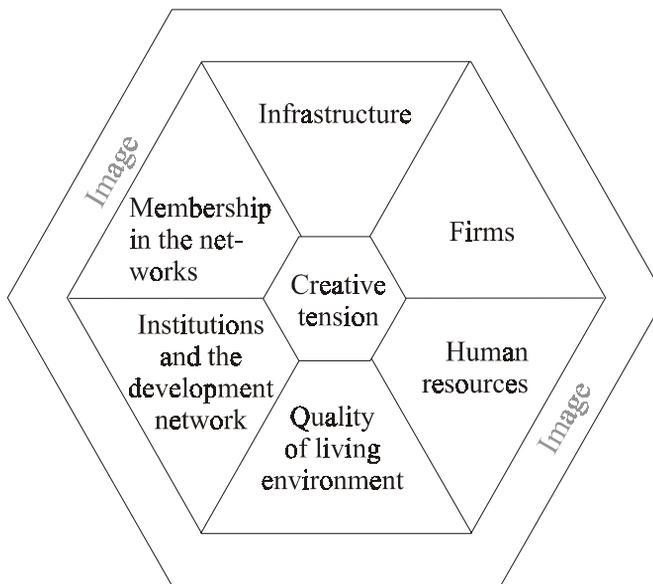


Figure 2. The eight elements of urban region competitiveness (Sotarauta 2001, 206).

The elements of urban region competitiveness form an interdependent whole, but the research on and development of competitiveness require its division into manageable parts. A more detailed content description of the competitiveness elements or parts has been presented in the research of Kostiainen (1999), Linnamaa (1999), Raunio and Linnamaa (2000), Raunio (2001), and Sotarauta et al. (2001). We should nevertheless bring up the latest, or the last identified, element of urban region competitiveness: the *creative tension* at the core of the competitiveness cube. Creative tension is first and foremost a state, not a mode of action or the content of the other competitiveness elements. At its best it is a force affecting both the region's renewal and development and the development of the individual elements.

The state of creative tension makes people look for solutions and act in new and surprising ways. At the same time it provides development activities with a new openness and orientation to the future. The state of creative tension creates something new and unprecedented that cannot be predicted in advance. One important question from the point of view of urban region development is how to produce creative tension and how to direct the energy it contains. (Sotarauta 2001.)

In the global information society, or the space of flows, urban regions compete for the flows of companies and their partial functions, skilled labour, information, capital, and for other flows. In order to succeed in the competition they have to appeal to the flows they seek. The elements of competitiveness must have achieved a sufficiently high standard and must support each other and thereby create a strong foundation for the development of the urban region. Furthermore, an urban region must create a competitive edge, in other words it has to be able to stand out from other urban regions competing for the same flows (Sotarauta 2001, 204). As such, competitiveness operates as a whole, and most often a given urban region either attracts flows or does not; it is true that certain elements affect certain flows more than other elements.

It is particularly important to observe that the competitiveness of an urban region does not emanate from some general quality of desirability. Urban regions cannot be, as it were thought earlier, generally competitive: instead, they are competitive in relation to the flows they attempt to attract. Kuusamo¹, for example, may be more competitive than Tampere as regards nature tourism, whereas Tampere may be more competitive as regards health technology companies' product development activities. We cannot say, however, that Tampere would be generally more competitive than Kuusamo, or the reverse. If we would like to rank various cities' competitiveness, their goals would have to be similar. Huovari et al. (2001) represent a totally different point of view, as they classify Finnish urban regions on the basis of fixed statistical competitiveness indicators. The Finnish city network research of the past few years concur, classifying urban regions by certain indicators².

The point of departure for the concept of competitiveness is competition. This study does not presume any value-related point of departure that would mark competition as intrinsically desirable or valuable; instead, the study begins with the analysis of the change which results in urban regions being

¹ Kuusamo is a small municipality in the North-East Finland with well known facilities for example skiing and fishing.

² See Vartiainen 1995 as well as Vartiainen and Antikainen 1998.

forced to enter global competition, whether they want to or not – naturally assuming that they hope for at least some kind of economic welfare. It is true that in Finland the offering of statutory services to the residents necessitates the maintenance of the economic foundation on some level, and it is presumable that an acceptable level cannot be reached without conscious development efforts. Still, as a term, competitiveness carries with it some kind of ideological ballast. Nonetheless competitiveness is important as a tool. Competitive urban regions can create preconditions for sufficient quality of life and living standards, as well as innovative operational environments for companies. The innovative operational environment is needed because prospering in the information society requires innovative efforts and innovations. The development of competitiveness also requires co-operative ability and membership in networks.

The concepts of the space of flows and urban region competitiveness, then, create the general framework of this study. Castells (1996, 66) has observed that the competitiveness of all economic actors hinges on their ability to produce, process, and apply new information. Lundvall and Borrás (1997, 31) say that, due to the fast pace of change, specialised knowledge becomes increasingly short-lived, and therefore learning ability and the flexibility to adjust to changing circumstances increasingly define the capacity of individuals, companies, regions, and nations. They call this kind of economic operating environment the learning economy. The learning economy does not equal the high tech economy, as learning is necessary for all companies; learning in this context refers to the development of new competencies and skills (Lundvall and Borrás 1997, 35). The term informational economy has also sometimes been used. The idea of the learning economy or informational economy is strongly linked to the space of flows and urban region competitiveness and makes use of the concepts of innovation system, innovative milieu, research and development (R&D), learning, innovation networks, and path dependence. This study uses these concepts, defining them more specifically in their context¹.

¹ See Kostiaainen 1999, 2000 ja 2002 and Kostiaainen & Sotarauta, forthcoming.

3

The task and aims of the study

This study aims to interpret and understand the change taking place in the operational environment of urban regions from the point of view of their development and economic development policy. It seeks to create concepts useful to urban regions and their economic development policies in the face of the challenges created by the new operational environment. The new operational environment is understood as the global information society, the network society. Varto (1992, 52) emphasises that the researcher should thematise his/her research subject, that is, pick a distinct theme for the subject within the issue under study. The theme is thus a kind of leading thought or point of view the researcher uses to observe the subject. In this study, the subject is urban regions, and they are analysed from the point of view of competitiveness and economic development policy.

Research task

The research task is to analyse and develop the approaches and models of competitiveness of urban regions and economic development policy to support Finnish urban regions' development and economic development policy renewal.

Research problem

How are competitiveness of urban regions and economic development policy outlined in the global information society?

The research task is analysed by seeking answers to the following question wholes:

- What does global information society mean from the point of view of urban regional development? What is the competitiveness of an urban region?

- What are the factors influencing regional economic growth? What innovation-promoting operational environments, or innovative milieu, do knowledge-based economies necessitate? How can those necessary factors be recognised, quantified, and developed?
- What does networking between actors mean in the development of urban regions? How do development networks learn, and how can their learning be promoted?
- How should the concept of city marketing be understood? How are cities marketed in the information society and in a global competitive situation? How is the meaning of city marketing changing?
- How is a regional knowledge-based economy created? What is the significance of time and path dependence in the creation of a knowledge-based economy?

The *main aims of the study* cluster around themes related to the question wholes:

- To create an interpretation of the global information society or network society suitable for the development of urban regions.
- To develop the theory of economic development policy for urban regions with mainly Finnish urban regions as application targets.
- To offer actors responsible for the development of urban regions – commune leadership, state economic development officials, technology centres, expertise centres, development companies, economic development organisations, institutes of learning and research, and companies participating in the development – models of thought and operation needed to understand fast-paced change and renew economic development policy.

The question setting reveals certain central underlying assumptions and restrictions. The study begins with a commitment to the network society as the general urban regional operational environment and develops a specific interpretation for that environment. That definition focuses on urban environments on the Finnish scale without adhering to administrative restrictions in the sense of locality. Locality research, emerging in the 1980s through a combination of old regional geography and social theoretical geography, abandoned regional administrative units with little importance to people's daily lives as the self-evident unit of study and introduced the concept of locality. (Häkli 1999, 113.) Informed by this understanding of locality, this study refers to an urban region as an operational unit experienced by the actors within it¹. Again de-emphasising administrative restrictions, the study avoids determining beforehand "whose responsibility" it is to develop urban

¹ While using statistical research material I have had to use only Ministry of Interior's division of regions, because they are statistical units. This has been stated in the articles in question.

regions. Both act (1135/93) and statute (1315/93) on regional development transfer the responsibility for regional development to regional councils formed by communes while emphasising programmes and co-ordination of the various actors' activities. On the other hand, the municipal law states that a municipality has both a universal and a special field of activity, and the universal field of activity includes the possibility that the municipality can assume tasks related to regional development and economic development policy. The idea of this study is that developing urban regions involves network-like activities where anybody can manage the networks¹ and where various actors may or may not take on responsibility.

Finnish regional economic development policy can broadly be defined in two different ways. According to the narrow definition, economic development policy addresses the supply of business activities' location factors and adjusts the supply of demand factors with their demand. In this case, a commune's economic development policy would take care of companies' general operational preconditions, such as lots, transportation connections, and municipal engineering. According to the wider definition, economic development policy involves the comprehensive development of a commune or a larger region. In this case the underlying idea is that municipal economic development policy has two interest groups: companies and inhabitants (Wuori et al. 1999, 18.) This study uses the wider definition, and therefore analyses side by side the development of urban region competitiveness and economic development policy. The urban region development's inhabitant interest group includes not only the actual inhabitants, but also the potential inhabitants. One question coming up in the study is precisely the relationship between companies and individuals. Castells pointed out as early as 1989 (Castells 1999, 11) that in an informational economy productivity depends on the ability to generate and process new information, which in turn depends on the labour force's symbol-manipulating ability. This informational potential of the labour force is a function of the general living conditions, in other words, it depends on the ability of the social milieu to produce and stimulate intellectual development. The success of localities in the informational economy depends equally on social milieu and on companies and jobs.

In this study, economic development policy is interpreted as strategies for comprehensive development of an urban region as a locality, not primarily

¹ On networks in the development of urban regions and on leading networks, see Kickert et al. 1997, Sotarauta and Linnamaa 1999, and Kostianen 2002.

as an administrative operation but rather as a network-type operation rising from local will. The operational environment of the development is the network society as space of flows.

4

The methods and research material of the study

4.1. Methods

The general nature, aims, and methods of research can be described according to several different categories. The German philosopher Dilthey, the creator of hermeneutics, made a division between humanistic sciences and natural sciences in the Nineteenth Century. This division of labour reflected a fundamental methodological difference, wherein the human and social sciences took as their goal understanding and interpreting phenomena and things, and the natural sciences sought to explain phenomena and things. It is interesting to observe that, at the time, understanding was considered the highest form of historical knowledge and such knowledge did not have to compete with the natural sciences for status. (Häkli 1999, 65.)

Regarding the methodological trends research can be divided positivist, humanist, and structural research. The ideal of positivism is to remove from valid knowledge all elements that cannot be verified through empirical observations; its model of science and knowledge is the natural sciences. The humanist, or hermeneutical (interpretative) methodology is based on the idea of humans being special in relation to nature. Humans are not only a product of the world but also its active producers both physically and spiritually. No one common philosophical foundation underpins humanist-oriented research, and as a methodological guiding principle it is more fractured than the positivist methodology. However, understanding and interpreting is the common objective. The key idea of the structuralist methodology is that a whole is more than the sum of its parts, i.e. the relationships between the parts contribute to the whole formed by the parts.

In social science structuralism leads to the search for causes of human behaviour behind the visible forms. Thus structuralist methodology is characterised by efforts to find and recognise the deep structures of social phenomena and to explain concrete phenomena with their help. (Häkli 1999.)

This combination of methodologies can be linked to Habermas' theory of interest of knowledge. According to Habermas there are three types of interest of knowledge. The technical interest of knowledge generates work aiming at dominating, utilising, and changing the physical and social environment. The practical interest of knowledge focuses on the consensus about the interpretations that language and culture provide for the world necessary for the durability and continuity of society. The critical interest of knowledge explores social power and power structures, seeking particularly to expose such power structures that have become so concrete and embedded that they resemble natural phenomena. Methodological trends can be combined with interests of knowledge and the structures transferring them as shown in Table 1. (Häkli 1999, 29-35.)

Table 1. The relationship between interests of knowledge and methodological trends (Häkli 1999, 31).

Methodological trends of research	Interest of knowledge	Where does the interest transfer
Positivistic	Technical	Work
Humanistic	Practical	Language
Structuralist	Critical (emansipatoric)	Power

The methods used in research can be classed as quantitative and qualitative methods. The quantitative trend assumes that the research subject is independent of the researcher, whereas the qualitative strategy states that the subject and the researcher interact. According to the former the task of the researcher is mainly to come up with the correct methods, while in the latter the researchers are also involved in the creation of their subject. (Hirsjärvi and Hurme 2001, 23.) According to Alasuutari, the methods of social science – statistical queries and the quantitative analysis of the interviews i.e. questionnaire research and qualitative research – are often seen as strongly separate methods. In his opinion, quantitative and qualitative analyses may

be separated, but they can also quite easily be applied in the same research and in the analysis of the same research material. (Alasuutari 1994, 22-23.) Alasuutari is supported by Hirsjärvi and Hurme (2001, 27) when they point out that as mainly quantitatively oriented and mainly qualitatively oriented researchers have different attitudes as regards the status of theory, it may be better to state that the research problem determines the method used. As a research project may involve several different kinds of problems, several different methods can also be used.

The general methodological approach and the entire research approach of this study can be characterised as hermeneutic. The goal is to understand the change around us from the point of view of urban development and to develop from that basis approaches and operational models that Finnish urban regions in particular can utilise in their own work. The challenge of understanding is directed not only to change but also to ideas concerning economic development policy at least in the urban regions used in the study as well as to how urban regions are being developed in practice. In Habermas' terms the interest of knowledge of the study is a practical one. Varto (1992, 28) has divided research into two main terms of interest: the theoretical and the practical type. Theoretical interest drives researchers to look for theory-oriented research material, while practical interest guides research for material that can be applied and that is suited to individual cases. In this sense the interest of this study is by nature mainly applied.

The understanding research approach often engages qualitative methods. Four out of the five articles in the study can be characterised as qualitative. The article *Innovatiivinen miljöö* (Kostiainen 2000) utilises a relatively large statistical database; however, the data have not been subjected to extensive statistical refinement. Thus the analysis remains mainly qualitative.

Varto (1992, 99) has pointed out that a researcher cannot adopt the perfect method since each specific research creates its own necessary method. In other words, each research requires the creation of a method specific for that research, although certain textbook methods can be applied as the foundation. In itself the creation of the method is an on-going process; qualitative research always necessitates continuous specification, revision, and targeting of its method. The qualitative method of this study is the concept analysis, and in the article *Kaupunkimarkkinointi* (Kostiainen 2001) it is the theme interview (Hirsjärvi and Hurme 2001). Among the separately published articles, the *Great Leap* (Kostiainen and Sotarauta, forthcoming) by its nature represents economic and social historical qualitative research. The aim of the study has been particularly to concentrate on what Varto (1994, 140-141) calls

“thinking”. He makes a distinction between thought and thinking. Thought is wisdom that has been completed; thinking is activity where each thinker must find out how well his or her thinking corresponds to the world – or does not.

For most of the time during the preparation of this study I was involved with the same questions as the director of economic development of the City of Tampere, so I had to assess the accuracy of my thinking in relation to the world on a daily basis¹. The role of a participant also helped me to perceive and understand the research subject and to pay attention to different issues than before. Understanding practical economic development policy as a question mainly related to companies appeared to be too narrow a perspective. This new awareness served in part to broaden my thinking to include the wider competitiveness angle and to make the research approach hermeneutic and concept analytical in the sense that the study creates new concepts through analyses and syntheses and attempts to argue for them rather than to verify them.

Research and the parallel practical work can be interpreted as a learning process in the sense of the hermeneutic cycle. According to Teräväinen (1982, 88-89), hermeneutic research involves the idea of a cycle wherein the research transcends its own preliminary understandings of the subject being researched. The preliminary understanding itself can then become a subject for research. This process more accurately resembles a spiral than a cycle: the research setting does not lead back to the preliminary understanding but to a wider theoretical understanding of the topic.

The parallel relationship between practice and research can also be approached with the help of Kolb’s cycle of experiential learning (Figure 3). In this cycle, the core of experiential learning does not so much lie in the point of departure experience as it does in the experience produced by the learning process. The most crucial phase of the learning process comes during the reflecting phase, which in this context, parallels the implementation of the research and grows out of the variance between the learner’s thinking and doing. The tension between reflecting and implementing maintains learning and creates foundations for continuous learning. The tension between concrete experience and abstract conceptualisation mainly has importance in terms of motivation. Becoming aware of the experience begins as realising, through reflective perception, that something has happened. The goal is to

¹ I worked as the director of economic development of the City of Tampere between 9/1997-7/2001, and this study began in May 1998, when I wrote the research design. I submitted my dissertation thesis to the preliminary inspection in April 2002.

understand what has happened and to give it a conceptual form, after which it can be shared with others. The conceptualisation may happen either via generalisation or via theoretical concepts. This study conceptualises via theoretical concepts. (Järvinen et al. 2000, 89-90.) Thus learning proceeds through a series of rounds and actually approaches the idea of the hermeneutic cycle.

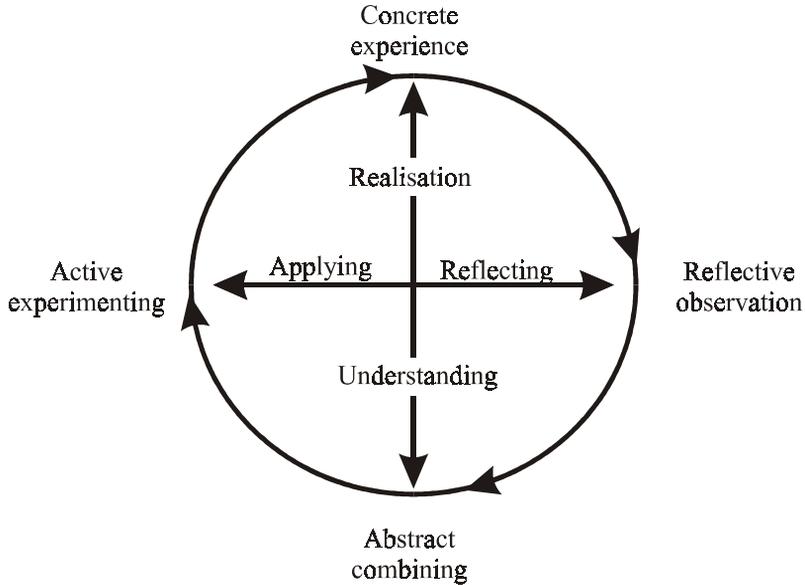


Figure 3. Kolb's cycle of experiential learning (Järvinen et al. 2000, 90)

As regards the role of the researcher as an outside observer of phenomena but also a participant-actor, Buttimer (1974)¹ has pointed out that the researcher must be able to move between these different interpretative frameworks and to make use of the resources contained in both perspectives. At the same time, the researcher has to assume responsibility and to commit personally to the information he/she produces and to the social questions promoted (or opposed) with the help of that information. In my own case, I have been able to apply the research information to the City of Tampere and its urban economic development policy and to commit to it that way; on the other hand, the combining of research and practical work has made it possible to introduce new questions into the research.

¹ Reference Häkli 1999, 80.

4.2. Research material

The research material in the article "*Competitiveness*" is the research and literature related to the information society, competitiveness and the location behaviour of companies. The concepts developed are illustrated by using the Tampere urban region as the example.

The article "*Innovatiivinen miljö*", in addition to reviewing the literature, provides statistical research material concerning the urban regions of Helsinki, Oulu, and Tampere, acquired for the purpose of the study. The statistical research material contains various indicators or key figures by which have been attempted to describe the innovation level, synergy, quality of life, economic growth, net-migration of skilled labour, and creation of new jobs in the urban regions. The indicators have been refined by deriving from them various mean values and compiled indexes. The difficulty of using various indicators and indexes to describe an innovative milieu and its development at least partially supports the critical claim that the innovative milieu approach lacks empirical evidence.¹ The study as such did not even attempt to find causal connections between various factors but rather sought to describe the directions of the development and to look for a possible coherence in them. Problems related to the research material included the poor availability of suitable statistical data, particularly over long time spans, finding suitable key figures to describe the properties of innovative milieu, the possible emphasises in indexes comprised of several key figures, and the tendency of the indexes to compress the information too tightly. However, the problem does not lie in the research material alone; the concept and approach of innovative milieu itself, and naturally in a more general sense the complex relationship between the entire innovation process and economic growth, present difficulties in and of themselves. It is not possible to make far-reaching conclusions about the causes of urban regions' economic success on the basis of this research material.

The empirical research material compiled in the article "*Kaupunki-markkinointi*" consists of theme interviews carried out in Jyväskylä, Tampere, and Turku and the strategies, plans, and project documents of these cities and urban regions published in writing or on the Internet. Theme interviews revealed views and intentions that are involved in city marketing but do not necessarily show up in documented research material. Furthermore, the theme interviews made it possible to perceive the commitment and motivation of the individuals responsible for the marketing of the cities and to analyse the

¹ On the criticism, see e.g. Legendijk 1998 and Sternberg 1996.

strategy changes or important measures planned in the near future. As such, the role of the empirical research material is mainly to illustrate the conceptual analysis.

The research material of the article "*Ba*" consists of the research and literature related to network management and policy networks, information management and the learning of organisations. The principal source research material is the theory created by Nonaka and his colleagues, which is applied to the development network of the urban region. The applications developed are illustrated using the Tampere urban region as an example.

The research material of the article "*Great Leap*" is the literature and research related to regional development and the relationships between regions, states, and the global system, as well as economic and social historical research on Tampere, various histories, official documents and the plans and reports of certain projects and development programmes, such as the Tampere Region Centre of Expertise Programme and the eTampere Programme.

The research material of the whole study is mainly qualitative. According to Mäkelä (1990, 47-48), the assessment of qualitative research material must consider the following issues:

- the significance and social and cultural position of the research material
- the sufficiency of the research material
- the comprehensiveness of the research material
- the transparency and repeatability of the analysis

With the exception of one separately published article, the research material includes generally available international and Finnish research literature as well as some other public documents. The research material of the article "*Kaupunkimarkkinointi*" is mainly based on interviews. These interviews make possible the development of general frameworks and concepts, and as "analytical tools" they also apply to urban regions in general. In other words, the tools provide a framework for thinking and developing that receives its specific meaning at each urban region in the practical application. In terms of content, the example applications only describe the urban regions in question, and their task is only to illustrate.

By the comprehensiveness and sufficiency of the research material Mäkelä (1990, 52-53) means that the researcher must not base his or her interpretations on incidental observations. There is no clear indicator for the comprehensiveness of qualitative research material, and especially while qualitative research material is always "a slice of the world to be researched" (Alasuutari 1994), it is difficult to know when the "slice" is sufficiently large. One indicator could be the saturation of the research material, which emerged

in the “*Kaupunkimarkkinointi*” research after only a couple of interviews. In other words, the interviewees brought up similar issues, which is understandable in that only a small number of people in the example cities are involved in marketing and the precise objective was to interview them in the first place. Documents also helped to further verify the interpretation of the interviews. As for the qualitative research material based on literature, the major sources (Castells, Webster, Nonaka, Kotler etc.) are eminent researchers in their own fields whose works have undergone debate in a wide scientific community.

By the transparency of the analysis Mäkelä (1990, 53) means that the reader must be able to follow the reasoning and that s/he has been provided with prerequisites to accept the interpretations or to challenge them when needed. The repeatability of the analysis, for its part, means that the methods used in the analysis have been presented so unambiguously that another researcher will reach the same results applying them. The structure of the articles is often relatively dense, in which case the birth and shaping of the interpretation may not be analysed in too much detail. The articles in this study are related to competitiveness of an urban region and the space of flows, and the framework created by them and the foundation of the interpretations has been described more extensively in the introductory summary section in order to provide the described interpretations with sufficient depth. The separately published articles have also aimed at transparency to facilitate the appreciation of the reasoning. From the point of view of the repeatability of the analysis, the general framework in relation to which the analysis takes place has central importance. By applying the study’s framework and the research materials of the study it is possible to reach corresponding conclusions. As regards qualitative research, it should, however, be kept in mind that a slice taken from the world cannot be studied by measuring the slice and generalising the results back into the basic group. The interpretation and analysis opportunities of qualitative research material are not limited to one, or even two, perspectives (Alasuutari 1994, 78-79). In this sense it would undeniably be possible to interpret this research material in various, although not contradictory ways. Such new interpretations would supplement the conclusions of this study.

Varto (1992, 103-104) points out that the validity of qualitative research must be assessed in relation to thematisation. In other words, a research is not valid if it answers a completely different question than the one determined in its thematisation. By the reliability of the research he means its freedom from incidental or irrelevant factors. The study at hand is thematised from

the point of view of urban region competitiveness and economic development policy. Each separately published article has also attempted to look at both topics from this point of view and thereby to answer the question asked. In this sense the study can probably be assessed as valid. The reliability is connected to the transparency and repeatability of the analysis, described in the previous paragraph.

In terms of whether qualitative research can be generalised, Alasuutari (1994, 216) recommends caution and modesty and considers such a posture wiser than claims of universal validity. Instead of generalisation, he recommends the term proportioning because generalisation as a term is reserved for questionnaire research (Alasuutari 1994, 222). In spite of Alasuutari's instructions, it is possible to apply the concepts developed here (comprehensive economic development policy, urban region competitiveness, innovative milieu) in different kinds of urban regions as analytical tools and/or frameworks of analyses.

5 Research results

The main results of the study are presented article by article in a way that links each article to the general framework of the study. In other words, each article describes its connection to the concepts of space of flows and urban region competitiveness. Furthermore, the articles explore the connecting points among themselves. In addition to the results, the articles also analyse in the light of the literature some special questions that are important for competitiveness and that have received little attention in the separately published articles.

5.1. Competitiveness and Urban Economic Development Policy in Information Society

This article creates the general framework of the study by presenting an interpretation of global information society based on a further development of Castells' (1996) space of flows model. The concept of urban region competitiveness is also developed. Urban region competitiveness is defined as its ability to attract the flows that are important to the urban region. Urban region competitiveness and economic development policy are linked together by defining economic development policy as a means to reconcile the goals, strategies and means of the various interest groups from various fields of social life on the urban region level and to co-ordinate the operation in order to develop the region's competitiveness, thereby promoting its economic development activities. The economic development policy of the urban region thus makes strategies for the development of the urban region's competitiveness.

The article also presents a possible model or concept for the implementation of an urban region's economic development policy. The new concept of comprehensive economic development policy determines seven functional areas in which the policy is being implemented. These areas include marketing, welfare infrastructure, material infrastructure, sectors and clusters, new companies, regional innovation system, and human resources. The concept does not comment on enhancing the content of the areas, but provides a generally suitable framework for the analysis of urban regions. The relationship and position of the comprehensive economic development policy as a part of the development policy whole can be illustrated according to Figure 4.

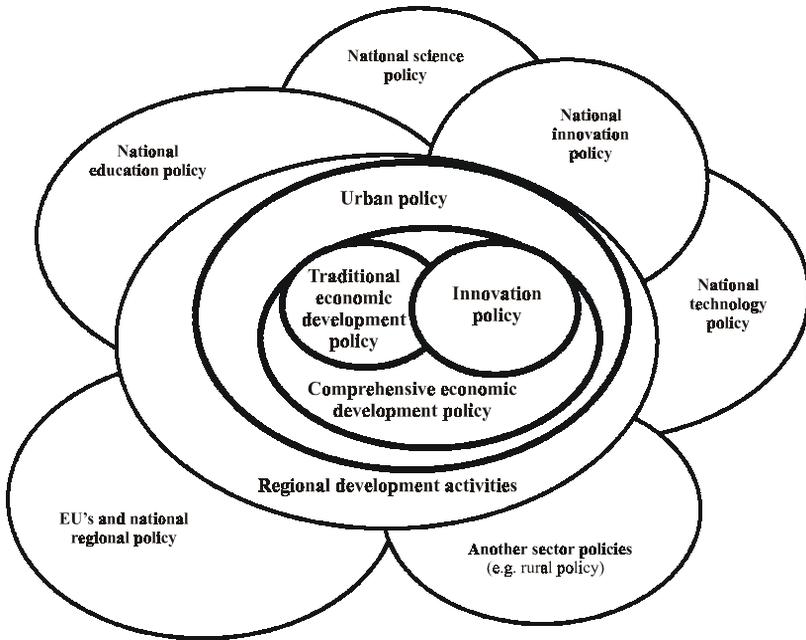


Figure 4. Comprehensive economic development policy as part of the development policy whole (Kolehmainen 2001, 146).

Kolehmainen (2001, 146) interprets the concept of comprehensive economic development policy as bringing together traditional economic development policy and regional level innovation policy to create a whole that covers a large part of urban policy. Kolehmainen's interpretation should be considered a success. The comprehensive economic development policy can be illustrated from the client's point of view in a way where the client (a company, an individual, or more generally, different flows) is given a promise by marketing,

and the promise is fulfilled by the other sectors of the comprehensive economic development policy.

One of the central conclusions of the article is that, upon confronting global competition, urban regions must choose the flows they particularly try to attract, must specialise accordingly and develop their overall competitiveness to support the choices. Additionally competitiveness must be developed from the points of view of both companies and individuals; while individuals do move to a new location in search of jobs, companies also move in search of skilled labour. Both national and the EU economic development policies show an increasing shift from policies of subvention towards policies of competitiveness.

5.2. Helsingin, Oulun ja Tampereen kaupunkiseudut innovatiivisina miljöinä (The urban regions of Helsinki, Oulu, and Tampere as innovative milieus)

This article concentrates in general on the theories of regional growth and in particular on the innovative milieu approach. The concept of innovative milieu is developed further and its dimensions are provided with key figures, which are in turn used in the creation of indexes measuring the dimensions. The urban regions of Helsinki, Oulu, and Tampere are studied empirically as innovative milieu with the help of the key figures and indexes. The research is related to the urban region competitiveness elements of human resources, quality of living conditions, institutions and an efficient development network, and membership in networks.

The innovative milieu is defined to be *"a whole of relations appearing in a certain geographical area with a high level of quality of life which has also networked beyond the area itself and which increases the unity of production systems, economic actors and industrial culture creating local collective learning and acting as a mechanism alleviating insecurity within the innovation process"*. Unlike earlier definitions, this definition factors in the element of quality of life.

Innovative milieu defined like this is firmly linked to the space of flows. When a milieu is innovative, it attracts several flows. Company flows stream to places promoting innovation. The thick network of the milieu also interests experts and skilled individuals. The external networks for their part are used to affect information flows, and if innovations are created in the milieu, capital flows turn there too. In fact, competitiveness of an urban region can be developed in a versatile manner within the framework of innovative milieu,

and the concept articulated in the article operates as one of the development tools in an urban region's tool kit in accordance with the aim of the separately published article.

By its nature, the concept of innovative milieu is clearly linked with the idea of endogenous growth. Endogenous growth becomes possible and more efficient in an innovative milieu. One interesting idea is also the rooting of expertise to the milieu, at which point the companies can be regarded as channels that offer the rooted expertise a context for commercial utilisation. The Finnish economic development policy debate has sometimes involved the term "Nokia risk", which refers to the possible consequences caused by Nokia leaving a municipality. From the point of view of innovative milieu, the issue can be studied with less fear, thinking about how expertise rooted in a milieu could channel—even rather swiftly—through several new, small companies and the dynamics this new channelling could create. In order for the expertise to channel in other ways, and quickly at that, the preconditions for enterprise must be good to begin with, efficient risk funding being one example. If, on the other hand, no preconditions for enterprise exist, losses can be severe. From the point of view of an urban region's client, the innovative milieu plays a central role in enabling the urban region to fulfil the promises made during marketing.

The policy recommendations related to the development of an innovative milieu can be summarised as follows:

- development of the milieu's external networks
- acquisition of foreign investments
- development of regional expertise resources in co-operation with various actors
- promotion of interaction and networking between actors
- integration of interventions and selective targeting of more promising areas

It is essential to notice that an innovative milieu does not create success only by concentrating on internal processes; instead, the development of external networks is important in terms of continuing development. The purpose of foreign investments is to stimulate economic growth.

5.3. Kaupunkimarkkinointi globaalissa kilpailutilanteessa. Esimerkkeinä Jyväskylän, Tampereen ja Turun kaupunkiseudut (City marketing in a global competition context. The urban regions of Jyväskylä, Tampere, and Turku as examples)

In a network society urban regions have to develop their competitiveness constantly, but they must also specialise and create something unique to be attractive to the desired flows. It is equally important to ensure that the desired flows – or in marketing terms, target groups – are aware of the opportunities offered by the urban region and that the image of the urban region is desirable in the eyes of the target groups. Thus marketing is also called for in the development of urban regions' competitiveness. The marketing of cities or urban regions differs somewhat from the marketing of products or services. As a content to be marketed, a city is often a more complex whole than an individual product; on the other hand, no ownership of the product is created while "consuming the city" Neither is it possible to draw a city out of production when the times get hard. Still city marketing is similar to the product and services marketing pursued by companies in the sense that city marketing also has to involve thorough planning, consideration of target groups, development of the organisation, and discovery of suitable messages and channels.

City marketing is not a bag of individual tricks; instead, marketing is one facet of the comprehensive economic development policy (Kostiainen 1999), and image is one of the eight urban region competitiveness elements (Sotarauta et al. 2001). It can also be said that marketing is development of an urban region and development of an urban region is marketing. Grönroos (2001, 46) suggests that, instead of service marketing, we should speak about service management. Applied to cities, this means that we should speak about city management rather than city marketing. The core of the message is that marketing is important enough to engage top management, not simply separate marketing units.

The marketing debate of the past few years has witnessed the emergence of concepts like images, brands, experiences, and dreams. It has been suggested that we are moving into an experience economy (Pine II ja Gilmore 1999) or a dream society (Jensen 1999). These concepts also touch upon city marketing, where the traditional marketing mix and 4P –ideology (product, price, place, promotion) have fit awkwardly. What, for example, is the price of a city product? The question is of course related to the definition of the product in the case of cities.

A city is a very complex product, and therefore the city product must be approached as layers: for example as an individual product or service offered by an urban region, or a cluster or whole of facilities and functions. The layers must form a consistent line, and the products of the various layers must have their own target groups. However, it is not possible to market everything, so choices will have to be made regarding target groups.

City marketing is the sector of comprehensive economic development policy where a client is given a promise and the interest of the client in the city is thereby aroused. Generally speaking, city marketing involves all types of flows, but as a consequence of practical strategic choices decisions are made to target concrete measures to certain flows. One means of developing an innovative milieu is the utilisation of foreign investments. Promotion of this exogenic growth is precisely the task of city marketing and links together city marketing and innovative milieu.

Of the example cities in the separately published article, Jyväskylä and Turku adopt a marketing policy of diversification, i.e. they adjust their service structure to new client groups, whereas Tampere strives to increase its market share in selected target groups, that is to expand. From the point of view of marketing strategies Tampere's marketing can be characterised as image marketing, Turku's as infrastructure marketing, and Jyväskylä's as infrastructure and person marketing. As regards images, nationally Jyväskylä and Tampere boast positive images related to expertise, development, and housing, whereas Turku still has much to do with respect to images related to expertise and development. Although urban regions believe that the general importance and significance of marketing will increase and the emphasis will shift to international marketing, investments in marketing remain rather small.

5.4. Learning and the "Ba" in the Development Network of an Urban Region

The elements of urban regional competitiveness include institutions and an efficient development network. The development network means the group of those actors whose specific task is the development of the urban region and whose influence is strong due to their own activities and mutual interaction. The compactness and degree of networking of the development network varies from one region to the other, but it is in any case a loose network, as it typically has no permanent organisation or fixed operational model, in addition to which its composition may change with development

measures. Any member of the network may manage the development network. The members of the network may include, for example, cities and municipalities, institutes of learning and research, technology centres and development companies, financiers, state development agencies, and key companies. (Kostiaainen 2002, Linnamaa 1998.)

In a network society and learning economy the success of individuals, companies, and regions is largely based on their ability to learn. An interesting question is who learns when an urban region learns. In an urban region learning may be interpreted as a qualitative property of the development processes: the more learning, the higher the quality of the processes. From the point of view of the development network's task, its learning is particularly important, because the development network influences all elements of competitiveness and can also promote the learning of other actors in the region. This article studies the learning of the development network within the theoretical framework developed by Ikujiro Nonaka and his colleagues. This framework centrally positions the interaction between tacit and visible (explicit) knowledge in the learning process and the places (*Ba*) supporting the various stages of the interaction. The model originally developed in order to apply understandings of learning within conventional organisations to learning within network-type organisations. The results of the conceptual research are illustrated by applying them to the urban region of Tampere.

Nonaka's learning model and the concept *Ba* can be applied to the operation of development network of an urban region and both can be used in developing and systematising the learning of the network. In the case of a network, however, it is likely to be more tedious than in the case of an individual organisation, since the members of the network come from different organisational cultures. Still, the diversity of its members must be considered an asset of a network and a factor opening new perspectives.

The development network of an urban region plays an important role in the space of flows, because several members of the network attract different kinds of flows, but the development network in itself also acts as an attraction by creating a dynamic brand for the urban region when it operates actively. The members of the network typically participate in the realisation of city marketing, and they can acquire information needed in marketing and development through their own networks. When a development network operates "well", that is learns, it creates a connection between city marketing and innovative milieu. While learning, a development network refines both the external knowledge received through marketing, for example about client needs, and the internal knowledge created in the networks of the innovative milieu. As the network learns, the tacit and explicit knowledge convert into

new knowledge that the development network can use both in development and in marketing and also transfer in various ways to the actors within the urban region. On a more general level, the development network can be said to interpret global flows, look for ways to connect to them and to transfer knowledge from them. Interpretations, operation modes, and knowledge are refined in a continuous learning process where each *Ba* has its own, specific task.

5.5. Great Leap or Long March to Knowledge Economy: Institutions, Actors and Resources in the Development of Tampere, Finland

From the point of view of an urban region's competitiveness and economic development policy, one of the central questions is how the high quality expertise foundation necessary in the network society and learning economy and creating long term competition advantages is constructed, and how that construction can be influenced. This article looks at the creation of a knowledge-based local economy by using the city of Tampere as the example since the founding of the city (1779) to the beginning of the twenty-first century. The study searches for answers by examining the critical incidents that have influenced the direction of the development in various eras, by identifying the central actors or actor groups related to them and by assessing the impact of the institutional environment on development. The interaction of global, national, and local levels and their significance in terms of the development is also an object of interest.

All elements of competitiveness influence the development of a knowledge-based economy, but their influence and weight vary in different times. In the early times of Tampere history the Tammerkoski rapids played a central role by providing the power the factories needed (material infrastructure). The recent development of information technology has, for its part, been based largely on research institutes (institutions) and skilled labour (human resources) that have attracted suitable flows to the region and made endogenic growth possible in the sense of the innovative milieu.

The importance of timing is mentioned often in relation to strategies. In the case of Tampere the timing manifests itself well in the connection of the city's founding. Although ideas for founding the city had been presented in the seventeenth century, the spirit of the times favouring entrepreneurship and Gustavus the III's rise to the throne made those ideas into a reality. The spirit of the times was suitable, and the supranational level had a decisive impact.

On an open field by the roadside an administrative decision founded what was planned to be an industrial city even though Finland had neither the markets, the capital, nor labour demanded by industry. Industry did get created in Tampere as well as in Finland in general, but the prerequisite of that creation was the global flows travelling through Tampere in the early 1920s and making industrialisation possible with the help of foreign capital and expertise. The birth of industry in Tampere illustrates the significance of individual persons, who were decisive in this case. Individuals continued to make great contributions also later when the city acquired the institutes of learning and research demanded by the knowledge-based economy.

During the past 40 years, two knowledge-intensive clusters have formed in Tampere: the information and communication technology cluster and the health technology cluster. That both clusters coalesced in the 1960s shows that the expertise base is formed over a relatively long time-span even in spite of active efforts. The relatively slow evolution of the expertise base, despite active development efforts, underscores path dependency and shows that economic development policy needs a kind of perseverance reaching much further than an individual city council's term of office. While culminating incidents often appear to bring on rapid transitions, in fact changes in expertise bases do not happen quickly. The cornerstone of Tampere's industrial history, the textile industry, provides a good example of the long term time frames of important transitions as its decline can, at least in retrospect, be seen to have already begun in the 1950s although its obvious collapse came in the 1980s. The example of Tampere also reveals the interesting fact that knowledge-intensive clusters would seem to reach the top of the world faster than the clusters of traditional industry. This is true at least if we compare the mechanical engineering industry and ICT: ICT reached the top of the world in some 30 years while it took more than a century for mechanical engineering to do the same.

Global and national levels influence the success of cities in many ways, but the example of Tampere shows that local efforts and activity can have a decisive impact on the way the history of an urban region unfolds. In respect to places, the shifts of global flows are neither completely random nor completely determined. Instead, they move according to an understandable logic, and they can be influenced through the development of competitiveness. It is essential to recognise which competition-enhancing elements to develop, and in which direction. The flows' sensitivity and speed of change in comparison to the time it takes to develop an expertise base provides developers with other challenges and demands that specialisation also involve flexibility. The development network in particular has to be able to read the flows.

5.6. Special questions

The articles in the study are linked to the space of flows and the whole and elements formed by an urban region's competitiveness. Out of the range of competitiveness elements, the separately published articles have paid relatively little attention to the aspects of infrastructure and creative tension. At this point the dissertation forwards some notions about the infrastructure in addition to looking at the mobility of labour, the specialisation of urban regions and the alternatives of business development in a more detailed way.

Although the element of infrastructure exerts an important influence on the location of companies, it is not the most central criteria for knowledge-intensive companies. It is true, for example, that Simmie (2001a, 44) claims that in the agglomeration economy innovative companies demanded that an international airport be located an hour's drive away from their places of business. It would appear that sufficient infrastructure may not so much determine a company's decision to move to a given urban region as insufficient infrastructure determines its decisions not to move there. In other words, infrastructure is a competitiveness element that, when efficient, makes it possible to enter the contest¹ and may of course even tip the scales when all other elements are equal.

The mobility of labour is related to a central question in terms of developing an urban region: the importance of the housing and living environment in the competition for skilled labour. In his wide research on Finnish professionals² and urban regions, Raunio (2001) has analysed the attractiveness of six Finnish urban regions in the eyes of professionals and their preferences related to the choice of residence. With the help of theme interviews (n=66) and a questionnaire (n=860), he uses the concept "field of choices" to refer to the entrance into those urban regions between which the professionals make their choices. The entrance requirements to the field of choices include:

- the ability to satisfy the professional's "basic needs", i.e. the properties of the urban region
- the professionals' awareness of the attractive properties of the urban regions, i.e. a distinct profile
- a positive or neutral attitude towards the urban region, i.e. a distinct image (Raunio 2001, 11)

¹ On the preconditions of competition, see Linnamaa 1999.

² In the research, a professional was defined to be an individual whose job creates new knowledge or applies knowledge in a new way or who has a demanding managerial job, who has a relatively high education, and whose expertise is in wide demand (Raunio 2001, 36).

The basic needs are related to a comfortable and safe living environment, good basic services, and interesting work opportunities in the fields of the professionals. Professionals typically emphasise the content of their work and move in pursuit of it. While the quality of the surroundings is held in high esteem, the actual force attracting the professionals is nevertheless creative problem-solving environments—that is, high quality work environments offering interesting and challenging work opportunities. Alongside attraction we should also consider prevention, committing and loosening. Some facets of an urban region may appear negative enough to prevent in-migration. Committing engages reasons to stay in the region, for example the living environment. Loosening takes place when, for example, a region provides only passably adequate services. The professionals did not detect significant differences in the quality of the housing and living environments in the urban regions of the research (Jyväskylä, Pori, Helsinki region, Seinäjoki, Tampere, and Turku) (Raunio 2001, 11-12.).

An analysis of the criteria Finnish companies consider in their choice of location reveals that the most important factors are those related to labour (availability, education level, productivity, permanence, and professional skill), market factors (proximity of clients, expanding market, availability of lots etc.), cost factors and transportation location (Silander et al. 1997, 55-57). In research commissioned by City of Tampere, 125 knowledge-based companies picked from the client register of Finn-Medi Research Ltd. and Tampere Technology Centre Ltd. considered the main factor determining location to be the availability of skilled labour, and secondly good transportation connections and proximity of university level institutes of learning (Tampereen kaupunki, imagotutkimus, 9).

On the basis of research involving six innovative European cities, Simmie (2001c, 6) observes that their success is based on two central location factors, that is, highly educated and professional labour and the infrastructure, including the ICT infrastructure. DeVol et al. (1999, 4) have pursued extensive research on high tech regions in the United States and reached the conclusion that from the point of view of high tech companies the most important location factors are educated labour, proximity of high quality institutes of learning and research, presence of a delivery network, availability of capital funding, climate and the quality of life, and general living costs.

For professionals the most important aspect is a creative problem-solving environment, and for companies (particularly knowledge-intensive companies) a highly educated and skilled labour force. In other words, individuals attract companies and companies attract individuals. How the needs of individuals and companies can meet at a given geographical region

which satisfies their other requirements as well remains the central topic of this research. The key question is how this kind of agglomeration-high quality living surroundings-skilled labour –process is created. Neither the creative problem-solving environment nor the skilled labour can come first; instead, these factors must develop in a reciprocal process over a long time span. One important factor in this process is the presence of institutes of higher learning that can attract nearly all flows important to the urban region (Kostiainen 1999)¹. As it would appear that economic growth centres increasingly on concentrations where the central elements of "knowledge-based competitiveness"² meet, all "policy makers from Kuala Lumpur to Jerusalem" try to clone the Silicon Valley concept. This is difficult, however, as the Silicon Valley's "unique DNA is hidden somewhere in the Sand Road Hill area". (DeVol et al. 1999, 3, 15.) According to Simmie (2001c, 6), the urban regions that are at the top of their own country's city hierarchy and whose country's national innovation level is high stand the best chances of success. The positive development of the urban regions of Oulu and Tampere, for example, makes sense in this context³.

Skilled labour is also related to the specialisation of an urban region. At least on the Finnish scale, it will probably not be possible to develop a creative problem-solving environment without some degree of specialisation. Specialisation is a larger question, however, and it has to do with the overall chances of succeeding in global competition. Raivola and Vuorensyrjä (1998, 6) have pointed out that...

*"we are witnessing the creation of a global refining network where each individual, company and region must not only find its core competency but also utilise it as thoroughly as possible and develop it as profoundly and thoroughly as possible. Core competency as a real strategic strength means the kind of contribution made to the refining network by a competency concentration of an individual, a work group or a region whose every individual, work group, company, or regional competency concentration is the best in the world as regards that contribution."*⁴

This means that any urban region in the world has to make choices. Kotler et al. (1999, 20) have also emphasised specialisation, since it is impossible to be competitive in all areas. In Finland, where all urban regions are small on

¹ On the debate see also e.g. Simmie 2001b, DeVol et al. 1999 and particularly on the causes of professionals' mobility, see Raunio and Linnamaa 2000.

² The competitiveness of urban regions aiming at knowledge-based economy.

³ On the success of the urban regions of Oulu and Tampere, see e.g. Kaupunkipolitiikan yhteistyöryhmän 1997-1999 loppuraportti (2001, 101) or Rakennepolitiikka 2/2001.

⁴ On regional competencies, see Sotarauta 2000.

the international scale, special attention has to be paid to this fact.

How or in what to specialise is a question in its own right. Moss Kanter (1995) has suggested that world-class cities should specialise either in production competencies and the latest knowledge (concepts) or in commercial relationships (connections). In Moss Kanter's model, named 3C, specialisation proceeds horizontally, as it were, instead of occurring in one content theme.

According to the research Feldman and Audretsch (1999, 427) pursued using data related to the United States branch-based material, the most useful paradigm from the point of view of innovations and the development of knowledge-based economy is a versatile and mutually supportive economic structure with a common science foundation rather than strict specialisation or versatility. Furthermore, innovations are better promoted by local competition than by local monopoly.

Duranton and Puga (2000, 553) for their part point out that specialisation has its benefits and its drawbacks. The benefits include diminished urban overcrowding and a stronger "localisation economy" based on the mutual proximity of the producers. The drawbacks include diminished innovation and vulnerability to rapid booms and recessions of certain branches and technologies. Duranton and Puga do branch-based analysis, but a more modern way to analyse specialisation could be take a cluster-based approach where the connections between branches and companies are more important than an individual branch (Hernesniemi et al. 2001, 3).

The risks of specialising in certain branches of industry have been discernible in England, for example, where, when regional prosperity is based on narrow expertise, problems have emerged with the deterioration of the English in the world market (Häkli 1999, 114). On the other hand, a risk is also involved in specialising in high tech branches. According to DeVol et al (1999, 10), the volatility of high tech industry is the highest, and branches particularly vulnerable to recession include, for example, computers and office equipment as well as the aeroplane industry.

It is possible to specialise in many ways, but the pressure of the competition makes it necessary to specialise in any case. The opportunities of specialisation are limited by path dependency. In other words the fact that, for example, technological development is always a sum of innumerable individual choices and the technological paths created during the development limit moving to a new path, which for its part may require a totally new techno-economic paradigm. (Simmie 2001a, 34.) Furthermore, the acquisition of competency necessary for the creation of a new competency area always takes years, or

rather decades, as the example of Tampere shows.

While developing regional business activities or improving the preconditions for its development, a choice must also be made about sharing the resources among the development of existing business activity, the initiation of new business activities, and foreign investments. The development of existing business activities does not necessarily involve major risks, and the operating companies have already rooted in the urban region. Even modern marketing ideology¹ emphasises the significance of clienteles, and existing companies can be looked at as clienteles from the point of view of the urban region.

It has been pointed out in different contexts that Finland has too few companies (e.g. Kanninen 1999) and that the entrepreneurial activity is relatively low (Arenius et al. 2001). The report *Innovation Score Boards 2001*, published by the EU Commission, for its part shows that Finland and Sweden lead the EU countries in terms of their innovation systems, but Finland has a relatively small number of innovative companies; furthermore, innovative activity and its support structures involve major companies. Thus the problem is the linking of small and medium-sized companies to the innovative sector of the economy. In this sense, investments, particularly in new knowledge-intensive entrepreneurial ventures, appear justified.

The third chance to provide an urban region with more business activities comes from attracting companies from the outside. Competition for foreign investments is intense, and Finland does not have particularly cheap labour, low taxation or exceptionally large subsidies for companies, so the most likely target group is companies boasting a reasonably high level of expertise. Foreign investments into Finland have increased significantly during the past decade. Investments have come in the development of technology and expertise, as well as high-level infrastructure. Companies owned by foreigners do indeed employ more than the average precisely in the fields of high technology. (Pajarinen and Ylä-Anttila 2001, 63-65.) It is essential for urban regions to concentrate on carefully selected target groups because, on the one hand even the biggest urban regions have expertise of an internationally high level only in a few branches, and because, on the other hand, the investments in city marketing seem to be relatively small even in bigger urban regions (Kostainen 2001).

¹ See e.g. Grönroos 2001.

5.7 Economic development policy in the beginning of the 21st Century

In the beginning of the 21st Century, urban regions have to confront a new kind of competition situation characterised by turbulence and rapid change, unpredictability, growing complexity, increasing emphasis on information, learning, and innovations, and escalating competition for the location of companies and skilled individuals. In this study the new operational environment has been characterised as the network society and the space of flows. In the space of flows, for example, information, capital, cultural contents, experts, and companies move from one place to another, creating a dynamic and constantly forming "flowing world". In the space of flows the success of urban regions depends on their competitiveness, i.e. their ability to attract the flows important to them. The competitiveness of an urban region is developed with the help of the economic development policy.

In the 1990s Finnish economic development policy, on both the national and the regional levels, powerfully foregrounded the concepts of the knowledge-based economy including expertise and innovation systems. In the beginning of the new century the challenge involves deepening the understanding of the knowledge-based economy and applying this understanding to practical measures. But first and foremost development policy needs to recognise the new paradigms produced by the network society and the space of flows and to perceive the meaning of urban regions and their competitiveness in this new context. The evolution of the thinking and practices of urban economic development policy can be illustrated on the basis of the study at hand according to Table 2.

Table 2. The evolving of urban economic development policy from the 1990s to the beginning of the 2000s.

The evolving of urban region economic development policy		
Factor	Economic development policy in the 1990s	Economic development policy forming in the beginning of the 2000s
Operational environment	Local and National	Global
Type of operational environment	Space of places	Space of flows
Planning ideology	Strategies, programmes	Soft strategy ¹
Type of development policy	Subvention and competitiveness policy	Competitiveness policy
Targeted business structure	Versatile	Managed specialisation, clusters
Organisation of development	Formal ²	Learning development networks
National development ideology³	National administration, uniform models	Promotion of innovative milieu development
Marketing strategy	Infrastructure marketing	Image marketing, brands
Target for development	Companies' operational environment	Competitiveness of an urban region
Factors of economic growth	Knowledge, technology, innovations	Technology, (social) innovations, (tacit) knowledge, competition
Importance of entrepreneurship	Growing	Growing, especially knowledge-intensive companies (incl. service)

Classifications like this are often overtly simple and pointed, and this one is no exception. For example the soft strategy planning ideology emphasising the intertwined nature of the strategies' process, communicative and classical features is slowly entering public administration, which is in many places only working on its first strategies. On the other hand, the ideology of national administration seems to be deeply rooted in Finnish development policy⁴. For example the Ministry of Trade and Industry's recent economic development policy clarification *Elinkeinopolitiikka uudessa taloudessa*

¹ See Sotarauta 1996.

² One noteworthy feature to the organisation of municipal economic development policy is debate on whether a municipality requires an economic development policy manager or other corresponding official or whether a (regional) economic development firm should be founded.

³ See Kostiaainen and Sotarauta 2000

⁴ See Kostiaainen and Sotarauta 2000.

(2001) also brings up "regional economic development policy", but still approaches it from a strongly national framework. The organisation of development in the direction of systematically learning development networks will also certainly take time. The importance of city marketing has already been understood, but the investments continue to be modest. Specialisation is difficult in a decision-making situation replete with differing interests, but it is necessary all the same. The importance of innovations and technology emerged powerfully in the beginning of the 1990s, but perhaps the focus should move more and more to social innovations, as suggested by Schienstock and Hämäläinen (2001, 11), and to the utilisation of tacit knowledge (Kostiainen 2002). The directions described are in any case those that have already partly emerged, are currently emerging, or would at least be desirable within the framework of the global information society and urban region competitiveness.

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