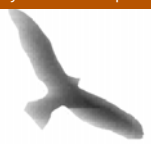

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Dynamic Capacities in Promotion of Economic Development of City-regions

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1 Introduction

Traditionally policy-making in urban economic development (UED) is based on a fairly well established belief in the national institutions and the capabilities of policy-makers to find the correct strategies for the future by rational planning. In Finland, in the era of building the welfare state, the System as a whole "was the capacity". Strong belief in comprehensive systems included a strong belief in the possibility of planning economic development, of exerting influence over the future and of controlling it. In policy-making attention was paid to the process in which the best possible means were selected by decision-makers using consultation, mathematical models, reports and surveys etc. so that a precisely defined problem could be solved by the best possible means. It was believed that resources would be forthcoming in ever-increasing abundance, thus political attention centred on their allocation. Existing structures and functions were not called into question.

Still in the early 00's, it seems that many of the thought patterns from the 70's and 80's are still with us, and in many cases regional development policies are too administrative in nature to meet the challenges of knowledge economy (Sotarauta & Lakso 2000). In the early 2000's, however, advanced economies have entered, or to be more precise, are entering to what is often labelled knowledge economy, in which knowledge has more crucial role than before. In knowledge economies, economic clusters consist in knowledge acting upon knowledge itself for productivity (Cooke 2002, 190; see Castells 1996 too). There are three main issues, according to Cooke (2002, 3-4), specific to knowledge economies; a) knowledge ages rapidly and new knowledge is constantly replacing the old one, b) scientific (including social scientific) knowledge is highly valued, and the scale and economic penetration of scientific knowledge exceeds distinctly the previous economic development phases, and c) knowledge economies are especially characterized by exploitation of new knowledge in order to create more new knowledge.

Knowledge economy is so clearly more complex, more blurred, more dynamic and more penetrating that policy-makers are forced to learn new skills and become more skilled in leading transition and interactive processes, not only in administrating resources and formulating development programmes, and this requires more profound understanding about dynamic capacities in promotion of urban economic development policies. This paper focuses on identifying dynamic capacities needed in promotion of urban economic development. Firstly, a brief look at the issues raised in contemporary studies on urban and regional development studies is taken to raise some policy-responses for the discussion about dynamic capacities. Secondly, a tentative dynamic capacities framework for both urban development studies and for making UED-policies more effective is presented.

2 Urban development logic in the knowledge economy

The basic puzzle is how to create locations for opportunities in the "borderless world". Many observers argue that globalisation tendencies are one of the most important sources of overall changes in the world, and thus one of the key contextual factors for evaluating and planning regional futures (e.g. Castells 1996, Asheim & Dunford 1997). Globalisation is inevitably one of the key elements that raise the need to reshape the policy-making as well. In the early 2000s, city-regions are engaged, willingly or not, in a fiercer global rivalry than before in creating or attracting activities generating wealth for their citizens. Particularly fierce the competition is about talented people that are the core resource in the knowledge economy (see Raunio 2001 and 2002; Florida 2002; Reich 2002). This has lead to a situation in which only few city regions prosper in economically. In Finland, for example, mainly big university cities and/or smaller towns specialised in electronics industry have been able to meet the challenges of the globalising world and have been able to prosper economically in the global economy (see about development of the Finnish cities Vartiainen & Antikainen 1998; Antikainen 2001; Huovari et al. 2001). People and firms seek their way to those city regions where they believe that future options are located (see Raunio 2001; Kostiainen 1999).

In an industrial society, borders between nations, institutions, organisations, regions, etc., largely determined the position of regions; in a global economy, however, borders are fuzzier than ever before, and activities and processes are increasingly organised in networks and participation in the networks and network dynamics are critical sources of power. A developed information technology enables an ever-accelerating interconnection of flows, diminishing also the the time-space ratio (Castells 1989 and 1996). Now the positions of both organisations and regions are more than before determined by their competencies and skills to learn and develop themselves in a continuous process, to cultivate some specific, differentiated and locally rooted knowledge and to foster linkages with other knowledge pools in the world. Consequently, local initiatives and an enterprising disposition is becoming more and more important in urban competitiveness; institutional and innovative capacities of regions are highly stressed, scarce resources need to be channelled and allocated more efficiently than before, and new operational models need to be created to achieve a sustainable, competitive position in global economy. All in all, contemporary development seems to be leading to a polarised development through increased differentation in innovation and economic growth between the "successful" and the "unsuccessful" regions, thus making the innovative capacity of city-regions of strategic importance in determining regional futures (Asheim & Dunford 1997).

A central determinant of the knowledge economy is dynamics. As Castells (1996) has shown us, flows pass through certain nodes and hubs, but if a city-region becomes less attractive or some other area becomes more attractive, the routes of flows may change quite rapidly. In the space of flows, companies are not the only global competi-

tors; also regions and cities compete globally. This means that within certain segments, city-regions have to possess clear competitive advantages that they can offer to local operations, organisations and people. The dynamics of the flows force city-regions to continuously develop their competitiveness, because decreasing competitiveness means that important flows will find other, more attractive routes. The incessant need to improve competitiveness requires city-regions to specialise. In other words, city-regions need to choose which flows they want to attract and what type of development strategies they need to implement (Kostiainen 1999), and in a knowledge economy unique knowledge itself is said to be the best rooting element.

In the flowing world, to be competitive is to be attractive. As stated above, cities are more and more dependent on the global economy and are therefore forced to adjust to global networks and flows. It is in their interest to get the important flows attached to themselves, there usually is no great interest in keeping them out, and economic competition and competitiveness are therefore growing in importance as policy concerns among cities. The question is, however, about how to attract not only foreign capital, but also experts, information, technology, etc., and hence specialisation, place-specific and knowledge rooted advantages are being created on the basis of innovation and pools of skilled labour and different institutional cultural environments. All this is expected to offer subtle distinctions in operating environment for various actors (Maskell and Malmberg 1999). This ability to provide the wherewithal to be successful in these terms is commonly described by the concept of competitiveness.

Competitiveness of a city-region is here seen as an ability to attract flows of information, technology, capital, culture, people and organisations that are important to the respective city-region, and along with it, the ability to maintain and develop the quality of life and standards of living of local residents, as well as an ability to create an innovative operational environment in which companies can develop their competitiveness. (Kostiainen 1999.) In addition, in order to be competitive in the longer term as a whole, city-regions should be able to redistribute the attracted flows within the region to enhance wealth, social equity and the quality of life of the region as a whole. It is therefore crucially important also to tie various activities, among other things, to the region. Such issues as networks and learning are thus often seen as effective ways to disseminate and create knowledge and tie different issues and activities together for urban competitiveness. Therefore, rather than emphasising the competitiveness of individual firms, it has become habitual, in the spirit of Porter (1991), to focus on clusters.

The global economy is driven by and dependent on the flows of information. Achieving regional-knowledge-innovation-focused competitive advantage is based upon the ability to access and generate knowledge, and of particular importance to securing competitive advantage is access to knowledge networks. It is quite generally believed that the countries and cities that are successful in the knowledge-based, fast-evolving flows are those who are able to keep their feelers out constantly, those who are able to adapt, learn and innovate – who are able to constantly create knowledge in an

interactive process. This means that mainly those who have participated in the creation of information will be capable of utilising it in time. Indeed, many commentators (e.g. Florida 1995; Lundvall 1992; Simmie 2001a; Kostiainen & Sotarauta 2000) have studied the role of viable cities as pools of knowledge, where business especially and other organisations can benefit from knowledge created in the city-region and from knowledge that has been attracted to the city-regions from various knowledge networks. Cities are the places where knowledge as a 'strategic resource' is created and achieved; throughout history, cities have indeed in one way or another been centres of knowledge activities (e.g. in the form of universities, entrepreneurial networks, or the knowledge centres of firms). Business performance will be enhanced by the knowledge base of the city, its knowledge infrastructure and the institutions and conventions that support interaction and collective learning. (see e.g. Kostiainen & Sotarauta 2000; Simmie 2001a; Florida 2002.) Cities can hence be seen as nodes and hubs of knowledge networks (Castells 1996), and contemporary UED-policies often focus on rebuilding the learning capacity in the cities; much of this relates to research and development, institutional development, and inter-firm networking.

Knowledge creation and innovation are social processes - various agents are embedded in their environment. The concept of embeddedness, according to Simmie (2001b, 25), is a key feature that distinguishes the analyses of both new industrial districts and innovative milieux from neo-classical agglomeration theory. Granovetter, in his often-quoted article of 1985, argued that, far from being a separate detached activity with its own independent forms of behaviour, economic activity is also a social phenomenon in which such social characteristics of economic activity as habits, conventions and norms of behaviour may be developed by the social interactions of agents 'embedded' within a regional context. The significance of the spatial context is based on the notion of the importance of trust that is built up through repeated personal contacts. These, on the other hand, are to be facilitated by geographic proximity and hence the easier possibilities for multiple face-to-face contacts. (Simmie 2001b, 25.) This also explains why companies join networks and form alliances with the aim of developing new technology, (Lundvall & Borras 1997, Kostiainen 1999) and why firms, as Aydalot (quoted in Bramanti & Ratti 1997) has put it, are no heaven-sent agents free to "choose" an environment but secreted by their environment. Firms are not isolated innovative agents but parts of the milieu which makes them act.

Storper and Venables (2002; see also Sotarauta et al. 2003) have stressed the role of local buzz as a force in regional development. Local buzz refers to lots of piquant and useful things that are going on simultaneously and therefore lots of information and inspiration to be received by perceptive local actors. Buzz refers to the information and communication ecology created by face-to-face contacts, co-presence and co-location of people and firms within the same industry and place of region (Bathelt et al. 2002.)

Regions may be important but the state still plays a role. While there is new literature seeking to emphasise the importance of agglomeration for learning, it has not

proved, not even in relation to disembodied knowledge, that the regional milieu is more important than the national environment. (Asheim & Dunford 1997). Amin and Tomaney (1995) state that the role of the region in knowledge accumulation is relative, and those commentators who only stress the regional innovation networks and/or learning regions do not see well enough the role of national policies and decisions. These observations seem to be valid especially from the viewpoint of small countries like the Nordic countries. As Kautonen and Schienstock (1998), for example, have stated, the Finnish innovation system is national-local in character. Therefore, the question is not of whether regional development is national *or* local, but of what kind of new interrelationships are emerging between different actors and what are the roles of different organisations in different contexts, that is, how development processes are global, national *and* local at the same time. (See Kostiainen & Sotarauta 2002.) Even though the national level still plays a role in the economic development, the above discussion implies that cities and regions should be more aware than before of the need to modify behaviour to retain advantage.

According to Cabun (2001), Merenne-Schoumaker has noted that the models of regional economic development, referred above, are not as much geographical but political projects which local actors initiate. Therefore, according to her, it is not possible to deduct general models of regional development from them. According to Merenne-Schoumaker, these kinds of general models create a false sense of security because they conjure up an illusion that it is possible to control global resources by mobilising local actors. On the basis of examining the past development of a city in Finland, i.e. Tampere, there is reason to second Merenne-Schoumaker's view: the development of Tampere has indeed been a political project in which local interests have had a great significance. However, the question is not of Tampere (i.e. its local elite) trying to control global resources, but rather that by mobilising local actors and expertise it has been attempted to develop institutions, structures and processes so that the responding ability of the city develops and the nexus to different global flows and networks improves. Hence, the objective is to develop the city in such a way that, on the one hand, it has the ability to better root important activities in it in order for global flows not to drain them away; and on the other hand, attract new activities to it. The question is therefore not actually one of the control of global resources, but of the development of the city's own ability to act as part of global networks and flows. (Kostiainen & Sotarauta 2002.)

Institutions frame the development activities. Many studies focusing on regional development have raised the importance of institutions, especially private and public organisations, that shore up networking of economic activities and, thus, more often than not institutions are nowadays seen as central factors in economic development. (see e.g. North 1992; Cooke & Morgan 1993; Maskell 1996; Morgan 1997). In a narrow sense, institutions refer to non-profit organisations, conventions, etc., including public sector organisations and universities. In a wider sense, institutions refer to organisations, conventions and to repeated and established practices. (Dosi & Orsenigo

1988,19.) In practice, an institution can be defined many ways. Drawing on Linnamaa (2002), we can generally see institutions as a framework for actions and choices. Therefore, institutions refer to the relatively permanent modes of operation, rules and resources and the organisational field which all give the development actions and various networks their basic form. In contemporary regional economy research, special importance is attached to informal institutions and regularly recurring behaviour generated by culture – habits, customs and routines. Formal institutions are also significant for development activities: formal institutions come into being when it is judged necessary to create a new mode of operation, presented in the form of a law, statute or written contract, or realised through some specific organisation. (see e.g. Maskell 1996; Morgan 1997; Hukkinen 1999; Klijn & Teisman 1997; North 1992; Linnamaa 2002.)

Institutionally thick regions prosper. One of the key questions in the knowledge economy is how local governance is able get to play a role in reducing the vulnerability of local economies, societies and environments to damaging external pressures, while promoting local economic health and quality of life at the same time. It can be argued that city-regions which are able deliver this kind of beneficial nexus are often characterised by a plethora of civic associations, a high level of interaction between social groups, coalitions which cross individual interests, and a strong sense of common purpose. (Healey et al. 1999.) These four factors, Amin and Thrift have argued, generate a quality of "institutional thickness" within which firms and other actors are embedded, and an institutional capability to mobilise in order to sustain supportive conditions for both (Amin & Thrift 1995, 101). However, as Healey et al. (1999) state, other researchers have pointed out that the four factors do not necessarily lead to beneficial trajectories, as they can be found associated mainly with dominatory local elites and with failures in economic innovation. Some qualities of institutional thickness seem to promote economic growth and innovation. Others may be more effective at fostering particular forms of social cohesion.

Based on above considerations, it is possible to simplify that being competitive means that the city-region…

- knows what it is competing for;
- identifies the flows it wants to attract, and is able to develop the elements of competitiveness so that they support the attractiveness in relation to the selected flows;
- identifies those issues that it seeks to root into the region;
- is able to make choices, i.e. to create strategies in a development network;
- is able to mobilise resources and create new ones;
- is able to mobilise actors;
- is able to create functional networks in which the competencies, strategies and objectives of various actors are made as parallel as possible, and hence is able to create such a strategy process that binds together vision and strategies of different organisations; and
- is able to link itself to knowledge networks;
- is able to create institutions, on the one hand, and to transform them on the other.

3 A tentative model of dynamic capacities in promotion of urban economic development

3.1 Contemporary policy response

The above discussed features of regional development also mean that urban economic development policies and economic policies in general have been replacing subvention and intervention policies with policies that promote competitiveness. Modern UED-policies try to increase relative place-specific advantages for the benefit of firms and other actors in their endeavours to improve their own competitiveness. The central idea is to promote the capability of companies to create individual competitive edges, and to establish a connection between this capability and the region in question. (Kostiainen 1999.)

Urbanisation economics suggest possibilities for a renewed role for public policy-makers in urban economic development. In particular, policy-makers in many regions have sought to counter the decline in traditional industries by developing new knowledge-based high-technology industries. Policy-makers have sought to emulate and replicate successful city-regions and industrial districts by developing a "technopolis" (Hall & Castells 1994), by supporting clusters of industries (Porter 1990) and by facilitating the development of an innovation *milieux* (Aydalot 1986). While these policy responses have been based on attempts to draw general lessons from successful new industrial districts, only few authors have explained how agglomerations of new knowledge-based high-technology industries develop and what policy interventions can best "seed" the development of these new industries in city-regions which have experienced urban decline. (O'Gorman & Kautonen 2002.)

As briefly examined above, much has been written recently about knowledge and learning and their role in regional and local development. Indeed, there is no lack of studies showing that innovation, technology, strategies, networks, etc., are important in regional development. Consequently, there are places that can said to be economically successful and that are claimed to exhibit the characteristics of networked, knowledge-based, strategic, learning, etc., regions or cities, and many other city and regional authorities have set their sights on strategies to develop knowledge-based activities, or to create networked learning communities. As O'Gorman and Kautonen (2002) state, policy-makers' attention has been directed towards linkages and interactions within and between different subsystems and towards actions that will improve the innovation capacity of the whole economy. The role of government has become to facilitate the development of resources from "basic" to "advanced" factors; to invest in developing technologies and capabilities that are common to all the industries in a cluster; and to develop the labor force through an open and competitive labor market. Investment in resources and infrastructure will usually involve investments in the educational system, in industrial training, and in research activities within firms and within research institutions such as universities. (O'Gorman & Kautonen 2002.)

Based on current understanding about urban and regional development the quite a common policy-recommendation is a) to develop institutions focused especially on building innovation capacity, b) to stimulate local buzz, c) to cultivate differentiated and locally rooted knowledge pool, d) to create and maintain shared mental models, interpretative schemes and d) to create and to foster pipelines to global knowledge.

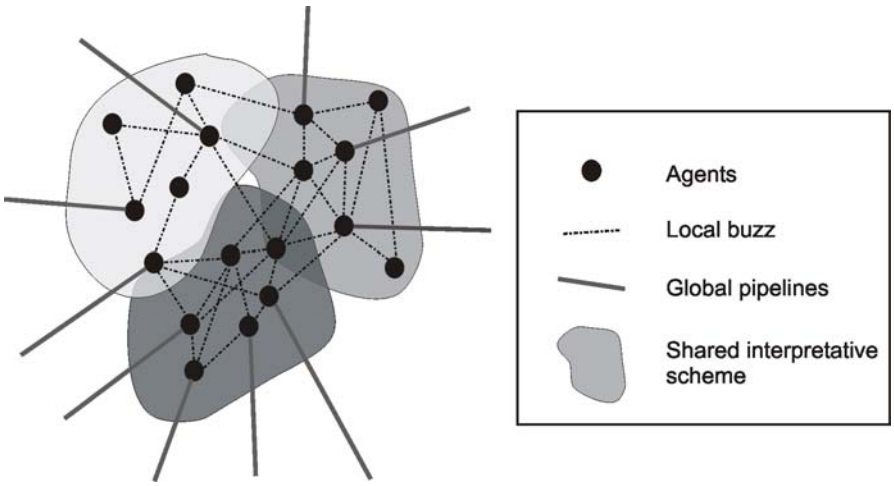

FIGURE 1. City-region as an innovation environment (c.f. Bathelt et al. 2002)

While the above considerations are relatively widely accepted, we still face the question, what kind of capacities is needed to make all this happen.

3.2 A dynamic capacity framework for promotion of urban economic development

All organisations and all city-regions have resources of some kind, but by no means are all of them capable of utilising these efficiently. Mere resources are frequently not enough to generate competitiveness, let alone to create a sustainable competitive advantage or to generate local buzz and pipelines to global knowledge. Creating a competitive advantage generally needs the ability to make good use of resources, i.e. many kind of *capabilities*. I have argued that even though policy-makers are nowadays more and more promoting expertise and learning based knowledge economy, they have not been able to improve their own capabilities to meet the new demands, and therefore there is an urgent need to analyze and develop dynamic capabilities also in promotion of urban development, since the dynamic capabilities are both implicitly and explicitly embedded in the many development processes and are directed toward enabling or disenabling economic change and evolution. These capabilities enable the city-region as a whole to reconfigure its resource base and to adapt to changing environment and to develop as an attractive hub vis a vis chosen flows. I suggest, as Teece et al. (1997) have done for the firms, that dynamic capabilities approach is promising both in terms of future research

potential and as an aid to development network endeavoring to gain competitive advantage in increasingly demanding environment.

First and foremost capacity is here seen as a measure of the quantity and quality of work a city-region can perform to promote economic development, i.e. it is an ability "to do something". Capacity is seen to be composed of a set of more specific capabilities. Capability is here defined as the ability to handle a given matter and as the ability to utilise the available resources and to create new ones (Javidan 1998). Teece et al. (1997) define capabilities as the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments, and therefore they see dynamic capabilities to reflect an organization's ability to achieve new and innovative forms of competitive advantage. Dynamic capabilities emphasise management capabilities and inimitable combinations of recourses that cut across all functions (Lawson & Samson 2001, 379), and in UED-policies they include building infrastructure, facilitating R&D, founding new development agencies, creating and brokering networks, developing human resources, etc. The main argument here is that in successful urban economic development policies a city-region as a whole needs a set of capabilities and the development network of a city-region should comprehend its capabilities in order to be able to utilise the resources available.

Behind the identification and development of dynamic capabilities there is also the assumption that these change more slowly than products and markets. Thus the competitiveness of a city-region should not depend on products and markets but on something more lasting, something which lies at the very core of the city-regions economic success. I argue that by focusing more on conscious development of dynamic capabilities in the context of urban economic development it might be possible to better identify, and utilize resources, and in addition to create new resources, and hence to improve competitiveness.

As stated above the basic policy response in knowledge economy is to create high level knowledge pool with strong internal links and pipelines to global knowledge the aim being to cultivate some specific differentiated and locally rooted knowledge and foster linkages with other relevant knowledge sources in the world. In addition intensifying knowledge links within the city-region and to help firms and other organisations to link with global knowledge sources is stressed. All this raise the question of what kind of capacities is needed, and next I elaborate this question by using the model presented in figure 2.

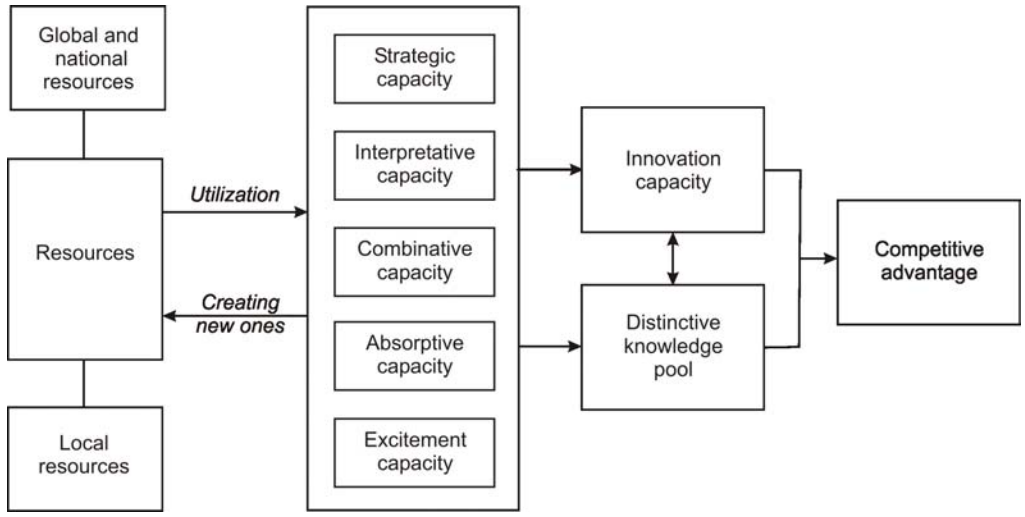

FIGURE 2. The capacity model for city-regions

Resources

According to Javidan *resources* are inputs directed at the enterprise's value chain. Barney divides the resources into three; physical resources (e.g. plants, equipment, locations and property), human resources (e.g. labour, management, educational level and experience) and organisational resources (e.g. organisational culture and reputation). Javidan perceives resources as the building blocks of competence (Javidan 1998, 62). In this context, resources are seen as inputs directed at the urban economic development.

Among the most important key questions in the UED-policies are: a) what kind of resources are there in the city-region; b) are the city-region, i.e. its policy-makers and development agencies and firms capable of identifying regional resources and are they capable of creating new resources and of networking to external resources; and c) what is the overall capacity of urban development network[1] to utilize resources? The spirit of the time usually shapes the development views that concomitantly influence agents to see some things as resources and not see some others. In an industrialized society, among the most important resources in the development of city-regions were raw materials, sources of energy, and logistical location. In a knowledge economy, a highly skilled labor force, universities and other institutions creating new knowledge, and expertise in general are usually seen as the most important resources. On a general level, resources can be grouped as follows.

- *Information and knowledge* – universities, other research institutes, firms, etc, and new knowledge produced in their interaction
- *Physical resources* – infrastructure, location, logistical connections, etc.
- *Firms* – their expertise, resources, contacts, etc.

[1] Linnamaa (1998) refers by urban development network to those key actors who by their own actions and mutual cooperation have an effect on the development of the urban region. Municipalities, key enterprises, business lobbies, educational and research institutions, financial institutions, state's regional administration, citizens' organisations etc. may be members of such a network. There may be considerable regional variation in the tightness and network like characteristics of the urban development networks.

- *Human resources* – highly skilled people in the firms and other organizations, research and educational institutes, etc.
- *Living environment based resources* – natural environment, built environment, private and public services, etc.
- *Financial and material resources* – funds for regional development work, venture capital
- *Connections* – good external networks, high-level social capital, and creative capital, etc.

In addition to utilizing local resources the ability to locate and utilize external resources is of utmost importance. Hence through skillful lobbying of external financiers and decision-makers and creative utilization of external funding (national, EU) it is possible to increase the resources to build on. In the economically successful cases of Denmark and Finland, for example, the ability of key actors to perform fast and proactive collective action was of great importance in guaranteeing external (national and EU) funding and raising interest in the region and mobilizing both people and resources. (see Linnamaa 2002; Bruun 2002b.)

Managing resources requires at least following capabilities in the development agencies: a) the ability to utilize existing resources and to find new ones; b) the ability to direct resources according to urban development strategies and in that way influence the strategies and operations of various organizations; c) the ability to skillfully lobby to external financiers and decision-makers and to creatively utilize of external funding, and d) the ability to see different things as resources in regional development and to utilize them.

Combinative capacity

In knowledge economy, it is increasingly recognized that knowledge and capabilities are distributed across a set of heterogeneous agents, and much has recently been written about collective learning and its role in regional development. In city regions, the quite a common policy response of the 00's is to try to combine strategies of many agents to attract additional resources and expertise in knowledge-intensive activities, with learning strategies targeted at a variety of groups within the city. Therefore one of the main tasks of the managers engaged in promotion of urban economic development is to create functioning development networks and to mobilize recourses and expertise both internal and external to the city-region in question. I distinguish three types of combinative capacity; institutional capacity, networking capacity and socialization capacity.

Institutional capacity in terms of direction, policies, procedures, and other explicit guidance are often used to integrate different organisations and their explicit knowledge. As Healey et al (1999) state, the notion of institutional capacity building is not a new concept. It has been used to highlight the need to build up individual capabilities (e.g. labour force skills, or entrepreneurial capacity), and those of public development agencies. In the former case, the focus is on the institutions which help to develop such capabilities. In the latter case, the emphasis has been on the capacity of particular organi-

sations. The new thinking about institutional capacity, however, focuses on the webs of relations involved in UED-policies, which interlink public development agencies, firms, and educational and research institutes in collective action, and thus institutional capacity is here seen to be part of combinative capacity.

The Nordic case studies on the urban development networks and processes of Tampere, Jyväskylä, Turku, Trondheim and North Denmark have raised (see Sotarauta & Bruun 2002; Kostiainen & Sotarauta 2002), in one way or another, the significance of institutions in framing and directing development processes. This general level observation supports the conclusions of many studies focusing on the regional economy stressing the importance of institutions in economic success (see North 1992; Maskell 1996; Morgan 1997). Consequently, institutions frame the development policies and processes and give various networks and development activities their context, but they may have either positive or negative influence. On the one hand, they may represent continuity in a rapidly changing world and also provide actors with a clear and supportive playground. On the other hand, institutions may lock regions in past development paths politically, functionally and/or cognitively (see Schienstock 1999; North 1992; Hukkinen 1999), and therefore removal of institutional obstacles blocking processes and networks in order to make the change-over to a new development path possible is often crucial in institutional capacity. Such obstacles may be prevailing thought and action patterns, organizational structures, administration, fear of losing acquired advantages, conflicts between organizations, etc.

At all events, institutions are among the most important factors rooting the city to a new path. For example city of Tampere is a prime example of a city that made conscious efforts to free itself from the past path and to create a new one by creating new institutions, by seeking out new resources to build on and by creating a new interpretation of the city-region, its current state and future prospects (see Kostiainen & Sotarauta, 2002.). One of the reasons that the development work often proceed well is the fact that in the earlier phases of development new institutions and resources have either emerged or been designed that could be utilized later by a more systematic strategic development approach. However, there are also examples, in Turku as well as Trondheim, of failed attempts and a closing-down of organisations that did not work (see Bruun 2002a; 2002c). The challenge lies in making these failures strength by admitting them, and learning from them. A learning region is a region which makes its institutional failures a resource for the future.

In conclusion it is possible to say that institutions provide urban development processes with a general framework and they have a major directing effect on processes. Therefore, consistency and clarity of institutional set-up is important in urban development. In a blurred and rapidly changing knowledge economy, uncertainty is not to be increased by unconsidered institutional transformations; institutions should reduce uncertainty, not increase it. Based on above considerations institutional capacity refers to the city-regions abilities to create such an institutional set-up that supports in promoting

urban competitiveness, and to abilities to remove the institutional obstacles and bureaucratic rigidities blocking processes and networks. It also includes such abilities as the ability to create and maintain flexible but at the same time persistent institutional set-up that supports networking and fluidity of development processes, that is, the ability to create institutions that provide organizations with as good and supportive national, regional and local development and innovation environment as possible.

Networking capacity refers to capabilities to forge trust, mutual dependency, loyalty, solidarity, trust and reciprocal support based horizontal co-operation between organisations and individuals. Hence it refers to the abilities to combine versatile and many-sided set of agents, and their competences and resources to be able to design and implement effective strategies and projects to promote urban competitiveness and to create distinctive knowledge pool to form a core of competitiveness. It also refers to the abilities to maintain and deepen the sense of mutual benefit that exists within the network by enhancing network connectivity, integration (mutual adaptation) and transparency. In networking capacity it is also important to appreciate openness to extra-regional collaboration and resources to solidify the long term resource base of economic development, and hence also the ability to combine internal and external resources and competences together is stressed.

Networking capacity includes such abilities as a) the ability to involve people and empower them to act as a network, b) the ability to make people work to reach joint and separate goals and renew them in an ongoing process, c) the ability to promote interactive processes serving as an intermediary in interaction between actors and steering activities towards seeking for goals and enabling cooperation, and d) the ability to connect various actors to the knowledge pool from their own starting points.

Socialization capacity refers to the abilities to produce shared and often tacit knowledge that leads to social integration between agents that goes far beyond the institutions and networking, and thus the ability to network competently and efficiently to utilize informal relations emerges important. Therefore such ability as sharing of feelings, emotions, experiences, and mental models become important. (see Nonaka & Konno 1998.)

Absorptive capacity

Based on their study on the transformation processes of the machinery industry in Tampere Martinez-Vela and Viljamaa (2003) state that absorptive capacity has been the key in the selective capability of the firms in their endeavour to detect and assimilate new knowledge, to prioritize development efforts and to make sense of emerging technological opportunities. Drawing on Cohen and Levinthal (1990, 569-570) and applying their definition to urban economic development, absorptive capacity refers to the development networks ability to identify, assimilate, and exploit knowledge from the environment. Cohen and Levinthal have also argued that the ability to evaluate and utilize out-

side knowledge is largely a function of the level of prior related knowledge. Absorptive capacity can be divided to potential and realized absorptive capacity. Potential capacity comprises knowledge acquisition and assimilation capabilities, and realized capacity centers on knowledge transformation and exploitation (Zahra & George 2002, 185), and thus realized capacity refers to capabilities to get things done and actually implement formulated strategies.

Absorptive capacity is essential in strategic adaptation in which both adaptation to changing environment and a strategic choices of an agent play a significant role. It includes for example such abilities as ability to value, assimilate and apply new knowledge and to transfer vision and strategies into action.

Interpretative capacity

Mental model, cognitive map, development view, whatever we call "it", is a important factor in the urban development, since in a certain sense, we live in a world of mental models made up of thoughts, ethics, ideas, concepts, images, memories, plans, knowledge etc. Agents do not react directly to reality but to internally constructed perceptions of reality. We all have a development view of some kind. Niiniluoto (1989) states, that the development view is a more or less detailed system of beliefs and values. Its parts are world view (what the world is like) and knowledge (how knowledge of the world is acquired and justified) and values (what the world ought to be like). This kind of reasoning suggests that perceptions are playing a key role in development efforts, they refer to differences and similarities in agents' values, goals and interpretations on a given issue.

Agents generally have different perceptions of problems, other actors, dependency relations and the benefits and drawbacks of working together. Such perceptions are hard to change, but in joint activity they gradually reform and are reconstructed. Agents are not even always willing or able to modify their perceptions. In such situations there is a risk that the development process will become a "dialogue of the deaf", with the same arguments reiterated ritualistically with nobody willing to have his/her view put in an unfavourable light. By interpretative capacity it is seeked to prevent such deadlocks or to resolve them by maintaining/creating conditions for open debate. In such discussions an effort should be made to accept that there is no "best" perception as such, and that for successful cooperation the existence of differing perceptions is more use than the elimination of differences in interpretations (Termeer & Koppenjan 1997.)

I have earlier argued that in urban development the conscious construction of collective strategic consciousness is one of the key-elements both in ensuring strategic focus, and the density and integration of development networks. Consciousness presupposes that an agent knows and recognises his/her/its own existence and environment. For the development of consciousness it is necessary that the agent have the ability to monitor and interpret events and to make sense of them. Consciousness expands to be strategic when the agent and/or agents have the ability to find the strategic issues essential to de-

veloping and development from the long-term perspective. The assumption then is that as strategic consciousness grows so does the absorptive capacity. (Sotarauta 1999.)

In the 1990s, in Tampere, Jyväskylä, Turku and North Denmark, the development view of many of the key actors has become increasingly parallel and it has had a significant effect in the urban development; it has become more effective and focused, and development networks have become more integrated, connected and dense (Bruun 2002a; Bruun 2002b; Linnamaa 2002; Kostiainen & Sotarauta 2002.), and thus it can be stated that the conscious construction of collective strategic consciousness is one of the key-elements both in ensuring strategic focus, and in creating and maintaining the density and integration of development networks.

Strategic consciousness may make development work more effective, but it may also lead to a phenomenon called group think (Janis 1982). Group think may hinder learning and thus prevent key agents from being able to reshape their development view. In this case, the dominant coalition does not listen to any critical arguments and does not see how changes in the environment are changing the base of the strategies. Consequently, the dominant coalition focuses on defending selected strategies and it may cognitively lock into the past path. In the case city-regions referred briefly above, the development views and strategic consciousness of the key actors has been becoming more parallel than before which has made UED-policies more effective, but on the other hand it has led to a situation where it has been difficult for policy-makers to see and think differently. There is a risk that coherence and homogeneity are prioritised at the cost of sound criticism. This might turn out to be highly problematic if the development activities evaluated with criteria that emphasize the moral as well as the long-term economic value of critical discourse. Such discourse, on the one hand, relates selected strategies to the respective region and its many other activities as a whole; and, on the other hand, uncovers possible weaknesses of selected strategies and thus critical discourse is also a source of continuous renewal. (Sotarauta et al. 2002.)

Openness and transparency are essential elements in the interpretative capacity, and dynamic, network-based and process-oriented urban development policy should be grounded in the explicit maintenance of the moral and long-term economic value of social discourse critically utilizing, reflecting and weighing the spirit of the time, which has ensured the emergence of such a policy in the first place.

Strategic capacity

In order to gain complete control over development or change in a given region it would be necessary for all actors to be of one mind with regard to issues and strategies and their solutions. Furthermore, they would need to implement regional development strategies through their own actions. Efforts have been made to unify the actions of many agents with the help of regional strategies. In other words, it is hoped that regional development strategies will guide a maximum number of regional agents either directly or indirectly. Thus, until now strategies has been formulated by methods based mainly

on classical strategic planning. Partnership is therefore often assumed to occur within the regional strategy.

The basic idea of urban development strategies, that the many organizations operating in the city region should realize shared strategies based on a shared vision, is very tempting. It would make things more manageable. However it is more likely that different organizations would nevertheless seek first to realize their own strategies. In the best case the creation of urban strategies can provide a good forum for the making the goals and measures of different organizations more parallel, but in the worst case there is the danger that strategies will not progress beyond being papers among a host of other papers. Every organization has its own ambitions and strategies which in that organization are stronger than urban strategies. This may mean that the intended urban developmental strategies appear to be everybody's but belong to nobody. Thus they never become part of what the organizations are doing. At their most efficient, urban strategies are backed by the organizations' own objectives and strategies and vice versa.

The assumption here is that partnership is not achieved *within* regional strategies, but *between* strategies. If a definition of urban development strategy is sought on this basis, it may be defined to be a interactive process, in which different aims and strategies of many actors are *reconciled*, and various interests *balanced*, and touching-points and concrete means between the many objectives are constantly sought out and *coordinated.* During this continuous process, the various goals and strategies of individual organizations are made as parallel as possible by combinative and interpretative capacities, etc. (Sotarauta & Linnamaa 1998.) Strategy determines the configuration of resources, processes and systems that the city-region adopts to deal with the uncertainties of knowledge economy. Strategic capacity refers to ability to make decisions about what to focus on in urban economic development in long run, and thus to set the strategic direction for many development efforts.

Strategic capacity includes such abilities as a) the ability to define strategies and visions for the urban development in collaborative process, b) the ability to bring to fore visions of a different futures and the ability to transform these visions into focused strategies and action, c) the ability to transform crisis-situations into something constructive, d) the ability to launch processes right and manage and lead them persistently in different phases, e) the ability to find correct timing for development work and seize the competitive advantage by being a pioneer, and f) the ability to bring forth big objectives so that they seem credible and attractive for the other agents.

Also the capacity for bold and fast strategic decisions in the community is important in opening opportunities for a new path; if successful this capacity may be institutionalised in the community and become a local pride and essential part of local culture. Previous successes or failures either strengthen or weaken capacity for bold decisions.

Excitement capacity

It has often been stated that in urban economic development the most important issue is mobilizing resources and agents, and many of the above referred capacities aims at doing exactly that, but in addition a separate set of capabilities that aims at giving birth to creative tension is identified here (for creative tension, see Sotarauta & Lakso 2000), since creative tension can make people genuinely inspired to create new products, processes, knowledge and concepts, and thereby to create a competitive advantage for the city region. Creative tension is an essential state for the urban development and it can be characterised by excitement and uncertainty about the consequences of future events and measures; the dominating thought and/or action patterns are questioned simultaneously by forces which are in mutual opposition or sufficiently different from one another. Creative tension may result in unprecedented, original products or in processes, thoughts, and action models, etc. It may come into being spontaneously or as a result of leadership.

Leaders need to be able to generate creative tension that makes people interested and motivated in development work and thus to create sense or urgency. Often the formulation of a vision or development program and, for example, receiving EU-funding provide a development network and a whole city region with a false sense of security, to avoid this pitfall development efforts need the sense of drama that can be found in a crisis, possible crisis, great opportunities, charismatic individuals, etc. It is essential to be able to raise the interest and motivation of individuals. It helps if key actors in the urban development project are regionally well-known and respected individuals, because the combination of enthusiasm and authority that they embody is likely to transmit a positive and regionally anchored view of the project to the general public. Visionary leadership and concentration of representative authority in the urban development network should be balanced with openness, transparency and goal consistency to guarantee the credibility and educational self-renewal of the network as sources of creative tension, i.e. exciting and inspiring processes that attract highly-skilled individuals, new knowledge and ideas.

Excitement capacity refers to ability to capitalize on the creative tension between the inspirations of key individuals and the dominant thought patterns, and to ability to excite the agents to “development rebellion”; all this requires a good sense of drama.

Excitement capacity includes e.g. such abilities as e) the ability to create and utilize creative tension in development work, and f) to create the sense of drama (presenting issues so that people become enthusiastic and excited), d) the ability to get short-term success in order to sustain motivation in the network, and e) and to motivate people to participate in various development efforts.

4 Conclusions

Knowledge economy needs its institutions and structures, but nevertheless it is clearly more dependent on brave and visionary individuals and innovative networks formed by them than earlier development phases. Innovative individuals and the development coalitions are often needed in creating conditions for a new development path. Core coalitions formed by innovative and determined individuals often plant the first seeds of something new in the midst of the different spirit of times and its institutions and culture; they are acting against the tide. The basic message of this paper is that more explicit focus on leadership, individuals, dynamics of the networks and the capacities is needed in UED-policies.

All this means that the capabilities of the managers and policy-makers should be continuously developed to be able to see different things as "stakes" in the promotion of urban development and to utilize them in cooperation with other actors, and thus an explicit focus on capacities needed is of utmost importance. It is also important to notice that focusing on capacities does not refer to a functionalist view on development, or on investigation which organization should have which capacities, but rather the question is what capacities exist already, what are missing, how it is possible to develop new capacities and to maintain and strengthen them, and how to channel capacities to development.

Our earlier studies on urban and regional development have brought me to propose following general level, tentative and incomplete hypotheses to be specified and worked with:

- Institutional capacity is often seen as an important factor in development, but I argue that inflexible institutions and rigid mental models are actually locking city regions to the past path by preventing fresh insights and ideas entering the discourse dominating the contemporary development efforts. Well-developed excitement, absorptive and interpretative capacities are important in opening opportunities for a new development path.
- The new development paths begin to unfold when individuals and small groups detect new opportunities and weak signals of changing economy and plant the first seeds of the change (often unconsciously), and in the planting of seeds interpretative, strategic and absorptive capacities play significant roles, since they open the thinking of individuals and small groups for the new horizons and enable agents to take the first steps. I also argue that the new development path is more often than not born outside the official strategies and dominant discourse, and therefore strategic capacity seems to be important in rooting the city region in to the new development path but not so important in creating a new one.
- Too much excitement capacity may, however, turn out to be harmful in some phases of development. A new path beginning to be rooted in the activities of many agents, too strong an excitement capacity may break new paths into overly incoherent and disconnected processes and it may even hinder development efforts if agents are not able to channel their excitement to implementation of existing strategies. If excitement capacity is too fragmented, it may prevent new ideas and innovations being institutionalized and absorbed to organizations and to the society and economy as a whole.

- Consequently the role and significance of combinative and absorptive capacities emerges important in stabilizing the new path and in creating more coherence in the development. Combinative and absorptive capacities are therefore important in institutionalizing new paths of development.

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