

Challenges for regional development in rural areas; reflections from the next EU programme period 2007-2013

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Abstract

This paper calls for a transfer of the results of academic research to peripheral areas, to strengthen the operational conditions of their business environments. This knowledge can improve the competitiveness of the regions, and at the same time competitiveness of the whole area of northern Finland. Moreover, well-established and more dynamic companies create good operational environments for themselves and further serve as examples for fellow entrepreneurs and residents of the area.

In recent years, several rural areas have undergone a rapid decrease in population with the result that their population structure has been considerably distorted. In addition, local companies are not investing enough to develop their businesses which both heighten the sense of insecurity in these areas and reduces the number of work places in areas where unemployment rate is already very high.

Research and development activities are seen as the driving force of economic growth. At the same time, rural companies and rural economic development organisations are not used to working with research and development (later R&D) programs, or with institutes providing R&D. The current support system for Finnish business environment has development and financing tools for R&D activities, but the support system does not encourage either small enterprises to invest in R&D or even higher education institutes to create and run long-term research in that area.

Today, short term planning and projects with fast results are preferred. Long term planning is not seen as useful development tool. We need to create a mental change process, where long term research will be used for strengthening the regional innovation systems. The key question is: "How should the current support system renew itself so that it can take better advantage of R&D activities?" This includes such actors like regional development culture, the changing role of higher educational institutes and also the abilities of the current financial support system for economic development. This question is rather important for rural areas since the new EU programme period offers new possibilities for development funding for these areas.

The core of this paper comes from two different sources that we try to combine. Firstly, the experiences of practical regional development work in rural areas, and secondly, the strategic planning and implementing works for the future of the northern part of Finland. In these strategies, the need for field work and close co-operation with different development organisations has been acknowledged, and the higher educational institutes have been promoted as future makers. Our main goal is to 1) evaluate how the practise and theory come together in real life, and further on, 2) evaluate what kind of challenges are ahead of us.

Keywords: Rural areas, regional development, support systems, higher educational institutes, innovation systems

1. Introduction

Today, a company in a remote rural area simply must have the courage to trust another company, possibly even their competitor. In this age of continuous development and change, the entrepreneur has to be able to detach himself or herself from the everyday operations, in order to ensure the viability of the firm in the future, no matter how wasteful or even counterproductive this absence from the daily thick of it may seem at the time. A crucial step in gaining competitiveness is the realization that the development activities of one's own do not suffice; the benefits that co-operation produces are at least equally important. In addition to inter-company collaboration, co-operation with higher education institutes (HEI) and regional development actors is of essence.

The situation in rural areas is rather different than in growth centres. In rural areas, companies do not have natural connections to HEIs and their employees usually do not have university level education. There are no functioning mechanisms for building and maintaining these kinds of connections, and regional development is emphasized by technology and its abilities to eliminate long distances. In the past rural development projects have mainly concentrated on educational activities and when measured with the amount of R&D funding the most development activities are found from technology centres.

The real challenge for university-rural area cooperation is to create a win-win research cooperation. In other words the challenge is to increase the quality of innovation environment. This is a significant challenge not only for the companies but also for the universities, and in the long run also for the whole support system. The current support system for Finnish business environment does not encourage either small enterprises to invest in R&D or even higher education institutes to create and run long-term research in that area

In this paper we will describe the roles of rural development actors from the perspectives of a field worker and HEI's. The key question is: "How should the current support system renew itself so that it can take better advantage of R&D activities in rural areas?" To this discussion we will add the regional development culture, the changing role of higher educational institutes and also the abilities of the current financial support system for economic development. The importance of this question comes from the fact that new EU programme period offers new possibilities for development funding for rural areas.

Our main goal is to 1) evaluate how the practise and theory come together in real life, and further on, 2) evaluate what kind of challenges are ahead of us.

2. Concepts of rural areas and Finnish business support system

2.1 Rural areas

Traditionally, western European regional development activities have been highly multiform, and it is difficult to discern any general tendencies. Development even in similar areas can be radically different in different regions and countries. Regional conditions and locality have been major issues in development work, and in

future their prominence will increase. Local areas are also, more than ever before, responsible for their own development. (Niittykangas et al. 1994)

Typical indicators for remote areas include low levels in (1) intensity of land use, in (2) population density, in (3) labour force within both primary production and industry, and in (4) income levels. However, according to Muilu and Rusanen (2004) all definitions continue to have grey areas in which the outcome is affected by the major historical and structural differences between areas, countries, and continents.

Finnish National Rural Programme (Maaseutupolitiikan yhteistyöryhmä, 2004) divides countryside into three categories (see figure 1): sparsely populated areas, rural heartland areas and rural areas near cities. Each of these categories are described according to their development opportunities (Maaseutupolitiikan yhteistyöryhmä, 2004):

Sparsely populated areas are facing the challenges of weakening opportunities. Long distances to population centres make daily work challenging, and also the local markets are distant and limited. In Northern and Eastern Finland the natural conditions limit the opportunities for agriculture, and solving the problems is further complicated by the municipalities' weakening economic possibilities for development work.

Rural heartland areas are dominated by strong primary production, and some have also achieved functioning industrial clusters. Large centres are relatively distant, but the distances to several medium sized centres are reasonable. These areas have strong municipal centres and the nearby villages are full of life. Most of the rural heartland areas are found from Southern and Western Finland.

Rural areas near cities have the best chances of development. As the larger centre is close, the inhabitants are able to work in the town and there is a large local market for rural enterprises. These areas are mainly located in Western and Southern Finland where also the opportunities for primary production are the most favourable. Especially families with small children favour these areas and want to move in which enables the municipality to invest and give variety of services. The welfare is on the best level of our country.

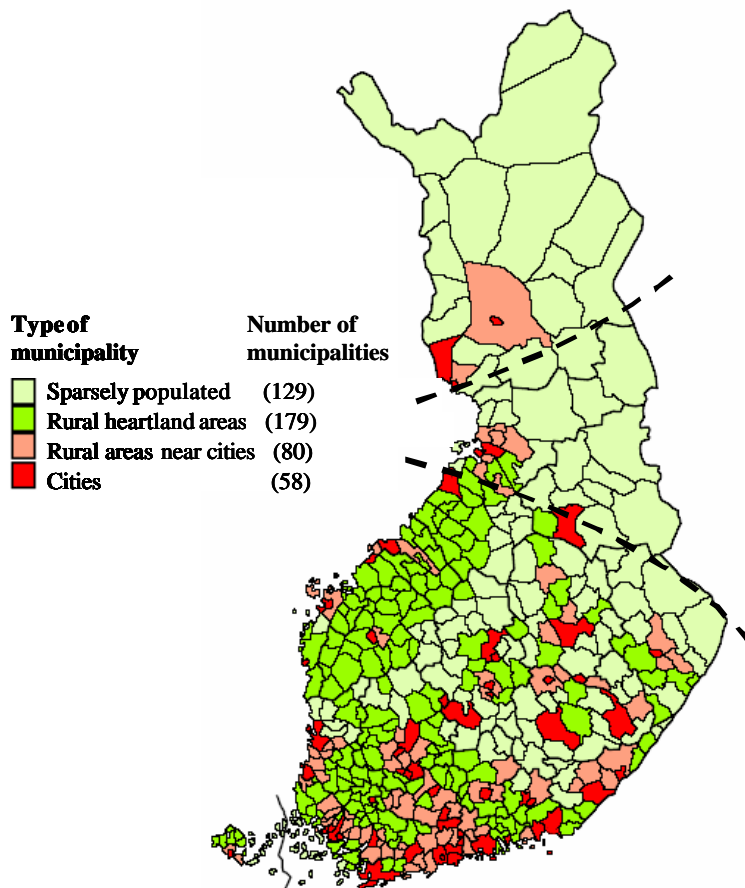


Figure 1. The rural tripartition of Finland in 1.1.2003. (Official statistics of Finland)

Niittykangas (2003) describes the vicious circle operating in many sparsely populated areas today as follows. Typically, the amount of population decreases, which translates into a shrinkage of the market and one-sidedness of demand. The decline in demand results in fewer jobs and in attrition of the number of companies, which in turn leads to movement of workforce away from the area, and to a decrease of total population. Paucity of firms has a detrimental effect on the entrepreneurial climate, hence lessening the attractiveness of the region as a location for new companies. In remote rural areas, population structure is often skewed, as the loss of population usually hits the active labour force hardest.

More importantly, as stated by Niittykangas (2003), the solving of regional problems is best based on local cornerstones and strengths, as location in rural areas no longer is the only cause for regional problems and because, as a consequence, the problems are not necessarily permanent. The solutions themselves may well come from outside the region, as long as they can be placed without difficulty into the framework of regional development, and as long as the local actors are genuinely committed to the implementation of the measures aiming to achieve the required solutions.

Characteristics of the case district

The object region of the development area (marked on the map above figure 1) bears the hallmarks of an economically challenged sparsely populated rural area. There are no large enterprises in the region, and the few SMEs located there face

considerable problems. No HEIs have branches or any other type of appreciable presence in either of the municipalities. The local administrative bodies are hard put to meet the challenges facing the regional economy.

In addition to the typical challenges for the regional economy of a remote rural area, our case district is characterized by a fragmentation of its entrepreneurial field mostly into micro-companies. It lacks any clearly leading firms which might act as drivers of local economic activity in general, and of concerted development measures like the present project in particular. This special and severe environment with few companies and even fewer large or expanding ones would appear to require exceptional and serious measures, and a good deal of commitment from everyone concerned.

Even though the case district has rather heavy challenges ahead, there is also a lot of potential. For example, the possibilities of ICT have been exploited very efficiently, almost as fast as in growth centres. There are also lots of raw materials for industrial use, such as forests and bio energy materials. At the moment, the best opportunities for growth and further welfare are seen in international tourism. Every year more and more people from all over the world find their ways to this region. But still, the best possibility of all is the development spirit of these micro companies. There is a lot of will power involved.

2.2 The business support system from research to business

In Finland there are lots of different kind of service systems for innovation and business opportunities support (figure 2). The public supply is very versatile and it has developed vigorously, but at the moment it is mainly depending on temporary project funding. Private supply usually finds its way according to the demand, and also according to where the best profits can be earned. At the moment, there is no need for either new services or adding the volume of the existing services. (Finnish Ministry of Trade and Industry, 2005)

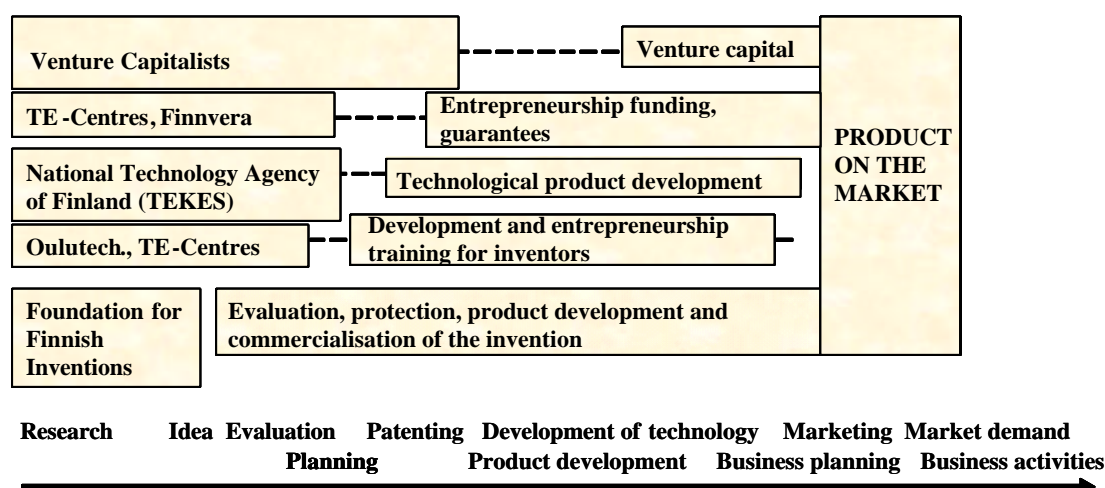


Figure 2. Public finance and support to inventions and business opportunities. (Foundation for Finnish Inventions, 2004)

In order to increase knowledge intensive industry base in the region, there is a need to have new kind of co-operation between the different actors that are now working separately. Like the figure 2 above showed that the public finance and

support system for creating inventions and business opportunities is very extensive, it is also disintegrated. The current system requires customers to move from one supporting actor to the other as for example when a business idea is developed further.

At the moment different supporting organizations work only with their own services and do not communicate with other service providers. Also the line between public and private services is very unclear since they all produce the same services as the others do. Even government and municipalities have similar support services. There is a real need to reorganize the existing support system and create an integrated interactive support system that does not wait for the customers to come in like the current system does.

This support system can be seen as a structure that covers all the phases from research to market launch, and all the way to the process of business planning. However, it is important to notice that the market launch of an idea presents the first phase of company development. Many theories say that the development and growth of companies have different kinds of phases, like presented in table 1 below.

Tabel 1. The company growth stages.

| | Greiner (1972) | Churchill and Lewis (1983) | Kazanjan and Drazin (1990) |
|----------------|---------------------------|---------------------------------------|---------------------------------------|
| Stage 1 | Creativity | Existence | Conception and development |
| Stage 2 | Direction | Survival | Commercialization |
| Stage 3 | Delegation | Success | Growth |
| Stage 4 | Co-ordination | Take-off | Stability |
| Stage 5 | Collaboration | Resource maturity | |

Companies tend to have 5-6 growth stages. However, there is a reason to doubt that all companies do not go through these stages in similar order; some companies might stay on a certain stage whereas others might grow very fast and leap over some stages. The latter has been especially typical for fast growing regional technology clusters (Hyry 2005). In rural areas particularly companies work individually and normally represent traditional fields of business.

In Finland Universities third mission¹ has become an essential issue. The general tendency in conversations is that the Universities of Applied Sciences (former Polytechnics) are mainly responsible of upraising the regional level of know-how by educating skilled workforce for the area. Universities role is to have an impact with basic and applied research, and also some special trainings (such as MBA's).

During the last 20 years the area of Oulu (including the University of Oulu) has succeeded very well in creating and developing industry that is based on new technologies. In this success a significant role has been on both the research done at the department of Electrical and Information Engineering at the University of Oulu and also on Nokia's determined work in creating new telecommunication industry. This success has also had an impact on Finnish regional development by emphasizing

¹ Finnish national higher education policy has changed in the beginning of the century by starting to consider the third role or task of higher education institutions and by emphasizing their regional engagement as a part of national innovation and competitiveness policy. This responsibility became a clear task for the universities in the new university law and is aimed to strengthen the social and regional impact of universities. (University of Oulu, Markku Joutsenoja)

technology based development which can also be seen from the structure of the support system presented above in figure 2 (Hyry 2005).

Now the question to be asked is that, has the technology based development model dominated too much our regional development and especially development of rural areas by for example transforming development policies more into ICT emphasizing (e.g. Multipolis network, www.multipolis.com/index.php?179).

From the regional development point of view following issues are rising critical: At the moment the business support system can reach easily high-tech and knowledge intensive companies but how can it also reach companies from traditional fields of industry. For example in city of Pudasjärvi (9000 inhabitants in 5870 km²) there are about 400 companies that work in the traditional field. The main question is; how the support system can reach well developed and growing companies that have not traditionally been in contact or cooperation with universities and research institutions? How can we build up this kind of research cooperation?

When the latter part is compared with the supply of our support system it is seen that there is not that kind of supply at all. But do we need it anyway? From our opinion the question is about building an innovation environment at the same standard as it has been done in the strong regional ICT cluster.

3. Actions for rural development

3.1 Insights from field workers perspective

Public support mechanisms for business development are rather unknown among rural companies (Keskuskauppakamari 2007). Usually rural companies have very few experiences of R&D activities, and therefore they also have the smallest possibilities to create good development projects even from very good development ideas.

In the companies, strengthening the abilities to compete and grow, presupposes increasing of their knowledge level and the usage of new technologies. The best way to promote new knowledge and technologies is to take part in research and development projects, where also research institutes, universities and other higher education institutes, and regional development organizations are present. This kind of triangle cooperation is also called as Triple Helix Model (see e.g. Etzkowitz 2000, Leydesdorff 2000, Etzkowitz & Leydesdorff 2000, Etzkowitz & Leydesdorff 1997). Rural SME's have lots of tacit knowledge (see e.g. Nonaka & Takeuchi 1995) that can be used in development activities. These regions have space for new research initiatives, and they also have a lot to give for the research field. There is clearly a need for knowledge exchange, but there is no tradition to show how to do it.

Since the growth centres are more experienced in this field, their knowledge should also be transferred to rural areas. To answer above mentioned needs, regional actors are now testing this operation model as a project called R&D Activator project, where rural companies are assisted in getting funding for their R&D development ideas.

Case of R&D Activator project

The idea of the R&D project is to increase R&D activities in the rural areas of Northern Ostrobothnia. The project assists and supports local companies work in creating project proposals and funding applications, and it helps to find suitable

experts and possibly company networks. The main focus is on SME's operating in the RFM-polis², Softpolis, Steelpolis, Humanpolis, Micropolis and Naturpolis centers of expertise or in the regions influenced by these centers of expertise. Project activities are also indirectly focused on universities, colleges, research institutes and other institutes.

R&D activator project includes 1) the idea evaluation, where regional team members evaluate project ideas together with financiers and experts of different fields, 2) finding of co-operative partners and experts since successful R&D projects usually presume new know how and also close co-operation with other companies, 3) direct contacts with financiers, 4) assistance on writing the project proposals and funding applications, 5) seminars and training activities. Since this is a project, all services are cost free for the SME's.

During year 2006 and until the end of February 2007, the regional R&D activators had worked with 86 SME's and 16 other organizations. Total of 121 project proposals were handled and created. The following table 2 presents the status of those proposals, and below the table 3 shows what business support organization has financed them.

Table 2. Business development proposals for funding.

| Status | pcs |
|--------------------------|------------|
| Project done | 19 |
| On going | 36 |
| Funding application done | 6 |
| In preparation | 52 |
| Not continued | 7 |
| No information | 1 |
| Total | 121 |

Table 3. The funding organizations.

| Funding organization | % |
|-----------------------------|-----------------|
| Tekes | 53,30 % |
| TE – Centre | 21,10 % |
| Council of Oulu Region | 13,30 % |
| EU –projects | 3,30 % |
| Leader + | 3,30 % |
| State provincial offices | 1,10 % |
| Academy of Finland | 1,10 % |
| Others | 3,50 % |
| Total | 100,00 % |

As described above, practical field work has shown that the rural companies are actively developing their businesses and they have lot of good development ideas. They only need a bit more support than the high tech and knowledge intensive companies in the growth centres. R&D activator project has shown that there is a need for this kind of support mechanism. So, rural companies are willing and interested to develop their businesses, they only need a bit more encouragement.

² Polis is a small technology centre (www.multipolis.com/index.php?179).

3.2 Insights from HEI's perspective

In the northern part of Finland, HEI's are actively involved in regional development programmes, and most of these programmes are educative projects. Strong connection to research and HEI's can be seen only in few business fields such as ICT and metal industry sectors, where the companies have actively built the cooperation. From the HEI's point of view, regional development of rural areas has been emphasized by Open University courses and other degree programmes. The main idea has been in increasing the level of education and also securing educations availability regionally. Due to the population's strong movement to growth centres, the need for this kind of operations will decrease.

In the preparations for the next EU period 2007-2013, HEI's have received and taken an important role. For example, in northern Finland there is a new strategy, Osaava Pohjois-Suomi ("Capable Northern Finland") (2005), which includes all higher education institutes. This strategy lines the main goals which will help to maintain livelihood in northern Finland, and even increase it. The main goals of Osaava Pohjois-Suomi (2005) and Avoin Pohjois-Suomi ("Open Northern Finland") (2007) strategies are e.g.:

- Education structure and level will reach national average levels,
- Increasing R&D activities and their quality,
- Increasing social innovations,
- Strengthen the emphasis of regional development, and
- Increase international visibility

In practise, the main challenges for these strategies are to create closer cooperation with rural areas (noncampus areas) and HEIs. Rural regions culture for development can be characterized by short term actions, defensive attitude (path dependency), concentration on educative projects (instead of R&D), decreasing resources, and also a competitive attitude towards other regions.

HEI's have started to answer this need for development by building deeper cooperative relationships to regional development actors. They have formed a Regional Network of HEI's (*Province University Concept*), which main goal is to strengthen:

- availability of HEI courses and degrees
- availability of open university courses
- increase the availability of Continuing Education (according Life Long Learning concept, e.g. MBA) and
- increase the regional R&D activity level (by win-win principle, region as a laboratory for basic and applied research)

4. Conclusions

In order to succeed, the above described action model needs deeply confidential communication channels between regional actors and HEI's. It also suggests that it is time to change thinking from project based development actions to the process based development, where the new processes are formed from research and development activities and from increasing of know-how in the area. The paradigm of regional development is changing. The rising new challenges can not be tackled with training or education. The situation is more complex. In future, we need to accept the uncertainties, risks and regional cooperation that belong tightly to the rural development work.

Apart from the fact that this new model challenges HEI's, it also challenges regional development organizations to new kind of cooperative actions. Rural development actors need to ask themselves the following questions:

- Do we have the abilities and patience to build up a long term research cooperation with HEI's (from project to process)?
- Do we have courage and abilities for interregional and also international cooperation and networking?
- How do we find the best partners?
- Do we have enthusiasm and courage to develop the development work by attending experimental knowledge exchange forums? (Such as Doctoral Graduate Schools in this topic)

In addition to trust building and finding a common language, rural economic development work also presupposes a shared vision of the outcomes, which concerns all the stakeholders in the cooperation. For enterprises and municipalities alike, it is common to expect fast and concrete results. Issues and processes are scrutinized and judged by means of a time-window of one or two years on an average, whereas in universities results are normally expected in five or ten years' time. A shared understanding of the different time perspectives is a crucial factor in interorganizational co-operation.

References

Churchill, N., Lewis, V., (1983). The five stages of small business growth. Harvard Business Review, May- June 1983.

Etzkowitz, H. 2002. The Triple Helix of University – Industry – Government. Implications for Policy and Evaluation. Sweden, Stockholm. Science Policy Institute. ISSN 1650-3821. 17 p.

Etzkowitz, H. & Leydesdorff, L. 2000. The dynamics of innovation: from National Systems and “Mode 2” to a Triple Helix of university – industry – government relations. Research Policy, Vol. 29, issue 2. p. 109-123.

Etzkowitz, H. & Leydesdorff, L. 1997. Universities and the Global Knowledge Economy. A Triple Helix of University – Industry – Government Relations.

Foundation for Finnish Inventions, 2004.

Finnish Ministry of Trade and Industry, 2005. [www.ktm.fi/?l=en&s=1]

Greiner, L. 1972. Evolution and revolution as organizations grow. A company's past has clues for management that are critical to future success. Harvard Business Review July- August 1972.

Hyry, M. 2005. Industrial Growth and Development in Northern Finland: The Case of Oulu 1970 - 2002. Doctoral Thesis, Coventry Business School, Coventry University, U.K.

Kazanjian, R. K. & Drazin, R. 1990. A stage-contingent model of design and growth for technology based new ventures. *Journal of Business Venturing*, Volyme 5, No 3, 1990.

Keskuskauppakamari. 2007. Alueiden kilpailukyky 2007. Helsinki.

Kinnunen, I. 2005. Osaava Pohjois-Suomi. Pohjois-Suomen korkeakoulujen yhteistyöneuvottelukunta. Kalevaprint.

[www.oamk.fi/~iskinnun/asiakirjat/Osaava_Pohjois-Suomi_2005.pdf]

Leydesdorff, L. 2000. The Triple Helix: an evolutionary model of innovations. *Research Policy*. Vol. 29, issue 2. p. 243-255.

Maaseutupolitiikan yhteistyöryhmä, 2004. Elinvoimainen maaseutu – yhteinen vastuumme. Maaseutupoliittinen kokonaisohjelma 2005-2008. Helsinki, Suomen Printman Oy. 324 p.

Muilu, T., & Rusanen, J. 2004. Rural definitions and short-term dynamics in rural areas of Finland in 1989-97, *Environment and Planning A*, Vol. 36, p. 1499-1516.

Multipolis network. [www.multipolis.com/index.php?179]

Niittykangas, H. 2003. *Yrittäjä ja yrityksen toimintaympäristö*. Jyväskylän yliopiston Taloustieteiden tiedekunnan julkaisuja, Nr. 134/2003, Jyväskylän Yliopisto, Jyväskylä.

Niittykangas, H., Storhammar, E. & Tervo, H. 1994. Yrittäjyys ja yritysten synty paikallisissa toimintaympäristöissä. Keski-Suomen taloudellinen tutkimuskeskus. Julkaisuja 132. Jyväskylä, Jyväskylän yliopistopaino. 131 p.

Nonaka, I. & Takeuchi, H. 1995. *The Knowledge-Creating Company. How Japanese Companies Create the Dynamics of Innovation*. New York, Oxford University Press. 284 p.

R&D Activator Project. [www.multipolis.com/index.php?250]

Yliniemi, I. 2007. Avoin Pohjois-Suomi. Pohjois-Suomen strategia 2011. Lapinliitto, Rovaniemi.