

## **Public Business Services Fostering Growth – Case Studies in Northern Sparsely Populated Areas**

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**Abstract:** The aim of this study is to describe public business services (PBSs) for early-stage small- and medium-sized enterprises (SMEs) in northern sparsely populated areas (NSPAs) of Northern Finland. These areas face challenges of globalisation, structural changes and demographic change. PBSs of these areas face special challenges including limited resources, remoteness, heterogeneous customer base, and long distances. This study describes how PBSs are organised and what kind of services are available for early-stage technology intensive companies in the three case NSPAs. The focus is on analysis and comparison of the supply of public business services in the three subregions of Oulu South region. As a result of this multiple case study, the services for SMEs and especially for early-stage technology intensive SMEs within the NSPA context are clarified.

**Keywords:** public business services, PBS, northern sparsely populated area, NSPA, growth, technology intensive, SME

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### 1 Introduction

Supporting small- and medium-sized enterprises (SMEs) and creating new businesses seems to be an important political agenda for governments at present (Osmonalieva, 2011). EU countries have also expressed increasing interest in the policy areas of innovation and entrepreneurship, especially because of the Lisbon agenda, which emphasises the importance of finding effective measures in those policy areas (Lundström and Kremel, 2011). Thus, many countries allocate large amounts of resources to innovation and entrepreneurship policy areas. A proportion of these inputs is also directed to providers of public business services (PBSs). However, there is a lack of information about the implementations and impacts of these investments to public business support systems. Significant public resources are invested, but more knowledge in that area will be precious. Public business support systems in general can be divided into financial support services and public business services, including consultancy and advisory services. In this study, the main focus is on PBSs.

The Finnish government, in addition to providing finance to SMEs, has established a number of support mechanisms that provide assistance to SMEs via free or subsidised business support services (Väänänen, 2003). Also, according to a recent report (Ministry of Employment and the Economy, 2012), there are a vast number of PBSs in Finland.

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However, the services are complex and scattered, from a company perspective. Partly due to project-based funding, the field remains mixed and changes frequently. According to innovation system evaluation (Veugelers, 2009), Finland's research and innovation system is complex and fragmented. This concerns the business support system, which small and start-up companies, in particular, experience as difficult. The challenges especially affect innovative and entrepreneurial support at regional levels. The support system has overlapping functions and unclear organisational roles between actors. Even if the innovation system as a whole can be seen to work satisfactorily, small, rapid-growth companies are not served well and achieve poorer results.

In the European Union (Eurostat, 2012), sparsely populated areas are defined as regions with population density below a certain threshold; the region is defined as sparsely populated if it has a density of fewer than 12.5 inhabitants per km<sup>2</sup>. Northern parts of Finland, Sweden and Norway and the majority of Iceland can be defined as northern sparsely populated areas (NSPAs). The Oulu South region is situated in the southern part of Northern Ostrobothnia in Finland. Oulu South is not a governmental unit or area. It was formed to increase intermunicipal cooperation and to gain the critical mass needed for national and international competition. The region consists of 3 subregions and 14 municipalities, with approximately 90,000 inhabitants. There are about 4600 active companies in Oulu South; the majority of them (95%) are micro-sized companies (Statistics Finland, 2012).

Small- and medium-sized enterprises are considered an important and integral part of every country's economy; SMEs are the fastest growing sector of many economies, and they are more flexible and adaptable in terms of their structure and their ability to respond more quickly than larger organisations (Tagliavini et al., 2001; Yifeng, 2011). SMEs are often associated with a higher economic growth of nations (Beck et al., 2005; Ciemleja and Lace, 2011; Reynolds, 1997; Robson and Bennett, 2000). The impact of SMEs on employment is significant (Ayyagari et al., 2007). On the other hand, compared to large enterprises, SMEs typically have fewer financial resources, lower technical expertise and more limited management skills (Blili and Raymond, 1993; Yifeng, 2011). A large SME sector, as such, does not directly cause economic growth, but it is indeed a key characteristic of successful economies. A successful SME sector can be considered a vital part of growth and development in sparsely populated regions.

Väänänen (2003) found that 12% of Finnish SMEs have used public business services at least one time during the past 12 months. However, about one third of high-tech and medium-tech firms have used services during the same time. In addition, the usage of PBSs is higher for the technology-oriented sectors than for the SME population as a whole, most prominently for the early- and growth-stage services, where the usage rates are three to four times those in the average population. Therefore, it is justified to take a closer look at provided PBSs, especially for early-stage technology intensive SMEs.

The characteristics of the NSPAs are peripherality, cold climate, low population densities and dispersed settlement patterns (Gløersen et al., 2006). Businesses in sparsely populated areas tend to be small, and small businesses in rural communities face geodemographic, sociocultural and economic concerns (Stathopoulou et al., 2004). Remoteness brings about transportation challenges as well as increases in manufacturing costs and longer workforce commutes. Low population density may also limit the available skilled labour as well as employment options. The per capita household income and educational level of rural residents tend to be low in comparison to their counterparts in urban areas, and rural businesses may lack sufficient access to financing. On the other hand, Shields (2005) has found that rural entrepreneurs viewed neither resource constraints (financing, technology and transportation) nor labour issues (availability of

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skilled workers and childcare) as significant sources of adversity. Sociocultural features such as gender roles, cooperation, communication and social and business networks are closely intertwined with small business operations in rural areas (Shields, 2005). In addition, Boter (2005) found that SMEs located in sparsely populated areas utilise PBSs more often than in larger regions.

The subregions in NSPAs face context-specific challenges as they provide services for their customers. This topic is less discussed in the literature. There is a need to describe and classify PBSs provided for early-stage SMEs in NSPAs. Our aim is to broaden the understanding of PBSs available for early-stage technology intensive SMEs in the NSPA context. This study's research problem can be condensed into the following research questions:

1. How are public business services organised in northern sparsely populated areas?
2. What kind of public business services are provided for early-stage technology intensive companies in northern sparsely populated areas?

These questions are studied by analysing the supply of services in the three subregions (Cases), located in NSPA Oulu South, which have similar operating environments. By doing so, it can be described how public business services are organised and services provided in NSPAs with similar environments. Moreover, it is possible to point out overlapping services and to clarify potential synergies between the subregions.

This is a case study with a holistic strategy. The power of a case study is in clarifying complicated processes and in obtaining new knowledge when the boundaries between phenomenon and context are not clearly evident and in which multiple sources of evidence are used (Yin, 1994). The empirical evidence was collected from three subregions of Oulu South at the end of 2011 and the beginning of 2012. In all three subregions, interviews were conducted using a similar research process and questionnaires. The data and the case study evidence was further analysed and synthesised. By investigating the three cases, this study explored how PBSs are organised in NSPAs.

This paper consists of five chapters. In the first chapter the purpose of the study, background, the research problem and the research questions are presented. The second chapter describes the sequential framework for early stages of technology intensive companies. The literature-based framework is used as a reference framework in this study. In the third chapter, the methodology is described in detail. In the fourth chapter of the empirical results are presented and the fifth chapter, discussion, offers conclusion of the findings, managerial implications and introduction to future research challenges.

## **2 Early stages of technology intensive companies: framework**

In this analysis, the early-stage technology intensive firm is an independently owned firm which is not more than 25 years old (Storey and Tether, 1998).

During past decades, many models have been formed in order to clarify the early stages of technology intensive companies. An extensive review of the research focusing on the stages of development was recently provided (Muhos et al., 2010; Muhos, 2011). Based on the review, a four-stage synthesis of fourteen recent empirically based models (e.g. Garengo and Bernardi, 2007; Hanks and Chandler, 1994; Kaulio, 2003; Kazanjian and Drazin, 1990; Smith et al., 1985; Stam, 2007) was developed for a self-assessment of

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the early stages in technology intensive companies (Muhos et al., 2009; Muhos, 2011). Such a framework may help intermediaries to provide accurate support for the new technology intensive companies. The four stages of the framework are condensed below. This framework is used in this study as a reference framework to classify the public business services provided for companies at early stages. The framework is described in the following paragraphs.

At stage 1, *Conception and development*, the newly established firm is owner-dependent. The objective is product and/or technology development and establishment of an early customer base. The main activities relate to the business idea, identification of a market, and resource mobilisation. Development of a working prototype begins. The management is informal, flexible and creative, communication is face-to-face, and the decisions are made by the owner. The organisation functions as a product development team. The cash flow falls into the red because there is not much to sell yet.

Stage 2, *Commercialisation*, begins with early reference customers. The objective is creation of a business and commercialisation of the product. The stage is characterised by early manufacturing and marketing and initial technical challenges. The company learns to make the product and to produce it. Management style is participative and coordinative. The nucleus of the administrative system is dominated by the owner and/or a small number of partners. Resource generation and survival are key issues. The amount of negative cash flow decreases.

At stage 3, *Expansion*, manufacturing and technical feasibility and market acceptance lead to high growth and constant change. The main objective is to manage the company toward growth and increase market share by marketing and manufacturing the product efficiently and in high volume. The company needs to produce, sell and distribute the product at an increasing volume while taking care of efficiency and effectiveness through structures and processes. New customers and new market channels require constant attention. Personnel problems result from high growth. The owner and/or entrepreneurial team are central, though a sense of hierarchy increases. Budgets are moderately utilised for communication. More specialised functions are considered and added. Positive cash flow increases rapidly.

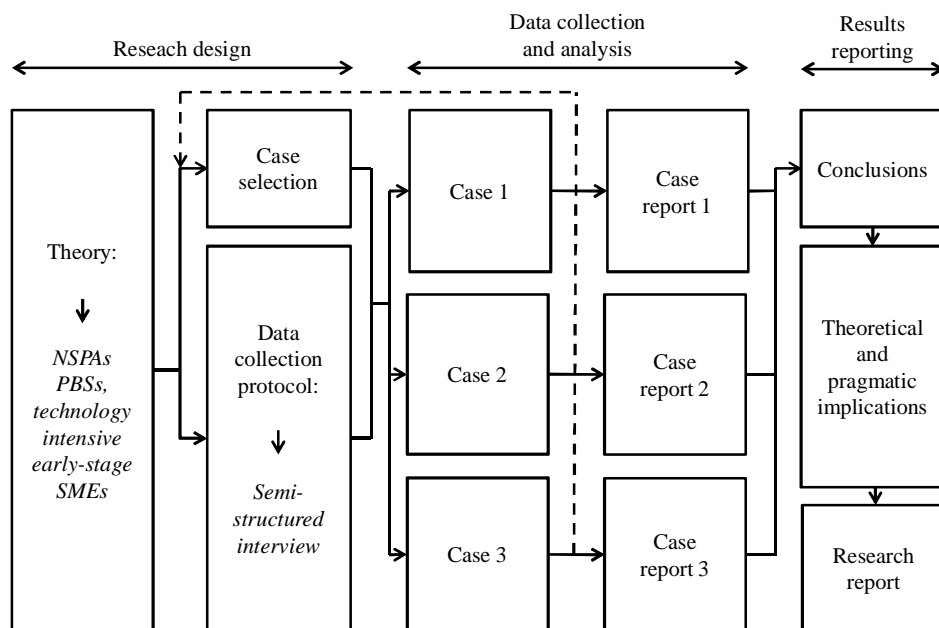
At stage 4, *Stability/renewal*, the company faces a lowering growth rate and intense competition in a maturing product market. Effort is needed for launching a second generation of the product and for effectiveness and efficiency issues. Identification of new markets is essential for company renewal. However, cost control and productivity become the main concerns. Growth and reasonable market share are maintained by the resulting product generations and profitability improvements. The owner is usually supported by or replaced by a professional manager or a management team, and professional management systems are added. Strategies, rules, regulations and procedures are standardised and formalised. Employees become specialised non-risk takers. Specialised functions are added. The stage is characterised by a decreasing growth of cash flow.

The above described framework functions as a reference framework in this study. The framework is utilised to reflect and analyse the services provided by PBSs in NSPAs. According to Lindhult and Höglund (2011), it was recently shown that it is possible to strengthen the entrepreneurial process through counselling and structured knowledge in the early stages. The next question is what PBSs should contain in order to be effective. Analysis of growth as a process enables foresight of early-stage companies' needs as a part of the public business service process. The main idea of segmentation under the growth process of companies is more individualised service, and in addition, the opportunity of evaluating the company's past and future development and related

management challenges. Management of companies prepared for the early-stage challenges is more likely to succeed than unprepared. Comprehensive understanding of the companies' growth processes helps business services better to support various entrepreneurs confronting and forecasting the challenges.

### 3 Method

This is a holistic multiple case study (Saunders et al., 2007; Yin, 1989). The research process of this study is presented in Figure 1.



**Figure 1** Research process of this study (modified from Yin, 1989)

In this study, the unit of analysis is a PBS network located in a NSPA of Finland. The empirical data was gathered via semi-structured interviews and public archives related to the three case subregions of Oulu South. The interviews were conducted face-to-face during fieldwork. The questionnaire consisted of the following sections:

1. Clarification of the purpose of the interview
2. Basic information of the organisation and the interviewee
3. General description of the services provided by the service provider
4. Evaluation of the services

During the interview, the interviewer summarised the explanation provided by the interviewees in order to avoid a biased or incomplete interpretation. Multiple sources of

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evidence were used, including quantitative and qualitative evidence. The case study evidence was saved to the database. The case study evidence was collected by a researcher trained in data collection procedures and in the theoretical background of this study. The interviews were recorded and lettered. In an inclusive and iterative process, the data was analysed and the main findings were summarised.

**Table 1** The interviewees and the organisations

Interviewee	Position	Organisation	Subregion
A	Development manager	YTEK	Ylivieska subregion
B	Chief Executive Officer	YTEK	Ylivieska subregion
C	Business development manager	Ylivieska subregion	Ylivieska subregion
D	Chief Executive Officer	NIHAK	Nivala-Haapajärvi subregion
E	Business development manager	NIHAK	Nivala-Haapajärvi subregion
F	Project manager	NIHAK	Nivala-Haapajärvi subregion
G	Chief Executive Officer	Haapavesi Technology Park	Haapavesi-Siikalatva subregion
H	Executive director	Siikalatva Development Centre	Haapavesi-Siikalatva subregion

## 4 Results

### 4.1 Public Business Service Providers in the Case Regions

The *Nivala-Haapajärvi subregion* (Case 1) has arranged its business development services via the development company, NIHAK, which operates as a limited company. NIHAK is a municipal producer, and its duty is to develop the region, together with its member municipalities and partners, by means of programme-based regional development. The aim of the business development services is to develop several kinds of business activities, excluding primary production in agriculture and forestry, which are the responsibility of other actors/organisations.

The roles of the personnel are divided in such a way that the personnel have both a horizontal (thematic) responsibility (e.g. the incubation services and the services of the growing enterprises) and a vertical (local) municipal business development consultation responsibility. In every member municipality, there is a business development manager and an agency where the entrepreneur receives a start-up package containing information on business development services, following the principle of a “single window” system. The business development managers provide business services in their own

municipalities, but they cooperate with each other as a network, depending on their areas of expertise, for the benefit of the subregion.

The main content of the service is recognising and understanding the process and the life cycle stage of the business activity and then offering the appropriate service. In addition to producing the services, the development company is an agent for the services provided by the cooperation partners, including such things as manufacturing studios, premises, international services, etc. In this study's interviews, NIHAK is regarded as an immediate interface between the enterprises, society and the public economy.

In 1996, the establishment of the *Haapavesi-Siikalatva* (Case 2) subregional joint authority brought together regional development and business services of the subregion's municipalities. Currently, a joint authority, the Siikalatva Development Centre, produces business services for the municipalities of Siikalatva and Pyhäntä, and via regional development projects, it also does so for the municipality of Haapavesi. However, Haapavesi produces its general business services locally.

The Siikalatva Development Centre is mainly responsible for business development in the subregion. The essential part of these services is project-based. The Siikalatva Development Centre offers all business services to enterprises that range from entrepreneurs thinking about establishing a business to businesses already operating on a regular basis. The vital part of this business development includes the formation of a business development strategy, launching and coordinating projects according to that strategy, the production of business consulting services and the development of entrepreneurial training. The Siikalatva Development Centre has a business agent and it also coordinates about 10 EU-funded projects, which aim to provide added value to the companies. The project managers participate in the production of business services.

The main content of the business services includes flexible facilities and location, high-level advice and consultation, training, research and development services and services provided through the advantages of national and EU-level policies. The most essential questions about how to run a business focus on the funding of investments, liquidity and obtaining financial support related to expansion and marketing. However, the Siikalatva Development Centre does not offer direct funding. In addition to the direct services, companies are linked to services provided by the network. Often the network can provide the necessary services if the service cannot be directly offered during the first contact.

The *Ylivieska subregion* (Case 3) does not have a single PBS company; the municipalities in this subregion implement the business services more or less independently. However, multidimensional subregional collaboration is broadly used in PBS production. Some of the municipalities buy the services from the subregional association. The starting point is to ensure that the Ylivieska subregion has the capability of providing a variety of services through the entire life cycle of the company and to support entrepreneurs and potential entrepreneurs.

In Ylivieska, the business services are provided by YTEK Ltd., which is a company owned by the town of Ylivieska. YTEK offers its customers advisory services and facility solutions. All YTEK personnel are involved in these basic advisory services. Later on, as the current state and the goals of a company are known, the special fields of expertise are used for more specialised service. Based on this case study's interviews, the most important competency is the capability to recognise the company's main problems by listening to the entrepreneur. The problems are analysed, and based on that analysis, the next developmental steps are agreed upon.

The goal of the productisation is to clarify the service portfolio so that, after first contact with a customer, the personnel can guide a customer to the right



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service/specialist. The intention is to minimise ad hoc services and develop more specialised services according to the life cycle of the company. The services are currently organised according to a general life cycle model divided into start-up services, know-how and networking services, growth and internationalisation services, and change of ownership services.

**Table 2** The service description of the subregions (Case 1, Case 2, and Case 3)

<b>Case 1</b>	<b>Nivala-Haapajärvi subregion</b>
Organisation of services	NIHAK
Municipalities	Haapajärvi, Kärsämäki, Nivala, Pyhäjärvi and Reisjärvi
Inhabitants	30,333
Number of enterprises	1600
Employees working with entrepreneurs	10
<b>Case 2</b>	<b>Haapavesi-Siikalatva subregion</b>
Organisation of services	Siikalatva Development Centre, Municipality of Haapavesi
Municipalities	Haapavesi, Siikalatva, Pyhäntä
Inhabitants	15,031
Number of enterprises	800
Employees working with entrepreneurs	7 (varies according to the projects)
<b>Case 3</b>	<b>Ylivieska subregion</b>
Organisation of services	YTEK Ltd., Ylivieska subregion, municipalities (Sievi, Oulainen, Kalajoki)
Municipalities	Ylivieska, Kalajoki, Oulainen, Sievi, Alavieska, Merijärvi
Inhabitants	44,062
Number of enterprises	2300
Employees working with entrepreneurs	10 (varies according to the projects)

*4.2 Services for technology intensive companies presented in stages*

The four-stage framework described in chapter 2 functions as a reference framework in order to reflect and classify the services provided by PBSs in NSPAs.

*Conception and Development stage*

Services for enterprises in the *conception and development stage* include general enterprise consultation, enterprise start-up consultation and grants. In addition, business idea development, survey of grant opportunities, evaluation of profitability, different kinds of plans (e.g. a business activity plan), financial statements, financial planning and application for financing are offered. This clearing up of different financing alternatives, along with arranging contact between financiers and the entrepreneur, also describes the character of the business development service as an important intermediary organisation.

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There are also the incubation services in all subregions, which are directed especially to commencing enterprises and young enterprises as well as to those who start up and develop new business activities and have opportunities to expand. Innovation services, like protection of innovations and the building up of development services, suit the enterprises in this stage. Additionally, in Nivala-Haapajärvi subregion, NIHAK and its partners offer training in enterprising, manufacturing studios and premises.

Guidance services applying to an enterprise's needs in the conception and development stage are valuation of a business idea, the drawing up of business activity plans, financial planning and possibly arranging for that financing. The enterprise incubation offers help to those who are thinking over an enterprise activity, and it also helps a commencing entrepreneur in an enterprise's start-up stage.

An enterprise in the conception and development stage obtains from the business consultants around the subregions covering information about the enterprise's start-up stage and the total planning of financing. Consultation may also be necessary when choosing the enterprise form and the business name or when other issues arise such as licensing, making basic reports, acquiring insurance and arranging bookkeeping.

The partial character as intermediary organisations of the business development services at both the subregional and the municipal level appears already in the enterprise's start-up stage, when the financial opportunities are surveyed. Support and help are also offered by training entrepreneurs in the development of the models of action along with strengthening of the business activity.

It is also important that the entrepreneur has the chance to discuss the enterprise's matters confidentially with specialists. In Ylivieska subregion, it is possible for the commencing entrepreneur to participate in incubation activity. Using a development plan, this helps the entrepreneur develop business activity expertise and go to the "First Step Service". This service is a productised service package for every commencing enterprise which turns to this service circle. The service attempts to help the commencing enterprise to determine the essential expertise and specific features for building up prosperity. It is a service subject to a charge, and it includes a lot of expert service for enterprise planning and enterprise start-up in the initial stage.

*Commercialisation stage*

Services directed into the commercialisation stage are the incubation, where the enterprise is developed in cooperation, and the utilisation of consultants. In this stage, the enterprises obtain basic services, guidance and necessary help from the enterprise services. Financial assistance can be considered, for example, for participating in a fair. Targeted training such as education project training is offered, which concentrates on elevating the personnel's expertise levels. Several general business development consultations with the entrepreneur occur, where asking the right questions gives necessary help to the enterprise.

As intermediary organisations, subregions' actors have also made recommendations such as the marketing and sales programme offered by the ELY Centre (Finnish government business service and support agency). The business services project is implemented in both Haapavesi-Siikalatva and Nivala-Haapajärvi subregions, the target group consisting of entrepreneurs and their staff.

In the commercialisation stage, the business services provide public consultation on economic life for the different actors in the region. Through the projects, experts' knowledge can also be put out to tender in helping to educate, train and spur enterprises

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in the region. The most essential issues in training during this stage of development involve sales and marketing expertise.

Based on the interviews, the public business services have received messages from entrepreneurs to the effect that public support almost ends in that stage when the enterprise starts to commercialise its products. As the financiers' supply decreases, the situation can also be seen in the business development services, where there are fewer services open to entrepreneurs in this stage. Nevertheless, export representative services can be offered, for instance, when commercialisation starts to expand towards an international activity. And for the time being, as purchased services, export representative services are offered, for example, for expansion into Central Europe.

*Expansion stage*

In the expansion stage, basic services are provided by the subregions' business services, such as guidance along with help for financial and development challenges for enterprises. Several kinds of sticking points become clear during this stage, for example, that manufacturing is not able to respond to sales growth. Problems may appear in connection with production management, quality management systems, financing, working capital, increases in staff, and recruitment. To recognise the acute sticking points and bottlenecks, the enterprise may need outside expertise that PBSs can offer. All internationalisation services, e.g. the shared export secretary service in Nivala-Haapajärvi subregion, can also be seen as expansion-stage services.

In the expansion stage, issues about financing arise to an essential role. Typical intermediary organisation services would involve public enterprise consultation along with services dealing with issues of planning, calculation and applying, related to financing, as well as uniting the entrepreneur and the financier. Training and other education provided through the projects may relate to the increase of leadership expertise and to the internationalisation of the enterprises, e.g. by supporting their participating in a business fair.

The PBS's role as an intermediary organisation is emphasised when the enterprise being served is in the expansion stage. The expertise of provided actors is utilised, for instance, in budget calculation. Typical services offered in this stage are financial planning and application for financing. From an intermediary organisation's point of view, an attitude of growth is something that financiers favour. The subregion systematically attempts to look for enterprises which are capable of expanding and which are expansion orientated.

In many development projects administrated by subregions, services for the enterprises are also available. For instance, the subregion has a project for the outside financing of capital with terms, which is directed especially to enterprises in the expansion stage. Additionally, the business development services tend to respond to the new educational needs that often arise in enterprises in the expansion stage. Solutions for sticking points related to expertise are looked for in the enterprises, through education and training. In the Ylivieska subregion, the service network experts help the enterprise find a suitable way to implement development and internationalisation projects directed to entrepreneurs, especially by building up an export network.

*Stability and renewal stage*

In the stability and renewal stage, the basic services offered to the enterprises are quite similar to the services in other stages. The services attempt to respond to an enterprise's

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needs, which in this stage are related to investments, family business succession or business acquisition.

On the grounds of the interviews, the stability and renewal stage is also interesting because some of the enterprises are content with their stability and are not trying to reach growth. The business activity is becoming stabilised, and in the absence of growth desires, there are no longer any significant needs for utilising business development services. But when the enterprise desires and needs a renewal, a stage of expansion with new investment planning may often come up, and then there is also possibly a need for an expert from outside. In this stage, a change of ownership may occur in the enterprise's development. If the entrepreneur is interested in abandoning the enterprise, PBSs can cooperate in implementing a sale and negotiate with purchasing candidates from outside.

In addition to public enterprise consultation, in the Ylivieska subregion, enterprises can receive needed specialist help. For example, enterprises can receive education in financing and strategic planning. There are situations in an enterprise's and entrepreneur's life cycle, such as family business succession, the entrepreneur's retirement or purchase offers, when a business acquisition occurs. In situations related to family business succession, services provided by the Innoveturi "Innovation Locomotive" are workshops, enterprise group services and local training.

The business services and development activities for early-stage technology intensive companies are condensed in Table 3, below.

**Table 3** Business services and development activities provided for early-stage technology intensive companies

	<b>Stage 1: Conception and development</b>	<b>Stage 2: Commercialisation</b>	<b>Stage 3: Expansion</b>	<b>Stage 4: Stability/ renewal</b>
<b>Case 1</b> Nivala- Haapajärvi subregion	- Business plan - Establishing the business	- Planning and seeking financing - Monitoring the business situation and development needs	- Planning and seeking financing - Monitoring the business situation and development needs	- Planning and seeking financing - Monitoring the business situation and development needs
<b>Case 2</b> Haapavesi- Siikalatva subregion	- Planning and seeking financing - Developing and	- Business incubation		
<b>Case 3</b> Ylivieska subregion	evaluating the business idea - Business incubation			- Services at changes of ownership and generation change

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<b>Case 1</b> Nivala- Haapajärvi subregion	- Assessing profitability - Constructing development projects -Manufacturing studios	- Building development projects - Training	-Export specialist services -Trade fair and contact services - Building development projects - Studios as development environments	-Building development projects
<b>Case 2</b> Haapavesi- Siikalatva subregion		- Courses and coaching	- Supported expert services - Courses and coaching	
<b>Case 3</b> Ylivieska subregion	- First Step service	- Courses and coaching	- Courses and coaching - Generating export networks	- Courses and coaching - Supported expert services

General business consulting, advisory services and the actions of the intermediary organisations are included in all cells of the above presented table. The support actions of the PBSs are not always productised, but they are tailored based on the customers' needs. Third party solutions are offered in case the service portfolio does not meet the specific needs of a customer. These can be offered through the partner networks.

## 5 Discussion

The aim of this study was to describe PBSs for technology intensive SMEs in NSPAs. The first research question is: How are PBSs organised in the sparsely populated case area? The organising of PBSs in Oulu South can be described through four main characteristics. First, the services are organised through several administrative solutions. The municipalities share the common interest of fostering the vitality of business and industry in their region; however, the solutions of organising and administrating PBSs vary due to the historical background of the collaboration in the region.

Second, the services are organised through important personal relationships between PBS managers and entrepreneurs. Interacting with entrepreneurs on a personal level builds trust. This personalised approach includes responding to the needs of enterprises within a short time period and maintaining contact at least on an annual basis.

Third, the tailoring and productisation of services constitute an integral part of the system. Most of the services are semi-structured, which offers the possibility of responding to the specific needs of each client. The productisation of services is important, especially when addressing the internal needs of the network and the partner organisations. To be able to tailor services or to use the services of the network, the PBS managers have to know the existing service possibilities.

Fourth, in addition to agencies' direct services, the services of the partner and network organisations are also offered. The services are organised through multiple intermediary

actors with multiple roles. The organisation offering PBSs in SPAs is acting on the interface. It is essential to produce and disseminate information to the entrepreneurs, the enterprises' staff and the collaborating organisations. The role of the agencies assimilates to the regional development tasks, such as promoting innovation possibilities and other preconditions of the enterprises.

It can be noted, that when an entrepreneur with a business activity is a client of the PBSs, that person's enterprise is usually in transition. In the positive or negative transitional stages, the entrepreneur tries to utilise the PBSs. Grant applications and plans for extensions, projects and investments, as well as budgeting related to those plans, are typical services directed to enterprises engaged in positive transitions. One important function of the business service organisations is to act as companions in discussions with the entrepreneurs.

The second research question is: What kinds of business services do PBSs provide for early-stage technology intensive companies in NSPAs? It appears that the three subregions produce similar services, often at the general level. Reorganisation of those overlapping activities is required and offers the potential for new forms of cooperation in order to improve productivity and potential synergies.

Some challenges were pointed out such as internationalisation, attracting private financing, and supporting the SMEs in participating in region-specific large-scale building projects. Generally speaking, service providers did not recognise major gaps between services and the needs of companies. They seem to have effectively utilised their networks and external expertise in cases of specific needs. On the other hand, some of them highlighted the need for building a more extensive knowledge base in order to be able to provide more accurate support for their customers.

This study provides support for the managers of PBSs considering or currently using stage framework as the framework for providing more accurate services for technology intensive companies. A very general level stage concept had already been used as a framework for providing services (especially in Ylivieska subregion). To develop this approach further in the subregions, more accurate support could be provided by implementing more industry-specific frameworks. In an earlier study, for the public sector considering using such frameworks for supporting young technology intensive companies in their early development, two viewpoints were highlighted (Muhos, 2011). First, stage frameworks can help to prepare for some of the central activities of the early stages. As a company progresses through the early stages, the configurations of the framework may help to predict the key managerial focus areas and to allocate resources in a more focused manner. Moreover, the stage framework is useful in reflecting ongoing realities in the company; the assessment of the current stage and the related potential key challenges may be useful in the midst of overwhelming operative tasks. Second, however, each business is unique and should be treated as such. The reality is rarely, if ever, totally parallel with such a reference framework. A framework provides neither case-specific details nor contradictory aspects. Therefore, when using such a framework in developing services, the limitations of the framework and the business context of the region should be carefully studied.

A construct validity of this case study is based on a sound research plan. The case studies presented here used multiple sources of evidence, including interviews and public archive documents, and the chain of evidence was carefully established. The internal validity of the study relies on the research design. The causal relations were built carefully to avoid any biases. Where external validity of a case study is concerned, analytic generalisation (generalisation to a theory) is possible through literal or theoretical replication logic (see Yin, 1989). This study represents literal replication,

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where the cases are designed to cover similar theoretical conditions. Analytic generalisation from these cases enables development of better context-specific frameworks in NSPAs. However, the findings of the study cannot be generalised to other contexts, and they depend on the time of data collection. Reproducing the same cases in the same environment later would change some of the findings. For evaluation of the reliability of the study, the following points are highlighted. Case study protocol was used during the data collection stage, the case database was established and the data collection process was documented—the research was conducted so that an auditor could repeat the procedures and arrive at the similar kinds of results. The researchers' own paradigm may have an effect on the findings in this type of case study, and this effect was minimised by an inclusive and iterative data collection process, which enabled verification of the interpretations during the process.

This study is limited to three subregions of Oulu South, located in Northern Finland. Therefore, some of the findings may be region-specific or country-specific. Moreover, the viewpoint of an interviewee may be biased, especially because he/she is asked to evaluate his/her own services from the point of view of the customer. The next natural and essential step in this research is to examine the customer's viewpoint. In future studies, it would be interesting to investigate more cases with similar backgrounds.

The results of this study represent the viewpoint of PBS organisations functioning in NSPAs. Their viewpoints might differ from viewpoints of similar organisations in different business environments, due to context-specific variables. It would be interesting to compare the results of a similar analysis made in PBSs located in rural areas in other European countries, Asia or in the United States.

## References

- Ayyagari, M., Beck, T. and Demircuc-Kunt, A. (2007) 'Small and medium enterprises across the globe', *Small Business Economics*, Vol. 29 No. 4, pp. 415–434.
- Beck, T., Demircuc-Kunt, A. and Levine, R. (2005) 'SMEs, growth, and poverty: cross-country evidence', *Journal of Economic Growth*, Vol. 10 No. 3, pp.199–229.
- Blili, S. and Raymond, L. (1993) 'Information technology: threats and opportunities for small and medium-sized enterprises', *International Journal of Information Management*, Vol. 13 No. 6, pp. 439–448.
- Boter, H. (2005) 'SME perspectives on business support services: the role of company size, industry and location', *Journal of Small Business and Enterprise Development*, Vol. 12 No. 2, pp. 244–258.
- Ciemleja, G. and Lace, N. (2011) 'The model of sustainable performance of small and medium-sized enterprise', *Engineering Economics*, Vol. 22 No. 5, pp. 501–509.
- Eurostat. (2012) *Regional typologies overview – Statistics Explained* [online] [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Regional\\_typologies\\_overview](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Regional_typologies_overview) (Accessed 6 February 2013)
- Garengo, P. and Bernardi, G. (2007) 'Organizational capability in SMEs: performance measurement as a key system in supporting company development', *International Journal of Productivity and Performance Management*, Vol. 56 No. 5–6, pp. 518–532.
- Gløersen, E., Dubois, A., Copus, A. and Schürmann, C. (2006) *Northern Peripheral, Sparsely Populated Regions in the European Union and in Norway*, Nordregio Report 2006:2, Stockholm.
- Hanks, S.H. and Chandler, G. (1994) 'Patterns of functional specialization in emerging high tech firms', *Journal of Small Business Management*, Vol. 32 No. 2.
- Kaulio, M.A. (2003) 'Initial conditions or process of development? Critical incidents in the early stages of new ventures', *R&D Management*, Vol. 33 No. 2, pp. 165–175.
- Kazanjian, R.K. and Drazin, R. (1990) 'A stage-contingent model of design and growth for technology based new ventures', *Journal of Business Venturing*, Vol. 5 No. 3, pp. 137–150.
- Lindhult, E. and Höglund, J. (2011) 'Product, process and person orientation in business advisory services', in Segelod, E. et al. (Eds.), *Studies in Industrial Renewal – Coping with Changing Contexts*, Mälardalen University, pp. 357–368.
- Lundström, A. and Kremel, A. (2011) 'Demands for counseling towards surviving business – a role for public counseling?' in Segelod, E. et al. (Eds.), *Studies in Industrial Renewal – Coping with Changing Contexts*, Mälardalen University, pp. 329–342.
- Ministry of Employment and the Economy. (2012) *Public business services in regions. Publications of the Ministry of Employment and the Economy 45/2012*. Helsinki, (in Finnish: Julkiset yrityspalvelut alueilla).
- Muhos, M., Iskanius, P., Kess, P., Phusavat, K. and Sanpanich, S. (2009), 'Framework for sequential analysis of new high-tech businesses' in *The eChallenges e-2009 Conference, 21–23 October 2009*, Istanbul, Turkey, 1–14.
- Muhos, M., Kess, P., Phusavat, K. and Sanpanich, S. (2010) 'Business growth models: review of past 60 years', *International Journal of Management and Enterprise Development*, Vol. 8 No. 3, pp. 296–315.



- Muhos, M. (2011) 'Early stages of technology intensive companies'. University of Oulu.
- Osmonalieva, Z. (2011) 'Entrepreneurship support', in Segelod, E. et al. (Eds.), *Studies in industrial renewal – coping with changing contexts*, Mälardalen University, pp. 343–355.
- Reynolds, P.D. (1997) 'New and small firms in expanding markets', *Small Business Economics*, Vol. 9 No. 1, pp. 79–84.
- Robson, P.J.A. and Bennett, R.J. (2000) 'SME growth: the relationship with business advice and external collaboration', *Small Business Economics*, Vol. 15 No. 3, pp. 193–208.
- Saunders, M., Lewis, P. and Thornhill, A. (2007) *Research methods for business students*. London, Financial Times/Prentice Hall.
- Shields, J.F. (2005) 'Does rural location matter? The significance of a rural setting for small businesses', *Journal of Developmental Entrepreneurship (JDE)*, Vol. 10 No. 1, pp.49–63.
- Smith, K.G., Mitchell, T.R. and Summer, C.E. (1985) 'Top level management priorities in different stages of the organizational life cycle', *The Academy of Management Journal*, Vol. 28 No. 4, pp. 799–820.
- Stam, E. (2007) 'Why butterflies don't leave: locational behavior of entrepreneurial firms', *Economic Geography*, Vol. 83 No. 1, p. 27.
- Stathopoulou, S., Psaltopoulos, D. and Skuras, D. (2004) 'Rural entrepreneurship in Europe: a research framework and agenda', *International Journal of Entrepreneurial Behaviour & Research*, Vol. 10 No. 6, pp. 404–425.
- Statistics Finland. SeutuNet – Oulun Eteläinen. 2012 (08/09).
- Storey, D.J. and Tether, B.S. (1998) 'New technology-based firms in the European union: an introduction', *Research Policy*, Vol. 26 No. 9, pp. 933–946.
- Tagliavini, M., Ravarini, A. and Antonelli, A. (2001) 'An evaluation model for electronic commerce activities within SMEs', *Information Technology and Management*, Vol. 2 No. 2, pp. 211–230.
- Veugelers, R., Aiginger, K., Breznitz, D., Edquist, C., Murray, G., Ottaviano, G., Hyytinen, A., Kangasharju, A., Ketokivi, M., Luukkonen, T., Maliranta, M., Maula, M., Okko, P., Rouvinen, P., Sotarauta, M., Tanayama, T., Toivanen, O. and Ylä-Anttila, P. (2009) *Evaluation of the Finnish National Innovation System – Full Report*. Taloustieto Oy, Helsinki.
- Väänänen, L. (2003) 'Public Provision of Business Support Services in Finland.' Helsinki: ETLA, Elinkeinoelämän Tutkimuslaitos, The Research Institute of the Finnish Economy, 59 p. (Keskusteluaiheita, Discussion Papers, ISSN 0781-6847; No. 850) [online]  
<https://www.econstor.eu/dspace/bitstream/10419/63769/1/362647593.pdf>  
(Accessed 16 September 2013)
- Yifeng, X. (2011) 'Open innovation of small and medium sized enterprises and R & D public service platform: a case about the VIC model of Zhangjiang Hi-tech Park', *E-Business and E-Government (ICEE)*, 2011 International Conference, IEEE: 1–4.
- Yin, R.K. (1989). *Case study research: design and methods*. Sage Publications, Beverly Hills.
- Yin, R.K. (1994). *Case study research: design and methods*. Sage Publications, Thousand Oaks, CA.