

Micro-Business Owner-Managers' Growth Intentions in Sparsely Populated Areas in Northern Finland

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This research provides new information on the prerequisites for micro-firms operating in sparsely populated areas. Micro-business constitutes a numerically dominant group in every economy. In recent years, small businesses and small and medium enterprises, the latter two of which form the backbone of many countries' economies, have attracted considerable research attention. This study has a twofold aim: (1) to highlight the scant attention paid by researchers to micro-enterprises and (2) to investigate the growth of independently owned micro-businesses and compare self-evaluated growth stages with the change in the turnover volume. This case study synthesises two empirical stage models into two self-evaluation frameworks used for 53 technology- and service-based firms. The results indicate that the selected growth stages correspond relatively well to the micro-businesses' growth.

Key Words: micro-enterprise, entrepreneurship, micro-business, stage of growth, framework

JEL Classification: D22, L21, L25, M51

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Introduction

Undoubtedly, entrepreneurship plays an important role in the economies of most countries; small- and medium-sized enterprises (SMES) form the

backbone of the European Union's (EU) economy, producing most of the new jobs. However, rural businesses face significant constraints in their development, relating to proximity to customers and access to business advice (Keeble et al. 1992). In many studies, SMEs are often associated with a high rate of national economic growth (see Beck, Demirguc-Kunt, and Levine 2005; Reynolds 1997; Robson and Bennett 2000). Additionally, in 2014, SMEs in the EU employed 88.8 million people, which comprised 66.9% of all private-sector jobs and generated 58% of all private-sector added value (European Commission 2015). However, a large SME base does not directly cause economic growth and should be considered only one characteristic of a successful national economy.

Entrepreneurship signifies economic growth (Sexton and Bowman-Upton 1991). The relevant literature can be summarised in terms of the antecedents and the consequences of growth (Wiklund 1998). In this analysis, both technology- and service-based self-evaluation frameworks were used to determine each micro-firm's current growth stage, and the growth stages were then compared with the change in the turnover volume. This study used four stages for a technology-based firm's self-evaluation framework (Muhos 2011; Muhos et al. 2010). At stage 1, conception and development, the newly established firm is owner-dependent. At stage 2, commercialisation, there are early reference customers. At stage 3, expansion, manufacturing and technical feasibility and market acceptance lead to high growth and continual change. At stage 4, stability and renewal, the firm faces a slowing growth rate and intense competition in a maturing product market.

The condensed self-evaluation framework for the early stages of a service-based firm (modified from Muhos et al. 2017) is described as follows. At stage 1, the service-based start-up focuses on developing and delivering services and building its market identity to survive. At stage 2, as market acceptance leads a service-based firm to rapid growth and constant change, the primary emphasis turns to growth management. At stage 3, because of market saturation and increased competition, a service-based firm's attention shifts to improving profitability and efficiency by formalising rules, procedures and financial controls. At stage 4, to gain new momentum, a service-based firm concentrates on new service generation, whether in business areas or locations, and on the development of a uniform firm culture. Many micro-companies' lack of growth and lack of propensity to become involved in externally supplied training and development activities lie at the centre of the policy chal-

lenge (Devins et al. 2005). Businesses in more rural or peripheral regions may have more limited potential to develop collaborative arrangements or call for external inputs (Bennett, Robson, and Bratton 2001).

Knowledge has been identified as one of the most important resources that contributes to an organisation's competitive edge, providing a sustainable advantage in a competitive and dynamic economy (e.g., Foss and Pedersen 2002; Pan and Scarbrough 1999). The significance of innovation and knowledge transfer in the regional economic development process has increasingly been highlighted. Many studies have emphasised the importance of external knowledge for organisational learning (e.g., Anusornnitisarn et al. 2010). Correct knowledge is an asset to micro-business owner-managers and should be a platform for all business decisions.

This study aims to investigate the growth stage of independently owned technology- or service-based micro-firms that are less than 15 years old. This study's research question is as follows: How well does the micro-business owner's self-evaluated growth stage match the company's realised turnover development?

The following section provides the study's theoretical background via a review of the literature on regional development, business growth and sparsely populated areas (SPAs). The third section discusses the research method, while the fourth presents the results of the search for micro-business articles in the Scopus database. The fifth section covers the gross case analysis of self-evaluated growth stages. The last section includes the conclusions, limitations and suggested areas for further research.

Theoretical Background

The regional level is an important aspect for understanding entrepreneurship and competitiveness, whereas a nation is often used as the unit of analysis in studies regarding economic development (Porter 2003; Verheul et al. 2002). Jokela, Niinikoski, and Muhos (2015) argue that innovations in micro-sized companies pose challenges to the regional innovation system, especially in how to reach innovators at the early stages of the process. Entrepreneurship has potentially short-, medium- and long-term consequences for regions, including the creation of employment and wealth (Fritsch and Mueller 2004; Mueller, Van Stel, and Storey 2008). A well-organised business will grow and survive, while an unproductive enterprise will decline and collapse (Audretsch and Keilbach 2004); therefore, the total effect on employment can be either positive or negative (Fritsch and Mueller 2004; Mueller et al. 2008).

The regions' ability to gain from the positive effects of entrepreneurship will depend on their institutional arrangements and social pay-off structures (Baumol 1990), along with their capacity to apply knowledge to regional growth through the creation and the dissemination of knowledge (Audretsch and Keilbach 2004).

The regions' competitiveness refers to the presence of the conditions that enable firms to compete in their chosen markets and to the firms' generated value to be captured within a region (Begg 1999; Huggins 2003). Hence, regions can influence entrepreneurial activities via a shared culture or a set of formal and informal rules (Werker and Athreye 2004).

Firm growth and its reason constitute an important and well-studied topic in economic literature (Brenner and Schimke 2015). Particularly, McKelvie and Wiklund (2010, 280) identify three research streams (growth as an outcome, the outcome of growth and the growth process) and three basic modes of growth (organic, acquisitive and hybrid). Regarding this issue, two fields are important in our study. First, some approaches aim to identify and analyse firms' growth stages and development paths (e.g., Delmar, Davidsson, and Gartner 2003). Delmar, Davidsson, and Gartner (2003) recognise different patterns of firm growth that are related to a firm's age, size and industry affiliation. Additionally, they focus their analysis on the variations of firm growth measures (i.e., relative, absolute sales growth and organic growth). Among the approaches are those concentrating on the sequence and the duration of growth phases during the life cycle of firms (e.g., Garnsey, Stam, and Heffernan 2006). They analyse new firms' growth paths that are categorised by patterns of survival, continuous growth, turning points, reversals and cumulative growth.

Gibrat's law, which states that firm growth is quite random, has been considered false by most of the current researchers (e.g., Lotti, Santarelli, and Vivarelli 2009). Nevertheless, other scholars seem to agree that firm growth, especially in the short term, is much more random (e.g., Liu, Tsou, and Hammitt 1999). It is commonly assumed that some determinants exert influence on firm growth. For example, Oliveira and Fortunato (2006) find that firms with higher foreign participation (e.g., export orientation) appear to grow faster than others. Other empirical studies examine whether firm growth can be explained by firm characteristics, such as size and industry affiliation (e.g., Bottazzi and Secchi 2006; Harhoff, Stahl, and Woywode 1998). Another important issue is the relation between strategic decision making and firm performance (e.g., Baum and Wally 2003). Baum and Wally (2003) suggest that, generally, the speed

of an entrepreneur's decision making predicts subsequent firm growth and profits.

According to the Eurostat (see http://ec.europa.eu/eurostat/statistics-explained/index.php/Regional_typologies_overview), a SPA (sparsely populated area) is defined as a region with a population density below 12.5 inhabitants per km². The northern parts of Finland, Sweden and Norway and most of Iceland can be defined as northern SPAs (NSPAs). The NSPAs' characteristics are that they are peripheral, with cold climates, low population densities and dispersed settlement patterns (Gløersen et al. 2006). Businesses in SPAs tend to be small, and small businesses in rural communities face geo-demographic, sociocultural and economic concerns (Stathopoulou, Psaltopoulos, and Skuras 2004).

Empirical evidence suggests that, despite the higher competition in urban areas (Minniti 2011, 125), population density, growth and size increase entrepreneurship rates (Reynolds, Storey, and Westhead 1994; Shane 2003; Sternberg 2009). Many formal and informal economic institutions support urban entrepreneurship (Gløersen et al. 2006). In their literature review, Gløersen et al. (2009) cite higher returns, greater supply of ideas, more resources and differences in the local cultures and policies as reasons why entrepreneurship is superior in urban areas. Moreover, areas with higher population densities offer entrepreneurs (and potential ones) more observation possibilities (Shane 2003). This finding is confirmed by innovation scholars, who point out the importance of proximity for entrepreneurial dynamics due to a mode of innovation based on doing, using and interacting (Jensen et al. 2007).

Furthermore, entrepreneurs in their home areas (which may be rural) can benefit from their established professional networks and knowledge of their locations (Dahl and Sorenson 2012). While rural areas tend to have a lower demand for products and services, entrepreneurs may feel compensated by decreased living costs in general or a more tranquil lifestyle, which may be preferred (Freire-Gibb and Nielsen 2014).

The Finnish national strategy is to enhance the business sector and, with its comprehensive entrepreneurship support policy, the government aims to help foster businesses, particularly their growth ('Programme of Prime Minister' 2011). The framework of the self-evaluation growth stages provides a tool to improve the preconditions and the climate of business by supporting the research on micro-business. Based on the study of Saarela et al. (2015), a successful enterprise sector can be considered a vital contributing factor to growth, development and better living

conditions in SPAS. However, Shane (2009) argues that considerable evidence shows that these policies lead people to start marginal businesses that are likely to fail, have little economic impact and generate minimal employment.

Methodology

This retrospective multiple-case study used a holistic research strategy (Saunders, Lewis, and Thornhill 2007; Yin 2003). Multiple data-collection techniques may be employed in case studies and are likely to be used in combination (Saunders, Lewis, and Thornhill 2007). Moreover, both qualitative and quantitative evidence can be shown in case studies (Yin 2003); in fact, Yin (2003) encourages using both techniques. In line with Yin's (2003) guidelines, we collected a combination of qualitative and quantitative evidence and focused on a qualitative analysis. At the data-collection phase, qualitative techniques may include focus groups, individual in-depth interviews and case studies (Cooper and Schindler 2010). The qualitative researcher often conducts content analysis of written or recorded materials. We divided the research process into three stages: research design, data collection and analysis, and cross-analysis and conclusion (figure 1).

This search was conducted by using methodical, rigorous standards typical of a systematic literature review (Fink 2004; Okoli and Schabram 2010). This search's inclusion criteria required selected keywords to appear in an article's title, abstract or its own list of keywords; the article to be indexed in the database searched (see www.scopus.com); and the article to be published in a peer-reviewed journal, as research presented in such journals is considered valid and more likely to have a greater effect in its field. Additionally, the study only included articles published in English between 2000 and 2015. Finally, although a number of other potentially relevant publications could be found using the keywords chosen, the study only included journal articles.

The keywords used were *micro-*, *small*, *medium-sized* and *large enterprise*. The subject areas searched were the social sciences and humanities, which included arts and humanities, business, management and accounting, decision sciences, economics, econometrics and finance, psychology, social sciences and multidisciplinary fields.

The case companies' data were collected from semi-structured interviews designed to capture information about economic indicators and the growth stages of the technology- and the service-based micro-firms.

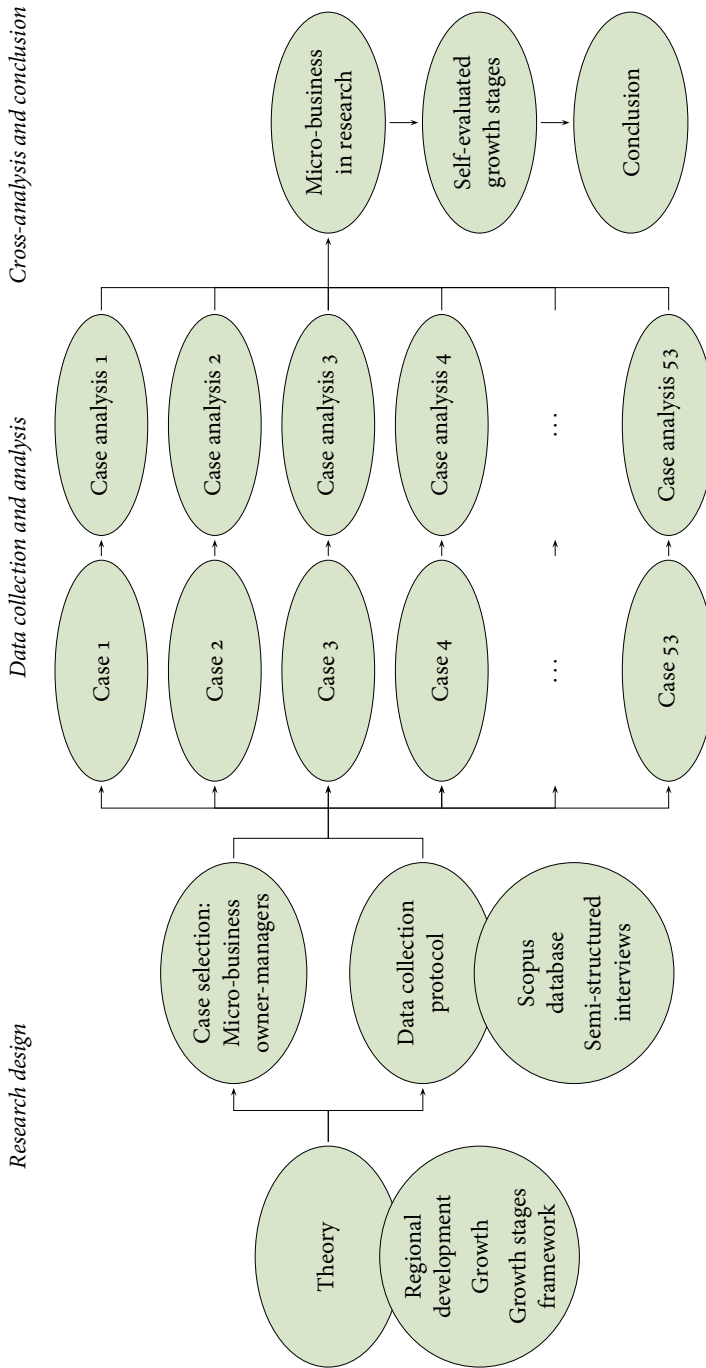


FIGURE 1 The Research Process

During each interview, the firm's age when the changes of a growth stage happen (year) and the turnover of the last 10 years, if applicable, were requested from the micro-business owner-manager. The interviews were constructed to allow interviewees to explain and clarify the topics discussed. The questionnaire, which included a description of the growth stages, was sent early enough to give interviewees time to review it in advance. In total, 53 micro-firm owner-managers operating in Northern Ostrobothnia, Finland, were interviewed by telephone, and each interview lasted up to half an hour. The interviewees' experiences and interests ensured high motivation and relevant knowledge of the topics discussed.

The positions of the interviewees were as follows: self-employed people (11), entrepreneurs (19), managing directors (18), board members (4) and other (1). Their work experiences ranged between 1 and 35 years, with an average of 11 years. The respondents comprised 32 males and 21 females. The firms were originally founded by 49 of the 53 respondents. The case firms' ages varied from 1 to 31 years, averaging 11 years. The legal types were as follows: limited (33), limited partnership (6), trade name (12) and open company (2). The numbers of employees in 2016 varied from 1 to 9, with an average of 3 employees. The firms' turnover figures varied from €10,000 to €1,500,000, with an average of €368,698.

Micro-Business in Research Articles from 2000 to 2015

Across the EU28 countries in 2013, 21.6 million SMEs in the non-financial business sector employed 88.8 million people and generated €3.666 trillion in added value. Expressed another way, 99 out of every 100 businesses in the non-financial business sector were SMEs, 2 out of every 3 private-sector employees worked for SMEs, and an SME contributed 58 cents of every euro of private-sector added value (European Commission 2014, 6).

According to Falk et al. (2014), it is well known that micro-companies form a dynamic group of firms, characterised by a large proportion of young enterprises and higher growth rates but high exit rates as well. The lack of studies on micro-firms is a result of the difficulty of obtaining the relevant firm-specific information (Falk and Hagsten 2015). However, an unambiguous finding in the literature is that micro-enterprises are most often not distinguished from larger SMEs (Falk et al. 2014). Although SMEs are rightly acknowledged as vital to every EU country, is the role of micro-enterprises sufficiently recognised?

Businesses in the EU28 countries in 2013 included the following: 92.4%

TABLE 1 Research Articles by Business Size and Publication Year

Keywords	No. of articles	2000– 2005	2006– 2010	2011– 2015	%
Micro enterprise	1,238	169	371	698	6
Small enterprise	9,587	1,499	3,206	4,882	44
Medium-sized enterprise	4,486	678	1,585	2,223	20
Large enterprise	6,536	1,065	2,220	3,251	30
Total	21, 847	3,411	7,382	11,054	100

micro-enterprises, 6.4% small, 1.0% medium and 0.2% large enterprises (European Commission 2014, 14). European Commission (2013) list 13 growth challenges for SMEs in the EU28 countries, as follows: administrative and regulatory burdens, access to capital, taxation, lack of skilled workers, access to public procurement contracts, unfair/too strong competition, labour laws, access to single markets, access to EU programmes, late payments, access to international markets, access to information and advice, and instability of the world economy/energy cost.

The definition of *enterprise* differs by country; thus, this study used the EU's definition. The research articles identified in the Scopus database totalled 21,874. The keyword *micro* returned 6% of the total, the keywords *small* and *medium-sized* together yielded 64% and the keyword *large enterprise* returned 30%. However, the keywords *small* and *medium-sized* might have returned some articles that were actually about micro-enterprises, although studies on small and medium-sized enterprises often exclude micro-enterprises (table 1).

As might be expected, the three countries that published the most English-language articles about business and entrepreneurship during the time period included in the study were the United Kingdom (UK) (3,838), the United States (US) (3,810) and Australia (1,223). The number of articles published by researchers in developing countries was insignificant.

The literature search identified 21,847 relevant journal articles from the Scopus database. The study did not analyse the contents of the articles. However, in 2013, micro-enterprises provided 29.1% of all private-sector jobs in the EU28 countries, followed by small enterprises with 20.6% and medium-sized enterprises with 17.2% (European Commission 2014, 14). In 2014, SMEs accounted for 71% of the employment growth in the non-financial business sector, including many sectors of the economy, except

financial services, government services, education, health, arts and culture, agriculture, forestry and fishing (European Commission 2015, 36).

Various studies use a wide range of definitions of small, medium-sized and large enterprises, making it difficult to directly compare study results. Additionally, some studies do not clearly state the definitions they are using for the various business sizes. For example, the definition of SME differs between the EU and the US. Therefore, the difference in definitions must be taken into account when comparing SME studies from these two sources. The US has no widely accepted common definition of SME, but in many cases, an SME is defined as having fewer than 500 employees. However, this definition differs, for example, by industry (Ayyagari, Beck, and Demircuc-Kunt 2007).

The search makes clear that micro enterprises play a relatively important role in terms of both economic contribution and employment. Therefore, it is odd that micro enterprises are not addressed in more studies. As table 1 shows, SMEs have attracted considerable research attention, accounting for 64% of the articles returned by the database search covering 2000–2015. About three-quarters of SMEs are active in the following five key sectors: wholesale and retail trade, manufacturing, construction, business services, and accommodation and food services (European Commission 2015). Additionally, the search results suggest that well-done research supports micro-entrepreneurs by providing them with much-needed data.

Self-Evaluated Growth Stage

In this analysis, both technology- and service-based self-evaluation frameworks were used to determine the micro-firms' current growth stages. To create these frameworks, this retrospective multiple-case study synthesised two empirical stage models of technology-based (see Muhos 2011; Muhos et al. 2010) and service-based enterprise growth (Muhos et al. 2017). In this research, we used the four stages for the technology-based firm's self-evaluation framework (Muhos 2011; Muhos et al. 2010), which are condensed in table 2 (see the appendix for full stage descriptions).

Entrepreneurship has been recognised as fundamental to regional economic development, and it has been suggested that entrepreneurship policies should pay more attention to the various dimensions of different regions (Aoyama 2009; Audretsch et al. 2012).

Similarly, a limited number of 25 empirically based models have been formed to clarify the early stages of service-based firms. The condensed

TABLE 2 The Main Stages of the Self-Evaluation Framework for the Early Stages of a Technology-Based Firm

At stage 1, growth through <i>conception and development</i> , the newly established firm is owner-dependent.
Stage 2, growth through <i>commercialisation</i> , begins with early reference customers. The objective is to create a firm and commercialise a product.
At stage 3, growth through <i>expansion</i> , manufacturing and technical feasibility and market acceptance lead to high growth and continual change. The main objective is to manage the firm towards growth and to increase its market share by manufacturing and marketing the product efficiently and in high volume.
At stage 4, growth through <i>stability/renewal</i> , the firm faces a slowing growth rate and intense competition in a maturing product market. Effort is needed to launch a second generation of the product and to address effectiveness and efficiency issues.

TABLE 3 The Main Stages of the Self-Evaluation Framework for the Early Stages of a Service-Based Firm

At stage 1, growth is through <i>market exploration and commercialisation of service(s)</i> . The service-based start-up focuses on developing and delivering services and building its market identity to survive.
At stage 2, growth is through <i>market acceptance</i> . Since market acceptance leads a service-based firm to rapid growth and constant change, the primary emphasis is on growth management.
At stage 3, growth is through <i>profitability and renewal</i> . Because of market saturation and increased competition, a service-based firm's attention shifts to improving profitability and efficiency by formalising rules, procedures and financial controls.
At stage 4, growth is through <i>diversification</i> . To gain new momentum, a service-based firm concentrates on new service generation (business areas and/or locations) and on the development of a uniform firm culture.

self-evaluation framework for the early stages of service-based firms is described in table 3 (modified from Muhos et al. 2017).

In the beginning of each interview, the micro-business owner-manager was asked to define his or her company's focus of business; it is either a technology-based or a service-based firm, regarding a portion of the turnover. Altogether, 51 of the 53 micro-firm owners self-evaluated their firms' current stage of growth, using the given framework (see table 2 and table 3). Two service-based firm owners did not find any of the stages appropriate. In this study, the real phases of growth of the participating micro-firms, which were stage 3 (expansion) for the technology-based firms and stage 2 (market acceptance) for the service-based firms, indicated the results we were looking for (see table 4).

TABLE 4 Characteristics of Case Companies' Self-Evaluated Stages of Growth

Main business focus	Stage 1	Stage 2	Stage 3	Stage 4	Total
Technology-based	1	3	8	2	14
Service-based	7	9	16	5	37
Total	8	12	24	7	51

TABLE 5 Development of Turnover in Technology-Based Firms

(1)	(2)	(3)	(4)	Turnover (1000 €/year)							(5)
				2009	2010	2011	2012	2013	2014	2015	
Q	6	2015	3	–	10	10	10	20	60	440	380
T	7	2015	4	–	280	360	549	622	705	920	215
BJ	15	2013	4	510	357	400	450	500	550	628	178
M	9	2015	3	244	227	200	201	193	102	260	158
N	4	2015	4	–	–	–	–	660	850	1000	150
BF	13	2010	4	270	270	270	270	300	300	335	65
C	7	2011	3	150	190	274	233	221	184	209	19

NOTES Column headings are as follows: (1) case ID, (2) firm age, (3) stage 3 reached, (4) stage 3 match, (5) change after stage 3 reached.

Next, we analysed in more detail what volume of turnover development materialised in those micro-firms that had reached stage 3 (see table 5). The research focused on companies no more than 15 years old. Eight micro-firms' current phases of growth reached stage 3 or expansion. The firms' ages varied from 4 to 15 years. They reached stage 3 during the years 2010–2015. Case BF had been in stage 3 for 7 years. Cases Q, T, M and N reached stage 3 in 2015. During the interviews, the owners evaluated how well each stage description of the framework corresponded to reality. The scale items were 1 (not at all), 2 (fairly well), 3 (relatively well), 4 (very well) and 5 (extremely well). The link between the self-evaluated expansion stage and the positive development of a firm's turnover was quite evident. Each case company had become capable of growth since stage 3 and had reached it. The technology-based firms' change in turnover was calculated using the following formula: year 2015 turnover – (year of stage 3 reached – 1 year). The change in the technology-based firms' turnover varied from €19,000 to €380,000 (table 5).

Second, we analysed the turnover development in service-based micro-firms that had reached stage 2 (see table e and table 6). The research fo-

TABLE 6 Development of Turnover in Service-Based Firms

(1)	(2)	(3)	(4)	Turnover (1000 €/year)							(5)
				2009	2010	2011	2012	2013	2014	2015	
J	3	2014	4	–	–	–	–	23	170	240	217
G	3	2015	2	–	–	–	–	5	68	166	98
AY	3	2014	4	–	–	–	–	236	334	334	98
AL	12	2010	4	65	82	80	68	62	88	142	77
P	2	2015	2	–	–	–	–	–	20	73	53
Z	11	2013	–	–	–	–	–	173	180	210	37
AT	4	2015	4	–	–	–	–	422	633	668	35
W	6	2015	3	–	5	60	60	35	35	30	–5

NOTES Column headings are as follows: (1) case ID, (2) firm age, (3) stage 2 reached, (4) stage 2 match, (5) change after stage 2 reached.

cused on companies no more than 15 years old. Eight micro-firms' current phases of growth had reached stage 2 or market acceptance. The firms' ages varied from 3 to 12 years. They reached stage 2 during the years 2010–2015. Case AL had been in stage 2 for 7 years. Cases G, P, AT and W reached stage 2 in 2015. During the interviews, the owners evaluated how well each stage description of the framework corresponded to reality. The scale items were 1 (not at all), 2 (fairly well), 3 (relatively well), 4 (very well) and 5 (extremely well).

The link between the self-evaluated expansion stage and the positive development of a firm's turnover was quite evident. Each case, except for Case W, had become capable of growth since stage 2 and had reached it. The service-based firms' change in turnover was calculated using the following formula: year 2015 turnover – (year of stage 2 reached – 1 year). The service-based firms' turnover growth varied from €35,000 to €217,000. In one company, Case W, the change in turnover was negative (€–5,000) (table 6).

Conclusion

This research provides new information on the prerequisites for micro-firms operating in SPAS. Micro-businesses' substantial impact on the national economy is evident (European Commission 2015). Micro-businesses are numerically dominant in every country's economy. Although micro-firms account for a large majority of SMEs, they remain comparatively under-researched (Gherhes et al. 2016). The literature review in-

dicates a gap in research on micro-enterprises. In contrast, research on SMES is well represented. The lack of studies on micro-enterprises could be caused by researchers focusing on SMES to the exclusion of micro-enterprises. Additionally, the results show relatively few studies from developing countries. Micro-entrepreneurs need research studies to support their practices because limited data on business management and operations are available to them.

Various studies use a wide range of definitions of small, medium-sized and large enterprises, making it difficult to directly compare results. Moreover, some studies do not clearly state what definitions they are using for the various business sizes.

To study the growth stages of micro-businesses, we used two-, four-stage frameworks, one each for technology-based and for service-based firms, and interviewed 53 micro-business owner-managers located in an NSPA. First, we assessed all the micro-firms' current stages of growth. All owner-managers from technology-based firms (14 in total) were able to identify their firms' current stages of growth based on the framework provided. On the other hand, two of the owner-managers from the 39 service-based firms were unable to do so.

Second, we explored the link between the self-evaluated stage of growth and the actual turnover. There was a strong connection between micro-firm growth and how turnover developed. The relationship was stronger in technology-based micro-firms than in service-based ones. The micro-businesses selected for the research did not seek fast growth. Andersson, Tyler, and McCallion (2005) argue that business-service provision has one of the greatest impacts on rural business competitiveness.

Both self-evaluation frameworks may help researchers provide more accurate data on the growth of technology- and service-based micro-firms. Thus, this study creates new context-specific knowledge about the early stages of micro-firm growth, which is needed to strengthen business environments and develop business support services in NSPAS.

This study had several limitations. It included only business and entrepreneurship articles that were published in English in journals that were indexed in one database. From the search results, the percentage of articles relating to micro-enterprises (6%) might be lower than the actual number of articles on this topic, as some of them might have been included with the articles on SMES. The study did not analyse the contents of the articles. It was also limited to Northern Ostrobothnia and its two subregions, Oulu South and Raahe, both located in northern Fin-

land. This case study used turnover development; the turnover described the volume of business but not its profitability. It would be interesting to compare the results of a similar analysis of micro-firms in the rural areas of other EU countries, Asia or the US. More studies are needed to fill this gap and provide adequate data to support micro-enterprise owners.

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Appendix 1: Questionnaire

Preliminary Information

1. Interviewee's name
2. Name of company
3. Interviewee's position in the company
4. Work experience in the company (years)
5. Were you involved in setting up the company: (yes/no)
6. Year of foundation
7. Number of employees (in man-years, 2016)
8. Turnover (€, estimation for 2016)
9. Update the key economic indicators for the last 10 years (if applicable)
10. The company's main turnover is formed by the 1) sales of a technology/product(s) or 2) sales of services.

Self-Assessment of Business Growth

1. Read the following descriptions of the early stage of growth in technology/service companies.
 - Choose what stage best describes your company's current stage of growth.
2. How well did the descriptions you read correspond to your own experiences of the company's early stages of growth? Choose the appropriate options below:
 - Stages 1–4: (1) not at all, (2) only partially, (3) fairly well, (4) very well or (5) almost perfectly
3. When did the company transition's from one stage to another take place?
 - When did the company move from stage 1 to stage 2 (year and month)?

- When did the company move from stage 2 to stage 3 (year and month)?
- When did the company move from stage 3 to stage 4 (year and month)?
- When did the company move from stage 4 forward (year and month)?

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