KUOPION YLIOPISTON JULKAISUJA H. INFORMAATIOTEKNOLOGIA JA KAUPPATIETEET 1
KUOPIO UNIVERSITY PUBLICATIONS H. BUSINESS AND INFORMATION TECHNOLOGY 1

MIKA PASANEN

In Search of Factors Affecting SME Performance

The Case of Eastern Finland

UNIVERSITY OF KUOPIO

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Doctoral dissertation

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ABSTRACT

The objective of this study was to identify factors affecting small and medium enterprise (SME) performance in peripheral locations. The study was carried out in the field of strategic management. Previous research into business success and failure does not provide a comprehensive explanation for SME performance. Particularly little research has been focused on factors affecting the performance of established SMEs in peripheral regions.

The empirical data were primarily based on an extensive mail survey and in-depth case interviews. A survey was made of entrepreneurs of 145 successful independent SMEs in Eastern Finland operating in the manufacturing, business services, and tourism sectors. In matched case studies, successful and failed cases were compared. In data analysis, both qualitative and quantitative methods were applied.

Analysis of all successful SMEs revealed that they constitute a heterogeneous group with a large variety of characteristics, though they also have some common characteristics. As a result of clustering the successful SMEs according to their growth mode and strategies three distinct clusters emerged: (1) stable independent survivors; (2) innovators with continuous growth; and (3) networkers with leapwise growth. Moreover, the study revealed that SMEs whose existence has never been threatened and those that have sometime encountered such a situation differ in significant ways. Also, there were similarities among failed firms, and among successful firms: some of these were common to all failed or successful firms, while some were cluster specific.

It seems that SME performance can be affected by a variety of interrelated factors which should taken into consideration in order to achieve success and to avoid failure in business. The findings suggest that there are several types of successful SMEs. More importantly, the study revealed the different "success formulas", i.e. sets of typical behaviors in each cluster. Comparisons between non-threatened and threatened SMEs and between successful and failed SMEs provided valuable information by increasing our understanding of the factors affecting SME performance. Several theoretical and practical implications are discussed. Nascent and acting entrepreneurs, organizations fostering SME development, financiers, public policy makers, and other stakeholders of SMEs can learn from the results. Suggestions for further research are presented.

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Tentative results have been presented earlier in the following international arenas: The 20th Babson Entrepreneurship Research Conference held at Babson College in Wellesley, MA, USA, June 8-10, 2000 (Pasanen et al. 2000); the 11th Nordic Conference on Small Business Research held at Aarhus Business School in Aarhus, Denmark, June 18-20, 2000 (Pasanen 2000b); the 21st Babson Entrepreneurship Research Conference held at Jönköping International Business School in Jönköping, Sweden, June 14-16, 2001 (Pasanen et al. 2001); and the 12th Nordic Conference on Small Business Research held at the University of Kuopio in Kuopio, Finland, May 26-28, 2002 (Pasanen 2002). Some of the results has also been published (in Finnish) in the author's licentiate thesis (Pasanen 1999; 2000a).

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Mika Pasanen

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1 INTRODUCTION

1.1 Relevance of the topic

Research into small and medium sized enterprises (SMEs) and entrepreneurship has grown strikingly during the last decade. A huge majority of firms worldwide are SMEs, and they play a significant role in the economy. Consequently, the performance of the SME sector is closely associated with the performance of the nation. In Finland, for instance, more than 99% of all firms are SMEs, i.e. firms with fewer than 250 employees, and they constitute more than one half of all firms, if measured by the number of personnel (61%) or by turnover (51%) (Statistics Finland 2002; cited by Federation of Finnish Enterprises 2003). Moreover, SMEs make a remarkable contribution to regional economic development. They are often the only feasible engines of development, especially in peripheral regions. They generate societal growth in terms of new jobs and revenues. SMEs create innovations, and they form flexible production networks.

The secret of firm success has long fascinated people, but most studies have focused on large companies. It has also been claimed that there are no secrets, because if there were, every firm would find out what they are and they would not be secrets anymore. However, as we know, some firms succeed and others fail. This study focuses on factors affecting SME performance. SME success is often closely associated with firm growth (e.g. Johannisson 1993a), so this study concentrates largely, but not solely, on growth firms. In western countries in the last decade the major proportion of net new jobs was created by small firms (e.g. Frank & Landström 1997: 3; see also Storey 1994; Davidsson & Delmar 1998). At the same time, much interest in the SME sector has been targeted at growing firms in particular, and this focus is clearly seen in policy-making, in small firm support, and in related research.

To date, a number of studies have dealt with firm growth and development. In fact, the research community largely shares the view that growth SMEs have a special importance in the economy (see e.g. Storey 1994). In Finland, the SME sector was the only sector increasing net new jobs in the 1990s. The number of jobs was decreasing at the same time in both the large company sector and the public sector (cf. Spilling 1996). It is argued that a relatively small proportion of all small firms are responsible for the major part of the small firm contribution to net new jobs (Storey 1994; Storey et al. 1987; Birch et al. 1993). At the same time, in Finland, for instance, the role of

Nokia as a new job creator has been remarkable, even though the number of jobs in the large company sector has been falling. It is important to keep in mind that changes in the production volume of large companies may often cause significant repercussions in the SME sector.

Most of the new jobs are created by existing, not new, SMEs (see e.g. Davidsson et al. 1993). Fast-growing small firms have been described as 'gazelles', 'fliers', 'growers' and 'winners', and the targeting of effort towards them has been described as 'picking', 'stimulating', or 'backing' winners (see e.g. Gibb 1997b; Freel 1998; Beaver & Jennings 1995). However, more recently, the role of fast-growing small firms has been questioned, and the issue is known as the 'mice vs. gazelles' (Birch et al. 1993) or 'flyers vs. trundlers' (Storey 1994) debate. In other words, which of these actually has the major impact on net employment (Davidsson & Delmar 1998)?

A critical precondition for growth is firm survival. However, few firms have succeeded in avoiding threats in their way, and only a very small fraction of SMEs avoid significant problems in the long run. The study of these SMEs might reveal how difficulties could be avoided. Many firms face, at least once, a situation where their existence is threatened (Pasanen 2000). From a study of firms which have faced a crises and survived, it may be possible to discern those factors that led the firm into difficulties, and discover how these SMEs have survived and achieved success in their subsequent development.

A high proportion of new ventures are closed down during their first years of life, and many SMEs are closed down every year, indicating that these firms were not able to maintain the alignment with their environment, or have never even achieved it. In this study, failure means that a firm has gone into liquidation, i.e. it has ended its business, leaving behind unpaid creditors. For instance, in Finland in 1997, more than half (52%) of the firms that closed down had survived less than four years (Statistics Finland 1998: 8; see also Mustaniemi 1997). It could be assumed that much could be learned from failed firms, but to date comparison of the success and failure factors has been rare in research. It has been found that entrepreneurs' chances of financial success are substantially greater than chances of loss (Dennis & Fernald 2001), but not nearly as favourable as new firm owners seem to believe (Cooper et al. 1988).

Previous studies dealing with the conditions of successful business have focused on large companies rather than SMEs. However, changes in the environment cause more uncertainty in SMEs than in large companies. Their resources for acquiring information about the market and changing the course of the enterprise are more limited. The response to environmental changes is different in SMEs than in large companies (e.g. Chen & Hambrick 1995). Large firms may even exit from one of its business areas, but this is not usually possible in a single-business firm. The options

for responding are limited by the firms' resources and strategic choices as well as by the opportunities offered by the industry and location. Those ways may also differ between the development stages of the firm.

Previous studies on SME performance have also focused on the success of new ventures rather than on existing SMEs and on the factors behind their longevity and growth (e.g. Tsai et al. 1991; Duchesneau & Gartner 1990; Keeley & Roure 1990; Roure & Keeley 1990; see also Cooper 1993). However, relatively speaking, the number of jobs created by expanding small firms is larger than the number of jobs created by new firms during their first year of operation or by large firms (Wiklund 1998: 1). As a matter of fact, as Mustaniemi (1997) found in her study of real enterprise birth in Finland, new firms employed only a few employees in their first three years. Moreover, her analysis, based on the business register of Statistics Finland, showed that only 63% of all enterprise openings in manufacturing and 54% in the retail trade could be classified as real births.

This suggests that greater attention should be paid to established SMEs. They have also invariably proven extremely resilient to fluctuations in the economy over time (North et al. 1992; Stewart & Gallagher 1985; see also Smallbone et al. 1993b). Moreover, it is a major challenge for policy-makers to help firms to develop the attributes and business practices which increase firms' survival chances and their ability to grow (cf. Smallbone & North 1995). Moreover, as Reynolds et al. (1993) have argued, governments should invest more time and resources in encouraging the survival and growth of established firms rather than encouraging the formation of ever more new firms, many of which are born to die (see also North & Smallbone 1996).

Moreover, few studies have focused on the foundations of SME performance in peripheral locations. This is unfortunate, as business is not managed in the same way in different areas (see e.g. Lussier & Pfeifer 2000; Yusuf 1995). The context often has a critical role: what works in one context will not necessarily work in another. This means that factors that lead to success in one context may lead to failure in another (Low & Abrahamson 1997).

However, the environment of firms has changed over the years and is changing continuously. Business is done at global level now more than ever before. It means that competition is also increasing in local markets. Such development is also supported by public policies, e.g. the intention to eliminate or mitigate the factors limiting competition within the European Union (EU). At the same time, customers' needs may change rapidly, and this shortens the life cycle of products. Changes in demand require a quick response and continuous product development. Rapid technological change affects the methods of production as well as product development. Paradoxically, on the one hand customers prefer individualized products,

but on the other hand customers' habits are becoming more uniform in western countries.

Most studies of strategic management and entrepreneurship have focused on investigating a very limited set of variables, and many investigators (e.g. O'Farrell & Hitchens 1988; Sandberg & Hofer 1987; McDougall et al. 1994; Landström & Sexton 2000: 437) have called for a more integrated and holistic approach. This study approaches holistically and extensively to factors affecting SME performance. However, the scope of any study is limited, so several choices had to be made.

Though the focus of this study is on the strategic management of the firm, the results also have implications for regional economic development. For instance, the study approaches strategic choices made by SMEs through four central strategic dimensions: the innovativeness (see e.g. Markides 1997; Kleinknecht & Poot 1992; Birchall et al. 1996; Koberg et al. 1996; Hyvärinen 1995; Gilbert 1994), specialization, networking (see e.g. Gilley & Rasheed 2000; Johannisson 2000; Curran et al. 1993; Quinn 1999; Varamäki 1996; 2001) and internationalization of SMEs (see e.g. McCarty et al. 2000; Chen & Martin 2001; Korhonen 1999; Christensen & Lindmark 1993; Veciana 1994).

Today, the importance of innovativeness for the firm's continuous renewal is emphasized. In the SME context, it is argued that firm success is based on a focused differentiation strategy (e.g. Carter et al. 1994; see MacMillan & McGrath 1997). Moreover, productivity can be increased through specialization (Dyer 1997). Therefore, a highly specialized and innovative firm which has adopted a niche strategy can focus on its core business, but usually also needs numerous network partners. Starting in a small domestic market, as in Finland, for example, very soon a firm will face the need to expand the market areas from national to global markets. Organizational networks may be a primary driver of internationalization (Hitt & Ireland 2000: 50).

These dimensions are relevant not only at a micro, i.e. firm, level, but also for the macro, i.e. regional and national, level (see e.g. Maskell et al. 1998). Innovativeness can be regarded as one of the major forces for development in an economy (see e.g. Grönroos 1999). However, new ideas and innovations are often created by small firms that grow rapidly and sometimes even create new industries. Specialization and cooperation produce efficiency in, for example, the labour markets in an economy. Exporting is a necessity for a country with open markets.

A successful business is important not only for the firm, but is also associated with the success of the region and the well-being of people living in the area. Successful regions, such as the so-called Third Italy or the Gnosjö region in Sweden (see e.g. Wiklund & Karlsson 1994), are characterized by well-developed and successful business life. Several concepts are used in describing and explaining

regional industrial development, for example industrial districts (see e.g. Pyke & Sengenberger 1992), new industrial spaces (Isaksen 1994: 34-35), innovative milieus (Camagni 1995), learning regions (Asheim 1997), and clusters (Porter 1998).

Industrial districts are usually characterized by large-scale production, and new industrial spaces refer to new industrial growth centres which consist of production chains of independent SMEs. Therefore, SMEs can be seen as flexible production units which can attain the scale of economics by cooperation. The concept of the innovative milieu has many aspects in common with that of the industrial district, in particular, a strong sense of territorial identity combined with a key role for network externalities. The central features of an innovative milieu are synergies and innovativeness (Camagni 1995). However, it is different in that many areas associated with milieu development have no significant past industrial traditions. The major features of learning regions are the firm's innovativeness and cooperation (e.g. Asheim 1997: 142-176; 1998). The most recent research in this area has emphasized clusters (see e.g. Porter 1998).

It has been suggested that the key for success of peripheral regions in the future will be endogenous growth. Endogenous growth models highlight the roles of factors such as local entrepreneurship, social networks, innovative milieu, factor flexibility, and institutional structure in regional development (see e.g. D'Arcy & Guissani 1996: 160-161). In addition to relations between firms connected with buying and selling goods and services, the development of industrial districts is based on a number of social and cultural factors, which are territorially specific (Isaksen 1994: 33-34). These factors can contribute to the creation of positive attitudes to starting up small firms, and promote cooperation between firms. The central concept of social capital refers to the resources available through social networks (see e.g. Putnam 1993).

Firms and investments are necessary for successful regional development. In the short run, regional development should be based on existing strengths to attain rapid improvement in economic development and employment. Accordingly, developmental actions should be targeted at the firms operating in the industry sectors characteristic of the area. Such firms can benefit from the operation of other firms by cooperation and learning. At the same time, it is advisable to create the preconditions for novel knowledge-intensive businesses that can serve as a basis for the future development of the region. A core question is, what kind of growth alternatives do firms have, and which factors are associated with firm growth (see e.g. Storey 1994)?

However, attending exclusively to firm-level growth and jobs may be too narrow, especially in the local development of peripheral areas. Firms, even very small and non-growing ones, can have different strategic roles or positions in the local economic system (Laukkanen 1999). Some are critical facilitators of other firms' growth or of their very emergence, and thus are important for job creation at the local

level. Therefore, in this study, the concept of successful firm was broadened to encompass, in addition to growth firms, firms which make a significant impact on local and regional economies. Successful non-growth firms can, however, have an important role in the economy in terms of maintaining existing jobs. The importance of their role is unclear so far. In any case, the EU, for example, seems to recognize their importance by using the number of maintained jobs as one of the criteria for the objectives of regional development programmes.

The target firms in this study are located in the peripheral area which is also one of the EU's Objective 1 target areas. The environment can be regarded as difficult surroundings (see Laukkanen 2000). Firms in peripheral regions may face many impediments for their development (see e.g. Birley & Westhead 1990: 538): venture capital availability is more limited (Mason 1987), as are opportunities for small firm expansion based upon local and regional markets (O'Farrell & Hitchens 1988: 1378). Peripheral economies dominated by large firms may not provide an ideal source of labour for small firms. The supply of managerial and organizational skills is restricted, firms are more vertically integrated, and the lack of specialization reduces competitiveness and the rate of growth of local firms (Del Monte & Giannola 1986: 282). The lower rates of innovation may also cause technical impediments (Oakey et al. 1980).

However, in terms of local and regional development, future actions should be based on the proven knowledge of successful businesses in the area. Many development projects are carried out today without a comprehensive knowledge base. Identifying the conditions of success in the SME sector is very important for acting and nascent entrepreneurs, organizations fostering SME development, financiers, public policy makers, and other stakeholders of SMEs. Using the results obtained, organizations fostering entrepreneurship and SME development can direct their actions and develop their products, education and advisory services. It is also relevant to know what kind of success strategies SMEs have used for the allocation of public actions. It is important to remember that the performance of a region is based largely on the performance of SMEs located in the area.

1.2 Objectives and limitations of the study

Success relates to the achievement of goals and objectives. On the most general level possible, the goal of the firm is continuity in business, i.e. survival. Closure can constitute success to owners in certain situations, but in general it means failure and causes losses in economic output. Firm performance is much affected by firm strategy, which aims at achieving a fit between the firm and its environment. Strategy involves

choices along a number of dimensions and can be represented by a firm's overall collection of individual business-related decisions and actions (see Mintzberg 1978; Miles & Snow 1978). Though there is a variety of definitions for the concept of strategy, it can accurately be conceptualized as *a pattern of strategic variables*, because the elements of strategy – the individual business-related decisions and actions – are interdependent and interactive (Galbraith & Schendel 1983). It is argued that the identification of strategy patterns permits a more complete and accurate depiction of overall strategic behavior (see e.g. Hambrick 1983a; Robinson & Pearce 1988).

The purpose of this study is to obtain information about the interaction between firms and their environment, since firm performance is dependent on the match between the firm and its environment. The objective is ***to identify factors affecting SME performance***. This is approached by studying configurations of successful SMEs. Configurations are groups of firms sharing a common profile of organizational characteristics (Meyer et al. 1993). In this study, an SME is defined as a firm with fewer than 250 employees, and firm performance as the firm's ability to continue in operation. Therefore, logically, firm performance can have two different outcomes: success (continuity of operation) or failure (ceasing of operation). However, because there are differences in performance among successful firms, they are divided further into two groups according to whether or not they have ever faced a threat to the continuity of their operation.

In view of all this, the empirical data in this study were divided into three categories of SMEs, representing three different levels of performance: (1) successful SMEs that have never had any threat to their existence; (2) successful SMEs that have at sometime been in such a situation and have survived; and (3) SMEs that have failed. In this study, success is defined as continuity in business, i.e. longevity of the firm, and threat refers to a threat to firm success. Failures in this study are defined as those SMEs which have gone out of business with loss to creditors. Bankruptcies as a deliberate strategy (see e.g. Moulton & Thomas 1993) are beyond the scope of this study.

The central research question is,

what are the main factors affecting SME performance?

To solve the research problem, the following six research questions were formulated. Answers to the first two questions were searched for in the theoretical literature and previous empirical studies. The last four questions will be approached through an empirical study of SMEs in Eastern Finland.

1 How can SME performance be approached theoretically? (chapter 2)
2 What is known about the factors affecting SME performance in the light of previous studies? (chapter 3)
3 How can successful SMEs be characterized? (chapter 5)
4 How can successful SMEs be clustered? (chapter 6)
5 How do non-threatened and threatened but survived SMEs differ from each other? (chapter 7)
6 How do successful and failed SMEs differ from each other? (chapter 8)

Within economic and other limits which restrict the conduct of the research, an extensive search was carried out to identify factors affecting SME performance, trying to capture holistically potential factors. Goal setting has an exploratory, empirical and pragmatic emphasis (see Aldrich 1992: 209). It is believed that it is possible to improve SME performance by paying attention to these factors and that SMEs can learn from the results. However, the results are useful not only for the SMEs, but also for local and regional economic development.

There clearly is no general law of firm success or of SME success, and each firm is individual and unique, with its specific characteristics. However, between these two extremes – general laws and firm-specific factors – it may be possible to identify types of typical patterns of successful firm behavior. As these patterns are transferable, they are useful to both existing firms for strengthening their competitiveness, and to new ventures by creating the preconditions for successful new venture development.

In the empirical part of the study, successful and failed SMEs in Eastern Finland, mainly in Northern Savo, were studied. The location of the region is peripheral for the main market areas of many of the SMEs, particularly for those operating in global markets. This may cause more problems in achieving high performance for these SMEs than for firms located near their main market areas (see e.g. Smallbone et al. 1993a; see also Niittykangas 1999; Silander et al. 1997). As few studies have focused on the foundations of SME performance in peripheral locations (Vaessen & Keeble 1995: 1-2), this study is exploratory.

In studies of this kind, defining the scope of the study explicitly is often problematic. No natural or clear-cut boundaries exist, so the researcher has to make a number of choices in order to keep the study manageable. The following theoretical, methodological and empirical decisions limit the scope of this study. First, from the point of view of theory this study is carried out in the field of strategic management, more specifically adopting the configurational approach (e.g. Miller & Friesen 1984). Certain issues, e.g. scientific discussions related to the personality traits of entrepreneurs (see e.g. Chell et al. 1991; see also Laukkanen 1999: 19-32), locational issues and peripherity (see e.g. Silander et al. 1997), and industry impact (see e.g. Porter 1980), are beyond the

scope of this study. Also, financial firm failure prediction models (see e.g. Keasey & Watson 1991) were left out of this study. The organization theory and organizational effectiveness literature, e.g. organization structure and structural contingency theory (see e.g. Pfeffer 1982; Donaldson 1995), is not reviewed comprehensively, but some sections relevant to the study are presented. Second, from the point of view of method, the non-randomness of the sample limits the generalizability of the results.

Third, empirically the scope of the study is limited to the content of empirical data which are based on the survey and interviews, and on the documentary and archival material. The study focuses on established, i.e. more than four years old, not new, SMEs with roughly 5 to 249 employees operating in industry sectors of manufacturing, business services, and tourism, and located in Eastern Finland. The data were collected between 1998 and 2001. The performance of the selected firms is not compared with that of firms in other geographic areas. Also, the peripherity of the selected geographical area is neither studied nor compared with other areas, but is taken as given (e.g. Savon Arkki 1998; Ministry of the Interior 1996). However, the results of a comparative study of the growth and success of SMEs in peripheral and core regions in the United Kingdom showed that a higher proportion of SMEs in peripheral locations were more successful than those in core regions (Vaessen & Keeble 1995: 24; see also North & Smallbone 1995a; 1995b).

1.3 Philosophical ground of the study

In common with all scientific research, this study is based on certain philosophical assumptions. In general, this study can be said to follow the subjectivist rather than the objectivist approach (Burrell & Morgan 1985; Morgan 1980). Hence, one of the ontological assumptions of this study is that reality is subjective and multiple, and participants in the study may see it in different ways. Accordingly, reality is considered to be a socially constructed product based on individuals' cognitions. Perceptions are important, because they are the basis for entrepreneurs' actions.

One of the epistemological assumptions of this study is that the world can be understood only from the point of view of the individuals directly involved in the activities in question. In line with this assumption, the entrepreneur or small firm owner-manager is seen to be the most appropriate informant, and the research methods used is believed to provide valid information about the research phenomena. In this study, an entrepreneur is defined as the person who actually leads the firm, and is the respondent in empirical surveys and case studies. Thus, s/he may be a founder or a successor of the firm, and an owner-manager or a hired manager of the firm. The reason for using such a definition for the term entrepreneur was that in Finnish there is

a single term encompassing founders and successors, purchasers and inheritors, regardless of their growth orientation, i.e. whether or not we may call them entrepreneurs or a firm owners. Moreover, as shown later, most respondents were owner-managers of successful, i.e. growth, SMEs.

Therefore, the research is conducted from a firm-internal viewpoint, which – in the case of SMEs – means the entrepreneur's viewpoint. The information collected is based on the subjective understandings and interpretations made by the entrepreneurs. Obviously, the use of and the reliance on only one informant and her/his recollection of past decisions and events which may have happened many years or even decades ago, may reduce the reliability of the results. This has to be taken into account in interpreting the results.

Regarding human nature, the study emphasizes a voluntaristic rather than a deterministic view. This study adopts an intermediate standpoint which allows for the influence of both situational, i.e. environmental, and intentional factors in accounting for the activities of human beings. This is related to the intentionality of human beings: intentionality refers to goal-seeking and conscious behavior, emphasizing the comprehensions, attitudes and objectives of human beings. A human being or group of human beings can set future goals and objectives which make their present behavior understandable. However, an entrepreneur may choose to pursue goals that are not necessarily economically rational: for instance, profit maximization may not be the goal of the firm.

1.4 Outline of the study

This study is divided into nine chapters. Briefly, the contents of the remaining chapters are as follows. Chapters 2 and 3 elaborate the theoretical frame of reference of the study and connections to pertinent scientific discussions are presented. Also, the main results of previous research are reviewed. In chapter 2, the two most frequently used theoretical approaches to firm performance are presented. The strategic choice perspective is contrasted with the environmental selection perspective, in order to provide a better understanding of the diversity of aspects and variety of potential factors affecting firm performance. Also, the main concepts and issues used in this study, i.e. performance, success, failure, environment, strategy, and resources, are discussed. In chapter 3, previous literature focused on factors affecting SME performance is reviewed. The major contribution of previous studies concentrated on the success and growth, and failure, decline and recovery of SMEs is compiled.

Chapter 4 outlines the empirical research methods used. Also, the selected empirical research approach, with the abductive, taxonomic and configurational

approach, are introduced. Data collection and analysis methods for survey and case materials together with descriptions of the survey sample and the cases are presented.

In chapters 5 to 8, the empirical findings are presented. Chapter 5 presents the research findings concerning the characteristics of successful SMEs. The homogeneity of the sample of successful SMEs is analyzed, and factors characterizing all successful SMEs are identified. In chapter 6, in order to achieve a more precise understanding of successful SMEs, the firms are grouped into mutually distinctive clusters based on their growth mode and strategies, and the characteristics of each cluster are described.

Chapter 7 makes another distinction, dividing successful SMEs into two groups: non-threatened and threatened but survived SMEs. The firms in these two groups are compared with each other, and the causes of the threat and the ways the threatened SMEs have adjusted are elaborated. Some of the differences between these two groups of SMEs may be due to the fact that threatened SMEs may have learned from the threatening experience. On the other hand, it could be that non-threatened SMEs have avoided potential threats by wise decision making. Chapter 8 presents the results of the comparative case studies. Matched triplets of successful and failed SMEs are compared with each other, in search of answers to the question: why have successful SMEs succeeded, and failed ones failed?

Finally, chapter 9 summarizes the main contribution of this study and underscores the major conclusions and implications. Also, an evaluation of the study is presented, together with some suggestions for further research. At the end of most chapters there is a brief summary of the main points, with reference to previous research.

2 FOUNDATIONS OF SME PERFORMANCE

2.1 SME performance: success and failure

Firm performance refers to the firm's success in the market, which may have different outcomes. Firm performance is a focal phenomenon in business studies. However, it is also a complex and multidimensional phenomenon. Performance can be characterized as the firm's ability to create acceptable outcomes and actions (Pfeffer & Salancik 1978: 11, 34). However, performance seems to be conceptualized, operationalized, and measured in several ways. Strategically, firm performance is often referred to as firm success or failure (see Dess & Robinson 1984; Ostgaard & Birley 1995).

Success, in general, relates to the achievement of goals and objectives in whatever sector of human life. In business life, success is a key term in the field of management, although it is not always explicitly stated. Success and failure can be interpreted as measures of good or indifferent management (Jennings & Beaver 1997). In business studies, the concept of success is often used to refer to a firm's financial performance. However, there is no universally accepted definition of success, and business success has been interpreted in many ways (see e.g. Foley & Green 1989; Morel d'Arleux 1997). Due to the central role of an entrepreneur in a small firm, and since different stakeholders may have different objectives and aspirations for a firm, Jennings and Beaver (1997; 1995; Beaver & Jennings 1995) suggest that it would be appropriate to regard an entrepreneur as the primary stakeholder and to begin by considering how s/he might define success and failure.

There are at least two important dimensions of success: 1) financial vs. other success; and 2) short- vs. long-term success. Hence, success can have different forms, e.g. survival, profit, return on investment, sales growth, number of employed, happiness, reputation, and so on (see e.g. Vesper 1990: 31). In other words, success can be seen to have different meanings by different people. In spite of these differences, people generally seem to have a similar idea of the phenomenon, i.e. of what kind of business is successful (cf. Kay 1995: vi).

The main goals and objectives of the small firm can be other than financial, and they can change over time. Rather than maximizing the financial performance of the firm, the owner-manager may prefer independence and style of life, for example (see e.g. Gray 1992; Jennings & Beaver 1995; Koiranen 1998: 29). Therefore, the role of an entrepreneur's values and expectations may be very important. However, in the

long run, even firms with lifestyle goals should attain at least a minimum profitability in their operations, i.e. their incomes should exceed costs, to ensure the continuity of operations. Moreover, according to Foley and Green (1989), whatever the goals for a small firm, many successful firms have similar characteristics.

There is a wide range of measures of organizational performance (e.g. Campbell 1976; Brush & Vanderwerf 1992; Matikka 2002). Often, performance has been measured by growth (turnover, number of employees, market share), profitability (e.g. profit, return on investment), and survival (see e.g. Storey 1994; Kauranen 1993; Smith et al. 1988; Robinson et al. 1984; Dess & Robinson 1984). However, few studies have sought to determine whether the factors that enhance one measure of performance, such as survival, are the same as those that lead to others, such as growth (Cooper 1993).

Firm growth has been used as a simple measure of success in business (e.g. Storey 1994). Also, as Brush and Vanderwerf (1992) suggest, growth is the most appropriate indicator of the performance for surviving small firms. Moreover, growth is an important precondition for the achievement of other financial goals of business (de Geus 1997: 53; Storey 1994; Reynolds 1993; Day 1992: 128; Phillips & Kirchhoff 1989). From the point of view of an SME, growth is usually a critical precondition for its longevity (Storey 1994: 158). Phillips and Kirchhoff (1989) found that young firms that grow have twice the probability of survival as young non-growing firms. It has been also found that strong growth may reduce the firm's profitability temporarily, but increase it in the long run (McDougall et al. 1994; cf. MacMillan & Day 1987).

In research, firm growth has been operationalized in many ways and different measures have been used. This may be one reason for the contradictory results reported by previous studies (e.g. Weinzimmer et al. 1998: 235; see also Davidsson & Wiklund 2000). The most frequently used measure for growth has been change in the firm's turnover (e.g. Weinzimmer et al. 1998: 238; Hubbard & Bromiley 1995; Hoy et al. 1992; Venkatraman & Ramanujam 1986). Another typical measure for growth has been change in the number of employees. However, it has been found that these measures, which are frequently used in the SME context, are strongly intercorrelated (North & Smallbone 1993; Storey et al. 1987). It may be supposed that such an intercorrelation does not exist among capital-intensive large companies. Firm growth is discussed in detail in Chapter 3.3.

A firm's profitability can be a useful measure of performance in the case of large companies. The measurement of performance is more complicated when studying SMEs, for several reasons. First, the central goals and objectives of an SME may be other than financial. Second, it is difficult to obtain reliable information on the factors affecting the financial performance of an SME: for example, in family businesses it is difficult to take into account the inputs of family members that are not

recorded by means of the accounting system. Third, organizational form can create artificial differences, e.g. procedures for handling owner compensation can present major sources of error (Dess & Robinson 1984). Fourth, SMEs may be very reluctant to provide financial data on their performance (e.g. Dess & Robinson 1984). Fifth, it may take several years before a new business venture becomes profitable (Biggadike 1979).

However, instead of performance indicators calculated from financial statements, subjective assessment of firm performance has been used (e.g. Powell 1992a; Robinson & Pearce 1988). The use of subjective assessment of performance has clearly some advantage over performance indicators calculated from financial statements. For instance, in cross-sectional studies, the profitability of firms in different industry sectors is not comparable due to the different degrees of capital intensiveness (Kauranen 1993: 24).

The definition of success may depend on the time frame: SME performance can be approached as a short- or long-term phenomenon. Even one year high economic output can be interpreted as success. However, the existence of the firm in the long run, i.e. longevity, can be interpreted as success meaning firm survival. As a matter of fact, it has been argued that the most important and most challenging business goal is long-term survival (e.g. Simon 1996: 12). Moreover, survival is, at least in the long term, a prerequisite for success in other terms, such as market share or profitability. To date, however, studies of firm longevity have focused on large companies. On the one hand, the probability of survival decreases over time. On the other hand, the probability of survival of new firms is lower than that of older firms, which refers to their 'liability of newness' (Stinchcombe 1965; Aldrich & Auster 1986: 194).

There are also several definitions of business failure (see e.g. Watson & Everett 1996a; 1993). Firm failure has been described with several terms, e.g. bankruptcy, insolvency, liquidation, death, deregistering, discontinuance, ceasing to trade, closure, and exit (e.g. Storey 1994: 78-81; Bruno et al. 1987). These definitions overlap each other to some extent (Sten 1998), and they may have different meanings in different countries. As a result of this conceptual pluralism, comparisons between results of previous studies of failure are difficult.

It is important to notice that not all firms that go out of business do so as a result of failure, and those that do not should be separated from failures. For instance, according to Thompson (2001: 631), ultimate business failure happens when a business is liquidated or sold. However, a distinction should be made between two kinds of situations: optional and non-optional. When there are no options, the discontinuance of the firm or business can be defined as failure: in other cases the situation can be labelled as exit. Hence, in this study, a failed firm is defined as a firm which has gone into liquidation, i.e. it has ended its business and left behind unpaid

creditors. On the other hand, a business which is sold because, for example, the entrepreneur wants to realize a profit, is an exit, and closer to a success than a failure.

2.2 Theoretical perspectives on firm performance

Firm performance is often seen to relate to the match between the firm and its environment (e.g. Johnson & Scholes 1993; Powell 1992a; see also Hrebiniak & Joyce 1985; Thompson 1999). The environment carries needs and expectations, i.e. market opportunities, which the firm tries to respond to with its resources and capabilities. The better the match, the better the success (cf. Kay 1995: 271). For example, according to contingency theory (see e.g. Donaldson 1995; Burns & Stalker 1961), firm performance is the result of a proper alignment of firm design with the context it operates in. Similarly, there is no one best way to organize, and contextual factors should be taken into account (Pfeffer 1982). In the configurational approach (e.g. Miller & Friesen 1984) successful firms are considered to be aligned in a small number of typical patterns. However, as the environment of many firms is changing all the time, there is a continuous need for adjustment of the fit between the firm and its environment. From the firm's viewpoint, this process of adapting to changes in its environment is called strategic management (Schendel & Hofer 1979).

Firm performance can be approached from many perspectives, e.g. from an internal (firm) or external (environment) perspective. Recently, the most popular theoretical approaches in research have been strategic management and population ecology (Tsai et al. 1991: 9). They explain firm performance from opposite directions: the first from the firm-internal viewpoint, and the second from the firm-external point of view. A central dimension is their voluntaristic vs. deterministic nature in explaining firm performance (e.g. Astley & Van de Ven 1983; Bourgeous 1984; Hrebiniak & Joyce 1985). In other words: do firms shape their destiny, or are they powerless victims of changes in their environment? The main features of these approaches are contrasted in Table 2.1. Later studies of firm performance have discovered the benefits of an integrated approach, i.e. a dialectical approach (Amit et al. 1993: 823; see also Jick 1979: 609; Vesalainen 1995; Leppäalho 1991).

There are several theoretical views or schools of thought on strategy development. These schools of thought and their ideas have been organized in several ways, and the schools are not mutually exclusive (see e.g. Mintzberg et al. 1998; Thorelli 1995a; Johnson & Scholes 1993; Kay 1992; Kettunen 1997; Näsi 1986). By way of example, Johnson and Scholes (1993: 35-54) have named six views of strategy development: natural selection, planning, logical incrementalism, cultural, political and visionary view.

Table 2.1 A comparison of strategic choice and environmental selection perspectives

	Strategic choice	Environmental selection
Example of the school of thought	• strategic management	• population ecology
Level of analysis	• micro	• macro
Point of view	• firm-internal	• environmental
Orientation	• voluntaristic	• deterministic
Relationship between the firm and its environment	• the firm creates and shapes its environment	• the firm has little affect to its environment
	• the firm has many alternatives in creating its environment and in adapting to environmental changes	• the inertial forces of the firm significantly restrict the adaptation of the firm
	• change is based on independent and free choices made by the management	• change is based on the natural evolution of environmental variation, selection and retention, and a firm population mechanically reacts to environmental changes
	• performance is based on the strategic choices made by the firm	• performance is based on environmental selection
Role of entrepreneur	• independent	• lacking independence
	• proactive	• passive and reactive
	• interactive	• symbolic
Main factors restricting the scope of business	• entrepreneur's limited ability to see business opportunities	• environmental carrying capacity, legitimation, and competition
Nature of the firms	• heterogeneous	• homogeneous within a population
	• independent actors	• parts of a population

On the other hand, Mintzberg et al. (1998; also Mintzberg & Lampel 1999) present ten schools of thought on strategy formation. The schools are the (1) design school (main contributors e.g. Selznick 1957; Andrews 1971); (2) planning school (e.g. Ansoff 1965; Steiner 1969); (3) positioning school (e.g. Porter 1980); (4) entrepreneurial school (e.g. Schumpeter 1950); (5) cognitive school (e.g. Simon 1957); (6) learning school (e.g. Cyert & March 1963; Weick 1979); (7) power school (e.g. Pfeffer & Salancik 1978); (8) cultural school (e.g. Rhenman 1973; Normann 1977); (9) environmental school (e.g. Hannan & Freeman 1977); and (10) configurational school (e.g. Chandler 1962; Miles & Snow 1978).

Each school has its own perspective focusing on one major aspect of the strategy formation process. However, on the other hand, they are not mutually exclusive, but share elements of thinking with other schools of the same typology. The configurational school, in particular, can be said to be a combination of the others.

In practice, entrepreneurs usually see strategies developing through a mix of different processes (Johnson & Scholes 1993: 54; Kettunen 1997: 218). Moreover, it should be remembered that the schools are also the products of their times, and reflect the thoughts of researchers sharing ideas of which factors are critical for firm success. For instance, one school of thought (e.g. Ansoff 1965) emphasizes planning as a critical condition for success, whereas another (Boston Consulting Group) is based on portfolio thinking, according to which success is seen to be based on the developmental balance of strategic phenomena (e.g. Hofer & Schendel 1978). According to business idea thinking, success is achieved by the continuous fit between products, markets, and the way of doing business (Normann 1976; see e.g. Niittykangas et al. 1998).

The differences between the schools relate to different emphases and different ways of conceptualizing phenomena. As can be seen, then, a variety of approaches have been used to try to better understand why some firms succeed and others fail. However, many models and other theoretical constructions have been created on the basis of empirical findings made in the context of large companies. From the point of view of small firms, the business idea thinking introduced by Normann (1976) is seen to be one of the most applicable in practice.

Strategic choice perspective. A strategic choice approach (Child 1972; 1997) assumes that firms are in a state of continuous change, which is directed according to the actors' subjective interpretations of the situation and the preferences they have (Vesalainen 1995: 31; see also Laine 2000). Naturally, there are some external and internal constraints, but management has a certain discretion in strategy formulation. According to Astley and Van de Ven (1983), the strategic choice approach draws attention to individuals and their interactions, social constructions, autonomy, and choices, as opposed to the constraints of their role incumbency and functional interrelationships in the system. Both environment and structure are enacted to embody the meanings and actions of individuals. According to this approach, managers are regarded as performing a proactive role. Their choices are viewed as autonomous, and their acts are viewed as energizing forces that shape the organizational world. However, the decisions made by entrepreneurs restrict the number of alternatives available in subsequent decisions. The major strategic choices that the firm has to make are dealt with in Chapter 2.4.

Strategic management research encompasses several research streams, and this may make it difficult to see and understand the role of different factors and mechanisms affecting firm performance. In view of the existence of this variety of research streams, it can be concluded that the theory behind strategic management research has more than one 'hard core' (Lakatos 1972). The most popular recent research stream in the field of strategic management has been the resource-based view

of the firm (e.g. Wernerfelt 1984; Barney 1991) and its extension, the knowledge-based view of the firm (e.g. Kogut & Zander 1992; Spender & Grant 1996; Grant 1996).

These theoretical perspectives are founded on firm-internal aspects. However, the roots of the resource-based view of the firm can be seen to be based on Penrose's (1959) idea of viewing a firm as a bundle of resources. Subsequently, since the appearance of Wernerfelt's (1984) work "A resource-based view of the firm", the popularity of the resource-based view of the firm has grown rapidly, and researchers attempted to explain differences in firm performance by differences in firm resources. The development of the resource-based view and the knowledge-based view of the firm, and the strategic management research as a whole, is reviewed in more detail by e.g. Hoskisson et al. (1999). Resources and capabilities are dealt with in more detail in Chapter 2.5.

Environmental selection perspective. The opposite approach, environmental selection, emphasizes the determinism of environmental forces and tries to explain organizational behavior mainly through environmental determinants. According to the population ecology approach, the adaptation of the firm to environmental changes is strictly limited due to the inertial forces of the firm. Consequently, as a result of differences in inertial forces between firms, the natural selection made by environments favours some firms and affects their performance. It means the survival of the fittest, and the destruction of the less well-fitted firms. However, fundamental to population ecology is the study of firm populations rather than single firms (Young 1988: 2).

Variation, selection, and retention constitute the three stages of the evolutionary change process (Campbell 1969; Hannan & Freeman 1977; Weick 1979; Aldrich 1979; Vesalainen 1995). Due to variations in firm populations, environmental changes affect firms differently. Selection refers to this process, where firms congruent with new environmental conditions will survive and others will become extinct. There are three types of environmental selection (Aldrich 1979: 40-46). The first type is the selective survival or elimination of entire organizations: they either are fit for their environment, or fail. The second type is selective diffusion or imitation of successful innovations in structure or activities across firms in a population. The third type of selection is that of advantageous activities that are happened upon in the normal course of variation in their performance over time. Finally, predominant environmental conditions reinforce the characteristics of the surviving firms until the next environmental change will happen.

Dialectical approach. Rather than keeping the strategic choice and environmental selection approaches separate, it is suggested that it might be useful to combine these approaches, and see that the firm is operating in a continuum where it has more or less power and control depending on the issues at hand. Such a combined

approach can be called *dialectical* (Bourgeois 1984: 593). Thus, environmental determinism and management's free choice can be viewed as a continuum. Hrebiniak and Joyce (1985) suggest a multidirectional relationship in which organizations neither mechanistically react to environmental forces nor exercise unrestricted free will. Therefore, the interdependence and interactions between strategic choice and environmental determinism define organizational adaptation.

In addition, as Bedeian (1990) has argued, this interaction is derived from two factors: organizations do not only react to their respective environments, but also create or enact them. Moreover, the resulting new environments influence future organizational strategies and resource allocation, which will again bring about subsequent environmental change. At the same time, the firm itself creates new restrictions for its own operation (Weick 1979: 164; see also Koskinen 1996: 20-21; Child 1997).

As a matter of fact, strategic management and population ecology have come much closer to each other during the last ten years than they were two decades ago, when they were clearly distinct theoretical perspectives (see Amburgey & Rao 1996: 1268). At the same time, in research focusing on the relationship between the firm and its environment, researchers have started to consider it desirable to deal with these two approaches in the same continuum, not separately (e.g. Bourgeois 1984: 593). As Hrebiniak and Joyce (1985) put it, "what is needed is a greater emphasis on integration rather than differentiation of views".

The role of firm-internal factors and that of environmental factors may vary between environments. In some environment, e.g. in customer markets, the firm may have fewer external restrictions than it has in other environments, e.g. in financial markets. On the other hand, asymmetric, i.e. insufficient information of alternative market opportunities in e.g. financial markets, may hinder business development. Moreover, there are temporal variations in the role of firm-internal factors and firm-external factors. In the short run, the extant markets may significantly restrict firm growth, whereas in the long run, the firm can change the markets or even create new markets for achieving growth.

However, firm performance is bounded with firm-internal factors such as firm resources and the firm's strategic choices, and with firm-external factors such the carrying capacity of the environment and competition, and further, their fit. The environment provides a chance to cease operation all the time. Only a few firms can avoid or overcome in the long run all the threats which cause an actual or potential threat for the firm. However, a number of firms face these threats and become under threat, but survive. Those firms which are not able to overcome the threats and their consequences are closed down.

2.3 The firm and its environment

The firm interacts with its environment. There are in fact different levels of environment, each encompassing several components. Thus, the environment of the firm consists of several environments. Environment as a general term refers here to all those arenas (Koskinen 1996) the firm is operating in and is attached to. Moreover, environments and their components affect firm performance in many ways, directly or indirectly.

On the one hand, the general environment is often described by the PESTE frame of political/legal, economic, socio-cultural, technological, and ecological factors which have an indirect connection with firms. The general environment defines the political, economic, social, technological and ecological boundaries of the firm. On the other hand, there is the task environment, whose components have a direct impact on the firm. This environment can be divided into the external and internal environments, which refer to the firm's external and internal stakeholders, respectively. The external environment is also called the operating environment and comprises external stakeholders, e.g. customers and suppliers. The internal environment comprises internal stakeholders such as the management and personnel.

Hence, the firm operates in many environments simultaneously collaborating with other actors in the market and at the same time competing for scarce resources with others. For instance, from the firm's point of view, one of the most critical market is the customer market, where the firm sells the products which have gone through the process of combining the production factors. On the other side of the supply chain, in the supplier market, the firm buys production factors. In the financial market, the firm acquires necessary financing for the business.

Several environmental dimensions have been presented in the literature for describing the qualities of organizational environments. For instance, Dess and Beard (1984: 55; see Aldrich 1979) distinguish between dimensions such as munificence, dynamism, and complexity. Munificence refers to the environmental capacity as the extent to which the environment can support sustained growth. In general, a munificent environment is regarded as more favourable for business success than a scarce environment. Dynamism is related to the turbulence, i.e. the dimension of stability vs. instability. It has been found that small firms that face an environment with increasing dynamism tend to grow faster than others (Wiklund 1998: 238). Environmental complexity indicates that there are several different segments of the market with varied characteristics and needs that are being served by the firm. Thus, the firm sees a heterogeneous environment as complex.

A distinction can also be made between hostile and benign environments (e.g. Covin & Slevin 1989). Hostile environments are characterized by precarious industry

settings, intense competition, harsh, overwhelming business climates, and the relative lack of exploitable opportunities. On the other hand, benign environments provide a safe setting for business operations due to their overall level of munificence and richness in investment and marketing opportunities. Perhaps the most elaborate typology of environmental dimensions is the one presented by Jurkovich (1974), who identified 64 types of environments based upon the following dimensions: complex/non-complex, routine/non-routine, organized/unorganized, direct/indirect, low-change/high-change, and stable/unstable.

However, it seems that the environmental dimensions commonly used are uncertainty, dynamism, homogeneity, munificence, and complexity (see e.g. Miller 1987c). It is important to notice that the environment may play a bigger role for small firms than for larger firms because of small firms' higher vulnerability to environmental influences. Paradoxically, environment is a threat for the firm, but also an opportunity in providing resources the firm needs. Different environmental conditions and the suggested strategies for firms operating in them are discussed in the next section.

2.4 Strategy and the firm's strategic choices

There is a huge number of definitions for the concept of strategy. According to Johnson and Scholes (1993: 10), "strategy is the direction and scope of an organization over the long term: ideally, which matches its resources to its changing environment, and in particular its markets, customers or clients so as to meet stakeholder expectations". Therefore, strategy may depend on but is not completely determined by environment. However, strategic management is needed not only to cope with changes in the firm's external environment but also to cope with changes caused by processes internal to the firm.

Strategic management has traditionally focused on business concepts that affect firm performance (Hoskisson et al. 1999: 418). According to Bhide (1996), the questions every entrepreneur must answer are (1) what are my goals?; (2) do I have the right strategy?; and (3) can I execute the strategy? In order to achieve high performance, firms need to adapt their strategies to their environment. The strategic management process consists of three main elements: (1) strategic analysis; (2) strategic choice; and (3) strategy implementation (Johnson & Scholes 1993: 16). Often, strategy is defined as top management's plans to attain outcomes consistent with the organization's missions and goals (e.g. Wright et al. 1992: 3). In general, strategy consists of four components: (1) scope, i.e. product/market combination; (2) deployment of organizational resources; (3) competitive advantage; and (4) synergy

among activities, resources, and scope (Hofer & Schendel 1978: 25; Sandberg 1992: 74).

One set of interpretations of strategy is given by Mintzberg (1987a: 7-17; 1987b), who defines the concept through five Ps, i.e. strategy can be seen as (1) plan; (2) plot; (3) pattern; (4) position; or (5) perspective. Strategy can be a plan to attain objectives and goals. It can be a plot against competitors. *Regularity in firm behavior can be interpreted as a strategy which can be retrospectively seen as a pattern*. Using strategy makes it possible to change the firm's position in the market, and adapt to different kinds of situations and environments. Strategy as a perspective refers to the firm's fundamental way of doing business its own way.

Strategy and strategic issues in a firm can also be described in terms of the following features (cf. Johnson & Scholes 1993: 5-10): One characteristic of strategy is that it concerns both a firm and its environment, i.e. the firm utilizes strategy to deal with the changing environment. Strategy affects the overall welfare of the firm, i.e. firm performance is much affected by the firm's strategy. Hence, strategy is holistic. In addition, strategy has a key role in achieving the goals of the firm, and is strongly related to the management's and owners' interests. Moreover, typical of strategy is a long time horizon.

Strategies are often divided into three levels: (1) corporate; (2) business; and (3) functional i.e. operational strategies. Thus, there are two major strategic choices that the firm has to make. First, the firm has to choose the business the firm is in. Naturally, this choice limits further choices significantly. Second, the firm has to choose the means by which it competes and attempts to achieve its goals within an industry. For a small firm, issues of business strategy are likely to be especially important (Johnson & Scholes 1993: 26). The first choice is related to the choice of corporate strategy, and the second choice refers to the firm's business strategy, which is also called competitive strategy (e.g. Chaffee 1985: 89; cf. Hofer & Schendel 1978: 27-29).

Studies of strategy can be roughly organized into two categories: those focused on the strategy process (see e.g. Pettigrew 1992); and those focused on the strategy content, i.e. on the competitive advantage (see e.g. Olson & Bokor 1995). Further, studies of strategy process can be divided into two groups according to whether the strategy process is seen as a rational process (e.g. Ansoff 1965); or as a social, emergent process (e.g. Mintzberg 1973; 1978). Similarly, the studies of strategy content can be divided into two groups according to their perspective: external view (e.g. Porter 1980); and internal view (e.g. Wernerfelt 1984).

There are several strategy-making process models (e.g. Mintzberg 1973; Chaffee 1985; Ansoff 1987; Nonaka 1988; see Hart & Banbury 1994). These are the methods and practices firms use to interpret opportunities and threats, and to make

decisions about the effective use of skills and resources (Shrivastava 1983). Strategy-making can be delineated through a number of characteristics of the organization itself, such as its size and the nature of its leadership, and the features of its environment, such as competition and stability (Mintzberg 1973: 49). Hart (1992: 334) has proposed an integrative framework of strategy-making processes that includes key dimensions, contingencies, and performance implications for five modes of strategy-making: command, symbolic, rational, transactive, and generative.

Mintzberg (1973: 44-49; Mintzberg et al. 1976) identifies three modes of strategy-making processes, entrepreneurial, adaptive and planning, and later added a fourth type, bargaining. In the entrepreneurial mode, strategy-making is dominated by the active search for new opportunities. Strategy-making is characterized by dramatic leaps forward in the face of uncertainty. Power is centralized in the hands of the chief executive, and growth is the dominant goal. In the adaptive mode, strategy-makers consciously seeks to avoid uncertainty. The adaptive organization does not have clear goals. In such firms the strategy-making process is characterized by reactive solutions to existing problems rather than a proactive search for new opportunities. Decision making is incremental, and decisions are disjointed. In the planning mode, analyses play a major role in strategy-making, which is also straightforward. The bargaining mode is typically a political process involving negotiations among decision makers with conflicting goals.

However, strategic choices are not unchangeable. Changes reflect partly the firm's ability to adapt to environmental changes. In addition, the realization of plans is not always straightforward. Intentions that are fully realized can be called deliberate strategies, and those that are not realized at all can be called unrealized strategies. Thus, intended strategy and realized strategy is not always the same. Realized strategy can be considered the result of intended strategy and emergent strategies (Mintzberg & Waters 1982: 465-466; cf. Johnson & Scholes 1993: 38-39). Moreover, strategies are often in informal, i.e. non-written, form in small firms in particular.

Firm performance in the market is based on its competitive advantage. The interaction between firms and their competitive environment can be seen as market-dependency and resource-dependency. Sources of competitive advantage are often bound with the firm's environment. A firm can attain competitive advantage by satisfying the needs of customers of some market segments better than its competitors do. Firms in local market can attain competitive advantage through good relationships with local firms. Also, resources in the region can be a source of competitive advantage. Other sources of competitive advantage of the firm can be low costs, high know-how, or strong network relations. The firm's competitiveness is based on its sustainable competitive advantage.

In the external view, the rules of competition and competitive advantage are determined by the structure of an industry. Industry structure influences the rules of competition and the strategic choices available to firms. In any industry, the rules of competition are embodied in five competitive forces: (1) the entry of new competitors; (2) the threat of substitutes; (3) the bargaining power of buyers; (4) the bargaining power of suppliers; and (5) the rivalry among existing competitors (Porter 1985: 4-5). The external forces of industry influence firms relatively, because they influence all firms in the industry. Firms' abilities to get on with the factors influencing the industry are not the same in all firms. The strength of competitive forces influences the concentration of industry. The number of firms and business size structure indicate the concentration or fragmentation of industry. Industry structure consists of several factors, such as entry and exit barriers, changes in industry growth, innovations etc. (see Porter 1980: 200-221). Porter (1980: 229-335) describes competitive strategies in fragmented industries, emerging industries, industries undergoing a transition to maturity, declining industries, and global industries (see also Low & Abrahamson 1997).

In the internal view, the competitive advantage is seen to be based on the firm's resources and capabilities. A good example of the research stream representing the internal perspective is the resource-based view (Penrose 1959; Wernerfelt 1984), which has gained favour among strategic management scientists in the last decade. The resources and capabilities of the firm are discussed more detailed in the next section.

The core of strategy consists of the critical success factors (CSFs) or key success factors (KSFs). Critical success factors are those few things that must go well to ensure success for a firm, and so they represent those enterprise areas that must be given special and continual attention to bring about high performance (Boynton & Zmud 1984; Johnson & Scholes 1993: 328; see also Sousa de Vasconcellos & Hambrick 1989; cf. Selznick 1957; Ghosh et al. 2001). To establish a competitive position for the firm Hofer and Schendel (1978) recommend concentrating on only a few key success factors, the most relevant ones. It has been found that only a few of the success factors have a substantial impact on firm performance (see e.g. Stalk et al. 1992; Hewitt-Dundas et al. 1997).

It is extremely important to identify the firm's critical success factors. They are often bound up with the nature of the business, and may change as the firm and business develop (Ghosh et al. 2001). The firm should pay particular attention to nurturing those factors with special care. Moreover, some of them can be general, i.e. common to all successful firms, some are industry specific, i.e. characteristic of the firms in the same industry sector, and some are firm specific, i.e. they relate to the firm's competitive advantage.

However, due to the continuous change of the environment, competitiveness calls for continuous renewal and innovativeness as the conditions of success change (see e.g. Abell 1999; see also Lengnick-Hall 1992). This calls for a dynamic view of strategy (Markides 1999). The firm should find a market position which is unique in some respect. Uniqueness can appear in products or in the ways of doing business, for example. In market conditions characterized by overdemand, it may be sufficient that the firm is acting like its competitors. The firm has an absolute competitive advantage if it has neither competitors nor close substitutes. In such cases the firm often has a protected market position, due to a patent, for example. Usually firms operate in markets characterized by continuous competition between the firms. In such case, it should have some relational competitive advantage, i.e. it has to reach a better market position than its competitors have in some respect that is valued by customers (see Kay 1995: 61; Porter 1980; 1996; see also Henderson 1989).

From the firm's point of view, it can be seen that a firm has two strategic options (Neilimo 1993: 63; cf. Mintzberg 1973; 1978). Leading firms in global markets and high-technology firms operating in narrow product and customer segments may follow an active, market-creating strategy. However, usually firms have to choose an adaptive strategy, i.e. they have to adapt to the changes determined by the environment.

Jennings and Beaver (1995; 1997) contrast the management process of large and small firms. They claim that in larger organizations, management is seen primarily as a predictive process concerned with the clarification of long-term objectives, the formulation of appropriate policies, and the feedback of information. In contrast, management in small firms is primarily an adaptive process concerned with manipulating a limited amount of resources, controlling the operating environment, adapting as quickly as possible to the changing demands of that environment and devising suitable tactics for mitigating the consequences of any changes which occur. Competitive advantage in the smaller firm often arises accidently as a result of the particular operating circumstances surrounding the enterprise.

Adaptation is used as a general term for the process of accommodation between a firm and its environment (e.g. Lawrence & Dyer 1983; see also Boulding 1978). The term is used in many ways (Hrebiniak & Joyce 1985: 337). In its broadest meaning, it encompasses both voluntaristic and deterministic perspectives. However, more frequently adaptation refers to the voluntaristic and managerial approach which was, especially in the beginning, the dominant approach in research focusing on the relationship between the firm and its environment (Hannan & Freeman 1977: 929). On the other hand, adaptation is a sub-term for the term 'strategic choice'.

There are at least four approaches to operationalizing business strategy (Hambrick 1980; see also Ginsberg 1984). Some researchers have viewed strategy as a

situational art that can best be studied through in-depth case studies; others have relied on one or a few key variables to portray strategic behavior; a third group have viewed strategy as a quantifiable interaction of a broad set of variables; and the fourth group's approach to operationalizing strategy is through strategic typologies, in which each strategic type is viewed as having its own distinct pattern of characteristics.

The strength of typologies is that they aim at capturing both the comprehensiveness and the integrative nature of strategy. For example, Miles and Snow (1978) have presented a typology composed of four types of firms: defenders, analysers, prospectors, and reactors. Each is described as having a particular strategy for responding to the environment, and a combination of structure, culture, and processes which support that strategy. Another influential theoretical construction of strategy types has been the generic strategies presented by Porter (1980). According to him, there are three generic competitive strategies: cost leadership, differentiation, and focus strategy. They are based on the combination of two dimensions: competitive advantage (lower cost or differentiation) and competitive scope (broad target or narrow target).

However, a number of researchers have questioned the appropriateness of these generic types in explaining the strategies of firms. In particular, these strategic options have been considered inadequate in explaining the breadth of strategies pursued by small firms (see Carter et al. 1994; Ostgaard & Birley 1995). Moreover, they have received only limited empirical support in the small firm context (e.g. Chaganti et al. 1989; Fombrun & Wally 1989). Porter, for instance, warns against being "stuck in the middle" and not trying multiple strategies. However, it has been shown that successful strategies can be based on a mix of cost leadership and differentiation (e.g. Thompson 2001: 309; see also Johnson & Scholes 1993: 205-209). These generic strategies have also been criticized because of their strong competition-based approach. Nevertheless, the generic strategy frameworks created e.g. by Miles & Snow (1978) and Porter (1980) have been applied in a high number of subsequent studies of competitive strategies. Different types of strategic behavior are dealt with more closely in Chapter 6.

Recently, as a response to criticism of competition-based approaches, the popularity of customer- and capability-based strategy approaches has risen. One example of such approaches is Mewes's EKS-strategy model, which offers detailed practical guidance for strategy formulation (see Friedrich & Seiwert 1994). The EKS strategy is based on four principles: (1) focus; (2) the point of greatest impact; (3) the bottleneck factor; and (4) benefit maximisation. The process of strategy making consists of seven stages: (1) analysis of current situation and special strengths; (2) selection of the most promising field of business; (3) selection of the most promising target group; (4) identification of the target group's most pressing problem; (5)

planning an innovation strategy; (6) planning a cooperation strategy; and (7) satisfying a constant basic need and safeguarding the firm's long-term market position (Friedrich & Seiwert 1994).

In addition to generic strategies, the firm may have strategies which are more specific, e.g. objective- or situation-based strategies: for instance, a growth strategy or a turnaround strategy. As a matter of fact, firms may apply several simultaneous strategies. Firm growth is discussed in more detail in Chapter 3.3, and turnaround in Chapter 3.5. However, the strengths of a firm's resources and environment determine the strategies that are available in different situations. It should be noted that no one strategy is always the best strategy. Hence, firms can be clustered into types according to the strategies that they have used in different situations and circumstances (see e.g. Vesper 1990; McDougall et al. 1992).

Organizations are often divided into two categories according to their structural characteristics. An organization with an organic structure is seen to fit better with a turbulent environment characterized by continuous and rapid change. Achieving high performance in such an environment is often seen to relate to entrepreneurial strategic orientation (Lumpkin & Dess 2001). Moreover, an entrepreneurial strategic posture and an organic structure are characteristic of successful firms with build-oriented strategic missions (Covin et al. 1994). In contrast, a mechanistic organizational structure and a conservative strategic orientation are seen to fit with an unchanging, stable environment. This is explained by the fact that an environment characterized by rapid change requires rapid reaction by the firm (Mintzberg 1979: 269; see also Miles & Snow 1978; Miller & Friesen 1983b; Covin & Slevin 1989: 77; Slevin & Covin 1997; Mintzberg & Quinn 1991). However, a competitive environment can be more unstable for a firm operating in an environment with stable changes in the demand than for a firm operating in an environment with growing demand.

In response to dynamic environments, the development of new products or new marketing, production, or administrative practices are suggested to be suitable strategies. Surviving in a hostile environment, characterized by increased rivalry or decreased demand for the firm's products, may require diversification. In such conditions firms may benefit from their competitive aggressiveness as a response to threats (Lumpkin & Dess 2001). Another way to avoid direct competition is by building customer loyalty through advertising or by tailoring products to the least competitive market segments.

According to selection theories, survivor selection differs with environmental change and type of organization, such as specialist versus generalist. These types represent different exploitation strategies of resource opportunities in a niche. A specialist organization is one that does a smaller number of things more intensively

than a generalist. In business organizations, one way of thinking about specialization is that it is the opposite of diversification. Specialist organizations serve a narrower range of product markets, but often because of this specialization, they know these markets and can serve them more efficiently. Specialist organizations maximize their exploitation of the environment over a relatively narrow range of environmental conditions and have little slack or excess capacity. Generalist organizations can survive over a wider range of environmental conditions but are not optimally suited to any single condition. Specialist organizations are more suited to rapid change, while generalist organizations accommodate more effectively to slow change.

According to niche width theory, population ecology suggests that the focused strategy of specialism has distinct advantages over adaptive strategies where environments are uncertain, characterized by rapid change, and where change is dramatic. When this set of conditions exists, adaptive strategies are unable to respond quickly enough to attain any degree of production efficiency, while specialists who bet correctly will reap large potential profits. Such conditions are not so rare as to be unimportant (Wholey & Brittain 1986: 523). Moreover, it has been found that generalists have lower death rates only when there are relatively few but large changes in environmental conditions. Specialist organizations were favoured in all the other environmental conditions.

2.5 Resources and their flexibility

In the resource-based view, the firm is viewed as a bundle of resources that management must deploy systematically to add value. A firm's resources can be defined as all tangible and intangible assets that are tied to the firm in a relatively permanent fashion (Wernerfelt 1984). Resources refer to both physical, concrete resources and intangible, invisible resources i.e. capabilities. Also, resources can be divided into human, social, physical, organizational, and financial types (Greene et al. 1997b). They can yield sustained competitive advantage when they are relatively scarce, hard to imitate, and hard to replace (Mahoney & Pandian 1992; Peteraf 1993; Collins & Montgomery 1995; Lubit 2001; cf. Miller & Whitney 1999). Flexibility of resources refers to a firm's ability and way to respond to environmental changes. It increases the compatibility between a firm and its environment.

Resources have a central role in gaining a competitive advantage (see e.g. Praest 1998: 178; Greene et al. 1997b). Both the strategic choice approach and population ecology approach emphasize the role of the nature of resources. In the resource-based view, firm performance is based on firm-internal resources (e.g. Powell

1992a). Firms may start with a similar resource base, but with time they become differentiated such that their resources cannot be perfectly imitated (Rumelt 1984).

Competitive advantage is seen to be based on the combination of the firm's tangible resources and capabilities. Capabilities refer to knowledge-based tangible or intangible processes, and by combining them the firm can attain its goals and objectives. For generating a sustainable competitive advantage, four criteria to assess the economic implications of resources have been suggested by Barney (1991): value, rareness, inimitability, and substitutability (cf. Grant 1991). However, the entrepreneur's limited perception may be a central bottleneck factor, and a management team can significantly improve management performance. The knowledge-based view emphasizes top management's ability to select, retain and develop critical capabilities.

In the firm, there are usually few core capabilities which are difficult to imitate (see Prahalad & Hamel 1990: 83-84; Aaker 1989). The firm's core capabilities are usually created by the firm, and they promote its ability in adapting to the needs of a rapidly changing environment (Prahalad & Hamel 1990: 81). In particular, taking advantage of the firm's unique nature is emphasized. Moreover, as e.g. Hamel and Prahalad (1989) point out the management's visionary skills and vision for the future in which the firm is unique are important. Management's task is to create the future, which should be fitted to the strengths of the firm in a unique way (see also Mintzberg 1994; Heene & Sanchez 1997). The core capabilities which are created in the firm serve as a basis for its growth. Business processes based on core capabilities can be transferred both into new geographical and business contexts (Stalk et al. 1992: 65-67). In such cases, the unique elements of the firm, the personnel's qualifications, and the flexibility of business processes play important roles.

Strategic core capabilities start with customer, the identification of their real needs, and stop at customers, the satisfaction of their real needs (Stalk et al. 1992: 62; see also Long & Vickers-Koch 1995; Miller et al. 2002). An important success factor is the firm's ability to respond to changes in customer needs. Five dimensions characterizing successful firms are (1) speed, i.e. the ability to respond quickly to customer or market demands and to incorporate new ideas and technologies quickly into products; (2) consistency, i.e. the ability to produce a product that unfailingly satisfies customers' expectations; (3) acuity, i.e. the ability to see the competitive environment clearly and thus to anticipate and respond to customers' evolving needs and wants; (4) agility, i.e. the ability to adapt simultaneously to many different business environments; and (5) innovativeness, i.e. the ability to generate new ideas and to combine existing elements to create new sources of value (Stalk et al. 1992: 63).

Due to the scarcity of resources, firm performance is built on two principles. First, allocating resources to objectives which will provide the maximum benefit will

lead to effectiveness. Second, the firm should develop resources into a resource pool characterized by continuous learning, inimitability and attractiveness in the market (see e.g. Montgomery & Wernerfelt 1991: 955; Kay 1995: 23, 272; Barney 1991; see also Foss 1996; cf. Hofer & Schendel 1978). The term resource pool here refers to a learning organization. In this task, top management's role is significant. In particular, the role of owner-manager is emphasized in small firms more than in large companies. Moreover, personal networks of top management may play a critical role in firm success (see e.g. Johannisson 2000; Ostgaard & Birley 1994).

Flexibility of resources affects the success rate of responding to environmental changes. The more flexible the resources, the better chances for the implementation of changes. Flexibility can be divided into internal and external types. Wiklund and Karlsson (1994: 109) has further made a more fine-grained classification by dividing firm flexibility into four types which they call input, output, and internal flexibility, and flexible network relations. Internal flexibility refers to the firm's resources as a source of flexibility, e.g. flexibility of factors of production or the structure of the firm. External flexibility refers to the firm's relations with its stakeholders: for instance, a firm's cooperation through networks can be a source of competitive advantage (Isaksen 1994: 35-36; Dyer & Singh 1998). However, network relations may also cause dependency on other actors, which may have negative effects for the business (see Pfeffer & Salancik 1978). Determining which business activities to bring inside a firm and which to outsource is a critical strategic decision. Failure in this decision may lead to either losing strategic focus or losing competitive advantage (Barney 1999).

The concept of flexibility is closely related with that of slack. The difference between total resources and total necessary payments, or between potential and actual performance, is described as organizational slack (Cyert & March 1963: 36). Also, slack has been more broadly considered as a 'cushion of actual or potential resources' (Bourgeois 1981). There are different kinds of organizational slack: economic, political and managerial. Economic slack refers to liquid financial assets, easily convertible assets, and generalizable capital assets. Political slack encompasses goodwill and consumer loyalty, for example. Managerial slack refers to a surplus of managerial resources and capabilities. Moreover, slack related to the firm's network relations may be extremely important particularly for small firms (see e.g. Johannisson 1990).

For the creation of slack resources, operation in growing and developing markets is seen to be important (Cyert & March 1963: 278; Covin & Slevin 1989). Firms commonly use slack resources for developmental actions. On the other hand, slack resources are the outcome of a firm's strategic behavior (Peltoniemi 1993). During growth, firms can use uncommitted resources to maintain their adaptability. Operating in a market characterized by stiff competition often means that the net cash

flow is used for running the every-day business. When no slack exists, as often in times of decline, the positive organizational processes dependent on slack resources are inhibited. However, the existence of slack resources is a necessary condition for adaption to environmental changes and firm development.

SMEs are regarded as flexible because of their simple organizational structures. They are characterized by a small number of hierarchical levels and short chains of command, and decision making in them is rapid and uncomplicated. In many SMEs, the personnel is a central resource. Unionism of personnel may be rarer in small firms than in large companies, and employees may see the link between their personal contribution and firm performance more clearly than in the case of a large company. Consequently, employees may be more motivated and committed in working for SMEs than for large companies. As Peters and Waterman (1982) have put it, "small in almost every case is beautiful", referring to the efficiency of a small facility based on turned-on, motivated, highly-productive workers, who outproduce workers in big facilities.

Firm development is determined by firm-internal and firm-external factors. The sources of internal inertia include investments, information, power relations and culture. The firm's renewal can be restricted as a results of sunk costs or routines (e.g. Dutton 1993: 340), which can also be important factors for the transfer of the firm's accumulated know-how to new employees, and therefore, for firm success in the long run (e.g. Nelson & Winter 1982). SMEs may have rigidities because of their old-fashioned, inflexible and inefficient resources and loose network relations. Hence, some resources may acquire negative value by creating core rigidities. Possible causes of inertia related to the external environment include legal restrictions, insufficient legitimation, or financial- or information-related restrictions.

Changes in the environment cause more uncertainty in SMEs than in large companies. SME's resources for acquiring information about the market and changing the course of the firm are more limited. Often, SMEs do not know their customers and their real needs as well as large companies do. This may cause tension between the firm and its environment. Moreover, the firm's inertia may restrict its ability to mitigate this friction. However, there is much variation in the liquidity of resources. Monetary resources are highly liquid. Their continuous adequacy is necessary for maintaining the liquidity of the firm. Underestimation of the need for working capital may lead the firm into liquidation, for example in the case of high growth caused by a big investment in production equipment.

It is characteristic of SMEs that their operation is closely related to the person who is the entrepreneur. In the resource-based view, the entrepreneur is a critical firm resource, but it might also be that s/he is an important factor which limits the achievement of firm success (see Whittington 1988: 524; Dutton 1993: 340; Spender

1989). The entrepreneur's interpretations and limited ability to see new business opportunities and the boundaries set by him/her may limit firm development more than the boundaries set by the external environment (see Barr et al. 1992; Barr 1998). Moreover, the firm's manager is often also the owner of the firm. Thus, ownership, management and the person of an entrepreneur may be combined in an SME.

Firms, like other organizations, are apt to retain the established ways of thinking and action, especially if there is no direct pressures for change in the environment (e.g. Koberg 1987; see also Burgelman 1990). As Miller (1994) argues in his study of how past performance influences the way a firm evolves, makes decisions, and adapts to its environment, after a long successful period firms are especially apt to (1) exhibit inertia in many aspects of structure and strategy-making process; (2) adopt extreme process orientations; (3) reduce intelligence gathering and information processing activity; and (4) demonstrate insularity by failing to adapt to changes in the environment. In an analysis of why good companies go bad, Sull (1999) claims that the causes of failure are associated with four inertial factors: (1) strategic frames, i.e. the set of assumptions that determine how managers view the business; (2) processes, i.e. the way things are done, (3) relationships, i.e. ties to stakeholders, and (4) values, i.e. the set of shared beliefs that determine corporate culture. Proactively changing a tradition which has been successful may be too challenging a task for management.

Strategically, one of the most important environments for the firm is the customer environment (Johnson & Scholes 1993: 10; see also Vesper 1990: 55). Adequate demand is one of the most critical conditions which affect other conditions significantly. Also, in population ecology, customers are the firm's most important resource and a factor determining the carrying capacity of the environment. It has been shown that growth of the industry is one of the most important factors facilitating firm growth (Lumme 1994: 3). Growth of the industry sector is a critical condition for venture capitalists' investment decisions (MacMillan et al. 1985; Bygrave & Timmons 1992: 8-10). Also, growth in demand is one of the most significant factors for the intensity of competition which the firm faces in the market (Porter 1980).

Intensity of growth in demand refers to the stage of development of the industry sector (e.g. Porter 1980). Strong growth in demand is related to the growth stage which is characterized by expanding customer segments, product improvements and differentiation, strong marketing, lack of capacity, increase in the number of competitors, bigger profits and opportunities for acquisitions (Porter 1980). Stable demand is related to mature industry sectors which are characterized by mass consumption, high quality, standardization, market segmentation, over-capacity, long production series, importance of service and low costs, and price competition.

The population ecology approach explains organizational change by examining the nature and distribution of resources in organizations' environments

(Aldrich 1979: 27-28). Environmental pressures make competition for resources the central force in organizational activities, and the resource dependence perspective focuses on tactics and strategies used by actors in seeking to manage their environments as well as their organizations. Environmental niches are distinct combinations of resources and other constraints that are sufficient to support an organizational form. The niche is assumed to have a particular carrying capacity. Organizational forms – specific configurations of goals, boundaries, and activities – are the elements selected by environmental criteria, and change may occur either through new forms eliminating old ones or through the modification of existing forms. Organizational forms, then, are organized activity systems oriented toward exploiting the resources within a niche. Selection pressures may favour or eliminate entire groups of organizations, such as industries, and the changing population distribution of organizations in a society reflects the operation of such selection pressures.

Organizational evolution is a consequence of the opposing force of two sociological processes: legitimation and competition. Legitimation of an organizational population means that its organizational form acquires the status of a "taken-for-granted" solution to given problems of collective action. Competition refers to constraints arising from the joint dependence of multiple organizations on the same set of finite resources for building and sustaining organizations.

Selection of new or changed organizational forms occurs as a result of environmental constraints. Environments are described in terms of either the resources or the information they make available to organizations (Aldrich 1979: 29-30). The information approach relies heavily on theories of perception, cognition, and decision making, with organizational members acting on the information they glean from typically incomplete searches of their environments. A major factor explaining organizational change is thus variation in information. The resource approach treats environments as consisting of resources for which organizations compete, highlighting the amount of resources and the terms on which they are made available. An effective organization is one that has achieved a relatively better position in an environment it shares with others. There are six dimensions that are used to characterize the way in which environments make resources available to organizations: environmental capacity, homogeneity/heterogeneity, stability/instability, concentration/dispersion, domain consensus/dissensus, and degree of turbulence.

2.6 Summary and conclusions

Firm performance can have two strategic outcomes: success or failure. Performance can be approached, conceptualized, operationalized, and measured in many ways.

Success refers to the achievement of goals and objectives. At least two important dimensions of success can be distinguished: financial vs. other success, and short- vs. long-term success. Performance is often measured by growth, profitability, and survival. It seems that survival and growth may be the most appropriate measures of success in small firms. Failure is also not an unambiguous concept, as it can have different interpretations. However, discontinuance of the firm can be defined as failure when the firm has ended its business and left behind unpaid creditors.

Firm performance is based on the match between the firm and its environment. It can be approached by several theoretical perspectives. Recently, the two most popular theoretical approaches have been the strategic management approach and the population ecology approach. They attempt to explain firm performance from opposite directions, using several contrasts. However, they can also be seen as the ends of the same continuum, and such a combined perspective can be called a dialectical approach. Altogether, firm performance is bounded with firm-internal factors and with environmental factors and their fit.

The firm operates simultaneously in several environments which can be divided into different levels and characterized by several qualities. Strategy matches the firm's resources to its changing environment. Also, strategy can be defined in several ways and different levels of strategy can be distinguished. A major distinction can be made between strategy content and strategy process. Strategy content, which is closely related to the competitive advantage and the critical success factors of the firm, can be approached from the firm-internal or -external view. In general, firms may follow an active, market-creating strategy, or, as usually, they have to adapt to the changes in their environment. Moreover, there are usually several strategies that a firm follows, i.e. in addition to generic strategies, firms often have objective- and situation-based strategies, e.g. growth and turnaround strategies.

Both the strategic management and the population ecology emphasize the role of resources and the firms' ability to exploit them. In the resource-based view, resources are seen as the major source of competitive advantage. Resources encompass physical, concrete resources and intangible resources, i.e. capabilities. The flexibility of resources increases the compatibility between a firm and its environment, and thus enhances the chances of high performance. Slack resources are important for firm development. However, firm flexibility is restricted by several inertial forces.

3 FACTORS CONTRIBUTING TO SME SUCCESS AND FAILURE

3.1 Previous research on SME performance

To date, research into firm success and failure does not provide a comprehensive explanation for SME performance. Much research has been carried out in trying to discover the factors responsible for firm success and failure (see e.g. Lussier 1995; Duchesneau & Gartner 1990). However, the findings of previous studies of such factors have been contradictory. This may be explained, at least partly, by differences in research designs, operationalization of variables and different limitations of the studies – some potential factors may have not taken into account in the research, for example.

Most such studies have been carried out in the large-company context, or have focused on the success and failure of new ventures rather than on established SMEs, and on the factors affecting their longevity and growth (e.g. Tsai et al. 1991; Duchesneau & Gartner 1990; Keeley & Roure 1990; Roure & Keeley 1990; Littunen 2001; Kauranen 1993; see also Cooper 1993) or failure (e.g. Zacharakis et al. 1999; Carter et al. 1997; Venkataraman et al. 1990; Sommers & Koc 1987; Lussier & Corman 1995; 1996). Moreover, few studies have focused on the foundations of the performance of SMEs in peripheral locations (Vaessen & Keeble 1995: 1-2). However, many studies have found that there are cross-national differences in the factors affecting firm performance (e.g. Lussier & Pfeifer 2000; Yusuf 1995).

There are several approaches to investigating SME success and failure. Several studies have been based on a single specific and often narrow perspective on factors affecting firm performance, e.g. on decision making (e.g. Eisenhardt 1999). Many studies have focused on firms with a certain age or size, or on a single industry sector. Moreover, the type of firm may affect the success and failure factors of the firm. Also, several methodological approaches to investigating SME success and failure have been used. For instance, there are studies focused on a very limited number of potential success or failure factors, comparative studies of success and failure factors, and studies focused on the holistic profiles or configurations of successful or failed firms. Most studies have concentrated on studying the role of a small number of variables for firm success (e.g. Lussier & Corman 1996; 1995; Cressy 1996; McDougall et al. 1992; Tsai et al. 1991; Keeley & Roure 1990; Stuart & Abetti 1990; Sandberg & Hofer 1987).

In reaction to the contradictory nature of the results of previous studies, recent research has called for a more integrated and holistic approach in studying firm performance (e.g. O'Farrell & Hitchens 1988; Sandberg & Hofer 1987; McDougall et al. 1992; 1994). Few studies have investigated how different types of factors may be inter-related with small firm performance (Gadenne 1998). It can be argued that the field is fragmented and several research streams exist. For instance, attempts have been made to explain firm success or failure in terms of the personality traits of the entrepreneur. However, as Storey (1994: 109) argues using "the analogy of the rowing boat on a rough sea" in describing the role of the entrepreneur's personality in SME performance in the event of unpredictable external shocks, it might be that firm performance is not easily predicted on the basis of the entrepreneur's personality. Also, Birley and Westhead (1994) could not find any empirical support for strategies for picking winners based solely upon the characteristics of an owner-manager and the business start-up reasons (cf. Miner 1997).

It seems that a number of studies have focused on firm success, but few recent studies focus on firm failure (Thompson 2001: 619). For some reason, many studies of firm failure were carried out in the 1980s. Some studies have explored and compared the potential influence of certain factors on both the success and failure of firms. However, to date comparative studies have been rare. Moreover, it is worth noting that studies focused on the causes of decline and crises and on recovery strategies may also contribute to the understanding of SME performance in the long run.

3.2 Studies of factors affecting SME success

There is considerable variation in the criteria for success used in previous studies. Empirical studies of factors affecting SME success can be roughly divided into two groups according to whether they focus on a quite limited set of variables or try to capture more holistic profiles of successful SMEs. Previous empirical research has used both surveys and case studies. There are also some compilations of the results of previous studies of the factors contributing to firm success. For instance, Storey (1994) has compiled the results of previous studies focused on the birth, growth and death of small firms, on the basis of which he presents some normative "dos and don'ts" lessons for small firms.

The following recent studies based on surveys have dealt with the factors affecting SME success. Westhead et al. (1995: 94) studied factors influencing the survival of 227 high-technology small firms. Ghosh and Kwan (1996) made a cross-national intersectoral study of the key success factors of 152 SMEs in Singapore and 164 SMEs in Australia. Kauranen (1996) carried out a follow-up study of 37 new

manufacturing firms in Finland and studied the determinants of the future success of the firm in the short term and in the long term. Yusuf (1995) explored critical success factors for small firms in several industry sectors based on the perceptions of 220 South Pacific entrepreneurs. Wijewardena and Cooray (1996) explored the importance of a set of success factors by studying a sample of 300 small manufacturing firms in Japan. Gadenne (1998) investigated the effect of various management practices on small firm performance by studying 369 small businesses in the retail, service, and manufacturing industry in Australia. Bracker and Pearson (1986) studied planning and financial performance of small mature firms in the dry cleaning business. Baker et al. (1993) studied planning in successful high-growth small firms. Pelham (2000) explored the relationship between market orientation and the performance of manufacturing SMEs in eight industry sectors.

Case studies have also been conducted. Duchesneau and Gartner (1990) studied 13 successful and 13 less successful (or failed) small young firms in an emerging industry (see also Duchesneau 1987). Lehtonen (1997) analyzed seven Finnish knowledge-based firms' paths to success. Taylor (1997) explored high-growth medium-sized firms in the UK, Germany and the US, and presented four lessons based on the 15-year study. Foley and Green (1989) presented five tips for business success in general, based on the views of business advisers and case study entrepreneurs of small firms with different goals.

On the basis of empirical studies concentrating on a limited set of variables rather than on holistic profiles of successful SMEs, the factors affecting SME success are classified into the following categories: (an) entrepreneur(s), management and know-how, products and services, customers and markets, the way of doing business and cooperation, resources and finance, strategy, and the external environment.

Of the factors related to entrepreneurs, several personal qualities and traits, such as self-confidence and perseverance, have been suggested to affect firm success (e.g. Yusuf 1995). In their study of new small firms, Duchesneau and Gartner (1990) found that lead entrepreneurs in successful firms were more likely to have been raised by entrepreneurial parents, to have had a broader business experience and more prior startup experience, and to believe that they had less control of their success in business, than unsuccessful entrepreneurs. They also found that lead entrepreneurs in successful firms worked long hours, had a personal investment in the firm, and were good communicators. Moreover, successful firms were those initiated with ambitious goals, and lead entrepreneurs had a clear and broad business idea (Duchesneau & Gartner 1990). Firms with more than one shareholder when it was set up were significantly more likely to survive (Westhead et al. 1995). Education and prior experience in business have been seen as critical success factors for small firms (Yusuf 1995; Wijewardena & Cooray 1996).

Management of the firm plays a critical role in determining the firm's strategy. Effective management has been found to be an important success factor for an SME (Ghosh & Kwan 1996; Yusuf 1995; Wijewardena & Cooray 1996). Firms that have a diverse range of management skills and competencies, i.e. a large number of management functions covered by individuals in the management team, have a significantly greater propensity to survive (Westhead et al. 1995). Firms with a management team that contains individuals with personnel backgrounds have been found to be more likely to survive (Westhead et al. 1995). Wiklund (1998: 240) found that well performing firms had larger management teams than others. An entrepreneurial team is fundamental to firm success, especially in terms of firm growth (Birley & Stockley 2000). A number of empirical studies have revealed that firms founded by teams are on average more successful than firms founded by single persons (see e.g. Lechler & Gemuenden 1999). Gadenne's study (1998) claimed that entrepreneur's personal characteristics are not related to successful management practices.

Innovation and proactiveness have been found to be the key strategic dimensions in successful small firms (Wiklund 1998; Chaganti & Chaganti 1983; see also Hitt & Ireland 2000: 48-50). In one study, a new product idea distinguished successful firms from unsuccessful ones in the short term but not in the long term (Kauranen 1996). In his study of paths to success of knowledge-based firms, Lehtonen (1997) found that the necessary condition for success was the ability to create an innovative product giving added value to the customer. Taylor (1997) also claimed that the high-growth medium-sized firms he studied succeeded because they innovate. In addition to innovations, Wijewardena and Cooray (1996) found that the second most important success factor for small manufacturing firms was high quality of products. It is important to achieve a suitable balance between product quality and costs (Chaganti & Chaganti 1983).

Good customer relationships and customer service have been found to be the most important factor contributing to SME success (Ghosh & Kwan 1996; Taylor 1997; Wijewardena & Cooray 1996). In his study of high-technology firms, Räsänen (1999) revealed the importance of close customer relationships (also Halborg et al. 1997). Duchesneau and Gartner (1990) showed that successful firms embarked upon sales to broad sectors of the market, whereas less successful ones were restricted to narrow market sectors consisting of customers characterized by small size and those more difficult to service. On the other hand, in his study of high-growth medium-sized firms, Taylor (1997) emphasized the importance of a market niche the firm can defend. Foley and Green (1989: 109) emphasized the importance of operation in a market which the firm knows and understands.

Marketing has been found to be an important success factor for an SME (Ghosh & Kwan 1996¸ Yusuf 1995). Market orientation has been found to have a strong relationship with measures of performance (Pelham 2000). Kauranen (1996) found that market-orientedness distinguished successful firms from unsuccessful ones in the short term but not in the long term. In his study of knowledge-based firms' developing into superior players in their branches, Lehtonen (1997) claims that a high tech company should, after conducting marketing tests in the home country, immediately drive global market wedges into major international markets. The success of internationalization may be a critical success factor promoting the attainment of some positive outcomes such as enhanced organizational learning, greater innovativeness and increased strategic competitiveness (Hitt & Ireland 2000: 52).

Several studies show that interfirm cooperation is important for small firms because it can, for instance, contribute positively to gaining organizational legitimacy and to developing a desirable marketplace reputation. Moreover, cooperation may enable the small firm to improve its strategic position, focus on its core business, enter international markets, reduce transaction costs, learn new skills, and cope positively with rapid technological changes (see Hitt & Ireland 2000: 50-51; Jarillo 1988). However, Gilley and Rasheed (2000) found that outsourcing has no significant direct effect on firm performance. On the other hand, firms that had gained access to resources and skills from local higher education institutes showed a significantly greater propensity to survive (Westhead et al. 1995).

The use of outside professionals and advisors, and the advice and information provided by customers and suppliers is also important for success (Duchesneau & Gartner 1990; also Kent 1994; Storey 1994: 310; Halborg et al. 1997). Duchesneau and Gartner (1990) found that lead entrepreneurs of successful firms were likely to spend more time communicating with partners, customers, suppliers, and employees than those of unsuccessful firms. Storey (1994: 310) reminds us about the importance of maintaining good relationships with the bank and keeping it aware of the firm's financial developments. The role of informal relations and social capital, i.e. personal networks, has been found to be critical to firm success (Malecki 1997; Lechler & Gemuenden 1999).

Many studies point out the important role of financial planning. The study conducted by Gadenne (1998) revealed that the only common success factor for small firms in different industry sectors was financial leverage, i.e. small firms in general tend to be more successful if there are sufficient financial resources either contributed by the owner or generated through profits and cash flows from operations (see also Yusuf 1995). Small business owners should invest in their own business and avoid taking out large sums in 'good' years (Storey 1994: 310; also Laureen 1996). Small firms should also keep and use current financial data for making key decisions, and

small business owners should be prepared to consider selling equity (Storey 1994: 310).

Availability of skilful employees was seen to be an important success factor in Wijewardena and Cooray's (1996) study. Maintaining staff loyalty and policies and mechanisms for motivating staff are vital (Foley & Green 1989: 109). Also, hard work and commitment from all staff have been found to be important. According to Taylor (1997), it is characteristic of high-growth firms to have organizational structures built on teams that can communicate easily and take decisions quickly.

Many studies have analyzed the importance of planning for firm success. Several studies show the importance of planning in firm performance (Bracker & Pearson 1986). Baker et al. (1993) found that in a sample of fast-growth small firms, over half conduct strategic planning on a regular basis. Moreover, they found that fast-growth small firms develop written business plans as a product of strategic planning and that they are used more for internal management purposes than for start-up funding, as is widely recommended. It has been suggested that entrepreneurs should adopt a clear business plan and carefully monitor the firm's performance and changes in the market (Foley & Green 1989: 109).

It has also been found that most successful firms did not have written business plans but, on the other hand, spent more time on planning than unsuccessful firms, and entrepreneurs in successful firms seek to reduce risk in their business (Duchesneau & Gartner 1990). However, in some situations, e.g. for seizing a business opportunity, there may not be much time for deep investigation (e.g. Bhide 1994). Miller and Cardinal (1994) analyzed previous studies of the planning-performance relationship, and found that strategic planning positively influences firm performance and that factors related to methods are primarily responsible for the inconsistencies in the literature (see also Powell 1992b; Slevin & Covin 1997). In their study of generic retailing types, Conant et al. (1993) revealed that firms with the most clearly defined strategy patterns performed better than other firms.

Successful firms have been found to be more flexible and adaptive organizations (e.g. Taylor 1997). Foley and Green (1989: 109) suggested that for business success, it is important to be lucky, and that well-calculated planning and marketing can minimize risks and enhance luck. In the long term, successful firms concentrate on what they are good at (Kauranen 1996). However, Taylor (1997) suggested that after establishing a position in a niche market, the firm should diversify quickly into related market niches in order not to become over-dependent on one product, one customer or the economy of a small region. Small firms which grow are more likely to survive than others (Storey 1994: 310).

Related to the external environment, firms that directly compete with a large number of organizations on a regular basis are significantly more likely to survive

(Westhead et al. 1995). In developing areas, satisfactory government support has been shown to be important for small firm success (Yusuf 1995). It is also important that the firm leaves the industry before 'the window of opportunity' (Timmons 1994: 91) closes (Taylor 1997).

In addition to these studies focusing on a quite limited set of variables, more holistic empirical studies of the strategic profiles of successful firms have been conducted. Studies focusing on the profiles of successful firms have been carried out by Peters and Waterman (1982), Kay (1992; 1995), Collins and Porras (1994), Simon (1996), and de Geus (1997), among others. Peters and Waterman studied long-lived, continuously innovative large companies and their characteristics, and found that excellent companies were brilliant on the basics. They show that the eight attributes characterizing successful American companies are: (1) a bias for action; (2) closeness to the customer; (3) autonomy and entrepreneurship; (4) productivity through people; (5) being hands-on, value driven; (6) sticking to the knitting; (7) have a simple form, lean staff; and (8) simultaneous loose-tight properties (Peters & Waterman 1982: 13-16).

On the other hand, in his study of successful large companies Kay (1992; 1995) found that their success rests on distinctive capabilities, i.e. on those characteristics that others cannot easily replicate. Therefore, what differentiates these firms is more striking than what they have in common. Kay (1995: 23) argues that if there were effective generic strategies, i.e. recipes for corporate success, then all firms would adopt them, and they would cease to yield returns for any firm.

Collins and Porras (1994; 1996) found that the successful firms they studied were characterized by vision, but it is important to note that this study was done through retrospective historical analysis. In line with these results are those reported by de Geus (1997), who investigated 30 long-lived large companies. The companies, which were found to be very good at management for change, ranged in age from 100 to 700 years. De Geus (1997) found four common characteristics of successful companies that could explain their longevity: (1) conservatism in financing; (2) sensitivity to the world around them; (3) awareness of their identity; and (4) tolerance of new ideas (see also Collins & Porras 1994; Kotter & Heskett 1992). Both studies emphasize the importance of preserving a core identity while simultaneously managing change, the importance of experimentation, and taking into account the needs of all stakeholders, not only those of owners (cf. Kotter & Heskett 1992).

Simon (1996) studied "hidden champions", i.e. SMEs that have occupied leading positions in their world markets, but are unknown to the public. These were long-lived SMEs, their mean age being 67 years and median average 47 years. In contrast to high-growth firms, characteristic of these firms were slow growth and remaining relatively small or medium in their size. Nine important characteristics of

these low-profile high-performance German firms were identified: (1) ambitious goals; (2) narrow market focus; (3) global orientation; (4) closeness to customer; (5) continuous innovation; (6) clear-cut competitive advantages; (7) reliance on own strength; (8) motivated employees; and (9) strong leadership. Also, "both-and" lessons were presented, for instance, it is important not to have *either* a technology or a market orientation but *both* a technology and a market orientation (see Simon 1996: 272-274).

The studies by Peters and Waterman (1982), Collins and Porras (1994), and de Geus (1997) focus on the profiles of successful large companies, with only Simon's study (1996) investigating successful SMEs. The main criteria for selection as successful firms have been longevity and good annual financial performance in the long-run. However, most studies have been carried out when the firms are old and big. The reliability of these studies may be questioned: we may ask, how accurately is it possible to analyze things that happened a long time ago? Also, it should be noted that small firms are not small large firms (Simon 1996: 245). Moreover, the research results are usually not valid for other types of businesses or environmental conditions. Therefore, taking into account the context is critical when applying the results and advices presented above.

3.3 Studies of factors affecting SME growth

Besides studies of the success factors of firms in general, much research effort has been targeted particularly at investigating the factors affecting firm growth, which in general refers to increase in size. Firm growth has been one focus area in strategy, organizational and entrepreneurship research. However, there are several conceptual and empirical challenges in the study of firm growth (Davidsson & Wiklund 2000; Delmar 1997). Managing growth is a major strategic issue for a growing firm (see e.g. Arbaugh & Camp 2000). Early studies of growth focused on large companies and their diversification strategies.

For one of the most comprehensive compilations of results of previous studies focusing on small firm growth, see Storey (1994). Although there has been much interest in understanding small firm growth during the last ten years (e.g. Davidsson & Delmar 1999; Delmar 1997; Wiklund 1998), there is still not much of a common body of well-founded knowledge about the causes, effects or processes of growth (Davidsson & Wiklund 2000). Moreover, the existing research on the growth and strategy of SMEs has focused mainly on new ventures (Olson & Bokor 1995). There are few studies of the growth of established SMEs: one instance is Davidsson (1989a), who studied the subsequent growth of an SME from the psychological point of view.

There is no comprehensive theory to explain which firms will grow or how they grow (e.g. Garnsey 1996). It seems that not even very strong explanatory factors have been identified (Davidsson 1991). Moreover, although several determinants of firm growth have been suggested, researchers have been unable to gain a consensus regarding the factors leading to firm growth (Weinzimmer 2000). Most of the research work in this area fails to provide convincing evidence of the determinants of small firm growth as a basis for informing policy makers (Gibb & Davies 1990: 26). Attempts to build models for predicting the future growth of the firm, i.e. picking winners, have not been particularly successful. The general preconditions for growth can be considered to be (1) entrepreneur's growth orientation; (2) adequate firm resources for growth; and (3) the existence of the market opportunity for growth (cf. Davidsson 1991).

Storey (1994: 158) claims that there are three key influences upon the growth rate of a small independent firm: (1) the background and access to resources of the entrepreneur(s); (2) the firm itself; and (3) the strategic decisions taken by the firm once it is trading. The most important factors associated with an entrepreneur are motivation, education, having more than a single owner, and having middle-aged business owners. The growth of the smallest and youngest firms is the most rapid. The location and industry sector also affect the growth. The most important strategic factors are shared ownership, an ability to identify market niches and introduce new products, and an ability to build an efficient management team. Storey argues that these three components need to combine appropriately for growth to be achieved. In their study of small manufacturing firms, Barkham et al. (1996) present more evidence that certain owner-manager characteristics, business strategies and firm characteristics are essential for small firm growth.

In her study of the factors affecting the growth of large Finnish companies, Hajba (1978) presents four groups of growth determinants: (1) direct growth determinants (size, fusion, exports); (2) parallel growth determinants (age, innovations); (3) background determinants (strategy, diversification); and (4) stochastic determinants (e.g. chance, luck). However, many studies of the growth factors of the firm, including Hajba's study, have focused on the growth of large companies. In such cases the role of diversification, for example, may be significantly bigger than in the case of SMEs. Growth through diversification may be necessary for the growth of a large company (Kay 1997).

Various explanatory approaches have been used. One way of organizing studies focused on firm growth is grouping them into four types by the factors explaining growth (Gibb & Davies 1990: 16-17; Gibb 1997b: 2-3; Pistrui et al. 1997; Poutziouris et al. 1999). These are: (1) personality-dominated approaches, which explore the impact of personality and capability on growth, including the

entrepreneur's personal goals and strategic business aspirations (e.g. Chell & Haworth 1992a); (2) firm development approaches, which seek to characterize the growth pattern of the firm across stages of development and the influence of factors affecting growth process (e.g. Scott & Bruce 1987); (3) business management approaches, which pay attention to the importance of business skills and the role of functional management, planning, control and formal strategic orientation in terms of shaping the growth and performance of the firm in the marketplace (e.g. Bamberger 1989; 1983); and (4) sectoral and broader market-led approaches which focus largely on the identification of growth constraints and opportunities relating to small firm growth in the context of regional development or the development of specific industrial sectors such as high-technology small firms (e.g. Smallbone et al. 1993a). This organization of approaches is used in the following review, though these categories, however, are not mutually exclusive.

The behavior of entrepreneurs is strongly affected by intentions (e.g. Krueger & Carsrud 1993: 315; Bird 1988: 442). The firm's strategic behavior and subsequent growth is understandable in the light of its growth intention. Therefore, firm growth is based not merely on chance, but on the management's conscious decision making and choice. Naturally, the firm can grow even though it is not the management's aim, but in such a case the growth is not planned and so may include more risks. Planning helps in managing growth.

In general, goals and objectives can be divided into two categories. On the one hand, there are final goals which are valuable as such. On the other hand, there are goals which have instrumental value for achieving some other goals. Growth can be regarded as the second most important goal of a firm, the most important one being firm survival, i.e. the continuity of the business. Moreover, growth is an important precondition for a firm's longevity. Negative growth of an SME is often a sign of problems, while stagnation, i.e. a situation where growth has stopped, is usually indicative of problems that a firm will face in the future.

As a matter of fact, growth often has instrumental value. For new ventures, firm growth is needed to ensure an adequate production volume for profitable business. Growth can serve as an instrument for increasing profitability by enlargening the firm's market-share. Other similar goals include securing the continuity of business in the conditions of growing demand or achieving economies of scale. Moreover, growth may bring the firm new business opportunities (cf. the corridor principle), and a larger size enhances its credibility in the market. Also, achieving a higher net value of the firm can be regarded as a motive for firm growth.

In SMEs, growth objectives are often bound up with the owner-manager's personal goals (e.g. Jennings & Beaver 1997). Much has been written about the importance of the entrepreneur's growth motivation (e.g. Perren 2000; Davidsson

1991; Miner 1990). The close connection between an owner-manager and the firm is the dominant characteristic of small firms (Vesalainen 1995: 18). Instead of profit maximization or growth, a firm's primary goal may be the entrepreneur's independence or self-realization (see e.g. Foley & Green 1989). Moreover, there may be no adequate resources for growth, or the expected increase in business risks may limit a firm's growth willingness. However, aversion to growth has been said to be the principal reason why most SMEs stagnate and decline (Clark et al. 2001).

It is assumed that the share of growth-seeking firms would be about twenty per cent of all SMEs (e.g. Hakim 1989; Cambridge Small Business Research Centre 1992). However, not all growth-seeking SMEs will grow significantly. It is important that the firm's goals and the personal goals of the entrepreneur support each other, and that there is harmony between the goals and the environments in which the firm operates.

In several typologies, entrepreneurs and firms are categorized by their business goals, so growth has been a widely used dimension in many typologies. There are two broad approaches in the studies of small firm success: (1) the business professionals' model, and (2) the small business proprietors' model (Bridge et al. 1998: 140-142). These two approaches can be identified in several typologies of entrepreneurs (e.g. Smith 1967; Stanworth & Curran 1976). According to the business professionals' model, a successful firm is one that achieves its highest potential in terms of growth, market share, productivity, profitability, return on capital invested or other measures of the performance of the firm itself. In the small business proprietors' model, the owner-managers' main concern is whether the firm is providing them with the benefits they want from it. These benefits are often associated with a lifestyle and an income level to maintain it. In the latter model, firm success therefore means being able to reach a level of comfort rather than achieving the business's maximum potential.

In *firm development approaches* firms are seen as temporal phenomena which are born, grow, mature, decline and die. Firm growth is the basic dimension of the models of organizational life cycles (e.g. Greiner 1972; 1998; Mintzberg 1979; Churchill & Lewis 1983; 1991; Miller & Friesen 1983c; Scott & Bruce 1987). Numerous models of organizational life cycles have been presented, e.g. a three stage model (Smith et al. 1985), four stage models (Quinn & Cameron 1983; Kazanjian 1988), five stage models (Greiner 1972; Galbraith 1982; Churchill & Lewis 1983; Scott & Bruce 1987), and a seven stage model (Flamholtz 1986). These multistage models use a diverse array of characteristics to explain organizational growth and development. According to Greiner (1972; 1998), a firm's failure to adapt to a series of crises caused by growth is one of the principal causes of firm failure.

Common to these growth pattern models is the claim that changes in an organization follow a pattern characterized by discrete stages of development (Dodge et al. 1994). Typical of these patterns are the sequence of events that show how things change over time, a hierarchical progression that is not easily reversed, and a composite of a broad range of organizational activities and structures. There is also substantial agreement about a consistent pattern of development and the differing characteristics associated with the various stages. For instance, organizational life cycle models are important in understanding the differences in success factors of the firm between the stages of the life cycle.

However, organizational life cycle models have been criticized because of their extreme simplification of reality: in some cases not all stages of development are found, some stages of development may occur several times, the stages of development may occur in an irregular order, and there is a lack of empirical evidence to support the theories (e.g. Gibb & Davies 1990; Bridge et al. 1998: 105; Koskinen 1996: 206-207; Eggers et al. 1994; Birley & Westhead 1990; Miller & Friesen 1983a; Vinnell & Hamilton 1999; cf. Dodge et al. 1994). In addition, on the basis of the results of their study of high-growth firms, Willard et al. (1992) concluded that "the applicability of conventional wisdom regarding the leadership crisis in rapid growth entrepreneurial firms may no longer be valid, if, in fact, it ever was". Organizational life cycle models is one application of the configurational approach in describing the stages of life cycles and the transformation from one stage to another (Mintzberg et al. 1998). It has been suggested that the status of being a growth firm may be rather temporary (Spilling 2001).

Several growth strategies related to *business management approaches* have been presented in the literature. It has been suggested that strategy is the most important determinant of firm growth (Weinzimmer 2000). Among high-growth firms, Dsouza (1990) identified three primary strategic clusters: (1) build strategy, i.e. emphasis on vertical integration; (2) expand strategy, i.e. emphasis on resource allocation and product differentiation; and (3) maintain strategy, i.e. emphasis on market dominance and/or efficiency. Thompson (2001: 563-565) presents four growth strategies: (1) organic growth; (2) acquisition; (3) strategic alliance; and (4) joint venture.

On the other hand, when looking at the product/market strategy, four options can be seen: (1) market penetration; (2) new product development; (3) new market development; and (4) moving into new markets with new products (Burns 1989: 47). However, there is a lack of agreement in empirical findings concerning product- and market-based strategies. While Sandberg and Hofer (1987) argue that product-based strategies perform better than focused strategies, Cooper (1993) claim that focused strategies outperform differentiated product strategies (Pistrui et al. 1997). Perry

(1986/87) investigated growth strategies for an established small firm, and concluded that the most appropriate growth strategies are niche strategies, i.e. market development and product development strategies, in that order. However, it seems that most empirical studies focus on new venture strategies. Studies of competitive strategies related to firm growth have been carried out in the new venture context by McDougall and Robinson (1990), McDougall et al. (1992), Carter et al. (1994), and Ostgaard and Birley (1995), among others.

As opposed to the organic growth strategy, acquisitions are usually regarded rather as a large companies' growth strategy which can be either synergistic or nonsynergistic (Anslinger & Copeland 1996). Forward or backward vertical integration means that the acquired firm is located at a different level of the value-addition chain, i.e. the acquired firm is a customer or supplier of the firm. In contrast, horizontal integration refers to a firm which is at the same level of value-addition, i.e. it is a competitor. Lateral integrations refer to unrelated businesses which represent a diversification strategy. In addition to becoming bigger and thus acquiring greater market power, there might be several other reasons for acquisitions, e.g. acquiring synergies, industry restructuring, reduction of business risk, acquiring new knowledge and other necessary resources, overcoming barriers to entry, and entering new markets quickly (see Vermeulen & Barkema 2001; Empson 2000; Birkinshaw 1999; Tetenbaum 1999; Chatterjee 1992). Despite the fact that growth through acquisitions is more typical of larger firms than smaller ones (see e.g. Davidsson & Delmar 1998), it is one option for the growth of an SME. However, it seems that there are few studies focused on acquisitions made by small firms.

Also, one often neglected way of growing is by setting up new firms. Studies using a firm as the unit of analysis have not been able to identify growth through a portfolio of firms as one way of growing (see Scott & Rosa 1996). However, it has been found that portfolio entrepreneurship appears to be more common than suspected, and that it is characteristic of entrepreneurs who own and manage growth firms (Pasanen 2003). Wiklund (1998: 239) concluded that growth through portfolios of firms does not seem to be an alternative to growing a single firm, but entrepreneurs leading rapidly growing firms tend more often to start subsidiaries and independent new firms and to grow these firms. Small business growth through geographic expansion is a challenging growth strategy, as during the course of opening a new geographical site an entrepreneur will be confronted with the task of managing an existing business and a start-up at the same time (Barringer & Greening 1998).

Penrose (1959) proposed already in the late fifties that firm growth is constrained by the availability and quality of managerial resources. Many studies draw attention to the important role of an entrepreneurial team for firm growth (see Birley & Stockley 2000). Also, in their study of technology-based ventures, Eisenhardt et al.

(1990) found an association between a strong management team and firm growth (see also Weinzimmer 1997). In addition to the importance of favourable firm-internal conditions, the strategies should be in harmony with the environmental conditions. Different growth environments may require different business strategies for SMEs. For instance, Chaganti (1987) found that for small manufacturing firms, different growth environments required distinctly different strategies. Interestingly, this was contrary to the findings concerning large companies. It was concluded that strategic flexibility is a critical requirement for small firms (Chaganti 1987).

Sectoral and broader market-led approaches focus largely on the identification of growth constraints and opportunities. It has been found, for instance, that economic fluctuations strongly affect the growth probability of small firms (Kangasharju 2000). Also, for firm growth, it seems that aiming at growing market niches is more important than taking market shares from competitors (Wiklund 1998). However, growth can happen only if there are no growth barriers. Such barriers can be related to firm-internal and firm-external factors (see e.g. Barber et al. 1989; Smallbone & North 1993a; Vaessen & Keeble 1995; Jones-Evans 1996; Vesper 1990: 174-175; Hay & Kamshad 1994).

The growth barriers characteristic of small firms in peripheral locations have been presented by Birley and Westhead (1990: 538). In the study carried out by the Cambridge Small Business Research Centre (1992), the most frequent growth barriers were related to factors on the macro level. The most important growth barriers were related to difficulties in obtaining finance (cf. Lumme 1994: 15) and the price of money, the level of and decrease in demand (also Perren 2000), and tightening competition (also Hay & Kamshad 1994). Other growth barriers were caused by restrictions determined by authorities, problems in obtaining a skilled workforce, and the small number or lack of potential cooperation partners in the area. The firm-internal factors affecting unwillingness to grow include the entrepreneur's fear of losing her or his autonomy, difficulties in fitting together personal and the firm's goals, and weak managerial or marketing skills (see also MacNabb 1995; Perren 2000). These issues are particularly typical when an entrepreneur "transfers" from the role of entrepreneur to that of manager, or when the firm hires a new manager.

In the population ecology approach, the three stages of variation, selection, and retention constitute a general model of organizational change which explains how organizational forms are created, survive or fail, and are diffused throughout a population (Aldrich 1979: 28-31). Variation generates the raw material from which selection, according to environmental or internal criteria, is made. Then, the retention mechanism preserves the selected form. Variation within and between organizations is the first requirement for organizational change, and there must also be variation across environments if externally directed change is to occur. Selection serves as the driving

force of long-term change (Hannan & Carroll 1995: 23). The environment also sets the conditions under which organizations operate and survive. Each population tends to become isomorphic to the environment through the mechanism of competition among organizational foundings in excess of available resource space. It is assumed that as the diversity of the resource base increases, the diversity in a set of adapting organizations increases.

3.4 Studies of factors affecting SME failure

It is important to understand the root causes of failure, not only the symptoms. In many studies, it seems that a clear distinction is not made between the symptoms and causes of failure (see e.g. Boyle & Desai 1991). For instance, financial ratios are seen to be symptoms rather than causes of failure (Argenti 1976). However, prior empirical studies of failure have concentrated almost exclusively on financial ratio data, though the usefulness of ratio-based firm failure prediction models has been questioned (Lussier 1995). It has often been argued that a firm failed because it had run out of money, whereas the root cause may be poor or ineffective management, for example. Revealing the underlying reasons for failure, in particular, and their dynamics would obviously be useful for the creation of the business on a sustainable basis.

Many methodological approaches have been used to explain and understand firm failure. Here, studies of firm failure are divided into case studies, surveys, and database analyses, on the basis of their methodological approach to data acquisition. There are also some compilations of the results of previous studies of the factors associated with firm failure. Perhaps the most extensive is the one made by Storey (1994: 92-110). Boyle and Desai (1991) also have reviewed the literature concerning the causes of small firm failure. They proposed a typology dividing the causes into four categories based on a matrix of two dimensions: (1) environment, i.e. internal vs. external; and (2) nature of response, i.e. administrative vs. strategic. Lussier and Corman (1995) have also reviewed the research literature on factors contributing to small firm success versus failure. Vesper (1990: 38, 55) presents a list of failure causes in high-technology start-ups.

The most recent case studies have been carried out by Bruno et al. (1987) and Zacharakis et al. (1999). Bruno et al. (1987) studied ten failed high-technology firms in emerging industries in California. Zacharakis et al. (1999) in their study of perceptions of new venture failure carried out matched case studies of venture capitalists and entrepreneurs.

In addition, there are some survey studies concerning the failure factors of firms. Carter et al. (1997) studied discontinuance among new firms in retail in the U.S.

with a focus on the influence of initial resources, strategy, and gender. Lussier (1996) identified the ten most common reasons for small firm failure in a survey of 100 failed small firms representing the population of small firms in six states in the U.S.A. Gaskill et al. (1993) studied the perceived causes of small firm failure in apparel and accessory retailing in Iowa. Smallbone (1990) conducted a follow-up study of new ventures who were clients of an enterprise agency in the UK. Sommers and Koc (1987) studied high-growth firms in the telecommunications, computer equipment, instruments, and electronic components industries. Cressy (1996) analyzed the shape and the underlying temporal stability of firm failure distribution, using a large UK start-up database.

However, there are several difficulties in studying failed firms (Bruno et al. 1987). These are: (1) difficulties in sampling; (2) the unwillingness of founders to discuss failure; (3) the inability of founders to understand and articulate causation; and (4) the multidimensional complexity of the problem. Difficulties in sampling relate to the selection of appropriate sampling frames of reference, but also to problems in locating the ex-entrepreneurs. The second and third problems relate to the length of time between failure and data collection. Multiple causation leads to categorization and comparison difficulties for researchers investigating the problem.

Many studies have concentrated on entrepreneur characteristics in explaining firm failure. However, the importance of the entrepreneur's personality traits has been seriously questioned (see e.g. Storey 1994: 109). Findings concerning the entrepreneur's age, gender, lack of work experience, and family background have been contradictory. Only the entrepreneur's education has been consistently verified in empirical studies to influence firm performance positively (Storey 1994: 109). However, there are also exceptions: in their study, Lussier and Corman (1995) found that the owners of failed firms had a higher level of education. In his literature review, Lussier (1996) shows that there is considerable evidence that firms managed by people without management experience have a greater chance of failure than firms managed by people with such experience (cf. Westhead et al. 1995: 88). Also, in some studies, lacking experience in the industry sector has been found to contribute to firm failure (Gaskill et al. 1993; Vesper 1990). Moreover, lack of motivation and commitment on the part of the entrepreneur is associated with firm failure.

Poor management is often associated with firm failure in several studies (Haswell & Holmes 1989; Gaskill et al. 1993; O'Neill & Duker 1986). An incomplete start-up team (Roure & Maidique 1986), and disagreement with partners (Hall & Young 1991) contribute to firm failure. In their study of failed high-technology firms, Bruno et al. (1987) reported that an effective management team was more important for firm success than overall management competence. Indeed, in seven cases out of ten, an ineffective management team was seen to be one of the major reasons for firm

failure. Lack of management skills was seen to be a major failure determinant by Zacharakis et al. (1999). Also, the entrepreneur's inability to perform both planning and administrative functions is seen to be associated with firm failure (Boyle & Desai 1991).

Many failure factors are related to products and services, customers and markets, and cooperation with other stakeholders. The greater the product range, the higher the probability that the firm will survive (Reid 1991). Unsuccessful product timing has been found to be one cause of failure, i.e. early and late introductions are problematic (Bruno et al. 1987; see also Vesper 1990: 38). Also, dependency on a single customer or only a few customers is a major factor affecting firm failure (Reid 1991; see also Hewitt-Dundas & Roper 1999; Hall & Young 1991). High reliance on a single customer as well as ineffective distributor relations are factors associated with failure (Bruno et al. 1987). Hence, a diversified customer base plays an important role in firm survival (Storey 1994: 107). Obtaining sufficient sales is a challenge in particular for smaller firms (Cromie 1991; Hall & Young 1991). Cressy (1996) found that fluctuations in firm sales increase the probability of firm failure. Moreover, it has been shown that those firms which do not use professional advisers are more likely to fail than those which do (Vesper 1990; Gaskill et al. 1993; Lussier 1995).

Firm resources and finance are seen to have a critical role in many studies. Firms that start undercapitalized have a greater chance of failure than other firms (Lussier 1996; Hall & Young 1991). The failed new firms studied by Smallbone (1990) also suffered from undercapitalization, and lack of business was characteristic of them. Financial inadequaces such as undercapitalization, and problems in venture capital relationship are the major factors affecting firm failure (Bruno et al. 1987; see also Zacharakis et al. 1999; Boyle & Desai 1991; Cromie 1991). In their study of discontinuance among new firms in the retail industry, Carter et al. (1997) showed that lack of human and financial resources is associated with business discontinuance. Such an association was also confirmed by Cressy (1996) in his database analysis. The lower the levels of external borrowing, the higher the probability that the firm will survive (Reid 1991). Labich and de Llosa (1994; also O'Neill & Duker 1986; Hall & Young 1991) claimed that mishandling of debt loads is an important factor associated with failure. Moreover, inadequate record keeping and financial control has been found to be a cause of failure (Gaskill et al. 1993; Boyle & Desai 1991; Vesper 1990). Often, rapid firm growth generates problems with finance, which ultimately may lead to firm failure. Thus, problems in working capital management are associated with firm failure (Gaskill et al. 1993).

The firm's inability to attract and retain competent employees may also lead to failure (Sommers & Koc 1987; Boyle & Desai 1991; Lussier 1995). Cromie (1991) claims that the biggest problem related to personnel in young firms is getting good

staff with the right attitudes. Labich and de Llosa (1994) claim that low employee morale and hostility may be an important reason for failure.

It has been found that young firms are more likely to fail than older firms (e.g. Dunne et al. 1989; Storey 1994: 109; Westhead et al. 1995). Similarly, smaller and especially very small firms are more likely to fail than their larger counterparts (e.g. Gallagher & Steward 1985; Dunne & Hughes 1992; Storey 1994: 109; Westhead et al. 1995; see also Watson & Everett 1996b). For the survival of young firms, their growth after startup is critical (Phillips & Kirchhoff 1989; Storey 1994: 109). Moreover, there is some evidence that the higher the firm growth rate, the higher the probability of survival, and also that firms which start larger have higher survival rates (Phillips & Kirchhoff 1989). The causes of crises and failure related to the management of transitions from one stage of development to another are described in the studies of organizational life cycles (see e.g. Flamholtz & Randle 2000; Kazanjian 1988; Greiner 1972; see also Boyle & Desai 1991).

A weak business concept or unclear business definition, i.e. lack of clarity about what business we are in, and lack of focus have been presented as causes of failure (Bruno et al. 1987; Smallbone 1990; Zacharakis et al. 1999; Labich & de Llosa 1994). Also, failure of vision has been found to be an important factor behind firm failure in the United States (Labich & de Llosa 1994). Resistance to change relates to the fact that "success can often be the seed of future failure", which underlines the importance of continuous development (Labich & de Llosa 1994; see also Miller 1994). It has also been shown that lack of a business plan is associated with firm failure (Sommers & Koc 1987; Gaskill et al. 1993; Lussier 1995). Lack of planning and especially strategic planning is often seen to be characteristic of failed firms (Boyle & Desai 1991). Also, an overextension of the business may cause failure (Gaskill et al. 1993). Jennings and Beaver (1997) claim that the root cause of either small firm failure or poor performance is almost invariably lack of management attention to strategic issues.

Turning now to the external environment of the firm, Storey (1994: 94-95) argues, based on his compilation of previous studies, that the industry sector seems to play a minor role in firm failure. However, the results of previous studies have been contradictory on this issue. For example, North et al. (1992) found wide sectoral variation in the survivability of SMEs, while many other studies have argued that there are no sectoral differences in failure rates (e.g. Phillips & Kirchhoff 1989; Kalleberg & Leicht 1991). One explanation for these conflicting findings may be found in a study carried out by Watson and Everett (1999), who claim that some definitions of failure are biased against certain industry sectors. Moreover, contrary to general belief, many firms filing for bankruptcy actually have growing sales and are situated in growing industries (Moulton & Thomas 1988).

The macroeconomic situation and changes in it have also been found to have an association with firm failure. Firms started during a recession seem to have a greater probability of failure than other firms (Bruno et al. 1987; Vesper 1990). Moreover, slow economic activity or recession has been found to be a major reason for failure (Lussier 1996). Poor external market conditions, including stiff competition, slow market growth, and small market size, have been found to be major factors associated with firm failure not only by entrepreneurs but also by venture capitalists (Zacharakis et al. 1999). Other studies have also found that stiff and increased competition, and the firm's inability to respond to it, is associated with firm failure (Roure & Maidique 1986; Gaskill et al. 1993).

The findings of previous studies can be described as fragmented, while several common themes are evident. There is disagreement among the results of previous studies concerning the factors contributing to firm failure (Lussier 1996). However, taking into account the several choices that researchers have to make concerning their study design, and therefore the diversity of studies, it is somehow understandable that the results of studies are inconsistent with each other.

3.5 Studies of factors affecting SME decline and recovery

Many firm failures do not happen suddenly, but develop over time as a consequence of decline or crisis. Although small firms are more vulnerable than large ones, few studies have focused on the decline, crises, and turnaround of small firms (Chowdhury et al. 1993). Decline is often seen as a relatively smooth trend, involving a sustained low rate of performance deterioration. In contrast, crisis is usually seen as a sudden performance drop, involving a major downward shift in performance trends. Weitzel and Jonsson (1989) have presented a model of decline consisting of five stages: (1) blindness; (2) inaction; (3) faulty action; (4) crisis; and (5) dissolution.

Slatter (1984) presents ten major symptoms of firm decline: (1) falling profitability; (2) reduced dividends; (3) falling sales; (4) increasing debt; (5) decreasing liquidity; (6) delays in publishing financial results; (7) declining market share; (8) high turnover of managers; (9) top management fears, e.g. ignorance of important tasks or problems; and (10) lack of planning or strategic thinking. Most of these seem to be related to the firm's finance. However, they are not causes of failure, but indicators of severe problems, and no action should be taken before the underlying primary, or root, causes are identified. For instance, Masuch (1985) analysed vicious circles which cause underperformance, stagnation, and decay in organizations, and found that such vicious circles are usually conceived as spiraling processes.

Thompson (2001: 625-630) grouped the factors associated with decline into three categories (see also Weitzel & Jonsson 1989). First, factors related to inadequate strategic leadership: (1) poor management; (2) acquisitions which fail to match expectations; (3) mismanagement of big projects; and (4) dishonesty. Another category of factors associated with decline relate to poor financial management: (5) poor financial control; and (6) cost disadvantages. Then there are factors which relate to competitive forces: (7) the effect of competitive changes; (8) resource problems; and (9) inadequate or badly directed marketing. According to Thompson (2001: 632), there is usually more than one factor causing firm failure. Most of these factors associated with decline were also identified in the study conducted by Thain and Goldthorpe (1990); their analysis also revealed lack of information as a factor associated with decline.

Recovery strategies refer to both retrenchment strategies and turnaround strategies (Thompson 2001: 635; cf. Pearce & Robbins 1993). On the one hand, retrenchment can be defined as a set of organizational activities aimed at achieving cost and asset reductions and disinvestment (e.g. Robbins & Pearce 1993). Hence, retrenchment strategies aim to reduce costs by concentrating and consolidating, which typically involves changes in functional strategies. Retrenchment strategies usually have a short time horizon and are designed to yield immediate results. For small firms, retrenchment has been identified as a common but not universal response to economic recession (Michael & Robbins 1998). However, it has also been claimed that retrenching plays a minor role in facilitating recovery (e.g. Barker & Mone 1994).

On the other hand, turnaround strategies relate to changes in competitive strategies and frequently feature repositioning for competitive advantage (Thompson 2001: 647-648). Turnaround strategies are likely to address those areas which must be developed if there is to be a sustained recovery. In addition, they are designed to bring quick results and at the same time contribute towards longer-term growth. However, in the short term small firms typically have no resources required for diversification, for instance. Hence, strategies aiming at increasing organizational efficiency may be more available to small firms.

Retrenchment can be regarded as the first stage of a two-stage turnaround strategy, where the retrenchment phase is overlapped and often obscured by a subsequent recovery stage as the firm implements its strategic redirection (Michael & Robbins 1998). In fact, as Robbins and Pearce (1992: 304) point out, retrenchment is an integral component of any turnaround strategy for the successful recovery of declining firms. In contrast, Barker and Mone (1994) and Castrogiovanni and Bruton (2000) question this with evidence that retrenchment has no beneficial effects on firm performance in all contexts (cf. DeDee & Vorhies 1998). However, it is important to distinguish between declines which represent a threat to firm survival and those which

do not. To date, in many studies focused on retrenchment and turnaround, the distinction between them has been blurred.

On the basis of case studies, Hofer (1980) identified three successful operating turnaround strategies: (1) cost cutting; (2) asset reduction; and (3) revenue-generation. In a later large sample study of retrenchment strategies, Hambrick and Schecter (1983) found only the cost cutting and asset reduction strategies. According to Slatter (1984), sustained recovery often requires (1) asset reduction, e.g. by divestment of part of the business; (2) a new leader; and (3) improvement of financial control systems. In a study of twenty firms in the manufacturing and service sectors in the U.K., Slatter (1984) found ten turnaround strategies: (1) change of management; (2) strong central financial control; (3) organizational change and decentralization; (4) product/market reorientation; (5) improved marketing; (6) growth through acquisitions; (7) asset reduction; (8) cost reduction; (9) investment; and (10) debt restructuring and other financial strategies. However, these strategies were often used in combination. Thain and Goldthorpe (1990) present a matrix of recommended turnaround recovery actions depending on the stage of decline, i.e. potential, actual and crisis, and on the key factors determining turnaround success or failure.

It has been found that superior management emphasizing the protection of margins, the efficient use of capital, and a concentration on markets or segments where distinctive competitive advantage is possible are characteristic of firms that have survived most successfully through an economic recession (Clifford 1977; cited by Thompson 2001: 657). Bacot et al. (1993), following Hall's (1980) study of survival strategies in a hostile environment, studied adaptive strategies and firm survival in an environment dominated by economic decline. Both these studies found that firms employed one or both of strategies which targeted (1) the lowest cost, and (2) a differentiated position. Although Hall (1980) cautioned against diversification, the firms in Bacot et al.'s (1993) study did diversify, primarily through acquisition or by modifying technologies for use in other markets. However, both studies focused on large companies, and diversification may play a different role in such firms than in small ones.

In their study of the characteristics and strategic adjustments of surviving and non-surviving firms, Smallbone et al. (1992) found five broad types of adjustment: (1) product and market adjustments; (2) production process adjustments; (3) employment and labour process adjustments; (4) ownership and organizational adjustments; and (5) locational adjustments. The main findings were that firms which had been most active in making adjustments were the most successful. To achieve real growth, active market development, i.e. identifying new market opportunities and increasing the breadth of customer care, is essential.

It has been found that successful recovery strategies are associated with the primary causes of decline (Pearce & Robbins 1993). For firms whose decline was due primarily to external problems, turnaround was most often achieved through strategies based on an entrepreneurially driven reconfiguration of business assets. On the other hand, for firms that declined primarily as the result of internal problems, turnaround was most frequently achieved through recovery responses with an emphasis on efficiency strategies. Contextual factors such as the nature of the competitive environment play a major role in the firm's turnaround success (e.g. O'Neill 1986). It is therefore important to take into account the turnaround situation, i.e. the contingencies. According to Finkin (1985), no two turnaround situations are ever exactly alike, so understanding and controlling nuances becomes important in each particular case, and will have much to do with achieving success (see also Thain & Goldthorpe 1990). Burns (1989: 51) claims that the crisis that triggers the decline to failure is often based on firm-external events.

Most of the studies reviewed above were carried out in the large-firm context. Therefore, the applicability of the results for the small firm sector can be questioned.

3.6 Comparative studies of success and failure factors

Little research has been carried out on reasons why some SMEs will survive, while others will fail (Hall & Young 1991: 54). According to the studies we do have, it seems that there are few differences between successful and failed firms (Smallbone 1990; Lussier & Corman 1995).

Hambrick and D'Aveni (1988) studied large corporation failures, matching failed and survived firms. They describe the decline of the firm as a downward spiral. Significant features of the downward spiral include early weaknesses in slack and performance, extreme and vacillating strategic actions, and abrupt environmental decline. Moreover, they found that the failures showed signs of relative weakness very early, so it can be concluded that the deaths are protracted processes. In his study of strategic and managerial consequences of organizational decline in large companies, D'Aveni (1989) found that bankruptcy may be delayed or even avoided in an environment of growing demand.

On the basis of their literature review, Lussier and Corman (1995) presented a list of 15 variables contributing to firm success versus failure. They found that the findings of previous studies are contradictory. In their study of 216 matched pairs of successful and failed firms, only two variables which may explain success and failure showed a significant difference between successful and failed firms: (1) firms that do not use professional advisers have a greater chance of failure than other firms; and (2)

firm owners whose parents did not own a firm have a greater chance of failure than owners whose parents did own a firm. However, there were also some exceptions, indicating that no general rule can be formulated. Moreover, in another study Lussier (1995) concluded that successful firms develop more specific business plans than those who fail.

Lussier and Corman (1995) concluded that there are few differences between successful and failed small firms, and that consequently there may not be a valid and reliable set of variables that can distinguish success from failure. They also suggested that in further research the most promising variables should be applied according to the specific situation at hand. This means taking into consideration the contingencies of businesses, and provides support for examining success in different types of firms.

In their study of factors influencing the survival of 227 high-technology small firms, Westhead et al. (1995: 94) found that of 69 variables studied, only 13 were statistically significantly associated with survival/non-survival of firms. Such variables related to the work experience of key founders, characteristics of the business, competitive structure, financial base, and management functions. In addition, and perhaps more interestingly, they found that none of the technology-related variables were significant, suggesting that the factors influencing survival/non-survival of independent technology-based firms are no different from those influencing similar firms operating outside high technology.

Statistically significant does not always mean important. In addition to empirical association, there should also always be theoretical rationales for such associations before the findings can be regarded as conclusive. This seems not always to be the case. For instance, on the basis of their empirical analysis, Lussier and Corman (1995) found that failed firm owners had a significantly higher education than successful ones, and similarly Westhead et al. (1995: 88) argue that founders with management experience prior to start-up were more likely to have a firm that closed. However, such empirical associations do not mean that higher education or prior managerial work experience are not important for firm success, nor that they are causes of failure. Usually such findings can be explained by problems of measurement or the influence of confounding variables.

3.7 Summary and conclusions

To date, research into firm success and failure does not provide a comprehensive explanation for SME performance. A huge number of variables seem to be associated with firm success and failure. The findings of previous studies of the factors associated with firm success and failure are contradictory. In addition, most studies have focused

on large companies, and those investigating small firms often concentrate on new ventures. Moreover, a large variety of research approaches have been used. Narrowness and a lack of a holistic approach are characteristic of many studies. It is encouraging to find that small firms, not only large companies, may become world leaders (Simon 1996; see Markides & Stopford 1995). In addition, few studies have focused on the factors affecting the performance of SMEs in peripheral locations. Hence, it seems that there is a gap in the research focused on the profiles of successful SMEs in peripheral locations.

Firm success is closely related to firm growth. Much has been written about firm growth, and there are several explanatory approaches. However, there is no comprehensive theory to explain which firms will grow or how they grow. It seems that not even very strong explanatory factors have emerged. Moreover, the growth of established SMEs seems to have attracted less attention in research, most studies focusing on large companies or new ventures.

While a number of studies have focused on firm success and growth, few recent studies have focused on firm failure. The factors contributing to firm failure are often closely related to the causes of decline and crises. Recovery strategies may provide valuable information on successful turnarounds. However, few studies have focused on the turnaround strategies of SMEs. Moreover, to date, comparative studies of firm success and firm failure factors have been rare. It seems that there are few differences between successful and failed firms in general.

However, in the light of previous research, it can be suggested that there seem to be certain factors related to success and failure. Success seems to be associated with the entrepreneur's higher education and experience, an effective management team, innovativeness in products, good customer relationships and avoidance of dependency on only a few customers, good cooperation relationships, adequate financing, skilled personnel, strategic planning, firm growth, firm flexibility, focusing on core business, and operation in favourable economic conditions. On the other hand, failure often seems to be related to the lack of these qualities.

In general, a firm's inability to adjust to changing circumstances can be seen to be the reason for failure. Several studies have shown that factors related to poor management, e.g. managerial inadequacy, incompetence, inefficiency, and inexperience, are frequently causes of firm failure, in the small firm context particularly (Haswell & Holmes 1989). Moreover, poor management issues are often related to poor financial conditions, inadequate accounting records, and lack of good managerial advice. However, financial problems are often due to a lack of planning. In the stage of rapid growth, in particular, inability to manage growth and change may lead to firm failure (MacMillan et al. 1985; Hambrick et al. 1985). Many times, the root cause of failure can be traced to problems in management.

Given the high number of studies focused on firm performance, it is surprising that much of the research is non-cumulative. There can be several reasons for this. There is a striking diversity in the definitions of central concepts, for example, and the field of research focusing on firm performance is fragmented due to the existence of several research streams and approaches. In addition, there are several contingency factors which may affect and blur the results. It is also worth noting that research results always represent selected views of reality, so research is always partial and can never thoroughly capture all the bits of the phenomenon in question.

4 EMPIRICAL RESEARCH METHODS

4.1 Empirical research approach

Over the years, the field of business studies has become fragmented (e.g. Landström et al. 1997; Landström & Huse 1996), and this has been facilitated by the conceptual pluralism in the field (see e.g. Bygrave & Hofer 1991). Recent research in strategic management and entrepreneurship has called for a more integrated and holistic approach (e.g. O'Farrell & Hitchens 1988; Storey 1994: 327; Gadenne 1998; Landström & Sexton 2000: 437; Sandberg & Hofer 1987; McDougall et al. 1994). This study tries to respond to this call via its versatile research design. A multimethod approach is applied, so that the limitations of one method are compensated for by the counter-balancing strengths of another (Snow & Thomas 1994: 464; see also Jick 1979).

The study follows an abductive approach (Peirce 1958). As opposed to studies using a deductive approach, which is theory-driven, this study is characterized rather by a data-driven, empirical i.e. taxonomic, approach. Taxonomies refer to empirically derived groupings of organizations (Sanchez 1993). As noted by Miller and Friesen (1984: 32), "Attempts are then made to identify natural clusters in the data, and these clusters, rather than any a priori conceptions, serve as the basis for the configuration".

Whereas an induction (e.g. Johnson 1998) starts from the empiric, and a deduction from the theory, abductive reasoning starts from the empiric but also recognizes the existence of theory as a background. However, the central element of abductive reasoning is thought. The reasoning can be based on an intuitive supposition but it can also be based in the actual facts, and in observed experiences. Using the literature, theories can be well used as support, not so much to be leaned on but as the source of inspiration and ideas. Thus, the facts are always somehow charged with the theory.

Abductive reasoning is based on the assumption that the formation of a new theory is only possible when a guiding principle is connected to observations. Therefore, a new theory is created not merely on the basis of observations, as is the case with inductive reasoning. The guiding principle may be a vague intuitive idea or a hypothesis. The guiding principle can be used to concentrate the observations in some points or conditions, because it is believed that it can produce new views and ideas, new theory from the phenomenon in question (see Peirce 1958: 96-97; Grönfors 1982: 33).

An abductive approach can overcome the problems of a purely inductive approach, as when, for example, inductive reasoning refers to a data-driven approach, the empirical material has to capture the phenomenon under investigation. Due to the exploratory nature of this study, it was considered advisable not to commit to a single theory only. Theories, models and concepts are used in organizing the phenomena and identifying the relevant issues for research. On the other hand, this study can be characterized as hypotheses testing, though no hypotheses are presented explicitly – however, the data acquisition and selection of variables are based on their expected relevance in the investigation of the phenomena (cf. Bygrave 1989).

The strength of taxonomies lies in the fact that they are derived empirically, through multivariate analysis, based upon common patterns or relationships identified in the data (Hanks & Watson 1993). As Gartner et al. (1989) put it: "Taxonomic approaches are an important methodology for uncovering relationships in complex phenomena, and many organization researchers suggest that the development of taxonomies is an essential part of the research process (Miller 1981; Miller & Mintzberg 1983; McKelvey 1975)". Taxonomic approaches are valuable for the development of both descriptive parsimony and theory (Gartner et al. 1989). However, taxonomic approaches have been rarely used because they require much work.

Along with the call for more integrated and holistic research, a configurational approach has gained more popularity among scholars in the field of strategic management and entrepreneurship. *Configurations* is used as an umbrella term that encapsulates a variety of research streams (Ketchen & Shook 1996). Examinations of organizational configurations have been conducted under many labels, including strategic groups (e.g. Hatten & Schendel 1977), organizational typologies (e.g. Miles & Snow 1978), taxonomies (e.g. Galbraith & Schendel 1983), and archetypes (e.g. Miller & Friesen 1978).

Organizational configurations are groups of firms sharing a common profile of organizational characteristics (Meyer et al. 1993). The underlying assumption of a configurational approach is that better understanding can be achieved by identifying distinct, internally consistent sets of firms than by seeking to uncover relationships that hold across all firms. A configuration represents a number of specific and separate attributes which are meaningful collectively rather than individually (Rosenberg 1968; Dess et al. 1993). Such attributes often fall into patterns because of their interdependencies.

In this study, configurations refer to sets of SMEs with similar patterns of strategic behavior. The value of configurational inquiry is its holistic perspective of the firm. Firms are complex configurations of many individual conditions (Rich 1992). Configurations are a means of achieving parsimony while presenting rich, complex descriptions of firms (Hambrick 1983b). In addition, configurations are said to be

predictively useful in that they are composed of tight constellations of mutually supportive elements. Configurational inquiry represents a holistic stance, an assertion that the parts of a social entity take their meaning from the whole and cannot be understood in isolation (Meyer et al. 1993; Sheppeck & Militello 2000). Moreover, the presence of certain elements can lead to the reliable prediction of the remaining elements (Miller & Mintzberg 1984).

This study clusters successful SMEs into homogeneous groups according to their growth mode and strategies, because these factors were expected to be very important, especially in terms of practical implications. The configurations are based on data referring to the characteristics of entrepreneurs and enterprises, their life cycle, the strategic choices made and success factors of the SMEs, and the nature of their environment (see Appendix 2). The configurations holistically describe conditions and circumstances related to the performance of successful SMEs. Some previous studies of small firm strategy have been criticized because of their narrow definition of strategy and because they force firms into a priori classification schemes (McDougall et al. 1992). This study tries to avoid this by using several clustering variables and collecting high number of other variables for the description of the configurations.

Moreover, previous studies have not been holistic and only a fraction have applied empirical, quantitative taxonomic approaches. Many previous studies have been qualitative, a priori conceptual typologies (Woo et al. 1991). Another concern, revealed in the study of new venture strategies by Carter et al. (1994: 23), is that many previous studies have focused on firms within a single industry. Such an approach may discriminate strategy archetypes across competitive methods by controlling for varying industry effects, i.e. it is not known whether the archetypes revealed are industry specific or not. There has been also a tendency for research in this area to be restricted to activities in certain functional areas only, so that it is not possible to identify patterns across functional areas and to define wholly a firm's strategy (Kotey & Harker 1998).

The empirical material used in this study is based primarily on two sources of information: data of an extensive survey (see e.g. Church & Waclawski 2001; Fowler 2001), and in-depth case studies (see e.g. Chetty 1996; Eisenhardt 1989a; Romano 1989). The data were complemented with documentary data. A versatile research design also enables triangulation (see e.g. Jick 1979; Denzin 1978: 291). However, not all results based on these empirical data sources are reported in this report.

4.2 Survey

4.2.1 Data collection methods

Empirical data were collected from 145 successful independent SMEs located in Eastern Finland in 1998. The definition of successful SMEs was based on the results of the previous studies of the financial state of SMEs, and on the expertise of local actors who evaluated these SMEs as the most successful ones in their industry sectors in the region. Thus, the concept of successful firm was broadened to include, in addition to growth firms, firms which make a significant impact on local and regional economies. In addition to their possible strategic roles in local economic system, successful non-growth firms have, however, an important role in the economy in terms of maintaining existing jobs. The EU, for example, seems to recognize their importance by using the number of maintained jobs as one of the criteria for objectives of regional development programmes.

For the customer markets of the target firms, the geographic area of the empirical study can be regarded as peripheral. This may create additional challenges for firm performance (see e.g. Smallbone et al. 1993a). There are few studies of the success of SMEs in peripheral locations, and the research focused on this phenomenon is fragmented (Vaessen & Keeble 1995: 1-2).

Sample selection was based on the results of previous studies of the financial state of SMEs in the area and local actors' expertise regarding local SMEs (cf. Laureen 1996; Lumme 1994). These studies were carried out by local development organizations: (1) Kera Ltd. (now Finnvera Ltd.) (Kera Ltd. 1996; Aira 1995a, 1995b, 1995c; Kuittinen 1995a, 1995b; Kuittinen & Karjunen 1995; Tengvall & Tuunala 1995); (2) Kuopion lääninhallitus (Heikkinen & Jääskeläinen 1996; Janakka 1996; Juntunen 1996; Karpansaari 1996; Lampelo 1996; Remes 1996); and (3) Savon Liitto. Multi-perspective evaluations of SMEs were conducted by several local actors such as representatives of the local authorities, e.g. business development departments of municipalities and towns, business associations, and trade unions. Despite the judgemental sampling employed, each of these studies identified largely the same firms (cf. Kay 1995: vi; see also Brush & Vanderwerf 1992).

A mail survey was made of entrepreneurs of SMEs operating in the sectors of manufacturing, business services, and tourism. The data received were largely based on the respondent's subjective evaluations and perceptions. A mail survey was chosen as a data collection method because it made it possible to obtain comparable data for statistical analysis. Personal interviews were out of the question because of financial restrictions. It was felt to be important to obtain large amounts of data so that SMEs of different types could be captured into the sample. Data collection was based on a pre-

tested questionnaire, i.e. three pilot tests were made before sending the questionnaire to the target SMEs. The questionnaire contained both questions with forced choices as well as open-ended questions.

The study focused on SMEs because of their high societal relevance and their distinctive features in comparison with large companies. An SME was defined in terms of the number of personnel, so that firms with fewer than 250 employees are SMEs (Statistics Finland 1997b: 9). On the other hand, to limit the sample, SMEs with fewer than five employees were excluded. Such firms are often new or recently founded, or if they are older they are not within the scope of this study (cf. Cambridge Small Business Research Centre 1992; Hakim 1989). Moreover, selection of such firms would had been difficult, because the analyses made by Kera Ltd. (1996: 5) covered firms with five or more employees only. Moreover, firms with 5 to 249 employees were considered to have greater potential impact on regional economic development than smaller ones.

Manufacturing SMEs were chosen because they have an important place in the economy, especially from the point of view of the development of local and regional economies (cf. Barkham et al. 1996). Their products can be exported, and they are not bound up with the demand of local markets. Business services may have critical importance for the development of manufacturing firms (Illeris 1989). Moreover, their role is emphasized for growth firms (see e.g. Niittykangas & Tervo 1995). On the other hand, the development of manufacturing firms may play a critical role in the start-up or relocation of business service firms. Like manufacturing firms, SMEs in the sector of tourism are not bound up with the demand of local markets. In terms of the national industrial classification of economic activities (TOL 1995), the industry sectors represented in the study are: manufacturing: 15, 17-22, 24-37; tourism: 55, 92-93; and business services: 72-74 (Statistics Finland 1995).

The variables used in this study relate to the characteristics of entrepreneurs and enterprises, their life cycles, the strategic choices made, and success factors of SMEs, and the nature of their environment. As was already mentioned in previous chapters, several factors in these areas are associated with firm performance. The questionnaire used can be found in Appendix 1, and the list of variables is presented in Appendix 2. The characteristics of entrepreneurs consist of variables relating to entrepreneurs' education, experience and other demographic factors. Variables related to the characteristics of SMEs and their life cycle include the firm's demographic characteristics and growth behavior indicators. For the strategic choices made by the firm, the focus is on internationalization, innovativeness, specialization and networking (cf. e.g. Niittykangas et al. 1998). These strategic choices include three important elements affecting SME performance: markets, products, and the way of doing business (Normann 1976). Internationalization refers to the markets of the firm,

innovativeness to the products of the firm, and specialization and networking to the way of doing business. Environment was approached by studying the characteristics of customer, industry and location environment.

The success factors of SMEs were presented as statements that describe their importance relating to the firm's competitive advantage. A set of 55 structured success factor statements was drawn up, based on the literature concerning entrepreneurship, strategic management and SMEs, discussions with colleagues, and the researcher's intuition. In the questionnaire, success was not predefined, i.e. the definition of success was based on the entrepreneurs' own understanding of the concept. The entrepreneurs ranked the success factor statements using a 7-point Likert-type scale (1 = not at all important, 7 = very important). The open-ended questions related to SME performance were: (1) "What has been the most critical for the firm's success?" (success factors), and (2) "What has been the most critical for the firm's survival, when the firm has faced problems?" (survival factors).

At the end of the questionnaire respondents were asked whether or not they were interested in participating in further case studies and in having a summary of the results. To facilitate contacting the respondent and mailing the summary, respondents were asked to state their names. Since almost all answered these questions, it was possible to verify that the respondents were the firm leaders, i.e. the CEOs of the firms.

4.2.2 Materials: sample characteristics

All SMEs in the sample shared four features: (1) size: SMEs, i.e. they employed fewer than 250 persons; (2) location: peripheral, i.e. located in Eastern Finland; (3) performance: evaluated as the most successful SMEs in the industry sectors in the region; and (4) ownership: independent firms, not subsidiaries of other companies. The original sample was 270 SMEs, of which 145 responded, giving an overall response rate of 53.7%. The representativeness of the sample could be assessed by three measures: industry sector, location, and being one of the firms in the group of "top firms" (Kera Ltd. 1996) in the region. These measures show that there were no differences between firms that responded and those that did not.

The response rate varied by industry sectors (see Table 4.1): in manufacturing, it was 54.5% (n=121), and in the service sector, i.e. business services and tourism, it was 50.0% (n=24). Some of those who did not respond reported that they had no time to reply and so returned an empty questionnaire form. The sample can be considered to represent successful SMEs in the selected industry sectors in their location.

Also, there were no differences in the distribution of SMEs that responded and those who did not by location. The response rates were between 56% and 58% in the regions of Inner Savo, Kuopio, and Upper Savo. The response rates were slightly lower in the Varkaus region (45%) and North-Eastern Savo (29%). In the latter region the relative impact of one response was emphasized due to the smaller total number of SMEs selected. Moreover, the lower response rates in North-Eastern Savo and the Varkaus region can be explained to some degree by the differences in sectoral activity in responding, i.e. SMEs in the sector of tourism (see Table 4.1) in those regions were somewhat reluctant to participate in the research.

Table 4.1 Number of respondents and response rates by industry sectors

Industry sector	No. of respondents	Response rate
Food industry	12	48%
Textile, clothing, leather, and shoe industry	12	52%
Mechanical woodworking industry	23	56%
Printing industry	11	50%
Chemical industry	3	30%
Building material industry	8	53%
Metal industry	26	63%
Machinery industry	7	50%
Electro-technical industry	19	61%
Business services	18	67%
Tourism	6	29%
Total/Average	145	54%

Moreover, there were no differences in the response activity of SMEs that were classified as “top firms” in the region (Kera Ltd. 1996) by their industry sectors. The response rate of the “top firms” in the region was 58.1%, which means that the material can be regarded as representative of the “top firms” as well.

The success of SMEs in the sample can also be evaluated by five performance measures: (1) firm age; (2) growth in terms of turnover; (3) the entrepreneur’s self-evaluation of firm success; (4) the entrepreneur’s satisfaction with firm success; and (5) the firm’s competitive power in the market of the main products. The average age of the SMEs was 20 years. Four out of five of the SMEs have grown during the last decade in terms of turnover. Here growth was interpreted as a linear trend of turnover between two points of time, ignoring any decline in turnover during, for example, the economic recession. The firm’s turnover at the beginning of the 1990s was compared with its turnover at the end of the 1990s. However, growth is obviously not an applicable performance measure for firms which do not have growth as an aim. On the other hand, it seems that firms aiming at growth have succeeded if measured by growth of their turnover, and especially if we take into consideration the economic cycles in the Finnish economy and the fact that economic recovery clearly took more time in Eastern Finland than in Southern Finland, for example.

Consequently, entrepreneurs' subjective evaluations of the firm's business success during recent years were elicited (cf. O'Neill et al. 1987; Jennings & Beaver 1995: 190). This made it possible to overcome the problem of incommensurability of goals and objectives. Almost two thirds of the respondents (61%) thought that their firm has succeeded better than their most important competitors. Only one out of ten thought that the firm's success has been weaker than that of their most important competitors.

They were also asked how satisfied they were with their firm's success, and more than four out of five (82%) reported that they were satisfied with this. Moreover, a firm's market share can be seen to be related to firm success, since the bigger the market share, the more competitive power and influence a firm has in the market. Five out of six respondents (85%) considered that their firm had at least quite good competitive power in the market of the firm's main products. Thus, the common problem of SMEs – the transfer of costs forward in the supply chain – which is based on the weaker power of SMEs in the market compared with large companies, seems not to be as significant a problem for the SMEs studied as it may be for other firms.

In the light of this evidence it can be argued that the SMEs in this sample are more successful than SMEs in general, i.e. those chosen by random sampling. It seems that these performance measures measure partly different aspects of performance because of their moderate correlations (see Table 4.2) (cf. McMahon 2001). Moreover, it should be noted that an SME can be seen as successful when measured by one performance measure and unsuccessful when measured by another.

Table 4.2 Correlations of performance measures[a]

Measures	1	2	3	4
1 Firm age				
2 Growth in turnover	-.16			
3 Business success compared with competitors	.08	.42**		
4 Entrepreneur's satisfaction with business success	.16	.47**	.46**	
5 Competitive power in the market of the main products	.19*	-.02	.30**	.21*

[a.] r_s, **=p<.01, *=p<.05

Overall, it seems that the survey material represents successful SMEs in selected industry sectors in the area. The loss of firms in the study seems to be random. Moreover, by using subjective performance measures it was possible to overcome the problems related to the use of absolute scores, which may be affected by industry-related factors. This was important because of the intersectoral nature of the data collected.

4.2.3 Data analysis methods

Quantitative and structured data were analyzed by means of statistical techniques (see e.g. Alkula et al. 1994; Bryman & Cramer 1994; Vasama & Vartia 1980a; 1980b). In the survey, the responses from two SMEs had so much information missing that they were excluded from statistical analyses. Thus, 143 SMEs were included in the statistical analyses. Statistical methods were used for description and analysis of the materials: frequencies, dependencies, grouping, group comparisons, etc. (see e.g. Mustonen 1995). The responses to the unstructured and open-ended questions were analyzed qualitatively (see e.g. Alasuutari 1995; Gummesson 2000; Denzin & Lincoln 1994). Those responses were analyzed mainly by identifying different qualities of the phenomenon under investigation, and naming them. After this conceptualization, the concepts were classified into categories and their frequencies were quantified.

Cluster analysis (see e.g. Afifi & Clark 1984: 379-411; Bailey 1994: 34-65; Manly 1990) was used to derive the taxonomy of successful SMEs (see Chrisman et al. 1988; Hambrick 1984). This is an exploratory technique which groups observations in a manner that maximizes between-group variance, and minimizes within-group variance. It permits the inclusion of multiple variables as sources of configuration definition. In cluster analysis, the number and characteristics of the groups are derived from the data and are not known prior to the analysis.

Canonical discriminant analysis (see e.g. Afifi & Clark 1984: 246-286; Manly 1990: 86-99) was then performed to assess the results of clustering (e.g. Greene et al. 1997a). Discriminant analysis is a multivariate technique which makes it possible to study how certain groups differ from each other according to a set of variables. It can also be used to identify which variables contribute to making the classification.

Another set of variables was used in describing and interpreting the derived taxonomic configurations. Differences between the clusters (growth) were tested by analysis of variance, non-parametric Kruskal-Wallis analysis of variance, or the chi-square test. These tests were conducted to test the differences between clusters for each of the individual variables. Differences between the two groups (threat) were tested using appropriate statistical tests: the t test, non-parametric Mann-Whitney U test, or chi-square test. These tests were conducted to test the differences between the two groups for each of the individual variables.

The importance of each of the 55 structured success variables formulated as verbal statements was studied to identify the most important ones. Exploratory factor analysis (see e.g. Afifi & Clark 1984: 330-360; Manly 1990) was used to extract the emerging dimensions of the success of SMEs. In addition, an open-ended question asking the respondents about the most important factors for their firm's success was used. This information made it possible to gain a more comprehensive view and to

evaluate the coverage of the 55-item questionnaire. Also, an open-ended question asked the respondents about the most important factors that had helped in overcoming important difficulties the firm had faced. These data about the survival factors of SMEs were compared with the data regarding the success factors of SMEs.

Using multivariate methods (e.g. Mustonen 1995: 121-147), dependencies between the variables are recognized and the covariation of variables can be described at the same time. Thus, the variation can be described by a few combinations of variables instead of several single variables. In previous studies, it has been found that the characteristics of an entrepreneur, firm strategy, and environment, for example, can together predict firm performance better than they can separately (Sandberg & Hofer 1987). Moreover, both cluster analysis and discriminant analysis can be applied even though independent variables do not follow multinormal distribution. Thus, dichotomic independent variables can also be used in cluster analysis and discriminant analysis.

4.3 Case studies

4.3.1 Data collection methods

The reason why case studies were used was to increase the understanding of the survey results including the in-depth investigation of the current situation and life cycles of the case firms, and to compare firms with different levels of performance by identifying differences and similarities between the cases. In selecting the cases, the firms were selected through purposive sampling, which is a criterion-based selection method that permits a sample to be constructed that fits a predefined profile. More specifically, the matched pairs approach (see e.g. Westhead 1997; 1995a; Lussier & Corman 1995; Hambrick & D'Aveni 1988) was applied.

On the basis of the survey sample, representative SMEs from each cluster and each group of performance level were picked out for case studies (see Yin 1989; Chetty 1996; Stake 1995; Eisenhardt 1989a). In other words, in each cluster of SMEs, the aim was to find three SMEs with similar background, but with different levels of performance: (1) a non-threatened; (2) a threatened; and (3) a failed SME. Thus, this approach might be called 'matched triplets' instead of 'matched pairs'. The most obvious advantage of this was the fact that such matched triplets sampling provided controls for important confounding factors.

The firms in each triplet of SMEs had, as far as possible, similar backgrounds, i.e. they at least operated in the same industry sector and in the same location, and they were the same size and age. These criteria for matching successful and failed firms were

also used in the study by Lussier and Corman (1995). This matching was made to allow comparison of the cases with each other. Information about failed firms was used especially as comparative data to validate the results based on successful firms.

First, pairs of successful SMEs with similar background were identified based on the survey sample of 143 SMEs. As a result of searching, eight pairs of successful SMEs consisting of one non-threatened and one threatened SME with similar backgrounds were identified. Then, recently failed SMEs with similar backgrounds were identified. Failures were defined as those SMEs which had gone out of business with loss to creditors. This was based primarily on the information gained from local authorities, e.g. representatives of business development departments of municipalities and towns. Finally, after this matching, six triplets of SMEs – non-threatened, threatened, and failed – were constructed and studied by interviewing the entrepreneurs of the successful and the failed SMEs. In one tentative SME triplet, one entrepreneur refused to participate in the case study, and in another triplet the entrepreneur of the matched failed firm could not be reached. Compared with the study by Bruno et al. (1987), where only fewer than 20% of entrepreneurs of failed firms could be located, this study can be regarded as successful in contacting the entrepreneurs of failed SMEs.

Next, the entrepreneurs of six triplets, i.e. 18 entrepreneurs, of SMEs located in Eastern Finland were interviewed in 1999-2001. Times for the interviews were fixed in advance, and the entrepreneur was asked to prepare for the interview by collecting the available annual financial statements. In some cases, other long-term key persons in the firm were also interviewed to provide complementary information. These were the cases where the principal interviewee had started as a CEO of the firm after the firm was founded, and there were some key person(s) who had longer experience in the firm, or the key person was more deeply involved than the CEO in some critical incident in the firm's history, and so had a better understanding of the issue in question. No discrepancies were found in the answers given by the entrepreneurs and the key persons. Moreover, some of the interviewees were reinterviewed later to obtain more detailed information about important incidents revealed in the first interview.

Each of these personal on-site interviews took from one to three hours. The interviews were recorded and transcribed. The material based on the interviews consisted of 20 to 30 pages of text per interview, altogether about 500 pages. In addition to interviews, document material such as annual reports, financial statements, newspaper articles, etc. were collected and used as complementary secondary data.

In addition to interviews with the entrepreneurs of six failed cases in triplets, information concerning another six recently failed SMEs were collected to obtain a broader view of SME failure. However, it should be noted that the cases for triplets were selected on the basis of previously known characteristics, and the remaining six SMEs, to complement the results, were selected on the basis of the analysis of the

SME triplets. Therefore, their selection was highly predetermined by the research design used in this study.

The framework for interviews (Appendix 7) was constructed on the basis of survey results and the research literature. The interview was started by asking the interviewee about her or his view of the foundations of the firm's success (non-threatened SMEs), or the events and factors associated with the development of the threat (threatened SMEs) or failure (failed SMEs). Next, information about the firm's present situation, past development, and future plans was elicited. The questions related to the foundation of the firm and the development of the firm's current position were modified from the EKS model (Friedrich & Seiwert 1994).

Next, to better understand the survey results, the importance of the features characterizing the successful SMEs and their entrepreneurs were clarified. Also, the structured success factors which were evaluated as important by all successful SMEs in the survey and those which the firm had evaluated as the most important for the firm, were dealt with in the interview, and interviewees were asked how their firms have taken care of these in practise. The importance of the most common survival factors found in the survey was clarified as well. In addition, some cluster-specific questions raised in the survey were asked. The purpose of these questions was to obtain a better understanding and find rationales for the typical SME behavior in each cluster. The potential role of failure factors found in the literature were also examined among cases.

Finally, the respondents were asked some questions summarizing the main points. They were asked, "what is most important for business success?" and "what should be avoided in business?". Then the entrepreneurs of threatened SMEs were asked, "what were the most important causes of the threat?" and "what did you learn from the threat?", i.e. what has been done in different ways after the threat was discovered? The entrepreneurs of failed SMEs were asked, "what were the most important causes of failure?" and "what did you learn from failure?". The interview framework also functioned as a checklist ensuring that relevant issues were covered. Some of the questions could be used to check the reliability of the survey responses. Moreover, in the identification of failed cases, the so-called snowball technique was applied, i.e. the respondents were asked about competitors who have recently gone into liquidation.

4.3.2 Materials: characteristics of the cases

All three cases in each triplet of non-threatened, threatened, and failed firm were matched with each other in each cluster. A summary of the backgrounds of the cases in

triplets is presented in Table 4.3. All cases were small firms in terms of their size as measured by the number of employees. Also, most of them can be regarded as established firms in terms of age.

Table 4.3 Characteristics of the cases

Cluster	Industry sector	Case[a]	Performance	Age[b]	Turnover, €M[c]	No. of employees[d]
Stable independent survivors	metal industry	S1A	successful, non-threatened	18	0.7	11
	metal industry	S1B	successful, threatened	31	0.5	8
	metal industry	S1C	failed	42	1.1	10
	bookkeeping agencies	S2A	successful, non-threatened	21	0.4	8
	bookkeeping agencies	S2B	successful, threatened	16	0.3	6
	bookkeeping agencies	S2C	failed	13	0.6	12
Innovators with continuous growth	electronics	I1A	successful, non-threatened	22	8.5	50
	electronics	I1B	successful, threatened	17	1.1	11
	electronics	I1C	failed	25	3.0	40
	electro-technical	I2A	successful, non-threatened	7	3.0	28
	electro-technical	I2B	successful, threatened	12	2.2	18
	electro-technical	I2C	failed	10	0.9	8
	software	I3A	successful, non-threatened	6	0.5	7
	software	I3B	successful, threatened	14	0.9	26
	software	I3C	failed	3	0.01	1
Networkers with leapwise growth	metal industry	N1A	successful, non-threatened	15	2.1	23
	metal industry	N1B	successful, threatened	14	2.3	26
	metal industry	N1C	failed	8	4.7	45

a. the first letter refers to cluster, the number to the SME triplet, and the last letter to the level of performance
b. firm age at the moment of interview (successful SMEs) or at the moment of liquidation (failed SMEs)
c. firm's turnover as the mean of the last two years before the year of interview (successful SMEs) or liquidation (failed SMEs); Finnish marks converted into million euros (€M)
d. number of employees as the mean of the last two years before the year of interview (successful SMEs) or liquidation (failed SMEs)

Altogether, information on six SME triplets was collected. These triplets were divided as follows: two triplets of stable independent survivors, three of innovators with continuous growth, and one of networkers with leapwise growth. In addition, as already mentioned, two potential triplets could not be constructed because of the refusal of one entrepreneur of a successful SME and because the entrepreneur of a

failed SME was out of reach. Thus, these eight potential triplets set the frame for the construction of triplets, of which finally six triplets could be constructed and explored.

4.3.3 Data analysis methods

Analysis of the information obtained through interviews was guided by the structure and themes of the interview framework. A brief description of the sample of failed SMEs is presented at the beginning of Chapter 8. However, due to the small numbers, no statistical tests between successful and failed SMEs was conducted.

For the matched triplets, first the present situation of the successful cases and the situation before the failure of the failed cases were briefly described. In the description of the historical development of the cases, the most important transitions, events and decisions affecting firm performance were identified and described. In this searching process, the critical incident technique (Chell 1998; Flanagan 1954) was applied. Special attention was paid by the interviewee or the researcher to the factors which showed a potential or proven impact on firm performance. Though significant occurrences in the firms' history were identified by respondents, the final evaluation of their importance was based on the researcher's interpretation.

In particular, the researcher looked for the factors affecting success in the non-threatened SMEs, those affecting the development of the threat in the threatened SMEs, and those affecting the development of failure in failed SMEs. The ways of responding to environmental changes and the strategic choices made by SMEs in each cluster were clarified. The methods of qualitative research used made it possible to acquire an in-depth understanding of the events and processes that can explain a firm's responses and choices (see e.g. Mintzberg & Waters 1982: 466-468).

The interviews were coded and analyzed applying the grounded theory protocol (Glaser & Strauss 1967; Strauss & Corbin 1990). First, the qualities emerging from the data were identified and coded. After this conceptualization, the concepts were classified into categories that emerged from the data. Next, connections between the categories and sub-categories were analyzed. Finally the core category was selected, the story line was explicated, and sub-categories were related to the core category.

The content of the case descriptions is organized by themes in chronological order. The factors affecting the success of non-threatened firms, the causes of threat in threatened firms, and the causes of failure of failed firms are summarized at the end of the case description. After the case descriptions, the three cases are compared with each other by selected qualities. Based on the differences revealed between the cases in the triplet, an explanation-building procedure was applied in the cross-case analysis (see Yin 1989: 113).

5 CHARACTERIZING SUCCESSFUL SMES

5.1 Characteristics of entrepreneurs

The backgrounds of respondents in successful SMEs were studied in terms of the factors related to their gender, position, age, education, work experience, and entrepreneurial experience (serial and portfolio entrepreneurship) (see Appendix 1).

Gender, position, and age. Most of the respondents were men (83%) and firm owners (70%). There were no gender differences between owners and paid professional managers. Managers in manufacturing firms were more frequently firm owners, whereas firms in the service sector were more often led by paid professional managers (χ^2=6.728; df=1; p=.009). Most owner-managers (71%) were founders of the firm, and they had worked for the firm for 13 years on average, half of them 7-19 years. Three out of ten (29%) had become a firm owner after the foundation of the firm, and they had worked for the firm for 11 years on average, half of them 4-20 years. Paid professional managers had worked for the firm for 11 years on average, half of them 4-19 years. The respondents' ages ranged from 28 to 78 years, and half of them were 40-53 years old, an average respondent being 47 years old.

Education. The educational background varied much between the entrepreneurs (Tables 5.1 and 5.2). Fewer than half had 12 years' basic education. Of those with further education, most had a mid-level qualification. Among the whole population of those aged at least 15 years in Northern Savo, 44% had a mid-level qualification, on average (Statistics Finland 1997a: 50), and thus, this proportion in the sample was fifteen percentage points higher (59%). One fifth of the respondents had university degrees, which is twice (ten percentage points) as much as among the population in the region on average (Statistics Finland 1997a: 50).

Table 5.1 Entrepreneurs' basic education

Basic education	Owner-managers	Paid professional managers	All
9 years	66%	40%	59%
12 years	34%	60%	41%
Total	100%	100%	100%

Compared with owner-managers, paid professional managers had had more basic education (χ^2=7.972; df=1; p=.005) and more further education (χ^2=14.348; df=3;

p=.002). In practice, almost all paid professional managers had at least a mid-level qualification. Also, the younger the entrepreneur, the more basic education (r_s=.36; p<.0005) and further education (r_s=.22; p=.013) they had.

Table 5.2 Entrepreneurs' further education

Further education	Owner-managers	Paid professional managers	All
None	6%	0%	4%
Lower level[a]	23%	3%	17%
Mid-level[b]	56%	64%	59%
University	15%	33%	20%
Total	100%	100%	100%

[a.] lower level further education is often typical of those who have 9 years' basic education
[b.] mid-level further education or a university degree are often typical of those who have 12 years' basic education

Work experience. Most respondents had had varied work experience. More than one third (37%) had had prior work experience both as an employee and as a manager. Another third (32%) had prior work experience as a manager only, and one quarter (23%) had prior work experience as an employee only. Hence, more than two thirds of the entrepreneurs had prior managerial work experience. One out of fifteen respondents (7%) had no prior work experience as an employee. Most frequently, prior work experience was related to tasks in sales and marketing, or in production (Table 5.3). More than half (59%) had acquired work experience in many functional areas. On average, entrepreneurs had 15 years' prior work experience, ranging from 1 to 35 years. Half of them had 7-24 years' work experience prior to their present position.

Table 5.3 Functional areas of entrepreneurs' prior work experience[a]

Functional areas	% of entrepreneurs
Sales and marketing	47
Production	45
Research and development	37
Purchases and logistics	21
Finance and accounting	21
Others	12

[a.] all prior work experience excluding experience as an entrepreneur

Serial entrepreneurship. Almost one third of the entrepreneurs (29%) had had prior experience as an owner-manager of another firm. This was more frequent among owner-managers who were non-founders of the present firm. Half of them had prior experience as an owner-manager of another firm. Among the owner-managers who were also founders of the present firm, one third had prior experience as an owner-manager of another firm. Altogether, four fifths of the entrepreneurs (80%) had been an owner-manager in the present or another firm. As an owner-manager, on average,

they had 14 years' total experience, ranging from 1 to 50 years. Half of them had 7-20 years' experience as an owner-manager.

Portfolio entrepreneurship. One third of the entrepreneurs (35%) were owners of other firms simultaneously. Sixty per cent of them were owners of one other firm, 26% of two other firms, and 14% of 3-5 other firms. In half of portfolio entrepreneurship cases, the businesses of the other firm(s) in the portfolio were closely related to that of the firm studied. Among these cases, 50% of the other firms were located at the same or a higher level in the supply chain. In other words, for the SMEs studied, these other firms were suppliers or partner firms for production arrangements. One quarter of these other firms in the portfolio provided support services to the firm studied, and the rest were customers. These firms were used as delivery channels for the firm's products.

Excluding the respondents who were non-owners, 40% of the successful SMEs were owned by portfolio owners and 32% by serial owners. Multiple-firm entrepreneurs were often both portfolio and serial entrepreneurs at the same time (χ^2=24.097; df=1; p<.0005). Only 50% of the successful owner-managed SMEs were owned by single-firm entrepreneurs.

5.2 Characteristics of the SMEs

Next, successful SMEs were analyzed in terms of their industry sector, location, scope of operation, age and founding, ownership, management, goals, and life cycle stage.

Industry sector. More than four fifths of the SMEs (83%) were manufacturing firms, with the rest (17%) being service firms. The sectoral distribution of the SMEs studied is presented in Table 4.1. Among manufacturing SMEs, the biggest segment in terms of the number of firms who responded were SMEs in the metal industry, including SMEs in the production of base metals and metal products, machines and devices, electro-technical products, and vehicles. Further, the second biggest segment consisted of SMEs in mechanical woodworking and furniture production. The next biggest segments of manufacturing firms were SMEs in the food industry and in the textile, clothing, leather, and shoe industry. In terms of the number of personnel, these four segments were the biggest manufacturing industries in Northern Savo (Pasanen 1997).

The sectoral distribution of SMEs indicates that the SMEs studied represent certain relative proportions of all successful firms in their industry sector in the region. It can be concluded that compared with the sectoral distribution of all SMEs in the region, SMEs in the metal industry were slightly overrepresented in this study, whereas SMEs in the tourism sector were slightly underrepresented. One fifth of the

respondents (21%) in manufacturing industries were classified as “top firms” in the region by Kera Ltd. No such classification has been made for firms in the service sector.

Location. The SMEs were located in 21 out of 24 municipalities of Northern Savo. The locational distributions of firms studied and all firms in the region (Statistics Finland 1993a: 40) in each of the five localities in Northern Savo were somewhat identical. Firms in the Kuopio region were slightly overrepresented in the sample, which can be explained by the special characteristics of the firms, e.g. the high proportion of growth firms in the sample. The locational decisions of firms in the business service sector often favour bigger centres of population, because such firms are usually more dependent on local demand. In the service sector, 83% of the firms studied were located in the Kuopio region, whereas in the sector of manufacturing, 47% of the firms studied were located in this region.

Scope of operation. Two thirds of the SMEs (68%) had one establishment. SMEs with two or three establishments constituted 17 %, and those with more than three establishments 15% of all SMEs. The average number of full-time personnel was 41 (median 13 employees, and mode 7 employees). This indicates the skewness of the distribution of the SMEs by their size, i.e. that there were more smaller-sized SMEs than larger-sized ones in the sample. Half of the firms employed 7-33 persons. More than four fifths were small firms, i.e. firms with fewer than 50 employees (Figure 5.1).

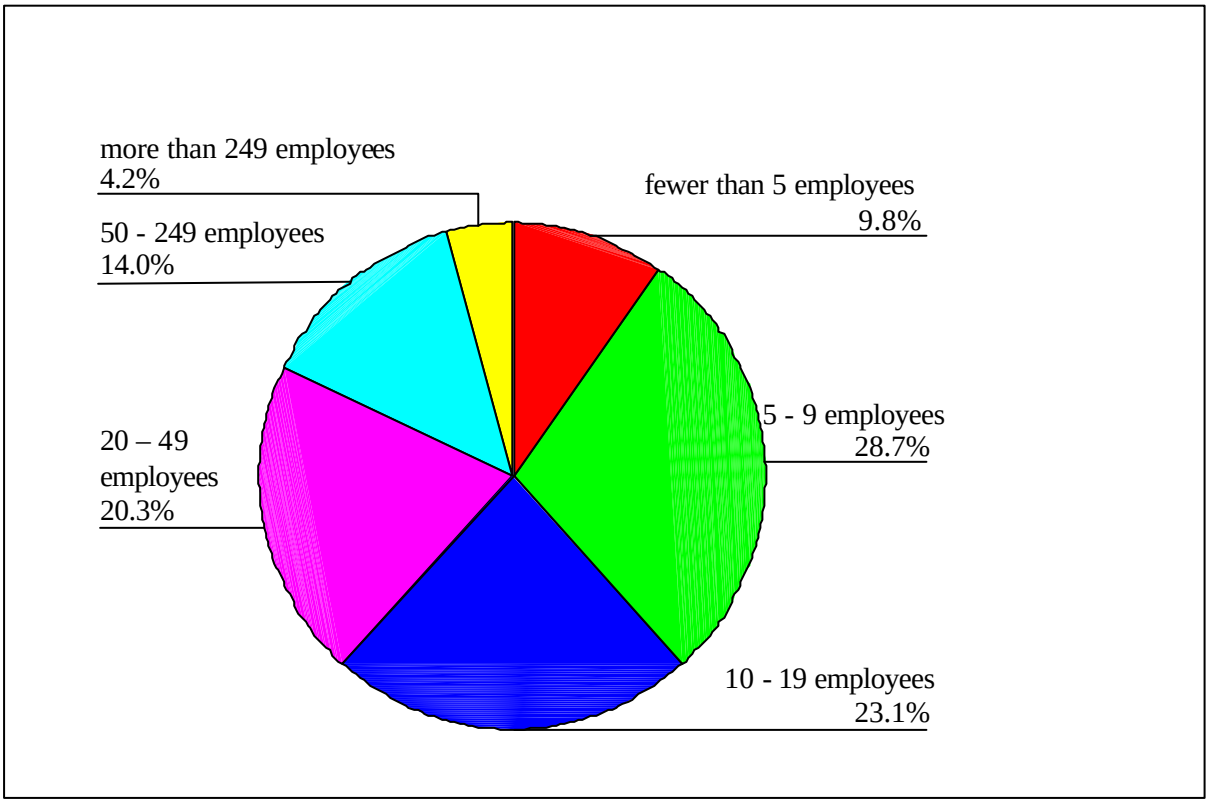

Figure 5.1 Size of the SMEs

Six firms had grown beyond the definition of an SME, i.e. they had more than 249 employees at the time of data collection. On the other hand, one tenth employed fewer than five employees; almost all these firms had four employees. However, the six firms with more than 249 employees and the firms with fewer than five employees were included in the analyses since they had fullfilled the size criteria in 1995-1996. One third of the SMEs employed part-time employees, with two thirds of these having fewer than five part-time employees.

Firm age and founding. The firms were 20 years old on average, with a median of 14 years. Firm ages ranged from 3 to 120 years. According to their age, more than 90% of the firms can be regarded as established SMEs, i.e. more than four years old, rather than new ventures. However, one third of these firms were so-called 'adolescent firms', i.e. 5 to 12 years old (see Biggadike 1979; Bantel 1998; Smallbone et al. 1993b). There were more younger firms than older ones (Figure 5.2), and almost one tenth were younger than five years old. It is worth noting that industrial traditions are younger and therefore weaker in Northern Savo than in many other parts of Finland (Pasanen 1997).

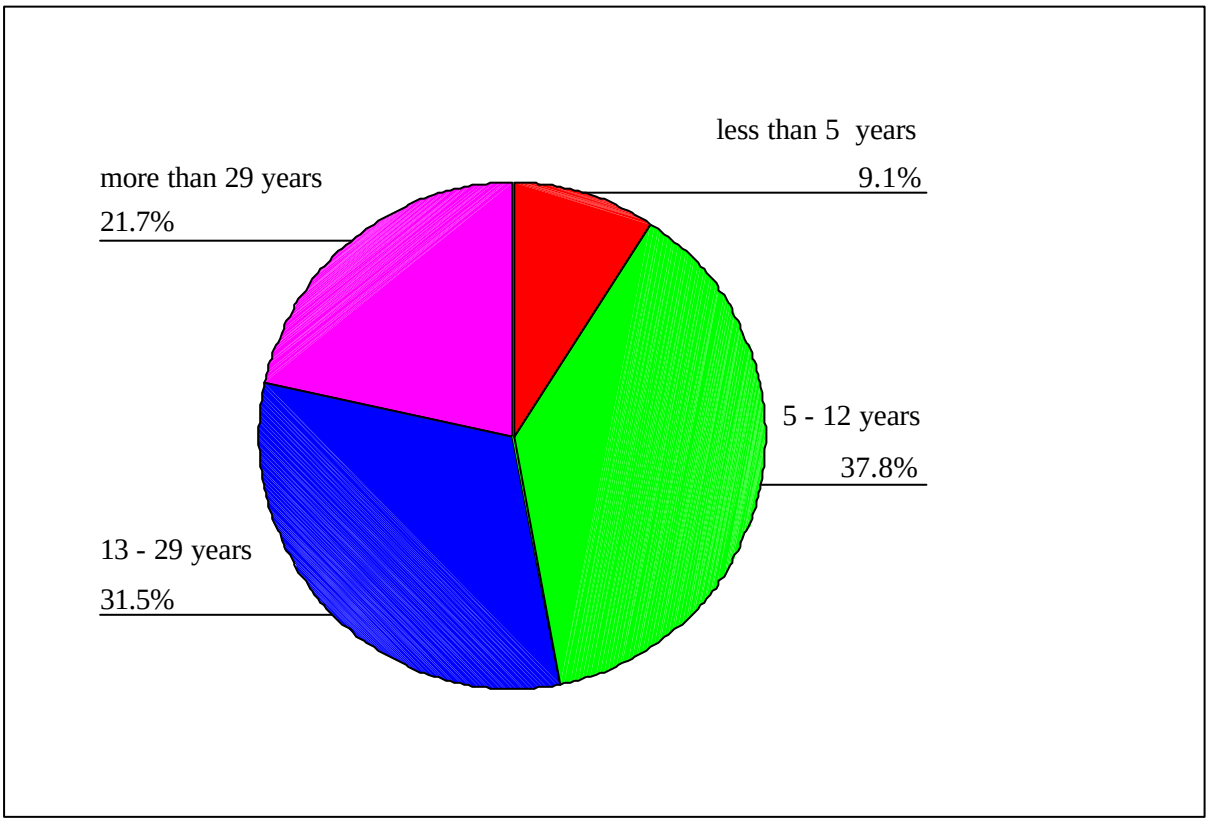

Figure 5.2 Age of the SMEs

Firm longevity can be regarded as a performance measure, and the lower probability of survival of new firms compared with older ones is known as the 'liability of newness' (e.g. Stinchcombe 1965; Aldrich & Auster 1986: 194). On the other hand, each firm

has a limited life cycle, and the probability of going out of business increases with time. There was a positive moderate correlation between firm age and size ($r=.44$; $p<.01$). Also, the growth rate of younger firms was slightly faster than that of older ones.

Two thirds of the SMEs were founded by more than one founder. Among these multi-founder firms, almost half (45%) were founded by two founders. In three quarters of the SMEs, at least one founder was still involved in the firm's present operations. In 61% of the firms, the founder(s) came from the local region. In other cases, the founder(s) came from outside the region (19%), or some of the firm's owners came from the region and some from outside it (18%). There was a moderate positive correlation between firm age and the number of founders ($r=.30$; $p<.01$), i.e. older firms were founded by more founders than younger firms. On the one hand, this may refer to the importance of an entrepreneurial founding team for the firm's longevity. On the other hand, to have the necessary start-up funding, the importance of an entrepreneurial team in founding might have been critical in the conditions of undeveloped financial markets.

Ownership, management, and goals and objectives. At the time of the study, more than two thirds of the SMEs (70 %) had at least two owners (Figure 5.3). Most frequently, the firms had 2-5 major owners (31%). Almost as frequently (28%) they had one owner only, and 26% of the firms had one major owner owning more than 50% of the firm. Among SMEs with several owners, 79% were led by an entrepreneurial team (team entrepreneurship), i.e. SMEs led continually and with a significant input by more than one owner.

Almost half of the SMEs (43%) were family firms. The definition of a family firm was based on the respondents' own evaluation, i.e. they were asked whether or not they regarded the firm as a family firm at the moment of investigation. Most of them (63%) had not yet gone through a succession process, during which the firm is transferred from one generation to the next. Among these, succession by family members was seen to be possible in two thirds of the family firms. In one fifth of the family firms (18%), the transition had been made, and for one out of eight family firms (13%) the transition was just being made while the data were being collection. There was no correlation between family entrepreneurship and team entrepreneurship. Family firms were slightly more frequently founded by one founder than other firms ($\chi^2=3.624$; $df=1$; $p=.057$).

Most SMEs (57%) had consciously determined specific goals and objectives. In 40% of firms, the goals and objectives were not clearly specified, but they were seen to guide the decision making in the firm. Only a few firms reported that they had no goals and objectives. Growth was a primary goal for two thirds of the firms, whereas it was not for one third. Non-family firms were more frequently growth-

seeking than family firms (χ^2=10.743; df=1; p=.001). Moreover, growth-seeking firms had more specific goals and objectives than other firms (χ^2=17.196; df=1; p<.0005).

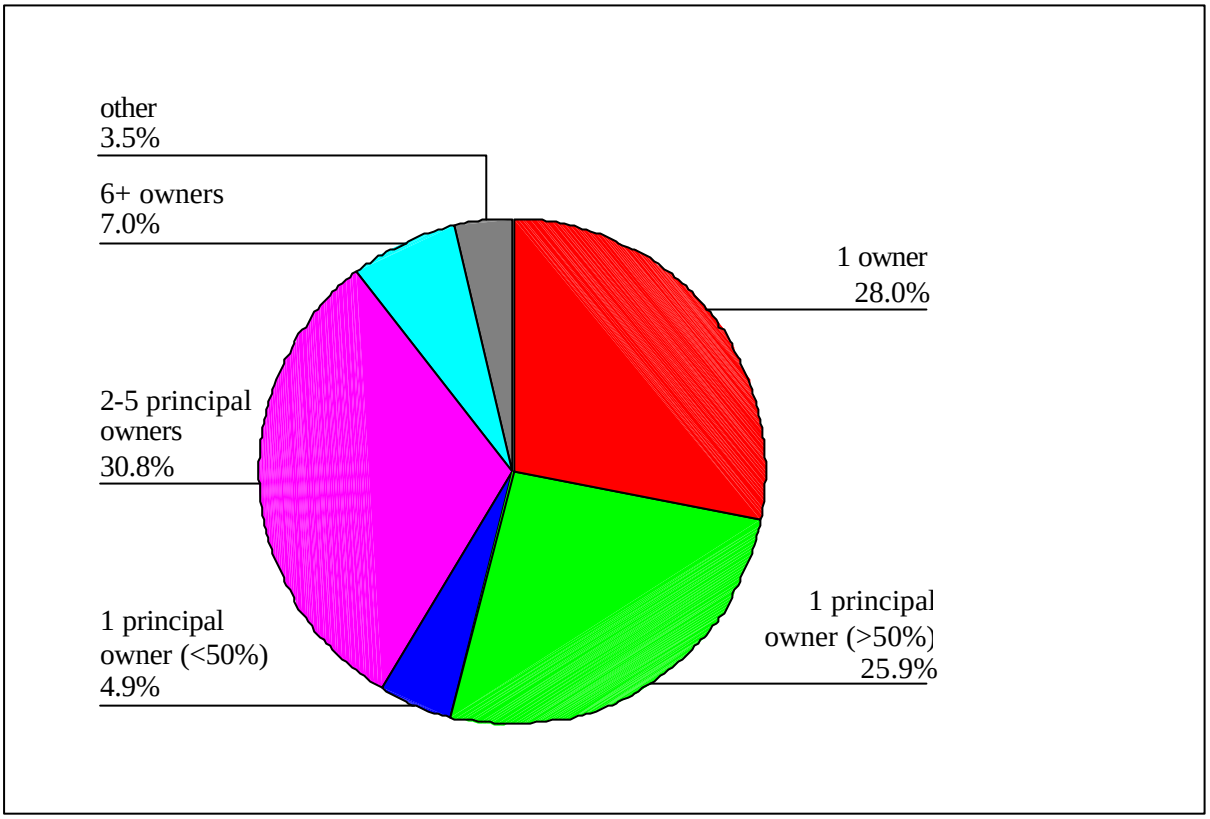

Figure 5.3 Ownership of the SMEs

Life cycle stage. The life cycle of an SME was divided into five stages: inception, growth, expansion, maturity, and decline. At the time of data collection, 6% of the SMEs were in the inception stage (Figure 5.4). Their products were new and required improvement, customer segments were vague, and the firms were searching for the most promising segments. More than two thirds of the SMEs (71%) were in the stages of growth or expansion. Typical of the growth stage was that products had been accepted by the customers, and the operations were modified by the customer segments. Also, the operations were efficient enough to increase the firm's market share. In the stage of expansion, the firms' products had occupied their own territory in the market, and the operations were well established. However, the boundaries of the firm's territory were established, and due to increasing competition new market acquisition is a tough job. The mature stage was typical of one fifth (22%) of the SMEs. Due to the stiff competition in the market, these firms modified and improved their products and operations, and the firms were looking for new customer segments. Few SMEs (1%) were in the stage of decline. Their profitability was under threat, since their competitors had launched products which outdid the firm's products, and these firms were having to revise their course.

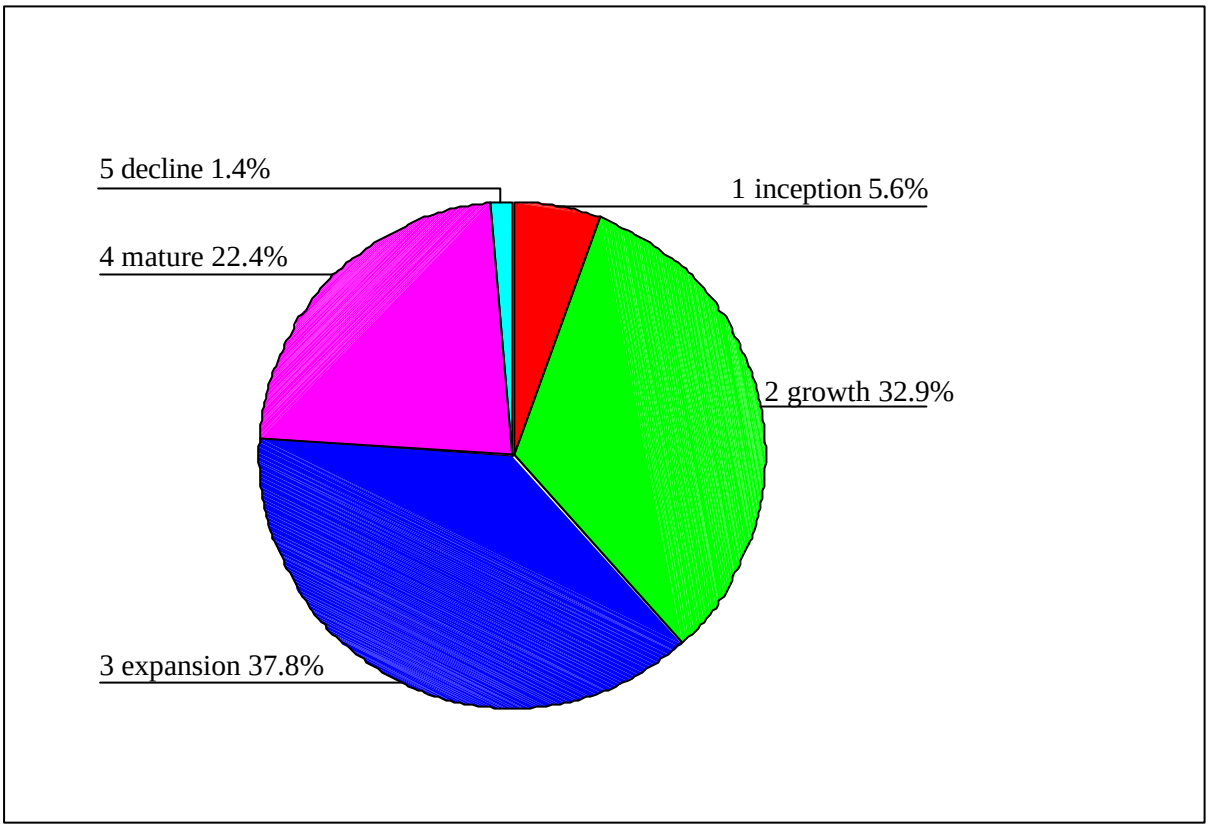

Figure 5.4 Life cycle stages of the SMEs (adapted from Haahti 1989: 252)

5.3 Life cycles

The above description is based on cross-sectional data, i.e. it describes the firms' situation at the time of data collection. The study also took the time dimension into account, and the dynamics of firms, i.e. their life cycles, were studied. The investigation focused on the changes in the firms' business base, turnover, management, ways of operating, environment, threats, and survival of the firms.

Changes in the business base. Four fifths of the SMEs (79%) had stayed close to their original business. On the other hand, in almost one fifth (17%) the business had changed significantly, and in a few SMEs (3%) the present business was completely different from the original one. Among these SMEs whose business had changed significantly or even completely, the change appeared as firm expansion within the same industry sector in almost all cases.

Periods of significant change in turnover. During their life cycle, almost half of the SMEs (46%) had faced periods of growth and recession equivalent to more than 20% of their annual turnover. In addition to these firms, another 37% had faced only such periods of growth. If the firm's life cycle encompassed several periods of

significant change, there were likely to be periods of significant recession among them.

Of the factors affecting significant firm growth, two thirds (66%) were firm-internal factors (Table 5.4). It should be noted that the categories presented here were created on the basis of a qualitative classification, i.e. the respondents had no structured response alternatives. The major firm-internal growth factors related to (1) the expansion of markets and investments in marketing; (2) investments in production; (3) research and development, and innovations; (4) acquisitions; and (5) specialization.

Table 5.4 The growth factors of the SMEs by the origin of growth

Source of growth	%[a]	Growth factors	%[a]
Firm-internal	66%	• Expansion of markets and investments in marketing	31%
		• Investments in production	14%
		• Research and development, and innovations	7%
		• Acquisitions	7%
		• Specialization	5%
		• Other firm-internal growth factors	2%
Interfirm	4%	• Cooperation arrangements	4%
Firm-external	30%	• Strong growth in demand	15%
		• Big single order	4%
		• New customers or groups of customers	4%
		• Other firm-external growth factors	7%

[a.] of all growth factors

The first category consisted of starting and expanding export, investments in marketing, expanding product range, and founding a new establishment and expanding an old one. Investments in production consisted of investments in production equipment, production facilities, and the development of production systems. Acquisitions also consisted of the purchases of production units. They were not included in the first category because they were related to the purchase of an extant business, not to the creation of a new business. Specialization consisted of focusing on a narrow market segment and outsourcing the peripheral businesses, i.e. other than the core business of the firm. In the case of outsourcing, specialization is often related to concluding long-term cooperation agreements. The category ‘other firm-internal growth factors’ encompassed factors such as financial investments made by the owners, satisfaction and firm excellence perceived by customers, and entrepreneur’s willingness to grow.

A merger or an acquisition was identified in the history of one fifth of the SMEs. In more than half of these cases, the purchased or mergered firm was an actual or a potential competitor of the firm studied, located at the same level in the supply

chain of the same or substitute products as the firm studied. In one quarter of these cases, a merger or an acquisition led to vertical integration of the firms. In 16%, the purchased or mergered firm operated at a lower level in the supply chain, i.e. it had been a customer of the firm studied. In 7% of the cases, the purchased or mergered firm operated at an upper level in the supply chain, i.e. it had been a supplier for the firm studied. Only in one case was there no business connection between the firm studied and the purchased or mergered firm.

Of the factors affecting significant firm growth, 30% were firm-external factors. The most frequently mentioned firm-external growth factor was strong growth in demand, which was a growth factor for 15% of the SMEs studied. The next most frequent firm-external growth factors were big single random orders, and the appearance of new customers or customer groups. In these cases, new customers or customer groups had appeared without any particular marketing effort by the firm. Other external growth factors were general economic growth in the market area, structural changes in the industry sector, mitigation of legislative restrictions, and luck.

Interfirm cooperation agreements were distinguished from firm-internal and -external factors because the initiativeness of the parties was not known, and therefore the origin of cooperation agreements could not be determined. However, interfirm cooperation may be considerably more important for firm growth than the figures show, since it can be related to other growth factors such as specialization and exports.

Apart from growth factors, factors affecting a significant fall in turnover were also identified. Among the SMEs which had faced a significant fall in their turnover, more than four fifths claimed that it was based on firm-external, i.e. environmental, factors (Figure 5.5). Almost all of these factors were related to the general economic recession. Other external factors affecting a significant fall in turnover were related to surprises abroad, stiff competition in the field, and difficulties related to a big customer. Firm-internal factors affecting a significant fall in turnover were mainly single factors, i.e. each factor was typical of only one firm. Many of these were related to problems in the firm's management. In other cases, the fall in turnover was a consequence of a variety of causes, and was related to some specific situations and decisions such as divestment of a part of the business, ownership arrangements, or strong investments in product development at the expense of the volume of the firm's other operations.

1 General economic recession
2 Problems related to a big customer
3 Surprises abroad
4 Overcapacity in the field and stiff competition

Figure 5.5 Factors affecting the fall in turnover of the SMEs

Threat and survival. During their life cycle, half of the SMEs (49%) had faced at least once a situation where the firm's existence, i.e. survival, had been threatened, while almost half (48%) reported that their existence had never been threatened. The threat was associated with significant falls in turnover; more than two thirds of the threatened firms had experienced significant falls in turnover, whereas two thirds of non-threatened firms had not, and in fact had faced only significant increases in turnover (χ^2=18.386; df=1; p<.0005).

Most threats were related to firm-external factors than internal ones. On the basis of the responses to unstructured open-ended questions, the origins of the causes of threat could be located mainly in the firm's environment. The most common external causes of threat were: (1) economic recession and collapse of market demand; (2) loans in foreign currency during devaluations, or high interest rates; (3) a big client suffering economic troubles or bankruptcy and credit losses; and (4) stiff competition and excess capacity in the field. The most common firm-internal causes of threat were: (1) managerial mistakes and wrong decisions; (2) inadequate financing; (3) low profitability; and (4) big investments.

Two common ways of adaptation was identified: (1) firm development with additional inputs; or (2) retrenchment. Two thirds of the SMEs had followed one of these paths, the same number of firms following each path. The most common developmental ways of adaptation were (1) financial arrangements and additional financial inputs by the owners; (2) additional efforts in marketing and export activities; and (3) greater personal input by the entrepreneur into firm development. The most common ways of adaptation through retrenchment activities consisted of (1) minimizing all costs possible; (2) reducing the number of personnel; and (3) cutting down the firm's scale of operation.

Changes in principles and practices of management and in ways of doing business. In four fifths of the SMEs (78%), the principles and practices of management had changed to at least some degree during the firm's life cycle. In one fifth of the SMEs, they had changed significantly. On the other hand, in one fifth of the SMEs they had not changed at all. The changes in the principles and practices of management seemed to relate to some extent to changes in the firm's original business base. The more changes in the original business base, the more changes in the principles and practices of management (r_s=.19; p<.05).

The most common changes in the ways of doing business were the following: (1) focusing on the core business and increasing interfirm cooperation; (2) investing in marketing and sales; (3) investing in production development; and (4) expanding the scale of operation. One tenth of the firms reported that their ways of doing business have not changed significantly.

Recent changes in turnover. During the last decade, four fifths of the SMEs (79%) had grown in terms of turnover. In the case of 12% of the firms, the turnover had not changed, and the turnover had fallen in 8% of the firms. The turnover of two thirds of the firms had developed steadily. One fifth of the firms (22%) had experienced a leapwise development of turnover, and in the case of one tenth (11%) the change of turnover was fluctuating.

Recent changes in demand. During the last decade, two thirds of the SMEs had operated in markets with a growing demand. Among these firms, one quarter operated in an environment characterized by strong growth in demand. For one sixth of the firms, the demand had not changed, and for another one sixth, the demand had decreased. There was a positive association between the growth of the firm's turnover and growth in demand in the market (r_s=.46; p<.01).

5.4 Strategic choices

Strategic choices refer to decisions related to firm performance (see Chapter 2). In particular, four strategic choices of SMEs were explored here: internationalization, innovativeness, specialization, and networking (cf. e.g. Niittykangas et al. 1998). Internationalization refers to the markets of the firm; innovativeness is related to the products of the firm; and specialization and networking are associated with the firm's way of doing business. In business idea thinking (Normann 1976), the firm's competitive advantage is bound up with the firm's choices in these areas. The importance of the internationalization of the firm may vary depending on the location of the firm. For Finnish high-tech firms, for example, internationalization is usually a critical condition in achieving success due to the small size of national markets.

Internationalization and the role of local markets

The firms' internationalization was analyzed in terms of market areas, export and import, units abroad, and foreign ownership of the firm (Figure 5.6). More than three quarters of the SMEs (76%) could be regarded as internationalized, if measured by some of these criteria. Almost one quarter of the SMEs were purely domestic firms operating in Finland only.

Market areas. On average, 36% of the firm's sales came from local markets (Northern Savo), 44% from other domestic markets (other Finland), and 19% from export markets (abroad). About 10% of the firms had no sales in local markets, and 5% had sales in local markets only. For most firms, local markets played a minor role in generating turnover. The local markets' share in the firm's total sales was either

low, 5-20%, or high, more than 60%. One out of 20 firms had no sales in other domestic markets, whereas some firms had sales in other domestic markets only. Of total sales, other domestic markets typically accounted for 10-40% or for more than 80%. Two fifths of the SMEs did not export. Typically, exports accounted for 5-20% of the firm's total sales, though there were firms exporting more than this, up to 100%. Table 5.5 shows the distribution of sales by market areas.

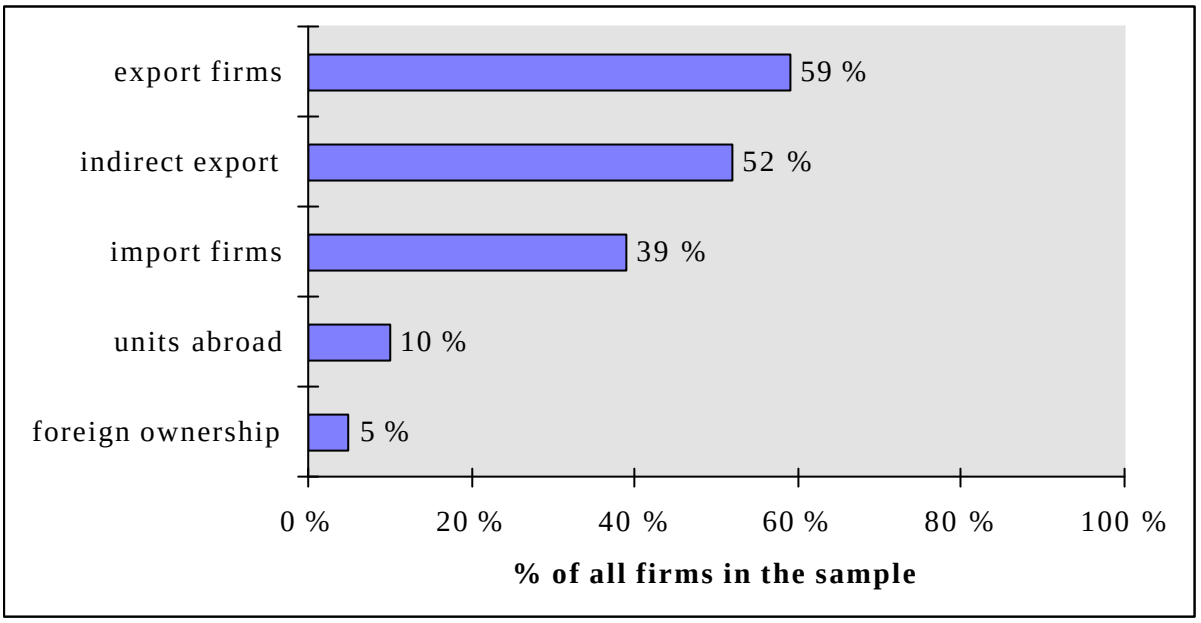

Figure 5.6 Internationalization of the SMEs

Table 5.5 Market areas of the SMEs

Market area	Lower quartile	Median	Upper quartile
Local markets	< 5%	20%	>70%
Other domestic markets	<15%	40%	>75%
Export markets	0%	5%	>30%

Export and import. SMEs with direct exports had exported for 12 years, on average. The most long-lived SME with direct exports had been exporting since 1926. Half of the SMEs with direct exports had started their direct exporting 1985-1994.

More than half of the export firms (59%) sold their products directly to foreign customers (Figure 5.7). One third (37%) exported through foreign import firms, wholesale firms, retail shops, agents, brokers, or commission agents (direct export with an intermediary abroad). One quarter (28%) exported projects. One fifth (21%) exported through domestic export firms, agents, commission agents or associations, and in some cases foreign import firms, wholesale firms, retail shops, agents, brokers, or commission agents. One tenth of the export firms (11%) exported through the firm's foreign sales office, branch office, production unit or subsidiary.

Moreover, half of the SMEs (52%) had indirect exports, i.e. they were subcontractors for exports. Among the SMEs with indirect exports, most (76%) had direct exports as well. On the other hand, among SMEs with direct exports, i.e. export firms, two thirds also had indirect exports. In other words, indirect exports seemed to be concentrated heavily on those SMEs which had direct exports as well (χ^2=17.537; df=1; p<.0005).

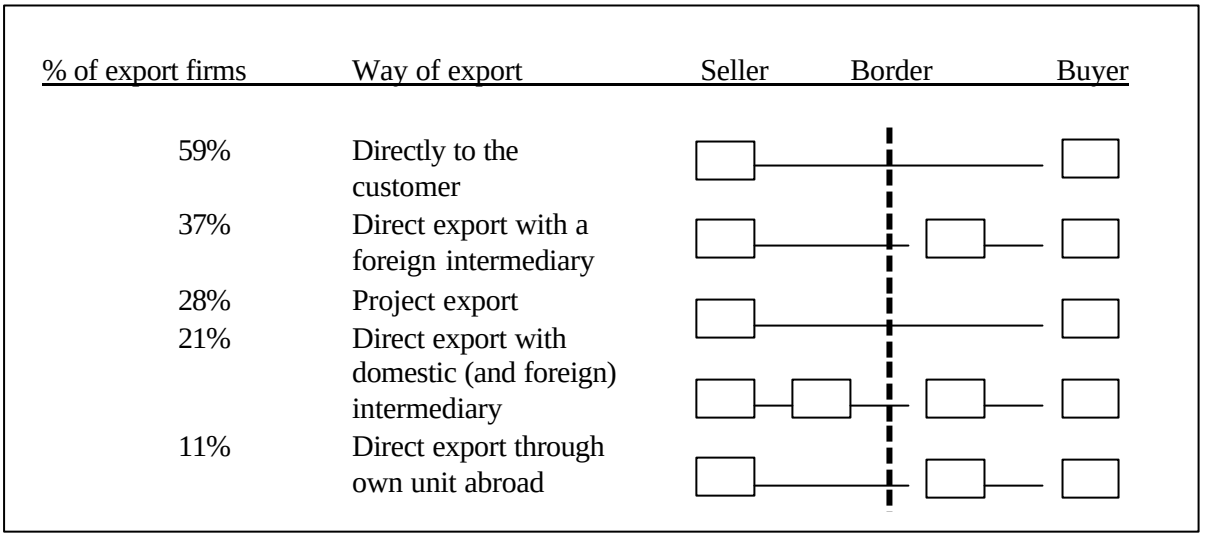

Figure 5.7 The ways of direct export

Export firms often imported their raw materials (χ^2=17.534; df=1; p<.0005). Among import firms, 82% were also export firms. The firm's raw materials were imported regularly by 39% of all firms and by 52% of export firms.

Units abroad. One tenth of the SMEs had a subsidiary or a joint venture abroad. Most of these were set up for the sales or marketing of the firm's products. The rest were production or assembly units. Some of the units had very independent roles and they manufactured and sold the products in the markets located near them.

Foreign ownership. Five per cent of the SMEs had foreign owners. In half of these firms the proportion of foreign ownership was no more than 20%. In firms with foreign owners, exports accounted for a significantly higher share of the firm's total sales than in other firms: on average, exports accounted for 50% and 17%, respectively, of all sales.

Innovativeness and technology

The firm's innovativeness and technology were analyzed in terms of unique products in the market, the life cycle stage of the products, the firm's R&D orientation, newness

of production technology, managerial know-how, and the risk of failure (Figure 5.8). In this report, products refers to both physical products and services.

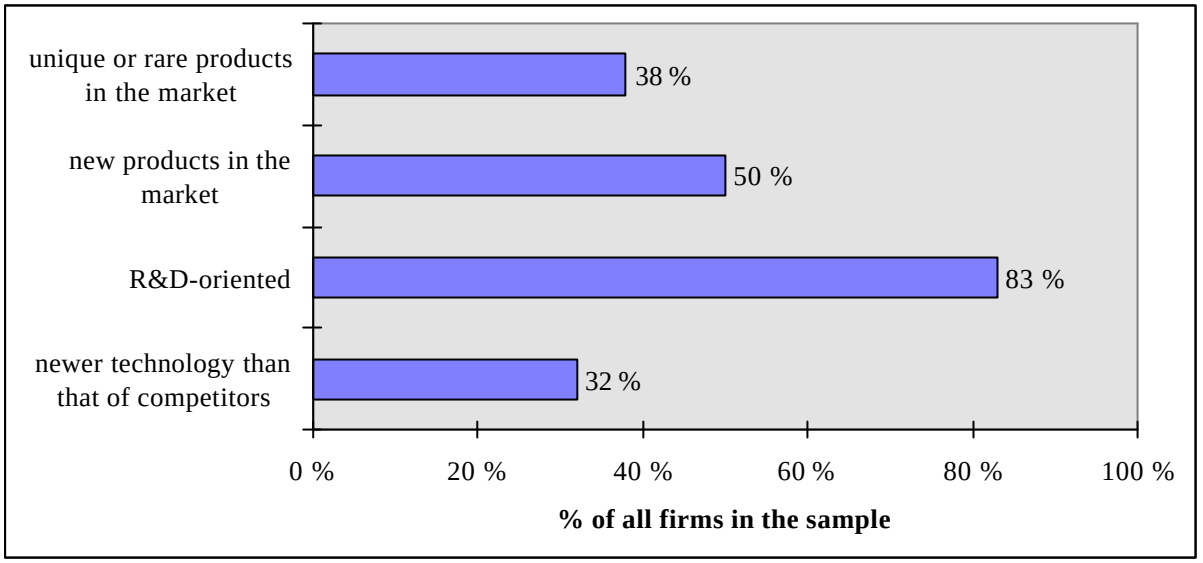

Figure 5.8 Innovativeness and technology of the SMEs

Unique products and the life cycle stage of products. In 4% of the SMEs, the products were considered unique in the markets. In one third (34%), the products were rare in the markets. Half of the SMEs (54%) had products which were quite similar to those of their competitors. In one tenth of the SMEs (8%), the products were regarded as identical to those of their competitors.

For an average firm, 60% of the products were ones with a relatively stable sales volume, 23% were products with more than 10% annual growth in sales, 10% were new products in the markets, and 6% were products with a falling sales volume.

Half of the SMEs had one or more new products in the markets. For most of them, new products accounted for 5-10% of all products and services in terms of turnover. More firms with new products in the markets than others were export firms ($r=.34$; $p<.01$). More than half of the firms had products with more than 10% annual growth in sales. Typically, such products accounted for 10-30% of all products. More than four fifths of the firms (84%) had products with a relatively stable sales volume. Such products usually accounted for more than 30% of all products, and for one fifth of the firms, all their products belong to this category. One third of the firms had products with a falling sales volume. Such products usually accounted for 5-10% of the firm's products. More firms which had new products in the markets than others had unique products in the markets ($r=.43$; $p<.01$).

R&D orientation. One third of the SMEs (37%) strove to be the first in the market so as to achieve an adequate advantage over competitors and to be able to seize the opportunities of emerging markets for a new product. Almost half (46%) were

focused on improving the quality of existing products, to add to their value. One tenth (10%) strove to be the second in the market so as to avoid the high risk and high research and development costs characteristic of pioneers. A few firms (3%) produced existing products so as to avoid all risks and costs related to research and development. R&D-oriented SMEs not only had a high proportion of new products in the markets, but also more often had unique products in the markets (r_s=.40; p<.01) than other firms.

Newness of production technology. In more than half of the SMEs (58%), production technology was as new as that of the most important competitors. For one third (32%) it was newer, and for one tenth it was older than that of the most important competitors. Firms having newer production technology than that of their competitors were more R&D-oriented (r_s=.30; p<.01) and they produced products which were unique in the markets (r_s=.36; p<.01).

Managerial know-how. In three quarters of the SMEs (74%), managerial know-how was thought to be as good as that of their most important competitors. In 16% of the firms it was thought to be higher, and 10% of the firms thought it was lower than that of their most important competitors. Firms with higher managerial know-how than that of their competitors used newer production technology than their competitors (r_s=.34; p<.01).

Risk of failure. In three quarters of the SMEs (74%), the risk of failure was seen to be as high as in Finnish firms in general, whereas in 5%, it was thought to be higher than in Finnish firms in general. Interestingly, more than one fifth of the firms (22%) considered the risk of failure to be lower than in Finnish firms in general.

Specialization

The specialization of the firm was analyzed by products, customers and competitive power of the firm (Figure 5.9).

Products. Half of the SMEs produced a few products or operated in a few product areas characterized by the same raw material, the same production technology or machinery, or the same professional skills. These product areas were clearly defined. One tenth (8%) produced a few products or operated in a few product areas, but in the production they were not able to use the same raw material, the same production technology or machinery, or the same professional skills. Also, their product areas were clearly defined. One third had focused clearly on one product or product area in production, and for them the sale of this product or these products constituted most of the firm's total sales. The rest of the SMEs (10%) produced several products or operated in several poorly defined product areas. It was typical of these

that the products and product areas changed often, and the firm's total sales came from these several small flows.

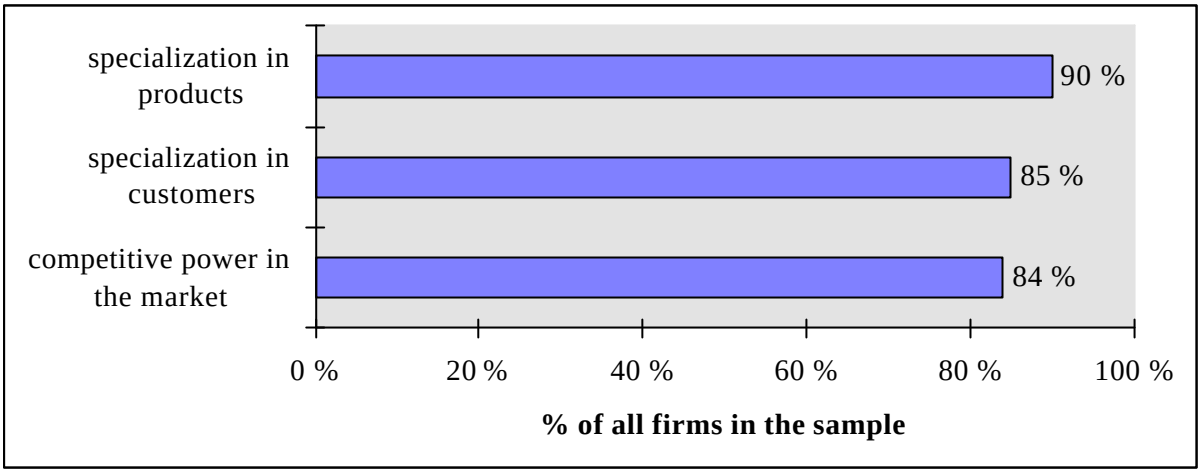

Figure 5.9 Specialization of the SMEs

Customers. Half of the SMEs had a few relatively coherent and mutually distinctive customer segments. One third had focused on serving one relatively coherent and clear-cut customer segment whose share in the firm's total sales was very high. The rest (15%) had no clearly defined customer segments, and their customers could be regarded as fragmented. For half of the SMEs, the proportion of turnover due to the biggest customer was 10-40%. The cumulative proportion of turnover due to the three biggest customers was 20-65%, and that due to the five biggest customers was 26-75% of the firm's total turnover.

A positive association between good competitive power of the firm and new production technology (r_s=.39; p<.01) was found. Such positive association was also found between good competitive power of the firm and high managerial know-how (r_s=.29; p<.01).

Cooperation and networking

Cooperation and networking were approached by studying attitudes toward interfirm cooperation, the importance of interfirm cooperation, the content of cooperation, cooperation partners and experiences, and the role of subcontracting, in particular.

Attitude towards interfirm cooperation and the importance of interfirm cooperation. The SMEs were interested in interfirm cooperation, with almost half (47%) actively looking for new interfirm cooperation relationships. Almost the same proportion (45%) were interested in investigating cooperation possibilities if some other firm would approach them. A few firms (4%) tried to avoid cooperation so as to avoid dependency on others.

The SMEs considered interfirm cooperation important: one third (31%) thought it extremely important, and almost two thirds (61%) considered it useful. Six per cent of the SMEs thought that interfirm cooperation had no importance. There was a moderate positive association between attitudes towards interfirm cooperation and perceived importance of interfirm cooperation (r_s=.35; p<.01), i.e. firms interested in interfirm cooperation scored high on the importance of cooperation. On the other hand, only some of the firms avoiding cooperation considered that cooperation had no importance for them.

Content, partners and experiences. Most firms used subcontracting (Figure 5.10). There was a moderate positive association between the number of different types of interfirm cooperation and the perceived importance of interfirm cooperation (r_s=.32; p<.01). Also, a moderate positive association between the number of different types of interfirm cooperation and attitude towards interfirm cooperation (r_s=.45; p<.01) was found. This means that the more different types (contents) of cooperation the firm had, the more important the role of cooperation was thought to be and the higher the interest towards interfirm cooperation.

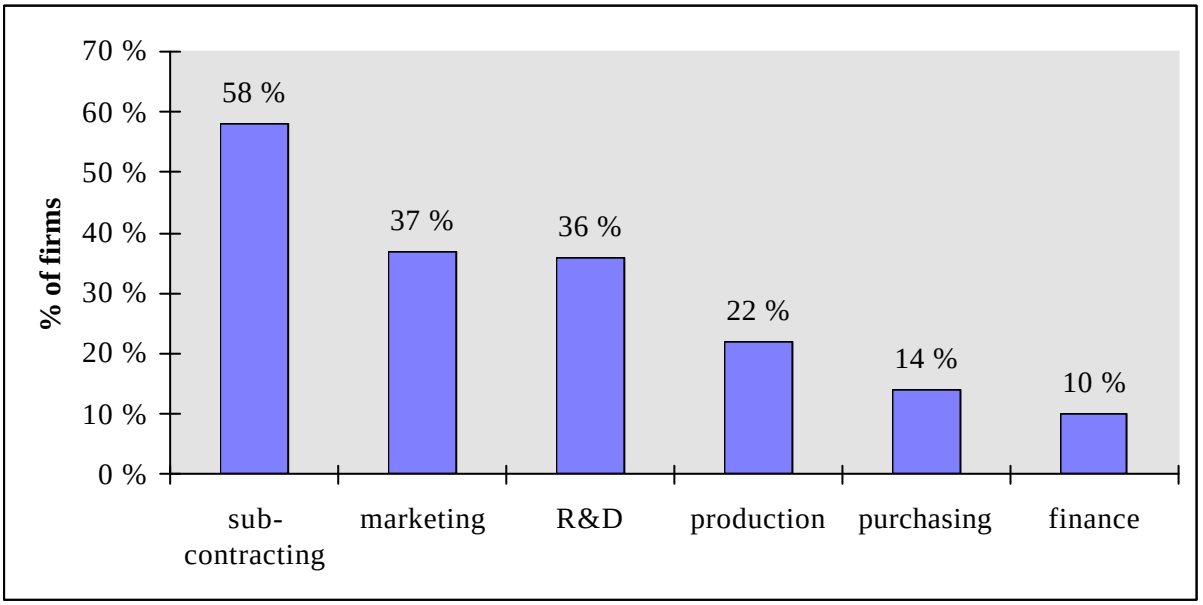

Figure 5.10 Types of interfirm cooperation

The most common cooperation partners were customers, suppliers and subcontractors. In contrast, cooperation between the firm and deliverers, public organizations fostering SME development, and vocational schools was much rarer. There were many differences in cooperation experiences with different cooperation partners, as shown in Table 5.6.

Table 5.6 Cooperation experiences with different partners

Cooperation partner	Positive experiences[a]	Negative experiences[a]
1 Major customers	57	1
2 Suppliers	57	1
3 Subcontractors	48	1
4 Major financiers	41	3
5 Firms in the same field	35	6
6 Vocational schools	28	2
7 Universities and research institutes	26	3
8 Public organizations fostering SME development	25	8
9 Deliverers (delivery channels)	23	1

[a.] % of all SMEs

Positive experiences were especially characteristic of cooperation with major customers and suppliers. On the other hand, negative experiences were associated with cooperation with public organizations fostering SME development and firms in the same field. There was a positive though weak association between a high number of cooperation partners and positive attitude towards interfirm cooperation (r_s=.23; $p<.01$). In regard to the duration of cooperation relationships, the longest ones were related to cooperation with financiers and suppliers. The rank order of cooperation partners by their importance for the firm is presented in Figure 5.11.

1 Major customers
2 Suppliers
3 Major financiers
4 Subcontractors
5 Deliverers (delivery channels)
6 Universities and research institutes
7 Firms in the same field
8 Vocational schools
9 Public organizations fostering SME development

Figure 5.11 Rank order of cooperation partners by their importance for the firm

Subcontracting. Half of the SMEs were subcontractors. They were divided into two groups: those with a high proportion of subcontracting in terms of turnover, and those with a small proportion of subcontracting. For this reason, the lower quartile was 10% and the upper one 81%. Three quarters of the SMEs bought subcontracting, and bought subcontracting generally accounted for 5-20% of the firm's turnover.

5.5 Success and survival factors

Study of the success factors of the SMEs was approached by structured and open-ended questions. Both the most important success factors and the underlying

dimensions of SME success were analyzed. Moreover, the most important survival factors were elicited on the basis of open-ended questions.

Structured success factors. The high-scoring success variables related to (1) customer relations; (2) supplier relations; (3) personnel, know-how, and quality; (4) flexibility; and (5) planning (see Table 5.7). The most important success variables were related to *customer relations*: good knowledge of customers and their needs, long-term customer relations, good reputation of the firm, fast and reliable delivery, and good inter-personal relations with customers and suppliers. The quality of raw materials and reliable *suppliers* were also important. Other high-scoring variables were related to *personnel, know-how, and quality*: personnel with advanced knowledge, good knowledge of products, continuity of key persons, cooperative personnel, and high quality products. In addition, *flexibility*, and *planning* were considered success factors by all successful SMEs. In total, 36 out of 55 success variables (65%) scored a mean of 5.19 or above on the scale of 1 (not at all important) to 7 (very important). Other structured success variables were considered success factors only by some of the successful SMEs. Chapters 6 and 7 investigate the success factors in detail by groups of SMEs, and reveal the differences between groups.

Table 5.7 The most important structured success factors

Rank	Success factor	Mean	Median	Standard deviation
1	Good knowledge of customers and their needs	6.54	7	.82
2	Long-term customer relations	6.44	7	.80
3	Good reputation of the firm	6.36	7	.78
4	Good knowledge of products/services	6.26	6	.84
5	Personnel with advanced knowledge	6.25	6	.85
6	Fast and reliable delivery	6.23	6	.91
7	Quality of raw materials and reliable suppliers	6.22	7	1.33
8	Continuity of key persons	6.18	6	.93
9	Cooperative personnel	6.16	7	1.09
10	Ability to respond flexibly to customers' needs	6.09	6	.88
11	Good inter-personal relations	6.06	6	1.26
12	Simple and flexible organization	6.03	6	1.02
13	High quality products	6.02	6	.92
14	Planning	5.98	6	1.05

The least important structured success factors are shown in Table 5.8. These factors seemed to be mainly firm-external factors. The least important success factors were external owners, private and public consulting services, public financial support, weak competition, and acquaintance with an influential distribution channel. Also, good terms of payment, difficult-to-imitate products, and difficult-to-imitate knowledge-based production system were considered less important success factors by all the SMEs studied. However, flexible use of family members as a work force was valued in

family firms. Also, internationalization was valued as a success factor in export firms, as was strong growth in demand by those firms operating in high-growth markets. However, it should be noted that there was much variation in the importance of these factors among the firms. In other words, some of these factors may be extremely important success factors for some firms.

Table 5.8 The least important structured success factors

Rank	Success factor	Mean	Median	Standard deviation
55	External owners[a]	2.54	2	1.86
54	Private consulting	2.83	3	1.54
53	Public consulting support	3.05	3	1.75
52	Public financial support	3.18	3	1.95
51	Weak competition	3.36	3	1.60
50	Acquaintance with an influential distribution channel	3.75	4	2.07
49	Good terms of payment	3.84	4	1.71
48	Flexible use of family members as work force[b]	4.14	5	2.45
47	Difficult-to-imitate products[c]	4.17	4	1.85
46	Difficult-to-imitate knowledge-based production system[d]	4.35	5	1.85
45	Internationalization[e]	4.38	5	2.08
44	Small number of owners	4.47	4	1.85
43	Low delivery and transportation costs	4.60	5	1.81
42	Multifunctional production equipments	4.66	5	1.72
41	Strong growth in demand[f]	4.68	5	1.56

[a.] In SMEs with several owners: 2.56 / 2 / 1.84, respectively.
[b.] In family firms: 5.28 / 6 / 2.01, respectively.
[c.] In SMEs whose products were unique or rare in the markets: 4.70 / 5 / 1.95, respectively.
[d.] In SMEs whose products were unique or rare in the markets: 4.55 / 5 / 1.98, respectively.
[e.] In export firms: 5.44 / 6 / 1.55, respectively.
[f.] In SMEs operating in high-growth markets: 5.45 / 5 and 6 / 1.30, respectively.

The exploratory factor analysis of the structured success statements revealed the underlying dimensions of SME success. Factoring was done with the SPSS Principal Component Analysis, and the rotated matrices were calculated using the Varimax method. A factor analysis of the 55 structured success statements yielded 12 factors with eigenvalues over 1.0. Seven factors with eigenvalues of 1.65 or above were used for subsequent analyses, based on the results of a screen test and interpretability (see Appendix 3). Each factor was named according to the variables with highest loadings. The interpretation was done using the top variables that loaded .40 or higher.

The seven underlying dimensions of SME success accounted for 59.0% of the total variance. The first factor represents a firm's *proactiveness, flexibility, and distinctiveness*: this explained 34.8% of the total variance. Factor 2 represents *planning and risk management,* especially in financing. The third factor consisted of variables related to *motivated personnel and high-level customer service*. In the fourth factor, *chain management* issues dominated. Factor 5 represents variables related to

product knowledge. The sixth factor draws attention to *leveraging external advisers and public financial aid*. Factor 7 represents *relationship management and customer closeness*.

Unstructured success factors. An analysis of the responses to the open-ended question on the most important success factors showed that customer relations were valued most (see Figure 5.12). Responses to an open-ended question also revealed some success factors which were not included in the 55-item questionnaire. These responses were collected under themes that emerged from the data.

The most frequent theme was *intimate customer relationships*, indicating closeness to customers, mutual trust, and high-level customer service, for example. The second most frequent was *skilled personnel*. The third was *right total quality*: not too high and not too low. Here, quality referred to the total quality, i.e. the quality of product (service), work, and operations. The fourth theme was *innovativeness and research and development*. The fifth was *planning, goal-orientedness, and persistence*.

The most critical factors for SME success:

1 Intimate customer relationships
2 Skilled personnel
3 Right total quality
4 Innovativeness and R&D
5 Planning, goal-orientedness, and perseverance
6 Entrepreneur's professional skill
7 Entrepreneur's personal contribution
8 Advanced technology
9 Strict cost control
10 Reliable and flexible delivery
11 Focusing on core business
12 Flexibility in business
13 Interfirm cooperation

Figure 5.12 Unstructured success factors

Survival factors. The responses to the open-ended question on the most important survival factors were analyzed using the same method as for the responses to the open-ended question on the most important success factors. Clearly the most frequent survival factor was *the personnel's contribution and flexibility* (Figure 5.13). The second most frequent survival factor was *good relationships with external stakeholders*, especially with financiers, customers, and suppliers. The other most important survival factors were *early reaction to problems and decision making without delay*, *good financial position*, and *belief in the future*.

The most critical factors for SME survival:

1 Personnel's contribution and flexibility
2 Good relationships with external stakeholders
3 Early reaction to problems and decision making without delay
4 Good financial position
5 Belief in the future
6 Entrepreneur's personal contribution
7 Cost reductions
8 Acquisition of new customers and increased efforts in marketing
9 Goal-orientedness and an ability to distinguish essentials
10 Risk management
11 Widely applicable and advanced technology

Figure 5.13 Survival factors

5.6 Summary and conclusions

Characteristics of the entrepreneurs. The entrepreneurs of successful SMEs were typically middle-aged men (40-60 years old) who had a mid-level qualification. Before starting as an entrepreneur of their present firm, they had varied work experience, most frequently in sales and marketing or production, including managerial tasks. Success followed long-term work and investments in business: most entrepreneurs have been entrepreneurs for more than a decade. Management with substantial industry experience has been found to distinguish high-growth firms from low-growth ones (Siegel et al. 1993).

Most entrepreneurs in successful SMEs were founders of the firm, but there were also paid professional managers. It has been found that there are no differences in firm performance between founder-managed and professionally managed high-growth firms (Willard et al. 1992). On the basis of the age distribution of entrepreneurs, it can be concluded that in many successful SMEs the management of the firm will change during the next ten years, and this may have important impacts on the future development of the region.

It seems that SME success is not related to the gender of the entrepreneur. In Finland, taking into consideration all industry sectors, female entrepreneurs constitute fewer than one third of the total, and this proportion is clearly lower in manufacturing than in the service sector. Also, many previous studies have shown that male entrepreneurs dominate particularly in growth firms (e.g. Koskinen 1996: 169). However, previous research has not, with the exception of some contradictory findings, been able to provide convincing evidence of gender impact on firm performance (see also Cliff 1998; Brush 1992).

Higher education and longer work experience seems to be related to SME success. As many previous studies have suggested, the higher the entrepreneur's education, the better the firm performance (see also e.g. Barkham 1992; Macrae 1991; Dunkelberg & Cooper 1982; Yusuf 1995). The findings support previous ones showing that entrepreneurs with prior work experience, especially in marketing, are more characteristic of growth firms than of others (Wynarczyk et al. 1993). The findings also underline the importance of prior managerial experience for firm performance (see also Macrae 1991; Dunkelberg & Cooper 1982).

Multiple entrepreneurship, i.e. serial and portfolio entrepreneurship, seems to be characteristic of many successful SMEs. This was an interesting finding in the light of the study by Stuart and Abetti (1990) who found that prior entrepreneurial experience had, compared with the other factors studied, the most significant impact on the early performance of the firm. However, the proportion of portfolio entrepreneurs was lower than that found by e.g. Storey et al. (1987) in their study of the proportion of portfolio entrepreneurs among high-growth firms (cf. also Westhead & Wright 1998a; 1998b; Rosa & Scott 1999). Compared with the Finnish SME population in general, the proportion of serial and portfolio entrepreneurs in this sample is high. Moreover, multiple-firm entrepreneurs were often both portfolio and serial entrepreneurs at the same time.

Characteristics of the SMEs. The SMEs studied represent the most important industry sectors and all regions in Northern Savo. On the other hand, successful SMEs could be found in each selected industry sector, so clearly SME success is related not only to high-growth industry sectors. Previous studies have emphasized the association between firm growth and the growth rate of an industry sector/markets. It should be noted that the growth within an industry sector can be fragmented: sales in one subsegment may grow rapidly, while it may fall in another. Many of the SMEs operated in narrow market segments of their industry (Pasanen 1997). Though many studies of favourable environments for entrepreneurship have pointed out the important role of the demand in the region (e.g. Johannisson 1993a), the demand of local markets may have less importance for the firms studied than for firms in general. Naturally, the role of local demand is much more significant for firms in the sector of business services and for other firms which are bound up with the volume of local demand.

Most successful SMEs were small firms with one establishment. In terms of the number of employees, most firms represented those size categories which have been found to create the most net new jobs in the long run (see Cambridge Small Business Research Centre 1992; Hakim 1989). Moreover, the majority of the remaining firms were just reaching such size. On the other hand, it can be expected

that one quarter of the firms will need to create formal structures for managing the firm if the firm is to grow (see Fombrun & Wally 1989).

There was a wide range of firms in terms of age, though most were established SMEs. However, it has been found that age does not distinguish high-growth firms from others (e.g. Smallbone et al. 1993b). Also, the findings support the claim that younger firms have a higher growth rate (e.g. Cambridge Small Business Research Centre 1992; Variyam & Kraybill 1992). This can be explained by, for instance, the fact that a young firm has to reach the scope of operation which enables efficient use of resources. On the other hand, however, it has never been possible to define the optimal size of a firm, in spite of the intensive research focused on this issue.

Typically, the firms were founded by more than one founder, of which at least one was still involved in the firm's operation. Often the founders were local people. The findings support the reported positive association between the number of founders and firm performance (e.g. Bruno et al. 1987; Barkham 1992; Feeser & Willard 1990; Woo et al. 1989; Dunkelberg et al. 1987; Westhead et al. 1995). Also today, the firms had more than one owner, and most firms were led by an entrepreneurial team. It can be seen that an entrepreneur in an SME has to be an all-rounder who understands and can manage the whole range of business activities. It has been found that team enterprises succeed better than other firms (Rosa & Scott 1999). Team entrepreneurship provides better conditions for high performance enabling the division of labour and the specialization of the members of an entrepreneurial team (see e.g. Timmons 1999: 278. In such a case, the capabilities and special knowledge areas of the team members complement each other (Westhead et al. 1995).

It is important to make a distinction between team entrepreneurship and family entrepreneurship, because of the differences between family-owned and -managed firms and those not family controlled (see e.g. Chua et al. 1999; Morris et al. 1997). Compared with other firms, family firms were rarely growth-seeking (see e.g. Donckels & Hoebeke 1992). Almost half of the firms were family firms, but in most of them no transition of the business from one generation to the next had yet been made. Particularly in these firms, the role of founders may be crucial for firm development (see Kelly et al. 2000).

The successful SMEs had clear goals and objectives. Two thirds were growth-seeking, indicating their high proportion in the sample. The SME barometer in Finland showed that only 7% of Finnish SMEs were growth-seeking (Ministry of Trade and Industry 1998; cited by Kauppalehti 1999a). On the other hand, there was much variation in firms' growth-seekingness between regions in Finland: in Northern Savo, the proportion of growth-seeking firms was slightly higher (9%) than the national average.

In terms of the life cycle stage, the majority of the SMEs studied were in the stage of growth or expansion. However, there were also SMEs at the beginning of their life cycle, and also some in the mature stage. From the regional point of view, the distribution of successful SMEs in terms of the life cycle stage seems to be well balanced. All in all, successful SMEs can be said to constitute a heterogeneous group of firms with a large variety of characteristics.

Life cycles. Most of the successful SMEs had stayed close to their original business, which is consistent with findings of previous studies (e.g. Feeser & Willard 1990). During their life cycle, most SMEs had faced periods of growth and/or recession equivalent to more than 20% of their annual turnover. Annual growth of more than 20% has been used as a criterion for defining rapid-growth firms (e.g. Fischer et al. 1997). In contrast with traditional life cycle models, the present findings show that a firm can have several separate stages of high growth during its life cycle. Growth was seen to be based mainly on firm-internal factors, of which the most important ones were related to the expansion of markets and investments in marketing, and investments in production. These were identical with the most important development areas of SMEs revealed by the SME barometer in Finland (Pesola 1997a: 4).

The most common firm-external growth factor was strong growth in demand. However, the time of investigation, shortly after a deep general economic recession, may have increased the role of this growth factor. A merger or an acquisition was identified in the history of one fifth of the SMEs. In almost all cases, a business connection was found between the firm studied and the purchased or mergered firm. Acquisitions are often considered a risky growth strategy (e.g. Duchesneau & Gartner 1990), but these SMEs had not made mergers and acquisitions in order to diversify.

Of the factors affecting a fall in the firm's turnover, four fifths were firm-external factors related to the general economic recession. Firm-external causes of recession were strongly emphasized, when compared with e.g. the findings by Slatter (1984; cf. also Boyle & Desai 1991; Heany 1985; Finkin 1985). This may be partly explained by the special characteristics of the sample, i.e. successful SMEs, and the time of investigation (after the general economic recession in the 1990s).

During their life cycle, half of the SMEs had faced at least once a situation where the firm's existence had been threatened. Typically, firm-external rather than internal factors were seen as the causes of threat (cf. Boyle & Desai 1991). There were two common alternative ways of adaptation: firm development with investments, or adaptation through retrenchment activities. There were significant changes in the principles and practices of management and in the ways of doing business during the firm's life cycle. During the last decade, the turnover of the firms had mainly grown,

and in most cases the growth had been stable. Also, for the majority of the firms, the demand in the markets had grown during the last decade.

In other words, the success in terms of firm growth was seen mainly to be based on firm-internal factors. On the other hand, the difficulties in terms of falls in turnover and threat were seen mainly to be based on firm-external factors. This is consistent with the main body of results of previous studies (e.g. Storey 1994: 105; Jenkins & Johnson 1994: 3; Vanhala et al. 1994: 105). However, in their study of new venture failures, Zacharakis et al. (1999) showed that entrepreneurs acknowledged that firm-internal causes contributed to their venture's failure. Hence, it is worth noting that there are several factors which may affect SME growth and decline.

Strategic choices. Most successful SMEs were characterized by internationalization, innovativeness and R&D orientation, specialization, and cooperation and networking (see also Hitt & Ireland 2000: 48-52). Often, these qualities combined with each other in the same firm. Three fifths of the SMEs exported, and two fifths imported. The most common way of direct export was selling directly to foreign customers. Half of the SMEs had indirect exports, and interestingly, most of these were export firms as well. The proportion accounted for by export markets in the firm's total sales was positively associated with other forms of internationalization. Units abroad and foreign ownership were rare.

Few firms had products identical to those of their competitors. Half of the firms had products which were new in the markets. Almost all firms actively developed their products. The production technology of firms were as new as that of their most important competitors. Also, the managerial know-how was thought to be as good as that of their most important competitors.

The SMEs were specialized by their product range (cf. Kauranen 1996; Lehtonen 1997). Also, they usually served one or a few clear-cut customer segments. Specialization was also indicated by the fact that the firms in general considered that their competitive power in their main markets was at least quite good.

The SMEs were interested in interfirm cooperation, which was also thought important for the firm. Half of the firms used subcontracting. Positive cooperation experiences were most frequently related to cooperation with customers and suppliers, and these stakeholders were also perceived as the most important cooperation partners. It seems that cooperation and networking among these SMEs might be more intensive than in the SME sector in general (see e.g. Curran et al. 1993: 24). It should be noted that a stronger growth may be achieved via a cooperation strategy than via an internal development strategy (Farrell & Doutriaux 1996). In the use of subcontracting, the findings of this study are similar to those of the study of peripheral small industrial firms in Northern England (Smallbone et al. 1999). The use of subcontractors may enable firm growth with lower capital costs than an organic growth strategy.

Success and survival factors. Factors relating to customer and supplier relations, personnel, knowledge, flexibility, quality, and planning were considered to be success factors by all successful SMEs. The single most important success variables were related to customer relations and personnel, as many previous studies of successful firms have also highlighted (e.g. Simon 1996). Interestingly, according to the SME barometer in Finland and also some other studies, the most important development needs in SMEs were related to marketing (Pesola 1999; 1997a: 4; Pesola 1997b: 10). Innovativeness and R&D was considered to be an important success factor by many firms, but it was not an important success factor for all SMEs.

Long-term customer relations contribute to customer closeness, i.e. good knowledge of customers and their real needs. Confidential customer relations can facilitate firm survival and they have an important role in firm renewal and continued success (cf. Räsänen 1999). Good reputation relates to customers' trust in the firm and its products and services (see Caruana 1997). These are also promoted by personal relations (see e.g. Putnam 1993; Lechler & Gemuenden 1999). The role of reliable and fast delivery is particularly important for customers who are not end-users when the product is used as an input in the customer firm's production process. Good customer relations have been found to be a source of competitive advantage more for small firms than for large companies, and regardless of their strategic focus and the growth of industry sector (McDougall et al. 1994: 552; see also Halborg et al. 1997; Stalk et al. 1996; Wijewardena & Cooray 1996).

Good supplier relations can be regarded as customer relations from the reverse viewpoint. Good supplier relations relate to the quality of raw materials and reliable suppliers. This reinforces the previous notion concerning the importance of reliable delivery, i.e. reliable customer relations both forward and backward. Reliability is a critical precondition for the successful operation of interfirm networks, which can be basically seen to be built on inter-personal relations. There was more variation in the importance of good supplier relations than in the other high-scoring success variables, indicating that the respondents were not unanimous in its importance for SME success. However, well-organized supplier relations may provide the firm with cost advantages in many ways.

Having personnel with advanced knowledge is a necessary and more central condition for SME success than ever before (cf. Ministry of Trade and Industry 1998; Arola & Larimo 1998; Lehtonen 1997). The main elements of know-how are product, customer and production know-how (e.g. Laureen 1996: 46). Good knowledge of products refers to the ability to apply a wide range in pricing and to good preconditions for differentiation and product development. Knowledge of customers refers to customer closeness and the ability to respond flexibly to customers' needs and expectations. Production know-how is associated with efficiency and quality of

operations. Good know-how is a precondition for high quality, since high quality of products is followed by high quality of operations. To maintain advanced knowledge in the firm, continuity of key persons and the ability of the personnel to work as a team are important.

Flexibility is often seen to provide a central source of competitive advantage more in small firms than large ones. There were two high-scoring success variables related to firm flexibility. Both (the ability to respond flexibly to customers' needs, and simple and flexible organization) promote the firm's adaptation process in a changing environment.

Planning is related to goal-oriented behavior and logical actions of the firm. Often it means long-term investments to achieve the goals the firm has set. Today, planning is rather strategic visioning, learning and searching for tools for implementing the vision than formal strategic planning (Mintzberg 1994; see also Duchesneau & Gartner 1990; Campbell & Alexander 1997; Miller & Cardinal 1994).

The success factors found in this study are strongly congruent with those identified in previous studies, e.g. with capability- and customer-based strategic thinking (e.g. Stalk et al. 1992; Friedrich & Seiwert 1994). They are also in line with findings of many other studies, for example the findings of the INTERSTRATOS study (Donckels et al. 1997: 353). However, it cannot be claimed that a firm is guaranteed success if it only takes good care of these success factors. But it is likely that a firm which does not deal adequately with these factors will decrease its probability of success compared with firms which pay adequate attention to these issues (cf. e.g. Lehtonen 1997).

The least important structured success factors were mostly firm-external factors related to external advisers and support, and competition. Interestingly, these factors as well as, for instance, difficult-to-imitate products, low delivery costs, and strong growth in demand, were considered to have only a small or moderate importance for SME success. However, it should be noted that there was much variation in the importance of several success factors among the firms. This means that these factors may also be extremely important for some SMEs.

The factor analysis of the structured success statements yielded 12 factors with eigenvalues over 1.0, indicating that SME success is a multidimensional phenomenon. However, one success factor, 'proactiveness, flexibility, and distinctiveness', explained 35% of the total variance. The other main underlying dimensions of SME success were planning and risk management, motivated personnel and high-level customer service, chain management, product knowledge, leveraging external advisers and public financial aid, and relationship management and customer closeness. These findings support a "both-and" approach (see Simon 1996: 272-274) in explaining SME success.

The unstructured success factors provide much support to findings based on the structured success factors. However, there were also some other important factors for SME success in addition to those revealed by the analysis of the structured success factors. The entrepreneur's personal contribution, advanced technology, and focusing on core business may be highly important for SME success.

It seems that success factors are quite different from survival factors. The contribution and flexibility of the personnel was considered to be particularly important for SME survival, suggesting that employees may be a firm's most valuable resource. Other most important survival factors were good relationships with external stakeholders, of which customer and supplier relations were considered to be important success factors by all SMEs (cf. Lechler & Gemuenden 1999). For SME survival, early reaction to problems and decision making without delay were also important survival factor.

6 A TAXONOMY OF SUCCESSFUL SMES

6.1 A need for classification

The sample of successful SMEs was not a homogeneous group of SMEs, though many of the firms have some characteristics in common. It can be argued that due to the diversity of successful SMEs, understanding the phenomenon can be advanced through grouping them into homogeneous strategic types of SMEs according to their characteristics. This makes it possible to study successful SMEs in homogeneous strategic groups in which the SMEs within the group are similar and different from firms in other groups (e.g. Woo et al. 1991; Hornaday 1990).

Classifying SMEs into types is an alternative to the idea that SMEs are either alike or unique. On the one hand, this makes possible a more accurate reflection of reality, and it allows richer and thicker descriptions. On the other hand, general laws are rare in business studies, and focusing on one firm only does not usually provide results with an adequate applicative power (cf. Rich 1992). Instead, an investigation into the empirical types of SMEs can offer a middle ground for learning. Similar firms can learn from the types of successful SMEs and use their characteristics as benchmarks for developing themselves (benchlearning) (see e.g. Boxwell 1994).

Several classifications relevant to this study have been presented. The types of entrepreneurs, SMEs, and SME strategies found in previous studies have been reviewed by Woo et al. (1991), Hornaday (1990), Sanchez (1993), Spilling (1999), Kotey and Harker (1998), and Carter et al. (1994), among others. It should be noted that there is a wide range of diversity in the classification criteria used. In some studies, the classification is based on a small number of attributes (special classifications), while in others the types are defined on the basis of a comprehensive set of characteristics (general classifications) (Woo et al. 1991).

One classification reflecting numerous previous studies and thus offering a broad pattern of the SME sector is presented by Bridge et al. (1998: 164). They divided small firms into three broad groups. First, there is a large group of small firms that have a short life. Then there is a second large group of firms that, although surviving, remain small. The third group is by far the smallest: it consists of those firms that achieve rapid growth. These groups have been referred to respectively as ‘failures’, ‘trundlers’ and ‘fliers’ (Storey 1994) and as ‘failures’, ‘mice’ and ‘gazelles’ (Birch et al. 1993).

6.2 Clustering successful SMEs

Cluster analysis. Clustering was done inductively applying an analytic technique, cluster analysis. Eleven variables related to a firm's growth mode, and strategies were used as the clustering variables (see Table 6.1). Growth was selected as a clustering dimension on the basis of its expected relevance and potential contribution to practical applications of the results of the study. Moreover, for an SME a major strategic issue is management of growth. In previous studies, it has been found that, for small firms, different growth environments may require different strategies (e.g. Chaganti 1987).

The first two factors, (1) actual growth in turnover, and (2) the nature of growth in turnover, characterized a firm's growth behavior in the past. The next two factors, (3) firm size in terms of the number of personnel, and (4) the life cycle stage of business (see Haahti 1989: 252), reflected a firm's present situation. Goals for growth (5) described the firm's growth intentions for the future. The next four factors may influence the firm's growth: exports; (6) innovations; (7) acquisitions and mergers; and (8) interfirm cooperation. However, because exports was found to have too high a correlation with the other variables, (9) local market's share in the firm's sales, which is the opposite of foreign market's share in the firm's sales, was used. The last two factors, (10) the growth in demand in the main markets, and (11) the importance of strong growth in demand, were measures of the growth in demand and its perceived importance for the firm.

Data were standardized prior to the analysis. An agglomerative hierarchical method using Ward's (1963) minimum variance method and squared Euclidean distances was employed in the analysis. The most commonly employed technique to define the number of clusters (Aldenderfer & Blashfield 1984), visual inspection of dendograms, was used (Ketchen et al. 1993: 1295). A three-cluster solution was seen to be the most appropriate, because (a) cluster solutions with different numbers of clusters could not provide a better taxonomy in terms of predictive power and accuracy as found by discriminant analysis; (b) other cluster solutions with more than three clusters would have led to too small clusters for a proper statistical analysis; and (c) a three-cluster solution was easy to interpret, because of the clear distinctions between the clusters.

The clusters could be characterized as follows. SMEs in the first cluster were labelled as stable, independent survivors. They were often SMEs with no actual growth or growth aspirations. They had few network relations, and many operated in local markets only. The other two clusters of successful SMEs consisted of growth-oriented SMEs, but the underlying nature of growth was different in each cluster. SMEs in the second cluster were characterized as innovators with continuous growth. They offered new products in growing markets. SMEs in the third cluster were bigger

than their counterparts in the other clusters. They were efficiency-oriented and network-intensive, and their growth mode was characterized as leapwise. The results of cluster analysis by clustering variables are presented in Table 6.1.

Table 6.1 A description of the clusters

Variables	Stable independent survivors	Innovators with continuous growth	Networkers with leapwise growth
Growth in turnover	no	yes	yes
Nature of growth in turnover		continuous	leapwise
Firm size (no. of full-time personnel)	small	small	medium sized
Life cycle stage of business	mature	growth	growth/mature
Goals for growth	no	yes	yes
Local market's share in the firm's sales	high	small	small
Uniqueness of the products in the market	low	high	moderate
Acquisitions and mergers	no	no	yes
Importance of interfirm cooperation	low	moderate	high
Growth in demand in the main markets	no	high	moderate
Importance of strong growth in demand	no differences between clusters		

According to their life cycle stage, stable independent survivors were more mature firms than SMEs in the other clusters. On the other hand, innovators with continuous growth were more often at the beginning of their development. However, there were only slight differences in life cycle stages of SMEs between the clusters. Moreover, these differences in life cycle stages between SMEs within the same cluster were also notable. There were no differences between the clusters in the importance of strong growth in demand.

Discriminant analysis. In order to ensure that the clustering was appropriate, a canonical discriminant analysis was performed on the three clusters and eleven variables (see Appendix 5). Two canonical discriminant functions were significant in differing among the clusters ($p<.0005$). The discriminant analysis revealed that the discriminant functions had eigenvalues of 3.781 and 2.176 with canonical correlations of 0.89 and 0.83. Such eigenvalues can be regarded as good, and such correlations indicate the high efficiency of discriminant functions in discrimination. Also, the map of discriminant functions was clearly divided into sectors, which indicates that both functions add new information for the classification. Wilks' lambda value for both functions was 0.066, and 0.315 for the second function alone ($p<.0005$). Thus, the discriminant model explained 93% of the total variance between the clusters ($p<.0005$).

Standardized discriminant coefficients indicate the predictive power of single variables of the model. The following variables with over 0.3 value of standardized canonical discriminant function coefficients had the highest predictive power: growth

in turnover and its nature, goals for growth, and firm size. Examining the correlations of the discriminant function and original variables, the most important factors for discrimination, in addition to those mentioned above, were the growth in demand in the main markets, local market's share in the firm's sales, and the uniqueness of the products in the market.

Another indicator of the applicability of the discriminant model is the degree of predictive accuracy measured by the percentage of cases classified correctly. Overall, 93% of the cases were correctly classified, considerably greater than could be achieved by chance alone (see Table 6.2). Of innovators with continuous growth, all cases were correctly classified. In contrast, stable independent survivors were the most fragmented cluster of SMEs, since no more than 86% of these were correctly classified. Furthermore, of all cases, 90% of the cross-validated (Lachenbruch 1975: 32) clustered cases were correctly classified.

Table 6.2 Classification results [a]

		Predicted cluster membership			
	Clusters	Stable independent survivors	Innovators with continuous growth	Networkers with leapwise growth	Total
Original %	Stable independent survivors	86.0	10.5	3.5	100.0
	Innovators with continuous growth	0.0	100.0	0.0	100.0
	Networkers with leapwise growth	2.9	2.9	94.1	100.0

[a.] 93.0% of original clustered cases correctly classified

Single variable tests. In addition to the eleven clustering variables, another set of variables was used in describing and interpreting the derived taxonomic configurations (see Appendix 4). In identifying the differences between clusters, each variable was tested using, depending on the variable, analysis of variance, non-parametric Kruskal-Wallis analysis of variance, or the χ^2 test. Variables showing statistically significant differences between the clusters are presented in Table 6.3. In total, 25 statistically significant ($p<.05$) differences across three clusters were found.

There were no statistically significant differences in success factors between the clusters, indicating that the success factors studied were all more or less important for all successful SMEs regardless of their cluster membership. One reason for this can be found in the method used since responses accumulated at the upper end of the scale. However, there were differences in the emphasis and valuation of certain success factors in each cluster. These differences, even though not statistically significant, revealed a consistent pattern of factors related to the competitive advantages of SMEs in each cluster.

Table 6.3 Statistically significant differences between the clusters (p<.05)

Variables	p value
Criteria for success:	
Growth in turnover	p < .0005
Business success compared with competitors	p = .005
Entrepreneur's satisfaction with business success	p = .035
Entrepreneur:	
Prior experience in business as owner-manager	p = .036
Entrepreneur's age	p = .037
Firm and environment:	
Goals for growth	p < .0005
Growth in demand in the main markets	p < .0005
Nature of growth in turnover	p < .0005
Firm size	p < .0005
Firm age	p = .012
Acquisitions and mergers	p = .014
Family business	p = .033
Life cycle stage of business	p = .036
Strategic choices:	
Local market's share in the firm's sales	p < .0005
Proportion of products with growing volume	p < .0005
Proportion of products with stable volume	p < .0005
Uniqueness of the products in the market	p = .001
No. of network relations	p = .001
Importing	p = .003
Indirect exports	p = .005
R&D orientation	p = .007
Proportion of new products in the market	p = .008
Subsidiaries or joint ventures abroad	p = .012
Bought subcontracting	p = .042
Attitude towards interfirm cooperation	p = .044

6.3 Characteristics of entrepreneurs

Stable independent survivors. Characteristic of this cluster was a higher proportion of female entrepreneurs than in other clusters: one fifth of the SMEs were led by a woman. Moreover, half of all female entrepreneurs in the sample were in this cluster. Also, founder-owners in this cluster had much longer experience as entrepreneurs than in the other clusters: most had more than 10 years' experience, typically almost 20 years. More often than in the other clusters, the entrepreneurs reported a lower level qualification (23%) as their highest further education, though the most typical highest further education in each cluster was a mid-level qualification.

Looking at the entrepreneurs' work experience, the proportion of people with prior work experience in purchasing and logistics was slightly higher. All those entrepreneurs whose principal work experience was in personnel administration or

office work were in this cluster. In contrast, work experience in planning and R&D was rare. Also, experience as an owner-manager in some other firm prior to the present firm was rare. The main characteristics of the cluster are presented in Figure 6.1.

- the highest proportion of female entrepreneurs
- prior experience as an owner-manager in another firm was rare

Figure 6.1 Characteristics of entrepreneurs in the cluster of stable independent survivors

Innovators with continuous growth. In this cluster the proportion of owner-managed firms was the highest, 83% of the SMEs. The entrepreneurs' average age was 44 years, which was slightly – approximately 5 years – less than in the other clusters. Experience in planning and R&D was more common among entrepreneurs in this cluster than in the other clusters, whereas experience in purchasing and logistics was rare. On the other hand, entrepreneurs in this cluster had less work experience than those in the other clusters. Besides, they were more frequently owners of some other firms than were entrepreneurs in the other clusters. The main characteristics of the cluster are presented in Figure 6.2.

- the highest proportion of firms led by owner-managers
- entrepreneurs were younger than in the other clusters
- prior experience especially in planning and R&D
- the shortest work experience

Figure 6.2 Characteristics of entrepreneurs in the cluster of innovators with continuous growth

Networkers with leapwise growth. More entrepreneurs in this cluster than in the others had 12 years' basic education (48% of the entrepreneurs in the cluster). Prior work experience in managerial tasks was slightly more common, whereas experience merely as an employee was clearly rarer than in the other clusters. Experience in planning and R&D, purchasing and logistics, finance, and general management was more common than in the other clusters. The main characteristics of the cluster are presented in Figure 6.3.

- prior experience in managerial tasks was slightly more common
- prior experience in tasks requiring mathematical skills

Figure 6.3 Characteristics of entrepreneurs in the cluster of networkers with leapwise growth

The major statistical differences between the clusters in the characteristics of the entrepreneurs were found in (1) prior experience in business as a venture owner ($p=.036$); and (2) entrepreneur's age ($p=.037$).

6.4 Characteristics of the SMEs and their life cycles

Stable independent survivors. A higher percentage of SMEs in this cluster than in the others operated in the service sector, representing one fifth of the SMEs (21%). A higher proportion of SMEs here than in the other clusters operated in business services, printing industry, food industry, and mechanical woodworking industry. More SMEs in this cluster than in the others had stayed near to their original business: over the years, only 14% of these SMEs had changed their original business significantly.

The proportion of SMEs with one establishment was higher than in the other clusters, three quarters of them having only one. The firm's growth in turnover had been moderate, and almost half had not grown or their turnover had even fallen during the last decade. The development of turnover had typically been stable (77%), and in 16% of the SMEs it could be characterized as fluctuating. In this cluster, problems related to the firm's management, or difficulties related to a big customer, were more commonly causes of a fall in turnover.

These SMEs were also older than those in the other clusters. A higher proportion of the founders of these firms than of those in the other clusters were from Northern Savo. On the other hand, almost two thirds of the SMEs in which none of the founders was still involved in the business (64%) were in this cluster. The most typical ownership structure of the firm was 2-5 main owners with more or less the same share of ownership. In this cluster, however, the proportion of SMEs led by an entrepreneurial team was the lowest. More than half (56%) were family firms, a clearly higher proportion than in the other clusters.

There were fewer changes in the principles and practices of management and the ways of doing business than in SMEs in the other clusters. Typically, growth was not a primary goal for these firms. In addition, these firms' goals and objectives guided decision making in the firms, but they were not specified explicitly. These firms were further in their life cycle than those in the other clusters: 60% were in the stage of expansion (stage 3/5).

The typical causes of threat were economic troubles suffered by a big client, or bankruptcy and credit losses. Another cause of threat especially characteristic of these firms was managerial mistakes and wrong decisions. Cost minimizing was more common as a way of adaptation. Other ways of adaptation typical of these firms were greater personal inputs into the firm's development by the entrepreneur, or change of management. The SMEs in this cluster could be divided into three almost equal groups in terms of the recent changes in demand in the markets. For some of the firms, demand had grown slightly, for others it had stayed stable, and for still others demand had fallen.

Entrepreneurs in this cluster thought that their firms had succeeded as well as their main competitors. However, twice as many as in the other clusters thought that their firms had not succeeded as well as their main competitors. Also, a higher proportion than in the other clusters were not satisfied with their firm's success. More than one quarter of the entrepreneurs (26%) in this cluster were not satisfied with the firm's business success. The main characteristics of stable independent survivors are presented in Figure 6.4.

- a higher percentage of SMEs than in the other clusters operated in the industry sectors dependent on the demand of local markets
- no significant changes in turnover
- problems in management and difficulties related to a big customer were more commonly causes of a fall in turnover and causes of threat
- firms were older than in the other clusters
- a small proportion of firms was led by an entrepreneurial team
- a high proportion of family firms
- few changes in principles and practices of management and the ways of doing business
- the most unspecified goals and objectives
- non-growth-seeking firms
- business ideas were at a further stage of development
- minimizing all possible costs, cutting down the firm's scale of operation, greater personal input by the entrepreneur into the firm development, or change of management were more commonly used ways of adaptation
- no significant changes in demand
- business success was thought to be as good as that of their main competitors

Figure 6.4 Characteristics of stable independent survivors and their life cycles

Innovators with continuous growth. A higher proportion of SMEs in this cluster than in the other clusters were producers of electro-technical products and optical devices, furniture, machines and devices, or operated in tourism. Analysing the significant changes in turnover (at least 20% annual change), the significant changes had been growth periods only in two thirds of the SMEs (66%). Investments in marketing, cooperation arrangements, and investments in production and the development of production were more commonly growth factors in this cluster than in the other clusters.

During the previous decade, turnover had grown, and almost half of the SMEs had experienced rapid growth. However, compared with networkers with leapwise growth, these firms' growth had been slightly slower. For almost all of these SMEs (94 %), the development of turnover had been stable.

On average, the SMEs were younger than those in the other clusters. SMEs led by an entrepreneurial team were more common in this cluster (87%). Growth was a primary goal for all the SMEs, and they were typically in the stage of growth (stage

2/5), indicating that they were in an earlier life cycle stage than SMEs in the other clusters.

Most of these firms (62%) had never been threatened. Highly cluster-specific causes of threat were under-developed markets, and lack of skilled personnel. Another cause, big investments, was slightly higher among the SMEs in this cluster. The cluster-specific ways of adaptation were interfirm cooperation, strong reliance on survival, focusing on the core business, and respite in payments. Early reaction to problems and openness and speed in problem solving were seen as crucial for their survival when the firms had faced problems. During the previous decade, growing demand in the markets was characteristic of the environment of these firms. Nine out of ten of these SMEs had operated in markets with growing demand.

Three quarters of the entrepreneurs thought that their firm's success was better than that of their most important competitors. Hence, innovators with continuous growth were the most successful SMEs according to the entrepreneurs' own evaluation. Moreover, one quarter of the entrepreneurs in this cluster assessed their firm's business success to have been clearly better than that of their most important competitors. In addition, the proportion of those who were fully satisfied with their firm's business success was the highest in this cluster (23%). The main characteristics of innovators with continuous growth are presented in Figure 6.5.

- a higher percentage of SMEs than in the other clusters operated in growing industry sectors
- significant and stable growth in turnover
- typically, the periods of significant change in turnover were growth periods only
- investments in production and marketing as growth factors in particular
- the youngest firms
- growth-seeking firms
- business ideas were at the earliest stage of development
- typically never been threatened
- growing demand
- success better than that of their competitors
- entrepreneurs were the most satisfied with their firm's success

Figure 6.5 Characteristics of innovators with continuous growth and their life cycles

Networkers with leapwise growth. Altogether 91% of the SMEs in this cluster operated in manufacturing. A higher proportion of SMEs here than in the other clusters operated in production of metal articles, non-metallic mineral products, machines and devices, mechanical woodworking, and tourism.

Most firms were bigger than their counterparts in the other clusters in terms of the number of employees. However, characteristic of this cluster was high variation in terms of firm size. In this cluster, acquisitions and purchases of production units, founding a new establishment and expanding an old one, expansion to new geographic

market areas, or big single random orders, were more commonly growth factors. The firms' turnover had grown rapidly during the last decade. Growth had been leapwise for nine of ten firms. Characteristic of the firms were acquisitions and mergers: almost half (43%) had made acquisitions or mergers. More frequently than in the other clusters the general economic recession was considered to be the cause of the fall in turnover: this was characteristic of three quarters of the SMEs (77%).

In this cluster, increasing interfirm cooperation, and investments in marketing and sales were more commonly changes in the ways of doing business. In general, these firms had changed their ways of doing business more frequently than those in the other clusters. A higher proportion of SMEs here than in the other clusters had consciously defined and specified goals and objectives. Typically, the SMEs were growth-seeking: growth was a primary goal for more than three quarters of the firms (77%). Clearly more SMEs than in the other clusters were in the mature stage of development (stage 4/5).

The proportion of threatened SMEs was the highest in this cluster: altogether, 62% had been threatened. The only slightly more common cause of threat in this cluster was stiff competition and excess capacity in the field. Typical ways of adaptation were financial arrangements and additional financial inputs by the owners, and additional efforts in marketing and export activities. The personnel's flexibility, good network relations, and new customers were of great importance for the survival of these SMEs. Demand had grown in the markets during the previous decade, but it had been slower than in the cluster of innovators with continuous growth.

A higher proportion of the SMEs in this cluster than in the others were classified as the "top firms" in the region. Entrepreneurs thought that their firm's success had been better than that of their most important competitors, though there was much variation among these evaluations. The main characteristics of networkers with leapwise growth are presented in Figure 6.6.

- almost all firms operated in the sectors of manufacturing
- firms were bigger than in the other clusters
- rapid leapwise growth in turnover
- acquisitions and purchases of production units were more commonly growth factors
- the general economic recession was more commonly a cause of the fall in turnover
- the ways of doing business had changed more frequently than in firms in the other clusters
- firms were the most goal-oriented, mainly growth-seeking firms
- the highest proportion of threatened firms
- financial arrangements and additional financial inputs by the owners were more commonly a way of adaptation
- growing demand
- the success of the firms was somewhat better than that of their most important competitors
- the highest proportion of firms classified as the "top firms" in the region

Figure 6.6 Characteristics of networkers with leapwise growth and their life cycles

The major statistical differences in the characteristics of the SMEs and their life cycles between the clusters were found in (1) growth in turnover ($p<.0005$); (2) the nature of the growth in turnover ($p<.0005$); (3) goals for growth ($p<.0005$); (4) the growth in demand in the main markets ($p<.0005$); (5) firm size in terms of number of personnel ($p<.0005$); and (6) business success compared with competitors ($p=.005$). In addition, there were statistical differences between the clusters in (7) firm's age ($p=.012$); (8) number of realized acquisitions and mergers ($p=.014$); (9) family business ($p=.033$); (10) entrepreneur's satisfaction with business success ($p=.035$); and (11) the life cycle stage of business ($p=.036$).

6.5 Strategic choices

Stable independent survivors

Internationalization and the role of local markets. For these SMEs the local market's share in the firm's total sales was higher than for firms in the other clusters. The share of other domestic markets and of foreign markets in the firm's total sales were much lower than for firms in the other clusters. Most firms (60%) did not export. However, of all export firms in the sample, those who had the longest exports experience were located in this cluster. More commonly than average, the SMEs in this cluster exported directly to their foreign customers. Typically these SMEs had no indirect exports: only one third (36%) had. One quarter of the SMEs imported. None of the firms had foreign subsidiaries.

Innovativeness and technology. In this cluster, none of the entrepreneurs considered their firm's products unique in the markets. One sixth considered their products identical to those of their competitors. Most of these firms had neither new products in the markets (63%) nor products with more than 10% annual growth in sales (56%). In other words, they had products with a relatively stable sales volume. Moreover, the proportion of products with a falling sales volume was much higher than in the other clusters. In those who had new products in the markets or products with more than 10% annual growth in sales, the proportion of such products was lower than in the other clusters. On the other hand, the proportion of products with a relatively stable sales volume was much higher, 75-80% on average, than in the other clusters. The typical attitude towards research and development was a striving to improve the quality of existing products, to add to their value, which was the aim for 61% of the SMEs in this cluster.

Specialization. The proportion of SMEs with no coherent and clearly defined customer segments was higher than in the other clusters. The customers of one quarter of the SMEs in this cluster could be regarded as fragmented.

Cooperation and networking. In this cluster, the proportion of those who considered that interfirm cooperation has no importance to the firm (10%) was higher than in the other clusters. Also, almost all the firms who tried to avoid cooperation were in this cluster: they constituted about 10% of the total. Interestingly, these two subgroups of firms reluctant to undertake interfirm cooperation were not composed of the same firms, i.e. some firms considered that interfirm cooperation had no importance to the firm, while others tried to avoid cooperation.

It was striking that more than one quarter of the SMEs (26%) were involved in no cooperation beyond the usual customer relationship. The firms had fewer network relations than firms in the other clusters. However, cooperation relationships were longer in time than in the other clusters, and this might be explained by the firms' older age. When looking at the content of cooperation, the most common types were subcontracting and cooperation in marketing. A smaller proportion of the SMEs in this cluster bought or sold subcontracting than in the other clusters. Fewer than half of the firms (43%) were subcontractors, and two thirds (66%) sold subcontracting. Strategic choices for stable independent survivors are presented in Figure 6.7.

- the role of local markets was important
- export firms had the longest experience in exports
- typically neither indirect exports nor own imports
- no subsidiaries or joint ventures abroad
- products were quite similar to those of their competitors
- there were more products with a relatively stable sales volume than in the other clusters
- R&D focus on improving the quality of existing products to add to their value
- the most fragmented customers
- the most reluctant to undertake interfirm cooperation
- little interfirm cooperation and few cooperation partners
- only a small proportion of the firms bought or sold subcontracting

Figure 6.7 Strategic choices for stable independent survivors

Innovators with continuous growth

Internationalization and the role of local markets. For an average firm in this cluster, sales was divided as follows: one quarter in local markets, half in other domestic markets, and one quarter abroad. However, a notable difference compared with the networkers with leapwise growth was that one third of these SMEs were not export firms. On the other hand, two thirds of export firms had started their exports during the 1990s, which seemed to be associated with these firm's younger age. These SMEs had

fewer different ways of exporting than the SMEs in the other clusters. The most typical ways of exporting were exports directly to the customer, and direct exports with a foreign intermediary. Almost half (46%) had their own imports.

Innovativeness and technology. A high proportion of the SMEs were characterized by their unique products in the markets. Half of the SMEs had products which were unique or rare in the markets. On the other hand, in this cluster there were no firms with products which could be regarded as identical to those of their competitors. Moreover, in this cluster compared with the other clusters, relatively more firms produced new products in the markets: for half of them, at least 10% of their all products were new products in the markets. Characteristic of the SMEs was the high proportion of products with more than 10% annual growth in sales, which was considerably higher than in firms in the other clusters. Four out of five of these SMEs (82%) had products with more than 10% annual growth in sales. The proportions of products with a relatively stable sales volume and with a falling sales volume were lower than in the other clusters.

Compared with the SMEs in the other clusters, the firms were considerably more R&D oriented. Typically (52%), they strove to be the first in the market so as to achieve an adequate advantage over competitors and to be able to seize the opportunities of emerging markets for a new product. More SMEs in this cluster than in the others considered that the firm's production technology was newer than that of their most important competitors. This was the case in one third (35%) of the SMEs. Also, the firm's risk of failure was assessed to be lower than in Finnish firms in general in more of the SMEs in this cluster. There were 35% such firms in the cluster.

Specialization. For these SMEs, the proportion of turnover due to the biggest customers was higher than in the other clusters. One third of turnover was due to the biggest customer, and the three biggest customers together generated half of the firm's turnover.

Cooperation and networking. Half of the SMEs actively looked for new interfirm cooperation relationships, and the rest were interested in investigating cooperation possibilities if some other firm approached them. When looking at the content of cooperation, the most common types were subcontracting and cooperation in research and development. Compared with the other clusters, the use of interfirm cooperation in R&D was more common, whereas interfirm cooperation in purchasing was exceptionally rare among these firms.

Four out of five SMEs bought subcontracting, and almost half were subcontractors. These SMEs who were subcontractors could be divided into two equal-sized groups: those with a small proportion of subcontracting in terms of turnover (less than 20%), and those with a high proportion of subcontracting (more than 50%). Strategic choices for innovators with continuous growth are presented in Figure 6.8.

- two thirds were export firms
- short experience in exporting
- the proportion of firms which had unique or rare products in the markets was higher than in the other clusters
- a high proportion of products with more than 10% annual growth in sales
- R&D-oriented with an attitude of "first in the market"
- the firm's risk of failure was assessed to be lower than in Finnish firms in general in more of the SMEs in this cluster
- a few big customers

Figure 6.8 Strategic choices for innovators with continuous growth

Networkers with leapwise growth

Internationalization and the role of local markets. More firms in this cluster than in the others could be regarded as internationalized. Almost four fifths were export firms. The firms' sales were divided between market areas as in the case of innovators with continuous growth. Almost half of the SMEs had started exporting in the late 1980s and almost half in the early 1990s. These SMEs had a wider range of ways of exporting compared with those in the other clusters. Almost all SMEs with direct exports through their own unit abroad were in this cluster. Also, project exports was emphasized. More SMEs in this cluster than in the others (66%) had indirect exports. Also, more than a half (56%) of the SMEs imported. One fifth had a subsidiary abroad.

Innovativeness and technology. There were relatively fewer SMEs with unique products than in the cluster of innovators with continuous growth. Similarly, the proportion of SMEs with the attitude "we are first in the market" was lower than in the cluster of innovators with continuous growth. However, 38% of the SMEs strove to be the first in the market so as to achieve an adequate advantage over competitors and to be able to seize the opportunities of emerging markets for a new product.

Typically, these SMEs had new products in the markets, and products with more than 10% annual growth in sales. However, such products constituted a small proportion of the total. One fifth of the firms had no products with more than 10% annual growth in sales. Products with a relatively stable sales volume constituted a major proportion of the total, 57-60% on average. Products with a falling sales volume accounted for less than 5% of all products of the firm.

Specialization. The SMEs in this cluster were more specialized in terms of products than firms in the other clusters. Almost all had focused clearly on one product or product area in their production, or they produced a few products or operated in a few related product areas. Similarly, they were more focused in terms of customers than SMEs in the other clusters.

Cooperation and networking. A high proportion of the SMEs considered that interfirm cooperation is of vital importance for the firm (41%). Also, more SMEs in this cluster than in the others actively looked for new interfirm cooperation relationships. This was the case for almost two thirds of the SMEs (62%). High cooperation activity may be explained by bigger size and specialization. Looking at the content of cooperation, the most common types were subcontracting and cooperation in marketing. Interfirm cooperation in purchases and finance were more common than in the other clusters. Negative experiences in cooperation were considerably rarer than in the other clusters.

More SMEs in this cluster than in the others were subcontractors (56%) or bought subcontracting (90%). The proportion of bought subcontracting in terms of turnover was higher than in the other clusters. Strategic choices for networkers with leapwise growth are presented in Figure 6.9.

- the highest proportion of internationalized SMEs
- the most export-oriented cluster of SMEs
- more SMEs with indirect exports than in the other clusters
- own imports
- subsidiaries abroad
- typically, products with a relatively stable sales volume played the major role, but there were also new products in the market, and products with more than 10% annual growth in sales
- the most focused SMEs in terms of products and customers (the most specialized SMEs)
- the most active in cooperation
- they were subcontractors and bought a considerable amount of subcontracting

Figure 6.9 Strategic choices for networkers with leapwise growth

The major statistical differences in the strategic choices for the SMEs between the clusters were found in (1) local market's share in the firm's sales ($p<.0005$); (2) proportion of products with growing volume ($p<.0005$); (3) proportion of products with stable volume ($p<.0005$); (4) uniqueness of the products in the markets ($p=.001$); (5) the number of network relations ($p=.001$); (6) importing ($p=.003$); (7) indirect exporting ($p=.005$); (8) R&D orientation ($p=.007$); and (9) proportion of new products in the markets ($p=.008$). In addition, there were differences between the clusters in (10) subsidiaries or joint ventures abroad ($p=.012$); (11) bought subcontracting as a share of turnover ($p=.042$); and (12) attitude towards interfirm cooperation ($p=.044$).

6.6 Success and survival factors

Structured success factors

Stable independent survivors. SMEs in this cluster valued good knowledge of products, personnel with advanced knowledge, and ability to respond flexibly to customers' special needs and requirements more than did SMEs in the other clusters. The main differences between these SMEs and innovators with continuous growth were in two success factors: these firms – like networkers with leapwise growth – attached more importance to low total costs and direct selling. There was, however, much variation in the importance of the latter success factor.

On the other hand, compared with those in the other clusters, these SMEs attached less importance to planning, internationalization, strong growth in demand, good relations with distribution channels, acquaintance with an influential distribution channel, public consulting support, public financial support, and private consulting. However, there was much variation in the importance of the last five success factors. The importance of internationalization was studied for internationalized firms only. Stable independent survivors valued good cooperation partners and relations less than did networkers with leapwise growth, and continuous development less than did innovators with continuous growth.

Innovators with continuous growth. SMEs in this cluster valued continuous development, good after-sales service, low costs in financing, strong basic values of the firm, flexible use of family members as a work force (in family firms), good production premises and equipment, and multifunctional production equipment more than did SMEs in the other clusters. In addition, for a significant number of the SMEs in this cluster, difficult-to-imitate knowledge-based production systems and public consulting support were more important than for the SMEs in the other clusters. The importance of flexible use of family members as a work force was studied for family firms only. Moreover, this cluster differed from the stable independent survivors in the importance attached to planning and internationalization, which were valued more highly by innovators with continuous growth and by networkers with leapwise growth.

On the other hand, SMEs in this cluster valued direct selling and incremental development instead of radical changes less than did SMEs in the other clusters. However, there was much variation in the importance of the first success factor. Innovators with continuous growth valued personnel with advanced knowledge less than did stable independent survivors, and good cooperation partners and relations less than did networkers with leapwise growth.

Networkers with leapwise growth. SMEs in this cluster attached more importance than did SMEs in the other clusters to good cooperation partners and relations, low total costs, good information and control systems, investment payments by self-financing, adequate slack resources for maintaining firm's flexibility, and low delivery and transportation costs. In the case of the last success factor, there was, however, much variation between the firms in its perceived importance. Planning was emphasized more by networkers with leapwise growth than by stable independent survivors. Internationalization was valued more highly by internationalized networkers with leapwise growth than by internationalized stable independent survivors.

Networkers with leapwise growth valued personnel with advanced knowledge less than did stable independent survivors, and continuous development less than did innovators with continuous growth.

There were no statistically significant differences in success factors between the clusters. The importance of low costs in financing differed statistically almost significantly (p=.051) between the clusters.

In all clusters, the highly important (importance 6 or 7) success factors were good knowledge of customers and their needs, long-term customer relations, good reputation of the firm, quality of raw materials and reliable suppliers, cooperative personnel, fast and reliable delivery, continuity of key persons, good inter-personal relations with customers and suppliers, simple and flexible organization, high-quality products, ability to find quick solutions for changing customer needs, customer feed-back, quality of management, availability of skilled staff, good marketing skills, environmental scanning, clear-cut identity of the firm, good financial base and adequate cash resources, continuity of personnel, and anticipation of new business opportunities.

In all clusters, the fairly important (importance 4 or 5) success factors were personnel training, strong inter-dependency with customers, simple and low-cost production technique, small number of owners, and difficult-to-imitate product.

In all clusters, the least important (importance 1, 2, or 3) success factors were good terms of payment, weak competition, and external owners. However, it is worth noting that in all clusters, there were much variation between the SMEs in the importance of the success factors that were evaluated as fairly important or the least important.

Next, the differences in success factors between the three clusters of SMEs were studied on the basis of the results of factor analysis by selecting three items with the highest loadings of each factor and combining them into one new variable representing the factor in question. The reliability of the new variables was examined by calculating

an alpha coefficient (Cronbach 1951) across the three items with the highest factor loadings within each factor. Alpha coefficients ranged from 0.73 to 0.83, so they represent acceptable reliability.

Among the seven factors, two statistically significant differences between the clusters of SMEs were found (Table 6.4). Both of these factors, chain management (factor 4) and leveraging external advisers and public financial aid (factor 6), were considered to be less important by stable independent survivors (cluster 1) than by innovators with continuous growth (cluster 2) or by networkers with leapwise growth (cluster 3). This was consistent with the cluster profiles because stable independent survivors were small local firms selling their products directly to end-users, or their delivery channels were very simple, they rarely used any external advisor services, and they had no access to public financial aid. Also, it was notable that the importance of both of these factors was quite low when one looks at the total factor score means.

Table 6.4 Univariate analysis of variance for success factors

Success factors[a]	$F_{2, 140}$	Level of significance	Means for clusters 1	2	3	Total factor score means
1 Proactiveness, flexibility, and distinctiveness	1.70	.19	4.79	5.22	5.39	5.09
2 Planning and risk management	2.61	.08	4.55	5.14	5.25	4.93
3 Motivated personnel and high level customer service	.61	.55	5.88	5.79	5.62	5.79
4 Chain management	6.34	<.01**	3.11	4.12	4.24	3.74
5 Product knowledge	1.93	.15	5.11	5.55	5.70	5.41
6 Leveraging external advisers and public financial aid	4.82	<.01**	2.11	2.89	2.90	2.58
7 Relationship management and customer closeness	1.09	.34	5.66	5.89	5.50	5.71

[a.] each success factor consists of three items with the highest factor loadings

Unstructured success factors

The importance of unstructured success factors was not identical between the clusters of SMEs. Their rankings in each cluster are presented in Table 6.5.

Stable independent survivors. Among the SMEs in this cluster, more importance was attached to the entrepreneur's personal contribution and flexibility in business, whereas clearly less importance was attached to planning, goal-orientedness and perseverance than in the firms in the other clusters. The role of the entrepreneur was important because of the firms' smallness and their more limited and slowly growing markets, so that keeping existing customers was important for them. Also, good reputation of the firm and the trust of customers were success factors typical of these firms only.

Table 6.5 Rankings of unstructured success factors by clusters

	Success factors	Stable independent survivors	Innovators with continuous growth	Networkers with leapwise growth
1	Intimate customer relationships	1	2	1
2	Skilled personnel	3	1	1
3	Right total quality	2	3	4
4	Innovativeness and R&D	5	4	1
5	Planning, goal-orientedness, and perseverance	10	5	5
6	Entrepreneur's professional skill	6	6	7
7	Entrepreneur's personal contribution	3	8	>13
8	Advanced technology	10	7	7
9	Strict cost control	8	>13	7
10	Reliable and flexible delivery	9	8	10
11	Focusing on core business	>13	8	5
12	Flexibility in business	6	11	>13
13	Interfirm cooperation	13	>13	11

Innovators with continuous growth. Planning, goal-orientedness and perseverance, skilled personnel, and advanced technology were more frequently considered the most critical for the firm's success by the SMEs in this cluster than by those in the other clusters. Strict cost control was not as important as it was for the firms in the other clusters. Innovators with continuous growth operated in growing and very often global markets, and they put a strong emphasis on research and development. They may be able to determine the prices for their new innovative products quite independently, and for this reason costs did not play so important a role.

Networkers with leapwise growth. In this cluster focusing on core business was more frequently considered the most critical for the firm's success, whereas the entrepreneur's personal contribution as a success factor was mentioned much more rarely than in the other clusters. These networkers with leapwise growth had focused on their core business and outsourced their other business activities. Also, these network-intensive companies were bigger than SMEs in the other clusters, and therefore had a bigger scale of operation.

Survival factors

The rankings of survival factors were much the same in each of the three clusters of SMEs (Table 6.6). Some variation between the clusters, however, could be found. In addition to their rankings, i.e. the order of frequencies of survival factors, the absolute differences in frequencies were taken into consideration. Hence, the survival factors emphasized in each cluster cannot be identified solely on the basis of Table 6.6.

Table 6.6 Rankings of survival factors by clusters

	Survival factors	Stable independent survivors	Innovators with continuous growth	Networkers with leapwise growth
1	Personnel's contribution and flexibility	2	1	1
2	Good relationships with external stakeholders	1	5	2
3	Early reaction to problems and decision making without delay	4	1	3
4	Good financial position	2	6	3
5	Belief in the future	6	1	5
6	Entrepreneur's personal contribution	4	4	8
7	Cost reductions	6	6	7
8	Acquisition of new customers and increased efforts in marketing	9	8	6
9	Goal-orientedness and ability to distinguish essentials	8	10	-
10	Risk management	9	10	8
11	Widely-applicable and advanced technology	9	8	-

Stable independent survivors. The most critical survival factors more typical of this cluster than of the other clusters were cost reductions, good relationships with external stakeholders, and good financial position.

Innovators with continuous growth. The most critical survival factors more typical of this cluster than of the other clusters were early reaction to problems and decision making without delay, and belief in the future.

Networkers with leapwise growth. The most critical survival factors more typical of this cluster than of the other clusters were personnel's contribution and flexibility, good relationships with external stakeholders, acquisition of new customers, and increased efforts in marketing.

6.7 Summary and conclusions

Successful SMEs were grouped into three clusters according to their growth mode and strategies. The three empirical configurations identified in this study describe the profiles of successful SMEs. The first cluster, stable independent survivors, consisted of SMEs operating mainly in local markets. The other two clusters encompassed growth-oriented SMEs but the underlying nature of growth was different in each cluster. SMEs in the second cluster could be characterized as innovators with continuous growth: these were SMEs offering new products in growing markets. SMEs in the third cluster were bigger than their counterparts in the other clusters. They were efficiency oriented and network intensive, and their growth mode could be characterized as leapwise. The main differences between the clusters are presented in Appendix 4.

Stable independent survivors (n = 57). Growth was not the primary goal for these firms, and they had not grown much during recent years. They were often family firms in local markets with stable demand. Their products were quite similar to those of their competitors, and sales volumes were stable. Their customers was more fragmented than those of firms in the other clusters. They had few network relations, and their attitude towards interfirm cooperation could be described as reluctant. Their success was based on high-standard customer service and flexibility in adapting to their customers' special needs. Often, the survival of local firms is dependent on high-level know-how and good reputation among customers (cf. Kettunen 1985: 31). The CEO's own contribution was critical for the firm's success. Entrepreneurship could be interpreted here as a way of living and as small business ownership rather than maximizing profits. When facing serious crises, a common way to adapt was to minimize costs.

These firms were also older than those in the other clusters. Entrepreneurs had rarely any prior experience in business as venture owner. A clearly bigger proportion of the firms in this cluster than in the other clusters were led by women. The entrepreneurs did not rank their firms' success compared with that of their most important competitors as highly as did entrepreneurs in the other clusters. As a matter of fact, they thought that their firms had succeeded as well as their most important competitors.

Innovators with continuous growth (n = 52). These SMEs had strong growth aspirations, and they had shown significant growth. Moreover, they operated in growing and very often global markets. Usually they were at the beginning of their life cycle, often in the growth stage. These SMEs strongly emphasised research and development. They had new products with strong growing sales volumes and many of these products were unique in the market. They had a few big clients, and most of these SMEs exported. Their success was based on their innovativeness (cf. Lehtonen 1997; Wiklund 1998). However, the ability to offer good after-sale services, low financing costs, planning, and consistency in decision making were also very important for the success of these firms. In addition, strong basic values of the firm were important for these firms, which may indicate a strong culture of the firms (e.g. Schein 1985). A strong culture has been found to be characteristic of successful firms by many investigators, for instance Peters and Waterman (1982) and Deal and Kennedy (1987). Moreover, Sveiby (1992: 185) claimed that a strong culture is a success factor for a know-how company because it reduces the need for formal control in management. On the other hand, a strong culture is often related with long-lived firms: in this case, the innovators with continuous growth were the youngest firms that were studied. Early reaction to problems and openness in problem solving were crucial for their survival when they faced serious problems (see Eisenhardt 1989b).

This cluster was also characterized by the entrepreneurs' younger age compared with those in the other clusters. The entrepreneurs had had prior work experience, particularly in planning and R&D. These entrepreneurs thought that their firms had succeeded clearly better than their most important competitors (cf. McCann 1991). Moreover, they were the most satisfied with their firm's success. This is in line with previous findings showing that pioneer firms or first movers have advantages over their competitors in terms of higher profits and bigger market shares (see e.g. Schumpeter 1934; Lieberman & Montgomery 1988).

Networkers with leapwise growth (n = 34). These SMEs were bigger than SMEs in the other clusters. They were growth seeking, and had experienced significant leapwise growth. Many of them operated in traditional industry sectors, and demand in the market had grown slightly. These firms had the clearest goals and objectives in business. Often the leapwise nature of their growth could be explained by acquisitions, which have been found to be particularly important for bigger firms (Davidsson & Delmar 1998; see also Anslinger & Copeland 1996). The sales volumes of their products were quite stable but a considerable proportion of their products also had a growing sales volume. These SMEs could be characterized as internationalized, specialized and network intensive. They had the most globalized ways of doing business: they both exported and imported, and many had subsidiaries or joint ventures abroad. These firms were the most concentrated on narrow product ranges and customer segments. Also, these SMEs were the most active in interfirm cooperation, and they used subcontracting extensively. Their success was based on focusing on their core business, good network partners, and reliable information systems (cf. Donckels & Lambrecht 1995). For their survival, the personnel's flexibility, good network partners and relations, and new customers were considered to be important.

In addition, typical of this cluster was the fact that more of the entrepreneurs than in the other clusters had prior work experience in management and tasks requiring mathematical skills. In these SMEs, firm success was considered to be slightly better than that of their most important competitors.

The first cluster, labelled 'Stable independent survivors', differed from the others because of the firms' reluctant attitude towards growth and their conservative (Covin 1991) characteristics. The CEOs in this cluster could be called small business owners rather than entrepreneurs (see Carland et al. 1984). They create a small number of new jobs (cf. Storey 1993; Birch et al. 1993). The other two clusters consist of growth firms. The entrepreneurs perceived their firms' success to be better in these clusters than in the first cluster. The second cluster, labelled 'Innovators with continuous growth', represented an entrepreneurial configuration with organic growth, while growth in the third cluster, 'Networkers with leapwise growth', was based, to a significant extent, on non-organic growth, e.g. growth by acquisitions.

In the latter two growth clusters, the competitive advantages seem to be related to the firm's innovativeness or to the efficiency of operations (cf. Zammuto 1988; Brittain & Freeman 1980; Miles & Snow 1978). For a firm's long-term success, using one of these approaches but not both has been claimed to be crucial (Bantel 1998: 208). Innovators with continuous growth were pioneers, with an attitude "we are the first in the market". On the other hand, networkers with leapwise growth emphasized efficiency and exploitation of existing business opportunities. The association between the firm's greater development orientation and generally better performance outcomes has been confirmed by McMahon (2001), for example.

Hence, the first cluster differs sharply from the others. This distinction reflects especially the difference between non-growth and growth firms. The second distinction between the two growth clusters reflects the difference between incremental and organic, and leapwise, non-organic growth, in particular. However, in interpreting the results it should be noted that some characteristics are clearly shared by at least two of the types of SMEs (cf. e.g. Hornaday 1990; Woo et al. 1991).

Regardless of how desirable it would be, it is impossible to make comparisons between the results of this study and those of previous ones, for several reasons (see Bailey 1994: 33). First, each study has its own design, which has a major impact on the results obtained. Second, the criteria used to classify entrepreneurs, firms, or their strategies are different to some extent in each study. Third, the variables employed in each study are different. Fourth, differences in samples and their characteristics may limit direct comparisons. However, on the one hand, the results obtained here have some obvious similarities with those presented in the literature, as illustrated in Table 6.7. On the other hand, many configurations presented in the literature cross and overlap the configurations revealed in this study (see e.g. Galbraith & Schendel 1983; Gartner et al. 1989; Lafuente & Salas 1989; McDougall & Robinson 1990; Merz et al. 1994; Greene et al. 1997a).

The *stable independent survivors* have many linkages with Smith's (1967) 'craftsmen', Stanworth and Curran's (1976) 'artisans', Filley and Aldag's (1978) 'crafts', Miles and Snow's (1978) 'defenders' and 'reactors', Porter's (1980) 'cost leadership strategy', Carland et al.'s (1984) 'small business owners', Covin's (1991) 'conservatives', Birch et al.'s (1993) 'mice', Johannisson's (1993) 'artisan owner managers', Storey's (1994) 'trundlers', Bridge et al.'s (1998) 'small business proprietors', and Mintzberg's (1973) 'adaptive strategy-making mode'.

Stable independent survivors share many characteristics with Kettunen's (1985: 31-33) 'local market firms', which focus on serving customers in local markets emphasizing good and flexible customer service. Reflecting Mintzberg's (1973) modes of strategy making, characteristic of these firms was an 'adaptive mode' which is characterized by the lack of clear goals, reactive behavior, incrementalism, and

inconsistency of decisions. Miles and Snow (1978) have called firms which reactively adapt to changes in the markets and look for stability ‘reactors’ and ‘defenders’.

Similar to stable independent survivors are Smith’s (1967) ‘craftsmen’, who have little interest in firm development and in managerial tasks. Stanworth and Curran (1976) have called such entrepreneur ‘artisans’ who want to secure their livelihood and continuity in business, and independence. In such firms, the entrepreneur is involved in the work on the shopfloor. Growth is not a primary goal for such firms. In addition, female entrepreneurs play a significant role in this cluster, and growth is rarely an objective of their firms (e.g. Koskinen 1996). In general, for stable independent survivors, entrepreneurship is a way of living rather than a way of profit maximization (cf. Bridge et al. 1998: 140-142).

Table 6.7 A comparison of configurations

Author	Stable independent survivors	Innovators with continuous growth	Networkers with leapwise growth
Smith (1967)	craftsmen	opportunists	
Mintzberg (1973)	adaptive mode	entrepreneurial mode	planning mode
Stanworth & Curran (1976)	artisan	classical entrepreneur	manager
Filley & Aldag (1978)	craft type	promotion type	administrative type
Miles & Snow (1978)	defenders/reactors	prospectors	analyzers
Porter (1980)	cost leadership strategy	differentiation strategy	focus strategy
Carland et al. (1984)	small business owner	entrepreneur	
Zammuto (1988)		first-to-market approach	efficiency approach
Covin (1991)	conservative firms	entrepreneurial firms	
Birch et al. (1993)	mice	gazelles	
Johannisson (1993b)	artisan owner manager	entrepreneur	professional
Storey (1994)	trundlers	fliers	
Bridge et al. (1998)	small business proprietors	business professionals	

Innovators with continuous growth resemble Smith’s (1967) ‘opportunists’, Stanworth and Curran’s (1976) ‘classical entrepreneurs’, Filley and Aldag’s (1978) ‘promotion type’, Miles and Snow’s (1978) ‘prospectors’, Porter’s (1980) ‘differentiation strategy’, Carland et al.’s (1984) and Johannisson’s (1993) ‘entrepreneurs’, Covin’s (1991) ‘entrepreneurial firms’, Storey’s (1994) ‘fliers’, and Mintzberg’s (1973) ‘entrepreneurial strategy-making mode’. Innovators with continuous growth share features with Birch et al.’s (1993) ‘gazelles’, Storey’s (1993) ‘fliers’, and Bridge et al.’s (1998) ‘business professionals’. These firms have a ‘first-to-market approach’ (Zammuto 1988) in business.

Innovators with continuous growth share features of Smith’s (1967) ‘opportunists’. Both are characterized by calculative behavior in identifying, creating and exploitation of new business opportunities. Many similarities can be found in Stanworth and Curran’s (1976) ‘classical entrepreneur’ who seizes the opportunity and

has economic-oriented goals. Such entrepreneurs aim at firm growth as a mean of achieving higher profitability. Their strategy making can be described as 'entrepreneurial mode', i.e. they are actively searching for new business opportunities, have growth as the firm's primary goal, an entrepreneur is the decision-maker, and they take bold initiatives (Mintzberg 1973). Miles and Snow (1978) called those firms 'prospectors' who were characterized by flexible structure, search for new business opportunities, and initiative. The entrepreneurs of the innovators with continuous growth had had prior work experience, especially in planning and R&D. Close to innovators with continuous growth are also the 'entrepreneurs' identified by Chell and Haworth (1992: 98-99).

Networkers with leapwise growth are close to Stanworth and Curran's (1976) 'managers', Filley and Aldag's (1978) 'administrative type', Miles and Snow's (1978) 'analyzers', Porter's (1980) 'focus strategy', and Johannisson's (1993) 'professional managers'. They share features with Birch et al.'s (1993) 'gazelles', Storey's (1994) 'fliers', and Bridge et al.'s (1998) 'business professionals'. These firms have an 'efficiency approach' (Zammuto 1988) in business.

Networkers with leapwise growth share characteristics of Stanworth and Curran's (1976) 'manager', who seeks for recognition and firm growth as a primary goal. The entrepreneur focuses on managerial tasks and is not involved in production. Such a firm is usually bigger than in the case of a classical entrepreneur and is often growth seeking. Networkers with leapwise growth have linkages with 'planning mode' as a strategy-making mode (Mintzberg 1973), which emphasizes the role of analysis and planning. Miles and Snow (1978) have called those firms 'analyzers', who put much emphasis on environmental scanning, and desire to match new ventures to the present shape of the business. They emphasize the efficiency of production when they operate in stable environments, and introduction of new innovations in changing environments.

According to Vesper (1990: 184), efficient management information systems are important for high growth firms. Characteristic of the networkers with leapwise growth was the entrepreneurs' prior work experience in management and tasks requiring mathematical skills. As success factors, they emphasized the importance of good information and control systems, and the financial management. Networkers with leapwise growth sought competitive advantage through the efficiency of operations by means of larger production volumes and division of labour, i.e. with specialization and good interfirm cooperation relations. It would be interesting to discover how leapwise growth and network relations can be combined, i.e. how the network can adapt or is adapted to the revolutionary change? Another interesting question is whether firm growth is based on market-pull (a big client) or on the firm's strong growth aspiration.

There was some variation in success factors between the types of SMEs (cf. Ghosh et al. 2001). Hence, the results give some clues for the successful actions of SMEs in different conditions and circumstances. It should be noted that most of the factors mentioned in the structured statements were considered to be important by all SMEs, regardless of which cluster they were in. One reason for this may lie in the method used, since the responses accumulated on the upper end of the scale. In addition, there were differences in the emphasis and valuation of many success factors in each cluster, and these differences – though they were not always statistically significant – revealed a consistent pattern of factors related to firm success in each cluster. The rankings of the survival factors were much the same in each of the three clusters, though some survival factors were more emphasized in one cluster than in the others.

The empirical taxonomy of successful SMEs constructed in this study shares similarities with previous typologies and taxonomies of entrepreneurs, firms, and their strategies. Reconfiguration, i.e. a firm's transition from one cluster to another, can be regarded as unlikely at least in the short term because of the significant differences between the firms and the foundations of success in different clusters. Binks and Vale (1990) also found that the success factors of firms differ considerably between the types of firms. Eggers et al. (1994) found that different areas of know-how are ranked in different orders of importance in high-growth firms and in moderate-growth firms. However, Hornaday (1990: 29) and Vesalainen (1995: 59-61), among others, have found that the core features of the types of firms remain similar over time.

7 A COMPARISON OF THREATENED AND NON-THREATENED SMES

7.1 Differences between threatened and non-threatened SMEs

SMEs that had never had any threat to their existence were compared with those that had sometime been in such a situation, and had survived. This was done first among all SMEs in the sample, and then within each cluster of SMEs. The differences between the two groups of SMEs, which were valid in all clusters, are presented in Appendix 6. However, it should be noted that the differences between the groups cannot be tested for all variables. Comparing SMEs in these two groups could help throw light on the success strategies of SMEs. On the one hand, the results may make it possible to determine how some SMEs have succeeded in avoiding situations where their counterparts have come under threat. Moreover, the results can reflect the learning of entrepreneurs in the threatened SMEs.

In the search for the differences between the groups of threatened and non-threatened SMEs, firstly all statistically testable variables were tested using – depending on the variable – the t test, non-parametric Mann-Whitney U test, or chi square (χ^2) test. The differences revealed by statistical analysis ($p<.10$) are presented in Tables 7.1-7.4. Those differences were also assessed by means of canonical discriminant analysis. It should be noted that the calculation of differences between the two groups was based on the values of variables in the whole sample, and thus the clusteral variation was not taken into account in this examination. The analyses by clusters follows the analysis based on the whole sample.

Seven statistically significant ($p<.05$) and two statistically almost significant ($.05<p<.10$) differences between the two groups were found to be valid in the whole sample (Table 7.1). In SMEs that have never had any threat to their existence, respondents were more satisfied with business success than were those in other SMEs. Almost all respondents of non-threatened SMEs (97%) were satisfied with their business success, whereas only two thirds of entrepreneurs of threatened SMEs (68%) held such a view. Also, more entrepreneurs of non-threatened SMEs thought that their firm's business success had been better than that of their competitors. Among the non-threatened SMEs, 22% of entrepreneurs thought that their firm's business success had been better than that of their competitors, whereas among threatened SMEs, 13% of entrepreneurs held this view.

No differences between the groups were found in entrepreneurs' backgrounds. A threat to existence or the absence of such a threat was strongly related to SMEs in two industry sectors, in particular. Namely, 83% of SMEs in the food industry had never faced any threat to their existence, whereas 86% of SMEs in the building material industry had encountered such a situation. Threat could not be explained by the age of firms in these two industry sectors since the SMEs in the food industry were older than those in the building material industry. The economic recession in Finland in the 1990s, which affected particularly firms in the building sector, may provide one explanation for these findings. However, due to the smallness of the samples in each industry sector, statistical analysis by industry sectors was impossible.

More threatened SMEs than others had experienced periods of decline with more than 20% annual change, their growth in terms of turnover had been fluctuating in recent years, and they had had more changes in their business base and in the ways of operating. More threatened SMEs than others reported the economic recession as a reason for the decline of turnover. Also, the role of the domestic market's – except the local market's – share in the firm's sales was higher. In other words, threatened SMEs sold less in local markets as well as in export markets. Firms exporting projects seemed to be more liable to threat than others. Threatened SMEs were older than non-threatened SMEs, as revealed by the chi square test, for which the SMEs were divided into two categories: those aged 9 years or younger, and those aged more than 9 years old. However, it should be noted that the t test could not identify the difference.

Growth factors more typical of threatened SMEs than of others were starting and expanding exporting, and cooperation arrangements. It seems that these had been used as ways of adapting. Threatened SMEs showed more positive attitudes towards interfirm cooperation. They were more active in searching for new interfirm cooperation relations than non-threatened SMEs. Moreover, at the time of investigation, these SMEs had more ways of cooperation than other SMEs ($t=1.696$; $df=141$; $p=.092$). They had used interfirm cooperation in purchasing and production as a way of adapting, and it had offered them advantages of scale and enabled the firm to specialize. Indeed, specialization as a change in the ways of operation was more common in threatened SMEs than in other SMEs. Therefore, specialization may be interpreted as a way of adapting that provides efficiency in the use of resources, and thus it may be important for achieving competitive advantage. More threatened SMEs than others bought subcontracting, and also both bought subcontracting and sold subcontracting as a share of turnover were slightly higher in the case of threatened SMEs than others. Moreover, SMEs led by an entrepreneurial team were less likely to come under threat. Also, most of the SMEs who had interfirm cooperation in financing had never been threatened. Hence, interfirm cooperation in financing may be interpreted as a way of avoiding threat.

There were no statistically significant differences in success factors between the two groups of SMEs. However, the difference was statistically almost significant for one success factor, 'ability to find quick solutions for changing customer needs', which was valued more highly by the threatened SMEs than by the non-threatened SMEs. In addition, threatened SMEs attached slightly more importance to strong growth in demand, public and private consulting, and good cooperation partners and relations, the last of which was also considered important for firm survival. Flexibility and anticipation of new business opportunities were valued by threatened SMEs, which may indicate that they had learned from the threat and how to avoid threats. The survival factors typical of threatened SMEs were belief in the future and good relationships with external stakeholders. On the other hand, non-threatened SMEs valued more than others the importance of personnel with advanced knowledge, and investment payments by self-financing. High quality of products, quality of management, and fast and reliable delivery were also considered to be slightly more important by non-threatened SMEs than others. These may be factors which were considered important for avoiding the threats.

Table 7.1 Statistical differences between threatened and non-threatened SMEs

Variables	Test	p value
Entrepreneur's satisfaction with business success	U test (z = -3.525)	<.0005
No. of periods of significant decline	χ^2 = 12.759 (df = 1)	<.0005
Nature of growth in turnover	χ^2 = 10.324 (df = 1)	.001
Firm age	χ^2 = 5.996 (df = 1)	.014
Attitude towards interfirm cooperation	U test (z = -2.303)	.021
Changes in the business base	U test (z = -2.141)	.032
Other domestic market's share in the firm's sales	t = 1.996 (df = 141)	.048
Business success compared with competitors	U test (z = -1.841)	.066
Ability to find quick solutions for changing customer needs	t = 1.708 (df = 132)	.090

A canonical discriminant analysis was performed on those two groups and nine variables (see Appendix 5). One canonical discriminant function was significant in distinguishing among the groups ($p<.0005$). The discriminant analysis revealed that the discriminant function had an eigenvalue of 0.414 with canonical correlation of 0.54. Wilks' lambda value for the function was 0.707. Thus, the discriminant model explained 29.3% of the total variance between the two groups (df=9, $p<.0005$).

Standardized discriminant coefficients indicate the predictive power of single variables of the model. The following variables with over 0.3 value of standardized canonical discriminant function coefficients had the highest predictive power: no. of periods of significant decline, entrepreneur's satisfaction with business success, changes in the business base, and other domestic market's share in the firm's sales. A new discriminant model built on the four variables mentioned above explained 24.1%

of the total variance between the groups (df=4, p<.0005). According to the degree of predictive accuracy measured by the percentage of cases classified correctly, 76.1% of the cases were correctly classified, clearly greater than could be achieved by chance alone. Furthermore, 70.4% of the cross-validated (Lachenbruch 1975) grouped cases were correctly classified. However, goodness of the discriminant model was not especially high, indicating that numerous factors differentiate threatened and non-threatened SMEs, or that the factors differ in different types of SMEs. Consequently, it seems to be advisable to study those differences within a homogeneous strategic groups of SMEs.

7.2 Stable independent survivors

Next, comparisons between the two groups were performed within each SME cluster. The procedure was the same as that described above. The differences between non-threatened and threatened stable independent survivors are presented in Appendix 6. Statistically significant (p<.05) and almost significant (.05<p<.10) differences between the two groups are presented in Table 7.2.

Among stable independent survivors that had never had any threat to their existence, entrepreneurs thought that their firms' competitive power in the market of the main products was stronger than that of other SMEs. The entrepreneurs of non-threatened SMEs seemed to have had longer prior work experience than others. Also, prior managerial experience seemed to be more typical of entrepreneurs of non-threatened SMEs. Hence, long prior work experience including managerial tasks seemed beneficial for avoiding threats.

There seemed to be some variation in threat between industry sectors, e.g. most SMEs in the metal industry had been threatened, whereas most SMEs in the food industry or business services had never been threatened. This suggests that SMEs bound up with the demand of local markets might have avoided threat better than others.

The proportion of products with stable volume was higher, and the proportion of turnover due to the biggest customer lower, in non-threatened than in threatened SMEs. Local market's share in the firm's sales was slightly higher in non-threatened SMEs, and they also had stayed close to their initial business. Over the years, principles and practices of management had changed less in non-threatened SMEs than in others. Non-threatened SMEs also valued more highly the success factors typical of the SMEs in this cluster. They typically had no interfirm cooperation. On the other hand, threatened SMEs had more positive attitudes towards interfirm cooperation than others. More of them than others were subcontractors and bought subcontracting.

Therefore, it seemed that non-threatened SMEs had reduced their business risks by their own choices.

There were no statistically significant differences in success factors between the two groups of SMEs. However, the differences were statistically almost significant for three success factors: personnel with advanced knowledge, ability to respond flexibly to customers' special needs and requirements, and availability of skilled staff. Non-threatened SMEs attached more importance than others to factors related to know-how, personnel and good customer service, and strict cost control, which can be considered important for avoiding potential problems. On the other hand, threatened SMEs attached more importance to the success factors related to supplier relations, slack resources and anticipation of new business opportunities than others did. They also attached more importance to the entrepreneur's personal contribution. As survival factors, personnel's contribution and flexibility, entrepreneur's personal contribution, and goal-orientedness and ability to distinguish essentials were considered more important by threatened SMEs.

Table 7.2 Statistical differences between the groups in the cluster of stable independent survivors

Variables	Test	p value
Competitive power in the market of the main products	U test (z = -2.782)	.005
Proportion of products with stable volume	t = -2.693 (df = 46)	.010
Proportion of products with growing volume	t = 2.236 (df = 52)	.030
Proportion of turnover due to the biggest customer	t = 2.221 (df = 38)	.032
Changes in the business base	U test (z = -2.112)	.035
Personnel with advanced knowledge	t = -1.889 (df = 51)	.065
Sold subcontracting	χ^2 = 3.185 (df = 1)	.074
Attitude towards interfirm cooperation	U test (z = -1.761)	.078
Ability to respond flexibly to customers' special needs and requirements	t = -1.748 (df = 53)	.086
Availability of skilled staff	t = -1.706 (df = 50)	.094
Length of prior work experience	t = -1.701 (df = 51)	.095

A canonical discriminant analysis was performed on the two groups and eleven variables (Appendix 5). However, a canonical discriminant function was not significant in distinguishing among the groups (p=.140). Consequently, variables with over 0.3 value of standardized canonical discriminant function coefficients were used in creating a new discriminant model. These variables were competitive power in the market of the main products, availability of skilled staff, proportion of turnover due to the biggest customer, length of prior work experience, and proportion of products with stable volume. Now, one canonical discriminant function was significant in distinguishing among the groups (p=.005). The discriminant function had an eigenvalue of 0.672 with canonical correlation of 0.63. Wilks' lambda value for the function was 0.598. Thus, the new discriminant model built on the five variables

mentioned above explained 40.2% of the total variance between the groups (df=5, p=.005). According to the degree of predictive accuracy measured by the percentage of cases classified correctly, 83.8% of the cases were correctly classified, considerably greater than could be achieved by chance alone. Furthermore, 75.7% of the cross-validated (Lachenbruch 1975) grouped cases were correctly classified.

7.3 Innovators with continuous growth

The differences between non-threatened and threatened innovators with continuous growth are presented in Appendix 6. Statistically significant ($p<.05$) and almost significant ($.05<p<.10$) differences between the two groups are presented in Table 7.3.

In contrast to threatened SMEs, entrepreneurs of non-threatened SMEs were almost all founders of their firms, and they often came from the local area. More entrepreneurs of non-threatened SMEs than of threatened SMEs had prior work experience in production. Also, more non-threatened SMEs than others were led by an entrepreneurial team. Among industry sectors, most SMEs in the sector of business services had been threatened, whereas threat had been rare in SMEs in the mechanical woodworking industry and tourism.

The R&D attitude “we are the first in the market” was considered more important by threatened SMEs, though all SMEs in this cluster could be characterized as pioneers in the market. Also, the proportion of new products in the markets was higher in threatened SMEs than in others. This may increase the liability to risk and so the possibility of becoming threatened. However, these SMEs actively looked for new cooperation relations, which may be a way of both sharing risk and surviving.

On the other hand, in the case of non-threatened SMEs, the local market’s share in the firm’s sales was higher, and they rarely imported. They applied newer technology than others, and they aimed rather at improving the existing products than creating new ones. Typically, they did not look for new cooperation relations but they were interested in investigating cooperation possibilities if some other firm approached them. Therefore, it seems that the business risk of non-threatened SMEs might be lower than that of others.

There were two statistically significant differences in success factors between the two groups of SMEs. In threatened SMEs, good inter-personal relations with customers and suppliers and long-term customer relations were considered to be more important success factors than in other SMEs. In addition, success factors related to continuity of personnel and firm flexibility were considered to be more important by threatened SMEs than by others. On the other hand, non-threatened SMEs considered slightly more important cooperative personnel, good information and control systems,

and high quality of products. Planning, skilled personnel, personnel training, focusing on core business, and reliable delivery were more important for non-threatened than for threatened SMEs. Non-threatened SMEs considered early reaction to problems and decision making without delay, and entrepreneur's personal contribution to be important survival factors. These referred to the factors which may have been important for avoiding threat.

Table 7.3 Statistical differences between the groups in the cluster of innovators with continuous growth

Variables	Test	p value
Local market's share in the firm's sales	t = -3.810 (df = 46)	<.0005
Good inter-personal relations with customers and suppliers	t = 2.815 (df = 50)	.007
Long-term customer relations	t = 2.709 (df = 47)	.009
R&D orientation	U test (z = -2.289)	.022
Importing	χ^2 = 4.645 (df = 1)	.031
Founder	χ^2 = 4.209 (df = 1)	.045
Founders' place of living	χ^2 = 3.534 (df = 1)	.060

As a result of the canonical discriminant analysis on the two groups and seven variables, one canonical discriminant function was significant in distinguishing among the groups (p=.046) (Appendix 5). The discriminant function had an eigenvalue of 0.533 with a canonical correlation of 0.59. Wilks' lambda value for the function was 0.652. Thus, the discriminant model explained 34.8% of the total variance between the two groups (df=7, p=.046). The following variables with over 0.3 value of standardized canonical discriminant function coefficients had the highest predictive power: good inter-personal relations with customers and suppliers, importing, founder, and R&D orientation. A new discriminant model built on these four variables explained 26.8% of the total variance between the groups (df=4, p=.016). According to the degree of predictive accuracy measured by the percentage of cases classified correctly, 79.1% of the cases were correctly classified. Furthermore, 74.4% of the cross-validated (Lachenbruch 1975: 32) grouped cases were correctly classified.

7.4 Networkers with leapwise growth

The differences between non-threatened and threatened networkers with leapwise growth are presented in Appendix 6. Statistically significant (p<.05) and almost significant (.05<p<.10) differences between the two groups are presented in Table 7.4.

More entrepreneurs of non-threatened SMEs than others were firm owners who were also founders of the firm. More of them than others had prior work experience both as an employee and as a manager (χ^2=2.591; df=1; p=.107). Thus,

varied prior experience seems to be associated with the avoidance of threat in this cluster as in other clusters. There were no big differences between the two groups of SMEs by industry sectors. However, in the sectors of building material, metal, and mechanical woodworking industry, most SMEs had faced threat. It was also characteristic of threatened SMEs that their principles and practices of management had changed more than those of others. On the other hand, acquisitions and mergers were more typical of non-threatened SMEs than others. In addition, more of them than others were regarded as "top firms" in the region. In this cluster, acquisitions and mergers might have provided economies of scale for the SMEs and reduced competition in the field, and thus they might have been important in avoiding threat.

In threatened SMEs, the proportion of products with stable volume was higher. Also, it was more typical of them than others to focus on domestic markets only. Thus, threat seemed to relate to the products which were in a later stage of development and operation in domestic markets only. In contrast, non-threatened SMEs had a higher proportion of new products in the market, and products with growing volume, than others. Importing was characteristic of them. Also, a "we are the first in the market" attitude was more common in their R&D orientation. The biggest customers accounted for a higher share of the firm's turnover in the non-threatened SMEs than in others. Moreover, typically these SMEs were subcontractors, though their sold subcontracting as a share of turnover was lower than in the case of threatened SMEs. On other words, it seemed that these SMEs were more dynamic than others, and obviously they had stronger symbiotic relations with a few big clients.

The only variable which differed statistically significantly between the two groups was a success factor, 'investment payments by self-financing'. This, together with long-term customer relations, were valued more highly by non-threatened SMEs than by threatened SMEs. Other success factors related to finance and financial management, logistics, and innovations were also regarded as more important by non-threatened SMEs than by others, and thus, they might indicate factors which are important for avoiding threat. In threatened SMEs, on the other hand, environmental scanning was given higher priority. Also, strong growth in demand, good reputation, continuity of key persons, personnel training, and customer feedback were considered more important by threatened SMEs than by others. These factors might have been important in avoiding threat. Survival factors more typical of them than of others were personnel's contribution and flexibility, acquisition of new customers and increased efforts in marketing.

Table 7.4 Statistical differences between the groups in the cluster of networkers with leapwise growth

Variables	Test	p value
Investment payments by self-financing	t = -2.186 (df = 31)	.036
Environmental scanning	t = 1.941 (df = 31)	.061
Long-term customer relations	t = 1.851 (df = 30)	.074
Changes in principles and practices of management	U test (z = -1.701)	.089
Being one of the "top firms"	χ^2 = 2.706 (df = 1)	.100

A canonical discriminant analysis of the two groups and five variables generated one canonical discriminant function that was significant in distinguishing among the groups (p=.011) (Appendix 5). The discriminant function had an eigenvalue of 0.836 with a canonical correlation of 0.68. Wilks' lambda value for the function was 0.545. Thus, the discriminant model explained 45.5% of the total variance between the two groups (df=5, p=.011). All the variables except 'Environmental scanning' had over 0.3 value of standardized canonical discriminant function coefficients, and thus, had the highest predictive power. A new discriminant model built on the four variables explained 45.3% of the total variance between the groups (df=4, p=.005). According to the degree of predictive accuracy measured by the percentage of cases classified correctly, 86.2% of the cases were correctly classified. Furthermore, 82.8% of the cross-validated (Lachenbruch 1975: 32) grouped cases were correctly classified.

7.5 Summary and conclusions

The analysis revealed some differences between SMEs that had never been threatened and those that had been at some time. A threat to existence seems to be related to many factors and to vary according to the type of firm. Factors differentiating threatened and non-threatened SMEs were often typical of the cluster of SMEs in question. Moreover, the differences identified by statistical analysis seem to be interlinked to some degree with the causes of the threat and the ways firms adjust as revealed by qualitative analysis. The causes of the threat as well as the ways firms adjust to changing conditions and circumstances seem to be to a large extent cluster specific.

Comparing all threatened and non-threatened firms, several factors distinguishing the two groups of SMEs can be found. In SMEs whose existence had never been threatened, entrepreneurs were more satisfied with business success than those in other SMEs. Also, they thought that their firm's business success had been better than their competitors'. No differences between the groups were found in terms of the entrepreneurs' background. However, studies focusing on the causes of failure have found that entrepreneurs of failed firms typically are less educated, less knowledgeable about the industry sector, lack marketing skills, have less experience in

management and entrepreneurship, and are younger, compared with those in survived firms (Storey 1994: 109; cf. Lussier & Corman 1995). It should be noted that the findings concerning the entrepreneurs' background in this study may be explained at least partly by the changes in management which had happened after the threat in the SMEs studied.

A threat to existence or the absence of such a threat was strongly related to firms in two industry sectors, in particular. Almost all the SMEs in the food industry had never faced any threat to their existence, whereas almost all those in the building material industry had encountered such a situation. This is an interesting finding, since several studies have found that there seems to be no association between failure rates of firms and industry sectors (e.g. Phillips & Kirchhoff 1989; Storey 1994: 94; Gallagher & Stewart 1985).

More threatened SMEs than others had experienced significant periods of decline, their growth had been fluctuating, and they had had more changes in their business base. Previous studies have also found that changes in business base are associated with lower firm performance (Feeser & Willard 1990). Also, threatened SMEs were older than non-threatened SMEs. However, it should be noted that the SMEs studied were successful firms, and no new firms, i.e. firms less than four years old, were involved in the study. Previous research has found that younger and smaller firms have a lower probability of survival than older and bigger firms. This phenomenon is called 'liability of newness' and 'liability of smallness' (e.g. Stinchcombe 1965; Aldrich & Auster 1986: 194-195; North et al. 1992). This is often explained by reference to the accumulated learning of older firms (e.g. Jovanovic 1982) and to the fact that governmental support is targeted more at big firms than at small ones. On the other hand, the longer the time period, the higher the probability that the firm will face a situation in which its existence is threatened, as a result of surprising external market disturbances for example.

The role of the domestic market, excluding the local market, was more important for threatened SMEs than for others, and threatened SMEs expressed more positive attitudes towards interfirm cooperation. Starting or expanding exporting, specialization and cooperation, in particular, were used as ways of adapting. The ability to find quick solutions for changing customer needs was valued more highly by threatened SMEs than by non-threatened ones.

In the cluster of stable independent survivors, entrepreneurs in SMEs that had never had any threat to their existence thought that their firms' competitive power in the market of the main products was stronger than that of other SMEs. In non-threatened SMEs, the proportion of products with a stable volume was higher, and the proportion of turnover due to the biggest customer lower, than in threatened SMEs. Many studies report that dependency on one or a few customers is linked with lower

probability of surviving (Storey 1994: 107; Reid 1991; Hall & Young 1991). Non-threatened SMEs had also stayed close to their initial business, and they seemed to attach more importance to the success factors typical of the SMEs in this cluster. It seems that threatened SMEs had more positive attitudes towards interfirm cooperation, and they often operated as subcontractors for other firms.

In the cluster of innovators with continuous growth, entrepreneurs of non-threatened SMEs were almost all founders of their firms, and they often came from the local area. In the case of non-threatened SMEs, the local market's share in the firm's sales was higher, and they rarely imported. On the other hand, the R&D attitude "we are the first in the market" was considered more important by threatened SMEs, even though all SMEs in this cluster could be characterized as pioneers in the market. Good inter-personal relations with customers and suppliers and long-term customer relations were considered more important in threatened SMEs than in others.

In the cluster of networkers with leapwise growth, the only variable which differed statistically significantly between the two groups was a success factor, investment payments by self-financing. This together with long-term customer relations were valued more highly by non-threatened than by threatened SMEs. In threatened SMEs, on the other hand, environmental scanning seemed to be given higher priority. Threatened SMEs also had more changes in the principles and practices of management.

When applying discriminant analysis, the most accurate results were obtained when threatened and non-threatened SMEs in the same cluster were compared. However, there seems to be no single variables with particularly high predictive power. The original discriminant models built on five to ten variables that had showed statistically significant or almost significant differences between the two groups of SMEs, and later, the new discriminant models based on four to five variables with over 0.3 value of standardized canonical discriminant function coefficients explained one quarter to one half of the total variance between the groups. In these models, according to the degree of predictive accuracy measured by the percentage of cases classified correctly, 76-86% of the cases were correctly classified. Furthermore, 70-83% of the cross-validated (Lachenbruch 1975: 32) grouped cases were correctly classified. Thus, it is, indeed, useful to study SME survival within homogeneous clusters of firms.

The results give us some clues about how some SMEs succeeded in avoiding situations where their counterparts had come under threat. For instance, non-threatened networkers with leapwise growth valued the importance of investment payments by self-financing more highly than did other SMEs, indicating that it may be one important factor characterizing their strategic behavior in avoiding situations where their existence could come under threat. In the same way, the more moderate R&D orientation of non-threatened innovators with continuous growth may point to the risks

involved in a more radical R&D orientation. Also, the higher proportion of products with stable volume and lower proportion of turnover due to the biggest customer in non-threatened stable independent survivors may reflect a conscious decision in managing business risks associated with products with changing volume and a high proportion of turnover being due to one customer.

The results reveal potential causes of threat and how the SMEs had succeeded in overcoming the problems they have met. Moreover, the results may reflect the fact that entrepreneurs in the threatened SMEs had learned from the difficulties. For instance, it seems that entrepreneurs in threatened SMEs had realized the importance of interfirm cooperation, which can be regarded as a flexible safety net and as an important way of adjusting to changing conditions and circumstances (cf. Niittykangas 1996). Also, entrepreneurs in the SMEs in the group of threatened innovators with continuous growth valued good inter-personal relations and long-term customer relations more highly than did entrepreneurs in other SMEs, suggesting that those factors might have been extremely important for the survival of these SMEs in their struggle through difficult times.

The results of this investigation shed new light on our understanding of SME survival. The knowledge of successful independent SMEs in peripheral locations presented in the previous chapters could be complemented with the results presented in this chapter. For instance, as shown in the previous chapter, the competitive advantage of innovators with continuous growth was related to their innovativeness. However, this analysis brought out the risks involved in their highly innovative strategic behavior. Also, as shown in the previous chapter, networkers with leapwise growth considered important efficiency and the exploitation of existing business opportunities. However, new customers may also have great importance for their survival in certain situations.

8 CASE STUDIES: COMPARISONS OF FAILED AND SUCCESSFUL SMES

8.1 A description of failed SMEs

In this chapter, failed and successful SMEs are studied more thoroughly by using multiple case study methods. The aim is to improve our understanding of SME failure and success, so failed and successful SMEs are compared with each other. It was also thought that in order to understand the strategies of successful firms, studying failed firms was essential (cf. Duchesneau & Gartner 1990). Here, the living SMEs, i.e. both non-threatened and threatened SMEs, were regarded as successful SMEs. In the following, a brief description of the sample of failed SMEs is presented with reference to the findings of successful SMEs (n=143) presented in the previous chapters. Thereafter, brief case descriptions and comparisons of failed and successful cases in the triplets of SMEs are presented in terms of clusters of SMEs.

Altogether, 12 failed SMEs were studied, and can be characterized as follows. Most entrepreneurs of failed SMEs were men (92%) and owner-managers (75%), as was the case in the sample of successful SMEs. Among owner-managers, 70% of entrepreneurs were founders of these SMEs. The entrepreneur's average age in failed SMEs was 47 years, exactly the same as in successful SMEs. Their educational background was also identical with that of entrepreneurs in successful SMEs. Moreover, there were no differences in the entrepreneurs' prior work experience between failed and successful SMEs. One third of entrepreneurs had prior experience as owner-managers (serial entrepreneurs), and the same number of entrepreneurs were owners of other firm(s) at the same time (portfolio entrepreneurs). In other words, even though the sample of failed SMEs was very small for statistical analysis, it seemed that there were no differences between the characteristics of entrepreneurs of failed and those of successful SMEs, the two samples being strikingly similar to each other.

Failed SMEs were found in several industry sectors. Most (83%) were located in manufacturing, and the rest (17%) in the service sector. The average number of full-time personnel counted before the firm went out of business had been 16 employees, which was significantly fewer than in successful SMEs. On the one hand, it should be note that there were no medium-sized firms among the failed SMEs studied. Firm sizes varied from 1 to 40 employees. On the other hand, however, typically these SMEs had

reduced the number of employees during their last year of operation, and hence, the number of employees did not indicate the highest number of personnel during the firm's life cycle. The firms' average age was 14 years (median 9 years), which was clearly less than in successful SMEs. Among the failed SMEs, 60% were founded by at least two founders. However, interestingly, 58% of failed SMEs were owned by only one owner just before the firm went out of business. Among the failed SMEs with more than one owner, 60% were led by an entrepreneurial team, and this percentage was lower than among successful SMEs. More than half (58%) were family firms, and this percentage was slightly higher than among successful SMEs. Most failed SMEs (58%) had consciously defined and specified goals and objectives. Moreover, there were failed SMEs in each stage of development.

All failed SMEs, except one, had stayed near to their original business. One third (33%) had faced at least once a situation where the firm's existence, i.e. survival, had been threatened (apart from the threat which had finally led the firm into liquidation). This was fewer than among successful SMEs. Two thirds had grown in terms of turnover during recent years of operation. Also, two thirds had operated in markets where demand had grown during recent years.

Almost half of the failed SMEs (42%) were export firms. One quarter had products which were considered unique in the markets, and this percentage was clearly higher than among successful SMEs. On average, the most important customers accounted for 29% of the turnover for failed SMEs, which is one percentage point more than among successful SMEs (28%). Interfirm cooperation was considered to be slightly more important by failed SMEs than by successful SMEs. Specifically, 58% of failed SMEs actively looked for new interfirm cooperation relationships, and 33% were interested in investigating the opportunities for new cooperation if approached by other firm. Moreover, 42% of failed SMEs thought interfirm cooperation was extremely important for the firm, and half of the firms considered it useful for the firm. Of the failed SMEs studied, one third were subcontractors and half bought subcontracting. These percentages were lower than in the sample of successful SMEs.

It should be noted that the failed SMEs were selected for the purpose of constructing matched triplets of SMEs. Therefore, they did not represent failed SMEs in general, but were selected on the basis of their known characteristics. Moreover, when reading the frequencies, it is worth noting that one firm's impact on percentages is high due to the small sample size, and therefore the figures should be regarded as indicative rather than precise values.

8.2 Stable independent survivors

8.2.1 Metal industry firms

Case S1A: successful, non-threatened

Present situation. The firm produced metal fixtures and articles and sheet metal constructions for building sites and for machine building, in particular. Most customers were in the public sector, on the one hand, and among manufacturing firms, on the other hand. At the time of investigation, the firm sold nothing to private builders and practically nothing directly to consumers. The firm was a subcontractor, and the role of the firm's own products was minimal. The firm had outsourced some of its operations that required highly specialized expertise or expensive machines, and so avoided expensive investments. In the field, there were many potential subcontractors who could do such specialized work. Customers benefitted from the firm's ready-made products, which were not typical among competitors. The firm was indirectly dependent on the trends in the construction industry, and particularly on the construction activity of the public sector. However, the business cycles in construction financed by public sector actors were considerably more gentle than those in construction financed by private sector actors. Focusing on serving public sector organizations provided the firm with an environment with reduced economic fluctuations, i.e. considerable stable demand, and also long-term contracts and better predictability of the future. Moreover, public sector organizations were reliable payers, without the risk of credit losses.

Life cycle. The firm was founded at the beginning of the 1980s by one man. Previously, the founder had been a partner in another firm operating in the same field. There he had been in charge of the business which became the core business of the firm studied here. The previous firm had been split up because the owners had different opinions about the direction in which the firm should have been developed. The first two years of the new firm had been more difficult than the entrepreneur had expected, but then an important customer had been found. At the same time, a part of the firm had been sold to a partner who had extensive experience in the production of the products that the firm started to produce. Since then the firm had been led by an entrepreneurial team composed of these two men.

Over time, the firm had produced a wide range of products, but mainly only one or a few products at the same time. Despite the numerous products produced during its life cycle, the firm had always focused on metal fixtures and articles. Interestingly, some contracts had been signed almost by chance, as the firm's founder explained:

> "Once two men just walked in, and asked: 'What are you doing here?'. I answered and showed that we are making these kinds of metal fixtures and articles for one supermarket chain. Then they said that they will start production of school furniture in the near future, but lacked a subcontractor who could produce some metal parts. 'Would you be interested in producing such parts?', they asked. 'Yes, we can make this kind of parts', the entrepreneur answered. Then the firm produced some samples of the parts. Their quality was found to be good, and very soon the subcontract was signed."

Since then the firm had been producing those metal parts for 15 years. In recent years, in fact, their role in the firm's turnover had been remarkable: the annual sale of those parts had amounted to about 150 000 euro (out of the firm's total turnover of about 700 000 euro). For many years this client had been the firm's biggest. The incident described above was a real stroke of luck for the firm.

In the firm's fourth year of existence the entrepreneurs had planned a considerable expansion of the business, but they never implemented the plan because a new big competitor had appeared in the field. The firm's competitors, who were located outside the region, had started to produce the same products using new production technology, with the result that the competition had rapidly become more acute. However, the firm had been able to keep one big customer though it did not have the production automation that the competitors had. There were at least two reasons for this: first, the products were complementary for the customer and did not replace old ones, and second, there was a successful long-term customer relationship, with all the benefits accruing from that. The firm had succeeded in getting new important customers from time to time, but it was striking that it had some very successful long-term customer relationships and could therefore for many years focus on cooperation.

The firm had been largely a subcontractor who received orders and specifications from its customers. For the firm, it meant a reduced business risk related to marketing the products, for example. The firm had had little product development, and in the first years, there had not been much need for interfirm cooperation. Later, when technology had been developed, they outsourced the production of parts that needed special knowledge or special machines or were too difficult or too expensive to produce using the existing machines. The biggest investment in production facilities was the purchase of CNC (Computer Numerical Control) machines at the end of the 1980s. After cooperation relations had been established, the partners stayed, and so the subcontractor relationships have been long.

The main factors contributing to the firm's success can be summarized as follows:

- the founder entrepreneur's prior experience in the field as an SME owner
- an entrepreneurial team providing an expanded knowledge base and flexibility in e.g. working hours
- focusing on the production of products based on the entrepreneurs' professional strengths and core competencies
- focusing on a limited number of products, which enables long series and efficiency in production
- few competitors were offering customers ready-made products
- being a subcontractor, which meant a reduced risk related to e.g. marketing
- flexible production facilities providing flexible changes from the production of one product to another
- focusing on public sector organizations as customers
- no competitors were located in the local markets
- risk-avoiding behavior in making strategic decisions, e.g. (1) a decision not to grow with one big client; (2) a decision not to invest in expensive technology but outsource operations which were beyond the firm's capabilities and resources (no need for debt financing); and (3) a decision to be a subcontractor without their own products (no need for research and development)
- stochastic factors, e.g. luck in acquiring new customers

Case S1B: successful, threatened

Present situation. The firm produced light metal constructions especially for building sites. Customers were private building firms, big companies, and actors in the public sector. Nothing was sold directly to consumers, and almost all (90%) was sold in the local markets. The firm was a subcontractor, and production was based on clients' orders. The firm used subcontracting in operations which required special knowledge or special machines. Production was carried out mainly in the workshop but also on building or rebuilding sites. According to the firm's CEO, the firm's competitive advantage was based on long experience in the field, a skilled and reliable workforce, and the firm's flexibility. However, the firm's small size limited opportunities to get large-scale contracts. The firm was dependent on the economic activity in the construction sector. However, in construction financed by the public sector actors, business cycles were considerably more gentle than in privately financed construction.

Life cycle. The firm had been bought in the late 1960s by the present entrepreneurs' father-in-law. Since the mid-1980s the two husbands of the daughters had run the firm. Both entrepreneurs had had varied prior work experience. They had considered their division of labour a necessity. The firm had been a subcontractor and many standards regulated the product requirements. The product range had been pretty much the same over the years. Production volumes had been based on market demand, and the few marketing efforts that the firm had made had not provided significant impacts. The most significant change in value added in the products happened five years ago: the firm had raised the value added over the years, and had aimed at delivering more and more ready-made products. Such products were recognized as a source of competitive

advantage. There had been little need for product development and development had been targeted especially at improving working methods. Proper tools and machinery had been considered important and small investments had been made regularly but only on the basis of a real and identified need and thorough planning. Special jobs had been bought from subcontractors. The firm had focused on jobs which could be done without heavy machinery.

In the mid-1980s there was a mini-recession in the construction field. When recovery had just begun, two years after the present entrepreneurs started, the firm had faced two significant credit losses because of the sudden bankruptcies of the biggest customer and of another significant one (building firms). At that moment, the entrepreneurs had seriously considered whether to continue or go out of business. However, they decided to continue, and the firm had negotiated a big loan with the bank to stabilize its financial situation. The decision had not been easy since the firm had had already borrowed a lot of capital.

Later, they decided to reduce the amount of borrowed capital systematically, and profits were used to achieve this. By the early 1990s, when the Finnish mark was devalued the firm no longer had loans in a foreign currency. The entrepreneurs had foreseen that the general economic development could not continue in the long run, and had learned that, as they said, *"if you walk with cautious steps, you can fall only from the edge of the carpet and that does not hurt"*. At the moment of the interview, the firm had no borrowed capital, and hence had very low financial costs, giving it some cost advantage over its competitors.

The intensity of competition varied considerably each calendar year. In the winter season, when there was low demand in the market, there was as much as 30% difference in prices between the competitors. However, the entrepreneurs had decided that they would not take part in price competition and used the same principles to calculate prices throughout the year. After the crisis in the late 1980s, the follow-up system for receivables was developed. Terms of payment were shortened from one month to two weeks. Also, the methods of collection were changed: no collection letters were sent and the entrepreneur contacted customers to discuss the situation with them.

The main factors causing the crisis can be summarized as follows:

- high capital commitment to unfinished products (in construction sites)
- a large amount of borrowed capital
- long terms of payment
- strong dependency on one customer (high single customer risk)
- big credit losses due to the bankruptcy of the biggest customer as the consequence of the mini-recession in the construction sector

The main factors affecting the recovery can be summarized as follows:

- the entrepreneurs' strong belief in the firm's chances of success
- a new bank loan
- the development of financial follow-up systems, and shortened terms of payment
- the decision to pay off debts systematically
- reduction of prices by minimizing borrowed capital and financing costs

Case S1C: failed

The situation before failure. The firm produced tailor-made metallic roofing sheets. Customers were hardware stores, wholesale firms, building firms, and consumers. Production was carried out almost exclusively by the firm itself. Time, i.e. rapid delivery of the tailor-made products, was the firm's most important source of competitive advantage. The firm could deliver tailor-made products to customers in two days, whereas its main competitors took two weeks. The main competitors were big firms with a strong resource base, which appeared in their aggressive marketing, for instance. The firm was highly dependent on the economic activity in the construction sector.

Life cycle. The firm was founded in the late 1950s by the entrepreneur's father. Travelling abroad, he had come across metallic roofing sheets which could be installed without using a professional plater. After returning home, he developed the first machine in Finland for producing such metallic roofing sheets. He had seen a business opportunity, a clear niche in the market for such products. At the beginning, sales were made through wholesale firms because they dominate in the building material trade, but in the last years more than 50% of products were sold directly to consumers. Research and development had been continuous. Old machines had been improved or replaced by new ones every other year, to increase production speed. In the early days, products were standard, but a dramatic change was made in the mid-1960s, since when products were tailor-made for each customer. Customer needs were very constant. Starting in the 1970s, metallic roofing sheets were used in constructing the walls of factories, and later also in the walls of dwelling houses and office buildings, where they are still much used today.

The entrepreneur had run the family firm since 1980, when his father had retired. In the 1980s, new machines had been bought and production lines had been renewed to increase production speed. The year 1983 was a turning point in the field because of the launch of a new production technique. The firm had been the second in Finland to start producing tile-patterned metallic roofing sheets which gave roofs a new look and were a real success in the market. The entrepreneur compared it with *"a transition from the era of the telephone to the era of the mobile phone"*. The product range expanded considerably, and marketing had become more focused. Previous

investments had been made using cash flow financing, but in the early 1990s, just before the beginning of the general economic recession, the firm had had to invest in new production facilities using borrowed capital.

In the early 1990s, the firm started exporting metallic roofing sheets to the Baltic countries, Russia and Central Europe. Soon after, some Finnish competitors also expanded their market areas into the same areas, and severe price competition started. Three years later, the firm had to withdraw from foreign markets. In the 1990s, the field changed very much as a result of acquisitions, mergers and other restructuring in the industry sector. This meant that new contacts had to be established, with suppliers for example. The number of competitors had been reduced but the new or mergered competitors had become bigger and stronger than ever before.

In the mid-1990s, the firm bought an installation firm. At the beginning, they had some good projects, and the size of the workforce rose rapidly from two to seven men. However, very soon the profitability of the installation business collapsed due to the oversupply of assemblers from all around the country who were willing to do the work for "ridiculously" low prices, as the entrepreneur put it. After three years of operation, the installation unit was closed down. During this three year period, personnel relations suffered because of the wage differences between assemblers and employees in the workshop, and this caused dissatisfaction among employees in the workshop. Both the installation business and exporting turned out to be unprofitable. Another problem had been caused by the steel supplier, who had guaranteed the quality of the steel. There were some problems with the quality, and consumers directed their complaints to the firm and not to the supplier, who, as a matter of fact, was responsible. This caused the firm a lot of extra work and probably influenced negatively the firm's reputation in the market.

A high seasonal variation in demand had caused a major problem for the firm. In winter, demand was low, but in summer there were more orders than the firm could handle. In the last years of the firm's operation, the production of the production lines partly replaced the lower demand in winter. The production of the production lines was rare among the competitors. The production lines were sold to customers in the Baltic countries, Poland and Russia.

The entrepreneur reported that his mental resources were running out in the early 1990s. He was tied up in every-day business and routines, and had no time for strategic thinking and planning. In fact, he was facing one problem after another, particularly concerning the tax authorities. For many consecutive years, certain writeoffs had been accepted by the tax authorities only after appeal, and the entrepreneur felt that some of the decisions were unjust. Consequently, he had lost his faith in justice. Finally, he neglected to deal with some matters and this led to the situation where the tax authorities got the upper hand.

During the economic recession, the firm had also had hard times with credit losses arising from the failure of many customer firms. In addition, the entrepreneur had not been capable of laying people off, keeping all the personnel throughout the year, even during winter time when there was no work for all of them, for several reasons. On the one hand, he had known the people a long time and wanted to take care of them. On the other hand, once let go it was by no means sure that they would come back when the high season started. However, it seems that the entrepreneur was not sufficiently business-like in this matter. As he said: *"Employing people is expensive"*. It seems that he acted more on the basis of feelings than sense, and treated the personnel as a big family. He described his feelings in the 1990s thus: *"I was running up a steep sand bank but my feet were sliding down all the time and I was getting nowhere"*.

The main factors affecting the firm's failure can be summarized as follows:

- one-man firm; no time for strategic thinking and planning
- social pressures to continue the traditions of the family firm
- the way of thinking: *"we have always done things this way and survived, so why shouldn't we do things this way also in the future?"*
- high seasonal variation in demand, and no work for all personnel in winter
- lack of business-like thinking, e.g. not laying off employees (causing continuous costs but no incomes)
- a significant investment with borrowed capital just before the economic recession and decline in demand
- negative changes in the environment due to the general economic recession: (1) rapid decrease in demand causing fall in turnover and falling prices; (2) liquidation of many customer firms causing sudden credit losses; and (3) industry restructuring, leading to the situation where the firm had to try to keep up with giants (competitors) with superior market power
- continuous problems with the tax authorities, the entrepreneur's mental resources were running out, oversights in tax issues with costly consequences
- conflicts about pay between assemblers and employees in the workshop affecting the atmosphere
- unprofitability of the installation business and exports
- supplier's quality problems negatively affecting the firm's reputation
- credit losses, costly consequences of neglecting taxational matters, and lack of business-like thinking led to a shortage of money and liquidation

A comparison of the three stable independent survivors in the metal industry

The successful SMEs were led by an entrepreneurial team, whereas the failed SME was a one-man firm. An entrepreneurial team seems to have important consequences for coping with the running of the business. In the successful cases, team members had a clear division of labour, and spent their holidays like salaried employees appreciating and enjoying their free-time. In contrast, in the failed case, the entrepreneur's mental resources were running out, he was totally tied up in routine tasks, and had no time for

planning. In the successful cases, the entrepreneurs had varied prior work experience, whereas in the failed case the entrepreneur had worked in the firm studied only.

The successful firms were subcontractors and had almost no products of their own, whereas the failed firm had products of its own. The successful SMEs had no need for product development. Instead, they took good care of the production facilities and conditions, and focused on the development of production methods. In the successful SMEs, ready-made products were considered to be important. For the successful SMEs, market demand was more stable than it was in the case of the failed firm, because many of the successful firms' customers operated in the public sector, and even though the construction industry as a whole is highly fluctuating one in economic terms, business cycles in construction financed by the public sector actors are considerably more gentle than in privately financed construction. Also, it is striking that the successful firms had long-term business relations, whereas the failed firm did business mostly with occasional customers. The successful SMEs had a network-oriented way of doing business. Hence, they were able to avoid expensive investments and the risks associated with them, and also maintained their flexibility in responding to a wide range of potential orders. They were subcontractors, whereas the failed firm sold much directly to final customers.

The successful SMEs had no borrowed capital at the time of the interview. Also, trying to minimize the amount of borrowed capital was characteristic of these firms. The failed firm borrowed a large amount of capital for production investment just before the recession, and was burdened with financially unfavourable taxation decisions. The non-threatened case could be described as a risk avoider. This firm tried to minimize all financial risks. The threatened firm became threatened mainly because of its high customer dependency. High capital commitment to unfinished products was characteristic of both the threatened and the failed firms. Credit losses caused by the difficulties of big customer firms seriously affected these firms' performance. A "small step" strategy was characteristic of the successful firms.

The non-threatened firm had no local competitors, while the threatened firm had many small competitors, and the failed firm operated in a market where it had to compete with giants. The threatened firm and the failed one had to cope with high seasonal fluctuations in demand and in price levels, whereas the non-threatened firm did not have to cope with seasons and had a stable production flow throughout the year. Stochastic factors also seem to have a role in success: a good example of this is the non-threatened SME's most valuable contract, which came about almost by accident. A detailed comparison of the cases is presented in Appendix 8.

8.2.2 Bookkeeping agencies

Case S2A: successful, non-threatened

Present situation. The firm was a bookkeeping agency offering bookkeeping and auditing services, payroll computation, account paying services, and consulting in e.g. business transitions, budgeting, and changes of legal form. Customers were local SMEs in many industry sectors. The firm was a member of the group of bookkeeping agencies which provided some professional services to its members. One important cooperation partner was a software company, and the firm had built a network of specialists which could provide their services to the firm's customers in legal, insurance, marketing and other special areas. According to the entrepreneur, the firm's competitive advantage boiled down to three factors: high quality, personal service, and technical know-how. On the other hand, pricing was a competitive disadvantage. However, it was the firm's conscious decision not to compete with prices so as not to get the reputation of being a cheap bookkeeping agency. The firm had adopted a customer-driven approach to business: *"the firm's success was based on the success of its customers: the better the clients' performance, the better the firm's performance"*, as the entrepreneur put it.

Life cycle. The firm was founded at the end of the 1970s. Previously the entrepreneur had worked as financial manager in an SME which went into liquidation. He had work experience in similar tasks in SMEs in many industry sectors. His parents had also been entrepreneurs. Moreover, there had also been two other founders whose prime role was acting as financiers and mentors without participating in the everyday business. The entrepreneur had met them by accident when they had planned to set up a new bookkeeping agency in the same location. Ten years later they sold their shares in the firm to the entrepreneur, who thereafter was sole owner.

From the very beginning, the firm had aimed to stand out from its competitors by providing extended service and consultation to clients. It meant that clients and their problems were approached and treated holistically. The firm's way of doing business had changed over time due to the development of the environment. Networks had been developed at the very beginning in the firm's history and they had been modified over the years.

The firm had grown slightly, and the entrepreneur's aim had been to keep the firm in such a size that he can manage by himself. The financial state had always been good. The firm had always tried to be in the frontline of technical development and to serve clients in the best possible way. The firm had actively participated in research and development projects carried out in the group. Also, in hiring staff the entrepreneur had always sought to match employees' personalities and their positions,

since this enables people to give their best. The firm had extensively invested in employees' professional education. Interestingly, except for the very first years, there had been no need for marketing. The biggest changes in procedures had happened along with the development of information technology. Changes in legislation had forced some changes in the calculation systems, and caused some extra work for the firm.

The main factors contributing to the firm's success can be summarized as follows:

- the entrepreneur's professional education, family background, and varied work experience
- the mentoring given by the two other founders of the firm
- a full-service bookkeeping agency as a way to stand out from competitors
- the firm's research and development orientedness, and staying in the frontline of technical development
- personal service with deep and multifaceted investigation of clients and their problems
- a versatile customer structure
- a good reputation (no need for marketing)
- good business sense: taking on the most profitable and long-term jobs, and leaving less profitable and occasional jobs for others
- high-quality work and efficient personnel, and investing in personnel training
- the philosophy of "the right persons in the right positions" led to flexibility in work behavior
- active networking with the group, experts and specialists, and the software firm
- adaptation over time to the changes in customer needs and technical development
- a small amount of debt, and an efficient follow-up of costs

Case S2B: successful, threatened

Present situation. The firm was a bookkeeping agency offering bookkeeping and auditing services. Customers were SMEs only, and mainly in the service sectors. The firm was an authorized bookkeeping agency, and the main cooperation partner was the Union of Bookkeeping Agencies. Other important cooperation partners were banks and insurance companies, and there was a two-way cooperation with them. The firm provided on-line information on the client's financial state throughout the year, and this service marked out the firm from its competitors. Prices were higher than those of most competitors, and this caused a competitive disadvantage for the firm. The firm was dependent on the general economic trends which affected prices in the field.

Life cycle. The firm was founded at the beginning of the 1980s by two entrepreneurs. After the first months of operation, one left the firm because of incompatibility between them. The remaining entrepreneur had a professional education and experience in similar tasks in both large and small firms. At the time of founding, the entrepreneur had seen that existing bookkeeping agencies could not provide the service that their customers really needed.

The firm had been active in research and development, e.g. by participating in projects aiming at quality development and improved customer service. The

entrepreneur had held several positions of trust in the field, and been involved in many networks, for instance, as an inspector in the Union of Bookkeeping Agencies. In this position she had inspected the operation of other bookkeeping agencies and had had a good opportunity to learn from others. There was constant demand for services, due to legal requirements affecting SMEs. However, work had been rationalized much over the years, and had become more interpretative and consultative.

At the time of the interview, the entrepreneur considered that the firm was the right size: on the one hand, it was manageable by one person, and on the other hand, it allowed the entrepreneur some freedom. In addition, though the turnover of clients had been rising, new technology had reduced the need for a human workforce. Therefore, there was a continuous need to find new customers to maintain the same level of turnover. However, as the entrepreneur said: *"bookkeeping agencies are really bad at marketing"* and continued: *"our existing clients do it for the firm"*. Another weakness of the firm had been the lack of financial follow-up and poor profitability: *"a shoemaker's children have no shoes"*, as the entrepreneur said, quoting a Finnish proverb.

The firm had always tried to be in the frontline of technological development. Computers and software were the biggest investments. They had been financed using bank loans, and the entrepreneur had used her personal property as a security for debts. Moreover, the firm had invested in the staff's professional education, which had been necessary because of changes in legislation.

The firm faced big credit losses in the mid-1990s due to the bankruptcies of the biggest customers, who could not manage their foreign currency credits after the Finnish mark was devalued at the beginning of the decade. The entrepreneur said that the firm had suffered all the time from an unfavourable customer structure, i.e. there had always been a few big clients, and this had caused a threat to the firm. At the same time, the bookkeeper in charge had left the firm taking her clients with her, and founded a new bookkeeping agency. The entrepreneur regarded this as a typical threat to any bookkeeping agency.

In addition, as a consequence of the general economic recession, new competitors had come into the field because of the bankruptcies of other bookkeeping agencies. Bankruptcies generated a number of unemployed professionals who then set up new bookkeeping agencies. At the same time, despite the fact that big firms outsourced their bookkeeping activities, which increased the demand for bookkeeping services, demand in general was decreasing and so competition increased. There had been pressures for lower prices because new firms usually competed with cheaper prices. As a solution to the difficult situation, the entrepreneur sold a share of the firm to one of the firm's bookkeepers, and so the business could continue. The firm survived but it faced smaller credit losses also later.

The main factors causing the crisis can be summarized as follows:

- big credit losses due to the bankruptcies of the biggest customers after the devaluations
- unfavourable customer structure (the business was based largely on a few big customers)
- a significant loss of customers and fall in turnover because the bookkeeper in charge left the firm taking a lot of clients with her
- stiff competition and decreasing turnover and profitability in the field due to the general economic recession and its consequences (new competitors)
- low profitability due to weak financial follow-up

The main factors affecting the recovery can be summarized as follows:

- selling a significant share of the firm to one bookkeeper
- the business itself was on a sustainable basis
- acquiring new customers

Case S2C: failed

The situation before failure. The firm was a bookkeeping agency offering bookkeeping and auditing services, payroll computation, invoicing, and consulting. The main customer groups were new local firms, firms in the woodworking industry, timber harvesting firms, and small metal workshops. The most important cooperation partners were the Union of Bookkeeping Agencies, a software firm, and the local Chamber of Commerce. The firm's main strengths were first-class versatile know-how, especially in taxation, keeping to deadlines, and a good reputation. Customers appreciated these qualities, and though new competitors came into the field every year, the increasing competition had no effects on the firm. As a matter of fact, the firm had no need for marketing. The firm's major weakness might be bad customer service: not all clients liked the straightforward way in which things were presented. The firm was especially dependent on economic trends in the forest and wood industry because it was the dominating industry sector in the firm's clientele over the years.

Life cycle. The firm was founded in the late 1970s by one woman aiming to employ herself. Four years later, her husband came into the firm though he had a permanent post in the public sector. He had left his job in the public sector believing that his life would be more interesting in the private sector. He had technical and commercial qualifications and long work experience but, however, not in the field of accounting. After the firm had been operating for ten years, they divorced and the husband bought his wife's share of the firm at the end of the 1980s, and was sole owner ever since.

The firm had followed technological development in the field. The first big change in the firm's history happened in the mid-1980s when new technology was bought and more personnel hired. Automatization had led to cost savings and the firm could provide some services without charge, which was not the case with most competitors.

At the beginning, one customer firm had constituted almost one third of the firm's turnover. This had been recognized as a severe threat, and it was decided to minimize it by means of firm growth. Later, when the owners of this client firm, which was the firm's biggest customer, sold their firm, and consequently the bookkeeping contract was dissolved, the loss of this customer had been manageable due to new customers which the firm had succeeded in acquiring.

Later, it had been decided that the firm's aim was to be number one in the area. Opportunities for growth had seemed to be good because there were more customers than the firm could serve. However, a problem arose with the premises: there were not enough rooms for more people. In the late 1980s, the firm had to choose whether the number of personnel and customers should be adjusted to the rooms available, or whether the firm should find larger premises. The decision to invest in a new office building was made, and a big loan in foreign currency was taken. At the same time, the firm leased a new computer system.

However, due to two devaluations at the beginning of the 1990s, the amount of the loans grew rapidly by about 50%. The firm faced liquidity problems, and consequently suffered from significant financial costs as the interest on overdue payments was 16%. The economic recession seriously affected the Finnish forest and wood industry, which was the firm's main customer segment. Many customers faced serious problems because of rapidly decreasing sales and many big customers failed.

As a consequence, the firm had also suffered big credit losses, and more problems caused rapidly decreasing incomes generated by the surviving customers and their problems in paying. At the same time, the firm's debts were bigger than ever before, and all securities were used. Moreover, the values of the securities collapsed rapidly. The firm had tried for half a year to sell the brand new office building but no one was interested in buying it. Also, the number of personnel was reduced. The firm proposed postponement of interest payments to the bank, but the request was rejected. Finally, all key persons left the firm, and it did not have enough income even for the interest payments. Since the firm had no working capital, it filed for bankruptcy.

The main factors affecting the firm's failure can be summarized as follows:

- strong dependency on firms in industry sectors highly sensitive to fluctuations in the general economic development
- a supposition that economic growth would continue as before
- big credit losses due to the bankruptcies of many customer firms
- no more securities available and the collapse of their value
- a jump in the amount of a big loan in foreign currency due to devaluations (a loan for an investment in a new office building)
- no buyers of the new office building
- insufficient income for necessary payments
- the bank's rejection of the request for postponement of interest payments

A comparison of the three stable independent survivors in the field of bookkeeping agencies

At the time of founding, all firms were new, founded to provide the entrepreneur with at livelihood. Excluding the last entrepreneur in the failed firm, all entrepreneurs had professional education and work experience in similar tasks. All firms were full service bookkeeping agencies and followed technical developments. The customers of the successful firms were fragmented, whereas those of the failed firm were from one highly dominating customer segment, i.e. SMEs in the forestry and woodworking industry. The threatened and the failed firm suffered from an unfavourable customer structure, i.e. they had a few big customers, which caused a high customer risk. Successful firms were more network-oriented than the failed one.

All firms invested in new technology, e.g. in computers and software. The threatened and the failed firm suffered from credit losses. The failed firm invested in an office building. It had strong growth aspirations and aimed at becoming number one in its location. The successful firms showed weak but stable growth. Also, they had a more analytic and systematic approach to their businesses, and growth was based on the small steps strategy. The environment of successful firms was more stable, due to their fragmented customers. Also, stochastic factors seem to have some role for success, e.g. in the case of the successful SME where the entrepreneur had met his partners by accident. A detailed comparison of the cases is presented in Appendix 8.

8.2.3 A comparison of failed and successful stable independent survivors

Although metal industry firms and bookkeeping agencies differed from each other in numerous and significant ways, it was possible to identify some similarities among the failed firms and among the successful firms. On the one hand, the failed cases had risks in customers and in the timing of investments. In the case of the failed SMEs, demand was more unstable and unpredictable, i.e. dependency on occasional customers (vs. long-term customer relations) and on a few big customers (vs. a more balanced customer structure). The failed SMEs made big investments in premises and production facilities just before the economic recession and the collapse of demand. Unexpected and sudden changes in their environments seem to be a major source of causes of failure in these SMEs. Moreover, the failed SMEs were led by one person.

On the other hand, common to the successful SMEs was their more network-oriented way of doing business. Hence, they could avoid expensive investments and the related risks, and they also maintained their flexibility in responding to a wide

range of customer needs. Moreover, the successful SMEs were characterized by their "small step" strategy, i.e. they tried to avoid potential financial risks. Also, their businesses were more planned than in the case of the failed SMEs.

8.3 Innovators with continuous growth

8.3.1 Firms in the electronics industry

Case I1A: successful, non-threatened

Present situation. The firm manufactured studio monitor loudspeakers and home theater loudspeakers. Studio monitor loudspeakers are part of a larger audio system. Its customers were firms, e.g. studios and radio and television companies, and many of them bought regularly. The firm exported more than 90% of sales to 60 countries. It assembled products, and had many cooperation relations, with e.g. suppliers and delivery systems. The firm's strengths were technical know-how, high quality, and a strong brand. The entrepreneur also emphasized personnel as a success factor, calling them a "good team". The firm's weakness was costs: many competitors produced in Third World countries so they had a cost advantage and could sell at cheaper price than the firm. Also, the main competitors were bigger, and so had more resources. Demand was dependent on the general economic activity in market areas.

Life cycle. The firm was founded at the end of the 1970s by several people. The entrepreneur had had a technical education. He had had a few years' work experience, and a few years' experience as a CEO in another firm. The firm's business idea had been based on the entrepreneur's hobby, and he wanted to implement his ideas in this firm. At the very beginning, the firm had acquired a significant customer when the national television company invested in studio monitor loudspeakers. In the very first years, the only competitive advantage was Finnishness, which was a highly respected value for products in Finland in the 1970s.

The firm had started marketing itself actively by calling to other radio companies. The entrepreneur said that learning to identify customer needs had been a continuous process. Networks had been created at the very beginning, and it had taken a lot of time and effort to maintain them. The entrepreneur emphasized that "*it was important to achieve a mutual understanding of the quality standards with raw material suppliers, and of the sales objectives and means of sales with delivery channels*". Customer need had seemed to be constant. However, on the one hand, the products always had a limited life cycle, which meant there was a need for continuous

renewal. On the other hand, the field was developing all the time, and new applications were being introduced, generating new demand in the market.

As a leading principle, *"the firm solved the customer's problem first, and this usually solved the firm's problems"*. The firm's aim had been to be at the top in the field. It had grown rapidly without loss in profitability. In the late 1980s, the firm outsourced its non-core businesses and focused being an assembly factory. In the mid-1980s, a factory building was built and financed on the basis of the previous years' profits. Later, the building was used as a security for new loans.

The firm had closely followed technological developments. One fifth of the personnel worked in research and development, which indicates how innovative it was. The strong emphasis on R&D led the firm to success: for example, at the very beginning of the 1990s, when the Persian Gulf crisis led to a rapid fall in sales, the firm introduced a new product which soon turned out to be a real success and sales began to increase rapidly. Products had gone through several generations, indicating the firm's continuous product development.

In the late 1990s, the firm founded a subsidiary in the USA. The firm had expanded its market areas abroad gradually, exporting to about 60 countries at the time of the interview. Economic crises in different parts of the World, for instance in Asia and Russia, had led to a fall in sales temporarily but no market areas had left completely. The firm's ways of operating had changed over the years, and it had invested particularly in total quality management. Also, the means of competing had changed: recently, more emphasis than previously being paid to quality and customer closeness.

The number of competitors in the field had grown rapidly during the previous decade, though there were no domestic competitors in the field. The firm had faced some problems in finding new personnel, but the devaluations had only positive effects on the firm's competitiveness in the global market.

The main factors contributing to the firm's success can be summarized as follows:

- the business started on the basis of the entrepreneur's hobby
- technical know-how, and the entrepreneur's prior experience also as an entrepreneur
- a significant customer at the very beginning, and active marketing
- solving customers' problems as a starting point
- a high quality of products and work
- innovativeness: investing heavily in R&D, and keeping up with technical developments
- focusing on a narrow product segment
- a strong brand
- operating in global markets with customers who bought regularly, and providing good after-sales service
- planning, and a good team
- the firm as an assembly factor: investments in cooperation networks
- a good financial position as a consequence of high profitability
- active environmental scanning, and absence of domestic competitors

Case I1B: successful, threatened

Present situation. The firm manufactured devices for measuring and testing muscles and the related software. It had two major product areas. Its customers were hospitals, rehabilitation centres, universities, and research institutes. Products were largely made by the subcontractors, and the firm took care of the final inspection, packaging, documentation and quality control. The firm's strengths were good know-how in this narrow product area, a good worldwide dealer network, and skilled personnel who could offer good customer service with good after-sale service globally. The firm focused on a narrow niche, providing some unique elements in its products. Actually, the products were 'expert systems'. The brand was known among experts in the field, and the firm was regarded as a reliable manufacturer in the market. However, most competitors had more resources and they could benefit from the bigger volume of their larger home markets. The firm's sales were dependent on the general economic development and especially on the governmental budgets for public health care and research.

Life cycle. The firm was founded at the beginning of the 1980s by several people in a university setting. In the course of a research project at the university, a technical solution was discovered which was assessed to have potential for commercializing. However, some areas of application had been known but the starting point had been clearly technology driven, not customer driven. Customers had been found on the basis of their potential need for measurements of muscular functions. In practice, the literature and feedback from doctors had largely directed customer selection. Continuous research and development was characteristic of the firm, and new products and new generations of existing products had been developed. In the very first years, most production had been done by the firm but later much had been outsourced. Cooperation partners had been selected primarily among synergistic firms, and their knowledge of the field was considered to be important. Also, it was necessary that all subcontractors fulfilled certain criteria since all firms were audited. It was thought that in the future more attention would be paid to ergonomic issues in working life, so there was a rising customer need for the firm's products.

In the first years, the focus was in R&D, sales were very modest, and the firm had grown slowly. The head of the firm had changed many times but it had been always understood that the firm had to internationalize. In the late 1980s, the business had a more established shape and exporting was started. However, the match between products and customer needs was not adequate at that time. Also, the technology used had been undeveloped, and the firm had no reference customers. The personnel's flexibility had played a significant role many times in the firm's survival.

The firm's financial situation had been poor for a long time, and it was understood that having more equity was an important requirement for its survival. Fortunately, some venture capitalists had invested in the firm and the firm's financial state was stabilized. At the same the working of the board of directors was improved significantly. In the early 1990s, the present entrepreneur started as CEO, though he had been the firm's founder and owner all the time and played several roles in the firm. However, these changes had clarified the management of the firm. The entrepreneur had a technical education, and a few years' prior work experience in the field.

A new product area was introduced in the market in the late 1990s. These products were based clearly on customer need, providing a solution to customers' problem, and hence, the starting point was totally different from that of the firm's first products. The equity investments made by the venture capitalists were important for many reasons. The development of the new product took more time and money than expected. Significant investments were made in developing quality systems which were a necessity in operating in the health care sector. On the other hand, belonging to a "qualified group" of firms provided several benefits. In the late 1990s, the deep economic recession in Asia led to a big drop in sales in Japan temporarily and caused credit losses. However, after these events, the firm's inputs in marketing and exporting led the firm to rapid growth in sales, and the firm's profitability also improved.

The main factors causing the crisis can be summarized as follows:

- a technology-driven start: a weak match between products and customer needs
- new unfinished products with undeveloped technology were offered to undeveloped markets
- fragmented customers and the lack of reference customers
- weaknesses in strategic management: "what business are we in?"
- weak credibility of the small firm, selling expert systems as products
- lack of finance and securities for investments
- undeveloped external stakeholder relations

The main factors affecting the recovery can be summarized as follows:

- new equity finance by the new owners
- improved working of the board of directors
- the flexibility of the personnel
- active sales promotion
- investments in exporting

Case I1C: failed

The situation before failure. The firm manufactured customer-tailored production lines. Its customers were industrial firms in many industry sectors, e.g. in the sectors of building, household appliances, shipbuilding. The firm designed and set up the lines. Subcontractors were used in many areas requiring special knowledge, e.g. electricity

and hydraulics. The firm had a network of agents around the world. The firm's strength was good customer service, in the form of the ability to adapt to customers' special requirements, i.e. to provide customer-tailored production lines. Due to the high quality of products, competitors – who were bigger than the firm – manufactured lower quality products and hence could sell at cheaper prices. Changes in economic activity in different parts of the world affected the demand for production lines, which were sold to other firms solely, and so very sensitive to fluctuations in the economy.

Life cycle. The firm was founded as a spin-off in the late 1960s by several founders. At first, it was a workshop, subcontracting mainly for one customer. Later in the 1970s, when the role of the main client fell, the firm had to find new products. At that time, it was thought that there was room for a new production line manufacturer in the market. Moreover, entry barriers in the field were low, and the firm had strong know-how and good premises. The firm's innovativeness appeared in customer-tailored products, i.e. each product was developed according to the needs of the customer.

There had been changes in the ownership of the firm, and the firm was a family firm since the 1970s. The family firm was run by the father of the last entrepreneurs until he died at the beginning of the 1980s. His younger son led the firm for some years, and an older son since the mid-1980s for about one decade. In the early 1990s, new premises were built just before the economic recession. The recession caused a drop in demand for production lines worldwide rapidly. Because the firm was a high-quality manufacturer, it was the first in the market to face the reduction in demand. Moreover, at that time, the firm was dependent on the demand for one product.

The firm's economic development fluctuated wildly due to the big value of one single production line, which might be the only one manufactured in a year. The firm needed a bank guarantee for each production line under construction. Such a guarantee was requested by the buyer for the protection of the pre-payment. However, during the bank crisis in Finland at the beginning of the 1990s, the firm's bank failed. Due to the very difficult financial situation, the firm could not find a new bank who would grant such a guarantee. Though the firm could have had new orders, lack of guarantees prevented all operations. Also, the entrepreneur's personal property was used as a security for existing loans. Very soon there was no liquidity and the firm went into liquidation.

The firm's financial situation had been difficult all the time: *"the firm lived from hand to mouth"*. There was no thorough long-term planning, and no savings had accumulated in "good times", but, in fact, the firm had fallen into debt. Due to the customer tailoring, pre-calculation of costs was difficult, and also much capital had been committed to unfinished products.

The main factors affecting the firm's failure can be summarized as follows:

- a one-man firm with no clear business goals and no adequate planning
- weak management: no accumulation of slack resources in the "good years"
- dependency on special products which were sold to other firms solely
- difficulties in cost calculation because of customer-tailored products
- inefficient payment policy: high capital commitment to the unfinished products
- a manufacturer of high-quality products demand for which decreased first in the general economic recession
- difficulty in responding to price competition as a manufacturer of high-quality products
- the small size of the firm with weak market power
- investment in premises just before the economic recession
- a customer of one bank only, and lack of bank guarantees due to the bank's failure
- the entrepreneur's personal property already used as a security for other loans

A comparison of the three innovators with continuous growth in the field of electronics

The failed firm was a spin-off who had to find a new product after a few years of operation since the subcontracting with the previous "parent" firm ceased. The successful firms had done the business in their initial product areas over the years. In the failed firm, no founders took part in the firm's operations in the last years, whereas in successful SMEs, the present entrepreneurs were also the founders of the firms.

The failed firm had only one product, which was sold to other firms solely. The successful firms had more products and also consumer products. Moreover, the products of the failed firm were individually customer-tailored and thus their innovativeness was in the design of each single product. The successful firms invested extensively in research and development of their products and thus gained competitive advantage through learning. Also, in the case of the failed firm, the production process was much longer and the product's price per unit was much higher than in the case of the successful firms. The customers of the failed firm were business enterprises only, whereas the successful firms also sold to consumers. All the firms used subcontracting extensively. In the failed firm, the precalculation of costs was difficult because the role of designing was very significant, and caused uncertainty.

In the non-threatened firm, profits accumulated and could be used in e.g. investing in the building in addition to paying everyday costs, whereas in the threatened and failed firm, profits were used to cover everyday costs, and there was no capital accumulation. The threatened firm was able to find financiers, whereas the failed firm was not. The failed firm had no long-term strategic planning. This was also true in the case of the threatened firm until the venture capitalists invested in it. All the firms emphasized high quality but the failed firm was highly vulnerable since its innovativeness was embodied in each customer-tailored product, and thus it could not

have such sustainable competitive advantage and continuous learning, i.e. the firm could not sell the product as an innovation in the market, as the successful firms could with products which could be improved continuously. The failed firm was heavily dependent on the bank, and in particular, on one financier. It had a position that was in danger first when the economy went into a decline. A detailed comparison of the cases is presented in Appendix 8.

8.3.2 Electro-technical industry firms

Case I2A: successful, non-threatened

Present situation. The firm manufactured electric distribution centres for office and industrial buildings. Its customers were electricity contractors and industrial firms in Finland and in the St. Petersburg region in Russia. The firm manufactured and installed the products using materials delivered by suppliers. The firm's strengths were high quality, the flexibility of a small firm, specializing in office and industrial buildings only, and striving to establish partnerships with customers. No electric distribution centres were manufactured for dwelling houses because the quality of the products was too high for such purposes and thus the firm could not compete in prices in that sector. Demand was dependent on the general development of the economy.

Life cycle. The firm was founded at the beginning of the 1990s by several founders. They had been employees of a big multinational company which closed a local production unit during the general economic recession and so the employees had lost their jobs. The founders had extensive experience and know-how in the field. The business had been built up on the business relations established in the former employer's service. The firm invested in R&D over the years. At the beginning, it had one product only but later as the result of active research and development, it expanded its range to three products. Also, each product was to some extent customer tailored. The firm's cooperation partners were mainly the same as in the former firm but some new partners had also been selected on the basis of their ability to offer high quality. Customer need seemed to be constant. Moreover, the field was very conservative and changes happened slowly.

The founders had been selected according to their professional skills, i.e. the best person for each function was selected. At the time of the interview, they were in charge of these functions, and hence, each function was run by the person with the best know-how. In this way, each function had been developed as cost efficiently as possible. Otherwise, as in one-man firms, it would not have been possible to take care of each function as thoroughly as it was in the case of this firm. In addition to having

skillful personnel, the firm had been very unprejudiced towards product development. Moreover, quality thinking had been extended beyond the requirements of the official quality systems and certificates.

The firm had clear goals and had grown in a controlled way, though more growth would have been possible. Actually, there had been no need for marketing because there had always been more work than the firm could handle. Long-term and confidential customer relations were maintained since the time of the previous firm. Personal relationships played a major role in this development. Characteristic of the firm was the avoidance of big debts. At the time of the firm's founding, the founders had put some money into the business, and later, investments had been financed by cash flow.

The main factors contributing to the firm's success can be summarized as follows:

- the profitability of the business was known prior to start-up
- an entrepreneurial team with strong know-how, division of labour, and strong feeling of togetherness
- own innovative high quality products, and investment in research and development
- focusing on a narrow product segment
- existing customer base and good knowledge of customer needs and markets
- customer closeness, long-term cooperation, and partnerships with customers
- clear business goals and controlled growth
- cost minimizing and avoidance of big debts, good financial position
- flexibility

Case I2B: successful, threatened

Present situation. The firm manufactured electric distribution centres for machines. Each product was designed for a certain machine and the firm produced repetitive series of products. Its customers were industrial firms in the field of machine manufacturing. The firm designed and assembled the products. Among its important cooperation partners were component and casing manufacturers. The firm was not just a passive subcontractor but pursued an active cooperation partnership with machine manufacturers. It designed the distribution centres together with the customer closely following the development of the machine. Some competitors required specific descriptions of the function of the product, but many customers did not have their ideas in a formal written form and some even did not have the ability to put them into such a form. The firm tried to ensure that the threshold for customers to approach the firm was as low as possible. Another strength of the firm was quality, which was understood in a wide sense, e.g. keeping to agreed timetables, which was not typical of the firms in the field. Demand for the firm's products was dependent on the economic fluctuations in the metal industry.

Life cycle. The family firm was founded in the late 1980s by several people who were relatives. Each of them had different strengths which were important in the business. The entrepreneur's initial aim had been to employ himself and some relatives. His brother's employer had had difficulties obtaining distribution centres in the market. The idea of founding their own firm had developed since the brothers produced some distribution centres for the firm. They strongly believed that other manufacturers might also be interested in such products. The customers were selected randomly: often the entrepreneurs had just seen a distribution centre as a part of some machine, so they contacted and discussed with the machine manufacturer, and the discussion led to a deal. The firm had invested especially in the personnel's know-how. Cooperation partners were sought on the basis of need, with price, quality, reliability and flexibility being important selection criteria. It was thought that customer need would be constant since no alternative products or solutions were anticipated.

At the time of founding, the firm was a new firm in highly saturated markets. Some years later, the firm faced the general economic recession. The firm would have needed more customers but it was extremely difficult to find new customers since potential customers were struggling for their own survival in an environment characterized by rapidly decreasing demand. Naturally, these firms had no interest in discussing changing the supplier with a young novice small firm, as there would be no significant financial benefits for these firms, and changing the supplier would not have solved their real problems.

The firm's major problem was too low a production volume to cover the fixed costs, though the profit margin in a single product level was good. The firm had to make a strategic choice whether to expand into new market areas or to widen the product range. Since production management would have become technologically much more complicated in the case of new products, the firm decided to expand its geographic market areas. This decision to focus on a narrow product range turned out to be successful, because it improved the firm's efficiency.

With a cautious steps, the firm started exporting in the fourth year of operation. Soon, it received big orders from abroad and so production volumes increased rapidly. Consequently, the growing volumes of purchases led to lower purchase prices of components. Naturally, suppliers were highly interested in a customer with growing volume of purchases, and particularly in the prevailing unfavourable general macro economic conditions. The firm's competitiveness in the market improved, and it gained new important customers also in the domestic market. Foreign customers started to require products with a new technology, and this speeded up the firm's product development. The firm adopted new technology, and this created a new competitive advantage. As a consequence, the firm had more new important customers. Moreover, due to its bigger size, the firm was considered a credible

cooperation partner. Growing production volumes also promoted international marketing. At the end of the 1990s, the firm built new premises financed by cash flow.

At the very beginning, there was no thorough planning in the firm. Stochastic factors played a certain role in the firm's success. For instance, according to the entrepreneur, new geographic market areas and several important customers were selected by chance.

The main factors causing the crisis can be summarized as follows:

- a new firm in saturated markets
- lack of strategic planning at the beginning
- inadequate demand due to the economic recession and stiff competition
- inadequate incomes to cover the fixed costs due to low production volumes
- inability to find new customers

The main factors affecting the recovery can be summarized as follows:

- expansion into new geographic market areas by starting exporting
- a narrow product range enabling efficient production
- big orders from abroad leading to growing production volumes
- product development and application of new technology

Case I2C: failed

The situation before failure. The firm designed, produced and installed electric cable conduits and their supporting systems. Most customers were big industrial firms in Finland. They were considered to be more reliable payers than small firms. The firm's strengths were skilled personnel and work of high quality. The firm stood out from competitors by its pricing method, which was unique in the field. The firm was dependent on the economic trends of the manufacturing industry.

Life cycle. The firm was founded in the mid-1980s by one person. He was a former employee of a company which ceased business in this area and focused on its core business. The founder had extensive experience and know-how in the field. He started up the firm on the basis of business relations with former customers who encouraged him to set up a firm. Product development was continuous, leading to the launching of new components and new fixing methods. The major cooperation partners were customers with whom the firm also had maintenance contracts. It was thought that the customer need would be constant, since no other technical solutions were in sight.

In the late 1980s, the firm sought bigger premises but found none, so new premises were built using a big loan in foreign currency. However, during the repayment period of seven years, two unexpected devaluations of the Finnish mark occurred, leading to a considerable increase in the amount of the principal and the interest. At the same time, demand in the field dropped due to the economic recession at the beginning of the 1990s. Also, values of securities collapsed.

The size of the customer markets had been quite limited, and the field had been highly sensitive to changes in general economic development. Moreover, four new firms had entered the field and they had succeeded in taking contracts from under the firm's very nose. The firm's turnover rose during the first five years but then, in the early 1990s, collapsed suddenly by more than 80%. The four new competitors did not pay their taxes, and so could sell at a 20% cheaper price. Later, the legislation was changed so that firms had to present in advance certificates showing that they have paid their taxes, but unfortunately this was too late for the firm. It was not able to fulfil its financial commitments.

At the same time, during the bank crisis in Finland at the beginning of the 1990s, the firm's bank failed. No new financing could be found as banks were reluctant to finance such a firm. Though prospects in the field were good, the lack of securities and a modest level of turnover in previous years did not convince financiers.

The main factors affecting the firm's failure can be summarized as follows:

- a big loan in foreign currency and two unexpected devaluations of the Finnish mark
- the collapse in values of securities
- the collapse in demand in the field due to the general economic recession
- the four new competitors' tax evasion, and unhealthy competition
- a standard product and dependency on a small number of potential customers
- focusing on a very narrow customer segment sensitive to fluctuations in the economy
- the failure of the bank
- unavailability of new financing

A comparison of the three innovators with continuous growth in the electro-technical industry

The successful firms were founded by several founders, whereas the failed firm was founded by one founder. In the non-threatened and the failed case, the entrepreneur had previously worked for a firm operating in the same business which had then ceased doing so. The firms were built up on previous business relations. The successful firms were led by an entrepreneurial team, whereas the failed firm was led by one man. In the successful firms, there was an efficient division of labour between the members of an entrepreneurial team.

All firms operated in a narrow product segment, and the products were customer-tailored. The successful firms had products that were assembled in production plants and then delivered to customers, but the products of the failed firm were assembled at the customer's premises. The market area and the number of potential customers were much more limited in the case of the failed firm than in the

other cases. The failed firm operated in domestic markets only. The failed firm had no subcontractors, whereas the successful firms used subcontractors.

The failed firm had many debts, whereas the successful firms financed their investments by savings and cash flow. The failed firm had not taken into account the possibility of external shocks, and was highly dependent on external factors. In contrast, the successful firms' strategic behavior was cautious and risk-controlled.

All firms operated in an environment characterized by stiff competition but the failed firm had to face unhealthy competition due to some competitors' illegal practices. Also, the demand environment of the failed firm was highly sensitive to changes in economic trends. Moreover, the currency devaluations and the bank's failure had a strong impact due to the large amount of borrowed capital. A detailed comparison of the cases is presented in Appendix 8.

8.3.3 Software firms

Case I3A: successful, non-threatened

Present situation. The firm's products were information systems for health care, including design, implementation, maintenance, development, and customer guidance and training. Its customers were hospitals and other institutions, and the firm was a subcontractor for some other software firms. The firm's strengths were extensive knowledge of the health care sector, good customer service, flexibility, and fast reaction to changing customer needs. A typical problem of many small firms – weak credibility in the market – prevented the firm from taking on large-scale projects. However, in cooperation with big software firms, the firm was able to participate in bigger projects. Demand in the market was dependent on the local authorities' budgets. Due to the long-term contracts with customers, the environment of the firm was stable in this respect.

Life cycle. The firm was founded at the beginning of the 1990s by several people who were former employees of a big company which closed its local office. They had been offered the opportunity to transfer to another unit of the firm but for family reasons they did not like the idea of moving to another place. Instead, trusting their extensive experience and know-how in the field, they thought that they could continue in the same business by founding a new firm. The team had kept together, and at the time of the interview all founders were committed to the firm. The business had been built up on the business relations that were established when they worked for their former employer. Characteristic of customer relations was continuity and long-term contracts. Development was based on changing customer needs, and these changes were based

on, for example, the changes in legislation or customer organization or technological development. Minimizing the risks related to product development, each new product was sold to customers before production was started. Also, cooperation partners were selected on the basis of previous relations. Moreover, though relations with the former employer firm were cool for a long time, in recent years the former employer firm was an important cooperation partner.

The members of the entrepreneurial team had known each other for a long time and a good spirit in the firm was maintained. The firm actively used consulting services in problem solving. After the very first years, the firm made a long-term plan, with a quality handbook, which directed subsequent decision making. Also, the firm's annual strategy seminars were considered an important forum for fostering expected behavior among all personnel.

The close customer relations led to long-term customer contracts which guaranteed a steady cash flow. New self-made products and new customer segments were important for the firm's growth and profitability. Changes in legislation forced customers to renew their information systems. The firm invested in new technology and employee training, and actively participated in research and development projects with the local university and some firms. The firm had no borrowed capital after the very first years. New technology and changing competition caused most changes in the firm's environment. In recent years, the industry sector faced a lot of acquisitions and mergers. This also meant that *"a former competitor can suddenly be a cooperation partner"*. As a matter of fact, exits in the field excluding one-man firms were consequences of acquisitions and mergers.

The main factors contributing to the firm's success can be summarized as follows:

- an entrepreneurial team with extensive knowledge of the customer industry sector
- self-made products providing profitable growth
- focusing on a narrow product segment and related services
- an existing customer base and good knowledge of customer needs
- a total quality system
- strategic planning with a long-term plan
- customer closeness, and risk-minimizing behavior
- long-term customer relations with a steady cash flow
- good customer service: flexibility and speed in reaction
- cooperation with big software firms providing access to bigger projects and mitigating the problem of the weak credibility of a small firm
- investments in new technology and employee training
- avoidance of borrowed capital

Case I3B: successful, threatened

Present situation. The firm designed and produced software as subcontracting particularly for production automation systems. Its customers were mainly big

industrial firms but the firm also participated in some small high-tech firms' product development projects. The customers, who were located all around the country, were regarded as the most important cooperation partners. The work was organized as projects and was largely done together with customers. The firm's strengths were extensive know-how in the software sector and continuity of the personnel. The major weaknesses were the smallness of the firm and its remote location. The demand for production automation systems affected the firm's financial situation.

Life cycle. The firm was founded in the mid-1980s by several people. The founders were teachers with good connections to local firms. The initial idea was based on their joking *"why shouldn't we do this in our own firm?"* and on their *"youthful enthusiasm of to try our wings*". They had closely followed the development of one firm for a few years, until they asked about the possibilities of subcontracting. Discussions with the representatives of the firm convinced the teachers, and the firm was founded the same day. First, the new firm's only customer had been this growing firm with a continuous need for software subcontracting. Later, new customers were acquired, and product development was done on the basis of customer needs. Cooperation with other firms in the field was done only in terms of sales and marketing. Customer needs changed considerably over the years.

The first years were good for the firm, but, unfortunately, it neglected marketing. Also, money was used irresponsibly and nothing was saved for bad times. The information systems were undeveloped, and financial follow-up inadequate. After the first years, subcontracting decreased, and at the same time, some employees went to work for the customer firm. To increase sales, the firm made some marketing efforts and started to sell computers, printers and accessories. However, the sale of hardware turned out to be unprofitable, and was soon abandoned. The firm decided to focus on software business, preferring bigger firms as customers.

In the early 1990s, the firm's major customer was bought by another firm in the field. As a consequence of this restructuring, many of the customer firm's employees were fired. Also, there was no longer any need for a subcontractor. The flexibility of the employees played a major role in the firm's survival: when there was no work, the employees took their holidays, and rearrangements in salary payment were also agreed with the personnel. Efforts were put into acquiring new customers.

At that time, the firm was deeply in debt, but in recent years it has had no debts. The firm also focused on big firms because they were considered reliable payers and pay in time. As the entrepreneur said, *"it is not worth talking with poor customers because even if you succeed in making a deal with them – after many weeks' or months' shilly-shallying – then you have to shout and shout and wait and wait for the money"*. Also, the firm strove for long-term contracts which reduced the need for

marketing. Moreover, new customer acquisition was used as a way of reducing dependency on big customers.

One of the firm's founders left the firm due to a difference of opinion about the direction in which the firm should be moving and about the use of profits. The firm decided to use the profits for the firm's development. The firm had grown slowly at first, but in recent years it had strong growth aspirations because it was able to invest in growth using its own capital resources, and new rapidly growing customers made growth possible. For this reason, the firm set up a new establishment in another location in the mid-1990s. Also, it was decided that employees could become owners, on the assumption that this would motivate them.

In the 1990s, the firm employed the quality system which defined its mode of operation. Also, the managerial thinking in the firm became more professional. Previously, there were single, separate projects with a limited duration, but recently more attention was paid to the continuity of business relations. The economic cycles influenced the firm: on the one hand, when things were getting worse, firms first gave up subcontracting, and on the other hand, when there was still uncertainty but things were getting better, firms preferred subcontracting to hiring new full-time staff.

The main factors causing the crisis can be summarized as follows:

- high dependency on one customer, and lack of marketing at the beginning
- highly customer-specified products
- irresponsible use of money, and the firm's indebtedness
- weak information systems and financial follow-up
- decreasing demand due to the general economic recession, and the restructuring of the customer industry sector

The main factors affecting the recovery can be summarized as follows:

- the flexibility of the employees
- new customer acquisition and reduction of the dependency on the biggest customer
- focusing on big firms and striving for long-term contracts
- a more professional and business-like approach to business

Case I3C: failed

The situation before failure. The firm produced customer-tailored software applications for local small firms and societies. It also offered support services, consulting and training. The firm had no cooperation partners. The business was based on the entrepreneur's knowledge of programming. A clear weakness of the firm was lack of knowledge of web technology.

Life cycle. The firm was founded in the mid-1990s by one man, for whom founding a new firm was an alternative to unemployment. However, he had considered entrepreneurship as a career option for a long time and believed that there would be a

good business opportunity in the field. The business was based on the entrepreneur's professional strength, i.e. his knowledge of programming. The entrepreneur had technical qualifications, but no know-how in marketing or presentation skills. At the beginning, the firm was involved in one project led by a consultant who offered the entrepreneur new contacts and business opportunities. The entrepreneur had extensive knowledge of applications and did many kinds of jobs. However, a frequently faced problem was that many customers considered the prices too high.

At the beginning the firm took out a loan. The project was over, and there was a continuous shortage of work. Income was not adequate to cover fixed costs. Also, the entrepreneur's faith in the firm's survival began to waver soon after a proposed co-project by the firm and the local university was rejected by financiers. The firm was running into debt. The problem was that it had neither permanent nor long-term customer relations, only some occasional single orders. It had no money for marketing or for the use of consulting. Moreover, the entrepreneur had only a few social connections. The lack of knowledge of web technology reduced the number of potential customers. The firm's initial idea had been to offer services for small firms but very soon it was found that they could not afford to pay nor invest in development projects in information technology. In fact, no market research had been done prior to start up. In addition, from the viewpoint of bigger firms, the firm's credibility in the market was weak due to its smallness.

The main factors affecting the firm's failure can be summarized as follows:

- lack of planning and market research at the beginning
- lack of marketing and presentation skills
- lack of a product of its own and of knowledge of web technology
- few customers, no regular ones
- the indebtedness of the firm, and inability to meet financial obligations
- lack of money for marketing or consulting
- few social connections
- unattainability of the targeted customer segment
- an unknown firm in the market with weak credibility as a one-man firm
- lack of interfirm cooperation partners

A comparison of the three innovators with continuous growth in the software sector

The non-threatened firm was founded on the basis of the business done in the founders' previous work place, which had closed down, and the business was built up on the business relations born there. The threatened firm was founded on the basis of the founders' former profession, and the business was built up on their former professional connections. In the case of the failed firm, founding a firm was an

alternative to unemployment, and the entrepreneur had no previous business connections. The successful firms were founded by several founders, whereas the failed firm was founded by one. The successful firms were led by an entrepreneurial team, whereas the failed firm was a one-man business. The team members in the successful firms had been workmates in their previous work place and knew each other well.

The non-threatened firm had products of its own, whereas the threatened and the failed firms were solely subcontractors. The successful firms focused on a narrow product segment, whereas the failed firm operated in many unrelated fields. The successful firms invested in new technology, whereas the failed firm could not respond to customers' requests for new technology. The successful firms knew their first customers, and the business was mainly built up on these customer relations. Customers were much bigger in the case of the successful firms than in the case of the failed firm. The customers of the successful firms were located all around the country, whereas those of the failed firm were local small firms and societies. The successful firms had more cooperation partners than the failed firm.

The non-threatened firm had no financial problems. In the case of the threatened firm, at the beginning, there was irresponsible use of money, and weak financial follow-up and information systems. Later, these weaknesses were corrected and the firm's financial situation improved. In the failed case, due to the lack of customers, income was inadequate to cover costs, and this finally led to the situation where the firm was running out of cash.

The non-threatened firm had thorough strategic planning from the very beginning. In the case of the threatened firm, there was no thorough planning in the first years, though strategic planning was developed later and a more professional approach to business and management was adopted. In the failed firm, there was no strategic planning. Minimizing risks was characteristic of the behavior of the non-threatened firm, whereas the threatened firm did not pay attention to risks until its survival was severely threatened. It seems that the failed firm hardly ever paid any attention to risk management.

The non-threatened firm positioned itself in a quite steady environment, and thus its sales were quite predictable. The threatened firm operated in an environment which was very sensitive to changes in the economic cycles. The failed firm's problem was that the carrying capacity of the environment was too weak for the firm, i.e. the environment did not provide enough demand for the firm's survival. A detailed comparison of the cases is presented in Appendix 8.

8.3.4 A comparison of failed and successful innovators with continuous growth

Lack of prior managerial work experience was characteristic of the entrepreneurs of the failed SMEs. Also, more entrepreneurs of failed SMEs than of successful SMEs lacked marketing skills. The failed SMEs were led by one man, whereas five out of six successful SMEs were led by an entrepreneurial team. All failed SMEs had customer-tailored products, whereas this was the case for only some of the successful SMEs. Lack of risk management and insufficient strategic planning were characteristic of the failed SMEs. Dependency on one provider of some critical resource made the failed SMEs vulnerable, i.e. being a customer of one bank only, or operating in a very narrow customer or product segment and in a very limited market area. The failure of each failed SMEs was seriously affected by the general economic recession in the 1990s, and was largely based on the SMEs' own strategic choices, or rather on their failure to make such choices.

In contrast, the successful SMEs had wider product ranges than the failed SMEs. The successful SMEs invested more in R&D than the failed SMEs, and thus increased their competitiveness by developing products through continuous learning. Also, the actual and potential customer segments were wider and more varied in the case of successful SMEs than in the case of failed SMEs. Moreover, careful strategic planning was characteristic of the successful SMEs, and of the non-threatened SMEs particularly. However, threatened SMEs did not pay adequate attention to strategic planning until they faced a crisis.

8.4 Networkers with leapwise growth

8.4.1 Metal industry firms

Case N1A: successful, non-threatened

Present situation. The firm manufactured, from design to installation, tanks, pressure vessels, and industrial chimneys. Its customers were firms in the paper and pulp industry, power plants and their builders, and other process industry firms. Most of the production was exported. The firm welded and worked metal sheets, and operations such as plating, freighting and lifting were made by subcontractors. The firm's strengths were high quality, long experience, extensive know-how, self-made unique production equipment, and a global orientation. The main competitive disadvantage was the remote location, as freight was expensive due to the heavy weight of the

products. The firm was especially dependent on the investment cycles of the paper and pulp industry, and turnover closely followed their cycles.

Life cycle. The family firm was founded in the mid-1980s by several people. They, as well as the personnel, had been workmates in a firm which closed down five years earlier. In the meanwhile, the founders had founded and run another firm which they sold just before they founded the new firm. The money was used to set up this new firm and could be used as a security for loans. The entrepreneur had long and varied work experience with good knowledge of the products. He had worked as an employee with similar products in previous work places and as an entrepreneur in their first firm. Also, the good customer relations that he had established continued in the new firm.

Industrial firms and power plants were selected as customers because of their good reputation as payers, compared with e.g. construction firms which were considered too unreliable as payers. In the first years, demand was high and the paper and pulp industry in Finland invested extensively. Some lucky deals in the first years had enabled the firm to invest in new machinery without taking loans. Each industrial chimney was unique, and was manufactured using self-made production equipment. Cooperation partners were selected on the basis of price and their geographic closeness. There were no alternative solutions for tanks, pressure vessels, and industrial chimneys, so customer need was constant.

The philosophy of the firm was to deliver the products as turnkey projects, from planning to installation. The role of planning was critical, and restricted other firms' entry into the field. Also, the products were special ones to some degree, and only a few firms were able to take on such big projects. The firm operated in a market niche which was not within the interests of big firms, whereas on the other hand, smaller firms were not credible enough in the market to take on such projects. Pricing was difficult because it was hard to know in advance exactly how much work would be needed. Pre-payments were required in order to manage risks and reduce financing costs. The planning of taxation was important, to avoid paying too much tax. The firm had had no loans in foreign currencies at the time of the devaluations. The firm's turnover varied considerably from year to year because of the big projects. The firm strove for growth because customers preferred ever bigger projects, and thus the firm needed to hire more permanent employees. From the viewpoint of its subcontractors, the firm played a minor role, i.e. subcontractors were not dependent on the firm, and so the high variation in the firm's demand did not have a serious influence on the subcontractors.

At the beginning, industrial chimneys were manufactured for the builders of power plants only, but later the final customers began to buy directly. They had noticed the high quality of the products, and naturally, doing business without any

intermediaries made it possible to have higher profit with lower prices. Also, the firm successfully carried out so-called “bad projects”, i.e. projects which turned out to be unprofitable after starting, and thus it had a good reputation as a responsible and reliable operator in the market. The firm closely followed technological development and made replacement investments when machines aged. Staying close to the frontline of technology was considered to be important since the firm’s competitiveness was seen to be based on productivity and quality. Moreover, in production the firm preferred acid-resistant steel and carbon steel, which had a lower intensity of competition than other materials. On the other hand, these materials required special skills in employees, and the firm was lucky in that some of its employees had such skills. Later, the firm trained the personnel intensively because high quality was essential for its customers, i.e. for firms in the process industry.

The main factors contributing to the firm’s success can be summarized as follows:

- an entrepreneurial team with strong prior experience as an entrepreneur
- extensive know-how based on prior experience, and an existing customer base
- high demand and some lucky deals in the first years
- good initial financing based on the sale of the previous firm
- good financial position with no loans in foreign currencies during the devaluations
- focusing on a narrow high-quality special product segment
- focusing on the core business and networking: flexibility and avoidance of expensive investments
- being a turnkey project deliverer with high quality, good reputation, and international operations
- strong accumulated experience of demanding project planning and cost estimation
- favourable market niche: bigger firms were not interested, smaller ones were not credible enough in the market
- superior know-how based on continuous personnel training
- self-made unique production equipment
- staying close to the frontline of technological development
- a strategic choice made in materials
- changes in customers’ buying behavior

Case N1B: successful, threatened

Present situation. The firm manufactured and maintained pipe-supporting systems for industrial piping projects. Its customers were power-plant suppliers, industrial piping contractors, and pulp and paper mills. The firm had no installation service, and a variety of activities were outsourced. However, the firm was a turnkey deliverer with an ability to manage bigger projects than its competitors. In the case of very simple projects where price was the most important selection criterion, the firm was often more expensive than its competitors. The firm was dependent on the investments made by industrial firms.

Life cycle. The family firm was founded in the mid-1980s by two family members. Previously the entrepreneur had worked as a partner in a team-based venture.

However, he had sold his ownership in the firm, and founded a new firm. This new firm's business had been built on the entrepreneur's know-how gained in the previous firm. He had varied experience in the field and in entrepreneurship. He decided to keep the business more focused than it was in the previous firm. The selected business area had been defined according to the entrepreneur's personal strengths, the know-how in working with steel, and his interests, targeted at industrial firms, not at building firms. The entrepreneur had to acquire customers because none had come along with the contacts he had in the previous firm. *"I just thought, who could be potential customers, then I contacted them and I went to their places… Writing doesn't help in these matters, only personal contacts."* The products were standard, and drawings were provided by the customer. Reliability was essential in cooperation relationships based on need and old acquaintanceships. No other solutions for the customers' problems were developed, and customer need remained constant.

In the late 1980s, the firm took a loan in foreign currency and moved into new premises, enabling the firm to grow. In the early 1990s, after two devaluations of the Finnish mark, the size of the loans and the firm's financing costs increased significantly. The firm's financial situation had been very difficult. In addition, as a consequence of the economic recession, demand had dropped suddenly, and it had caused a fall of more than one third in the firm's turnover. Naturally, incomes dropped faster than costs. To enable the firm to recover from the recession, Finnvera Ltd. granted it a loan, which was extremely important for the firm. Also, the supplier of raw material was flexible, allowing an extended credit limit. Moreover, the entrepreneur described the attitude of tax authorities as constructive.

Then, the firm invested in new customer acquisition, and soon its turnover began to grow, thanks to new export markets in particular. Expanding into new market areas also reduced the firm's dependency on a few customers. In addition, the number of potential customers, especially in domestic markets decreased due to acquisitions and mergers, and thus, the size of potential customers increased. However, one important cooperation relationship concerning licence manufacturing was established by the initiative of one important customer firm. As a consequence of that initiative, a licence manufacturing agreement was signed with a foreign firm. This licence manufacturing played an important role particularly in balancing the firm's work load round the year.

The firm invested extensively in production technology. At the time of the interview, the continuous development of production systems was considered important for the firm's competitiveness. The field was characterized as conservative: development was slow and new innovations were rare. However, the means of competition changed considerably over time. In recent years, the efficiency of production was critical, so it was important to follow technological developments. In

the first years, on the other hand, the emphasis had been on good service: a product with the right quality, at the right time, and in right place. Good customer service helped the firm to win the customers' confidence. It was found important to always take good care of even the smallest orders.

The main factors causing the crisis can be summarized as follows:

- a big loan in foreign currency for building new premises
- two devaluations of the Finnish mark
- dependency on the investments made by industrial firms
- rapidly decreasing demand due to the economic recession
- the fall in costs was slower than the fall in incomes

The main factors affecting the recovery can be summarized as follows:

- Finnvera Ltd.'s loan
- an extended credit limit by the supplier
- successful negotiations with the tax authorities
- new customer acquisition and expansion into export markets
- reduction of the dependency on a few domestic customers

Case N1C: failed

The situation before failure. The firm manufactured, from planning to installation, high-pressure pipe systems and other parts for soda and steam boilers. Many regulations regulated the firm's operation. Customers were big builders of power plants and soda boiler plants, and the firm also had some final customers, e.g. single power plants or pulp mills. The number of potential customers in the market was very limited. The firm focused on pipe work and installation, and it bought many services from subcontractors. The firm benefitted from a market niche with weak competition. The firm's small size provided flexibility, though smallness was also the source of the main problem – weak credibility in the market and lack of securities compared with clearly bigger competitors. Demand for the firm was dependent on the investments in the power and process industry. Also, dependency on single projects was high.

Life cycle. The firm was founded in the early 1990s by several founders who had adequate initial capital for setting up a firm and extensive know-how in the field. A big company had outsourced many of its activities and a number of its employees were fired. A small group of the employees had discussed with the employer the possibility of continuing one of the outsourced businesses as a subcontractor for the firm. In fact, the employer had encouraged them to set up a new firm. For the employees, it was a natural choice because they had extensive technical know-how in the business, and entrepreneurship was an alternative to unemployment. At the very beginning, the firm was located in premises hired from the big company, who was the firm's only customer. Later, the firm actively sought new customers and invested in production

technology, which played the key role in the firm's growth. Many of the previous subcontractors of the previous employer were cooperation partners for the firm. The customer need was constant because no other solutions were available.

The firm strove to become a turnkey deliverer taking care of the whole range of activities from planning to installation. The big size of customers forced the firm to grow, and new cooperation partners were needed. The firm had the ambitious aim to have a big turnkey project abroad as a reference. To this end, a big famous firm was selected as a subcontractor, as the firm had no planning know-how of its own. The selection of the subcontractor was based on the fact that this subcontractor and the customer firm had had a successful prior cooperation. Unfortunately, the firm itself was not in a position to evaluate the subcontractor's capability.

The subcontractor made bad mistakes in planning, and this caused a chain reaction. Due to inadequate control of the subcontractor's work, the problems were found too late. As a consequence, the products had to be produced and installed many times, which also caused major problems in managing the firm's other businesses. The firm's workforce and many of its subcontractors were tied up in that single project, and this generated high labour and material costs with no income. Moreover, the limitations of liability between the parties were not agreed on clearly and unambiguously enough. Very soon the firm was out of working capital, and finally, nothing could be done to avoid liquidation.

The main factors affecting the firm's failure can be summarized as follows:

- the extension of the business to planning without planning know-how in the firm
- inability to evaluate the subcontractor's capability
- trust in a customer's ability to evaluate the subcontractor's capability
- subcontractor's bad mistakes in planning
- an oversized project for the firm's resources
- lack of control
- unclear limitations of liability
- much extra work with high costs and without new income
- big problems in managing other businesses
- lack of securities
- lack of working capital

A comparison of the three networkers with leapwise growth in the metal industry

All firms were founded by several founders. The successful firms were family firms. In the non-threatened and the failed case, the entrepreneurs had previously worked in the business which was continued in the new firm. In the case of the threatened firm, the business was based on the entrepreneur's know-how gained in the previous firm. All firms were led by an entrepreneurial team, and the entrepreneurs had varied work

experience in the field. Moreover, in the case of the successful firms, the entrepreneurs had prior experience as entrepreneurs.

All firms were turnkey deliverers operating in a narrow product segment. The threatened and the failed firm manufactured standard products, whereas many of the products of the non-threatened firm were unique in the market. At the beginning, the non-threatened firm had an existing customer base, whereas the threatened firm had to acquire its customers. The failed firm had only one customer at the beginning. All the firms' customers operated mainly in the process industry. All exported a significant share of their sales. The threatened firm was highly dependent on a few customers. Moreover, in the case of the failed firm, the number of potential customers in the market was very limited. All the firms were or aimed to become turnkey deliverers with a highly networked way of doing business. They focused on core activities and used subcontracting extensively. The non-threatened firm used self-made, unique production equipment. The failed firm had expanded its operation to a new business area, i.e. planning, where it had no know-how, and also the limitations of liability were unclear.

All the firms had adequate initial financing. The non-threatened firm had no debt and no need for big investments. In the threatened case, a big loan in foreign currency for buying new premises, and two devaluations of the Finnish mark led the firm into a very difficult financial situation. In the case of the failed firm, one project with costs many times higher than expected led to a situation where the firm had no working capital. All the firms were specialists emphasizing the efficiency of production and focusing on their core activities. Only the non-threatened firm had thorough risk management. In terms of the environment of the firms, all the firms faced fluctuating demand in the market. For the non-threatened and the failed firm, the competitive environment was favourable. Moreover, luck played an important role in the case of the non-threatened firm. A detailed comparison of the cases is presented in Appendix 8.

8.4.2 A comparison of failed and successful networkers with leapwise growth

In the case of the successful SMEs, the entrepreneurs had prior experience as entrepreneurs. They had also prior managerial experience. The successful SMEs were family firms. In the case of the failed SME, the number of potential customers in the market was very limited. Moreover, the failed firm had expanded its operation to a business (planning) where it had no know-how, and also the limitations of liability were unclear. The failed firm was set up during the economic recession.

Both the successful SMEs as well as the failed SME were similar in characteristics and in the decisions they had made. The failure was strongly related to one single incident – to one project – which caused costs many times higher than expected, leading finally to the situation where the firm had no working capital.

8.5 Lessons from the cases

What is most important for business success?

The entrepreneurs were asked to name the most important factors for business success, and a variety of answers was received. The responses offered many tips on what the entrepreneurs should do to increase the probability of high business performance. Altogether, there were no significant differences in the responses between non-threatened, threatened, and failed SMEs. However, factors related to personnel were ranked slightly higher by successful non-threatened SMEs, whereas factors related to financing were ranked slightly higher by failed SMEs. Factors related to the entrepreneur were characteristic of threatened and failed SMEs only.

Important factors related to the person of the entrepreneur were the following: entrepreneurial behavior, creativity, diligence, persistence, honesty, genuineness, and tolerance of uncertainty and continuous change. Also, the respondents thought that a balance between work and free time, good relations between the entrepreneur and other persons, and some key skills in the entrepreneur were important for SME success. Moreover, they thought it is important to respect oneself and one's customers.

The firm should have a good product, and a good image among customers and potential customers. A clearly defined customer segment, knowledge of customers and customer needs, and the ability to satisfy those needs were regarded as important. An entrepreneurial team and personnel with strong know-how and knowledge of the industry sector and its development were also considered important. It was noted that business is done between individuals, not between organizations, and therefore it is important that "the right persons are in the right positions in the organization".

Also, there were some lessons for strategic management, regarding risk management in particular. As a starting point, the firm should have a clear vision based on knowledge of customers and the development of the industry sector. The entrepreneur should be aware of the firm's resources, and should keep the business within those limits. Also, the entrepreneur should be aware of any potential risks which could cause a threat for the firm. Moreover, it is essential to pay attention to the firm's tolerance of disturbances, and keep this in mind in planning investments. In addition, when a firm makes a profit, it is important to save some of the money, not

spend it all. A planned and systematic way of doing business and continuous development were considered important. The firm should be strong in each sector of the business.

Attention should be paid to maintaining the competitiveness of the firm, and more important than price or quality in themselves is their good compatibility. The use of debt financing should be based on very careful calculations, taking into consideration any potential risks which may hinder the repayment of the loan. Also, it is critical to ensure that the firm has the necessary amount of working capital all the time.

What should be avoided in business?

In addition to "do's", i.e. what should be done, "don'ts", i.e. what should not be done, were also elicited. Many of the responses were tips related to the behavior of an entrepreneur and his or her decision making. There were no differences in responses between the groups of SMEs. The major lessons can be summarized as follows:

Don't

· destroy your life. *"Man is not a machine"*. As a starting point, it is important to understand that not all of us have the necessary qualities to become an entrepreneur. On the other hand, '24/7' as a way of thinking and operating usually does not lead to success. It is essential to distinguish work and free time. Entrepreneurs who ruin their health usually end up with the failure of their firms.

· build on daydreams. *"Entrepreneurship is every-day toil"*. An entrepreneur should not build the business on assumptions but on a solid and sustainable basis. Assuming that there will be enough customers in the market, even though no market analysis has been made, or that the relationship with the major customer will continue endlessly, were examples of such assumptions taken for granted by the entrepreneurs of the failed SMEs in this study. Unfortunately, they did not realize until it was too late that these may be false assumptions. It should be remembered that entrepreneurship is hard work and not always fun, but is also rewarding when one is successful.

· lose focus. *"Focus on your strengths"*. Do not try to do everything but stay in the business that you know and understand. It is essential to focus on what one can do best and let others do what they can do better. Focus on your core business, and outsource peripheral operations. Before setting up the firm, make sure that it will have the needed cooperation partners with necessary capabilities.

· kill innovativeness. *"Never stop"*. You should never be too satisfied with yourself but remember that there is always space for improvements. It is important to

create an organizational culture characterized by continuous development and renewal. Try to avoid building a too structured, mechanistic and hierarchical organization.

· lose control. *"Both feet firmly on the ground"*. It is important to manage oneself, the business and the firm. Many useful bits of advice can be presented, for instance: "don't be greedy", "don't overestimate your own capabilities", "be brave but not daring", and "don't be too gullible". Unrealistic growth objectives and excessive risk taking should be avoided. On the other hand, "don't screw a nut", i.e. the entrepreneur should not focus on routines at the expense of visioning and strategic management. Planning is essential. Also, "don't be blinded by money", i.e. present profits are not a guarantee of profits in the future. It is important that a firm has slack resources to be used in adapting to changing environments. Moreover, excessive dependency on customers, suppliers, and financiers, among others, should be avoided.

Decisions which are too large-scale for the resources available to the firm should be avoided. If a firm is pursuing rapid growth, financing should be ensured in advance. Big investments should always be based on proper planning and accurate calculations, and a special care should be paid to investments financed by debt financing. In setting up the business, one should avoid starting with too few resources. Also, the firm should have some customers before a business is started.

· accept unprofitable business. *"Healthy business only"*. If a firm has some public financial supporters in starting up the business, keep them away from the pricing of products and services. Accept and adapt to social realities, and cease unprofitable businesses if they are not critical for the firm's core businesses. Apart from occasional special situations the entrepreneur should not neglect paying him/herself a salary.

· violate the rules of the game. *"Fair play"*. Unfair competition and fraudulence should always be avoided. Observing the rules of the game is essential because the rules protect players, and the players are playing in the same field. Moreover, it should be remembered that business is based on trust and inter-personal relations. For instance, a firm should always be able to give its customer an acceptable explanation when any failure in delivery times, for example, occurs.

What did the entrepreneurs of threatened SMEs learn from the firm's threat?

The entrepreneurs of threatened SMEs were asked about what they have done in different ways after the threat. Four important themes emerged, and can be summarized as the following lessons:

Pay attention to

· potential credit losses. Firms should take care that the proportion of turnover due to one customer does not grow too big. For example, one SME had decided that the proportion should not be more than 15% of the firm's turnover. If this proportion is achieved by one customer, the firm's management team is called for a meeting to discuss the potential risks this may cause and to decide on necessary actions. Another important way to reduce the risk of credit losses is to limit the period of invoicing. In addition, when collecting overdue payments, it is recommendable to contact debtors personally, and discuss the situation with them before sending a reminder. Moreover, some SMEs focused on bigger customers because they have been found to be more reliable payers than small and micro firms, in particular.

· networking and stakeholder relations. Stakeholders may better understand a firm in difficulties if they are well-informed about the firm's situation. It is useful to discuss matters with the main stakeholders regularly. Long-term cooperation relationships can help a firm to overcome occasional difficulties. On the other hand, often such relationships reduce the firm's need to make marketing efforts. However, environmental scanning and anticipating future changes are important as well. Also, it is essential that the firm's owners are willing to share the ownership of the firm with new owners, if necessary.

· action. Because the environment is changing all the time, continuous improvements and development is important. Planning is important but never sufficient without implementation. Continuous attention should be paid to e.g. sales and marketing.

· firm-internal relations. The entrepreneur should be frank with the personnel. The management should not hide difficulties if such exist. Employees should always know where the firm is heading. Also, it is important to encourage staff to bring up any problems they find.

What did the entrepreneurs of failed SMEs learn from the firm's failure?

The entrepreneurs of the failed SMEs were asked about what they had learned from the firm's failure. Many lessons emerged, and they can be summarized under the following five major themes.

· planning. The business should not be build on assumptions but on a solid and sustainable basis. It is important to watch the environment from several perspectives and to have a broad enough view of it. Moreover, it is essential that the time horizon is long enough. Entrepreneur should make sure that they have time for strategic planning. The firm should identify any business risk which might exceed the firm's carrying

capacity. Attention should be paid to the firm's tolerance of disturbances. Here, a good question for every entrepreneur is: "how long can the firm operate or survive if the flow of income falls significantly or even stops today?" The firm should always know where it is going, i.e. proper real time information systems are essential for planning and control.

· business-like thinking. Since the environment is continuously changing, yesterday's ways of operation may not be valid for tomorrow. It should be born in mind that there are several inertial factors in organizations which hinder renewal. It should be remembered that there are few constant and unchanging things in an organization. For instance, if there is no work for all employees, the number of employees should not be constant but flexible, adapting to changing conditions. When a firm is growing, it is essential to ensure that it does not lose its competitive advantage. For example, a small firm can compete by means of flexibility, but a medium-sized firm is not as flexible as its smaller competitor, and does not enjoy real economies of scale typical of bigger companies.

· know-how. Entrepreneurship requires extensive knowledge and a variety of skills. For successful operation it is important but not sufficient for entrepreneurs to have industry experience. For instance, it is particularly important that an entrepreneur who is starting a business have the necessary marketing and presentation skills. Also, team entrepreneurship may be a highly useful alternative, particularly if the entrepreneur's own ability to run the firm is not adequate. The firm should not try to do everything by itself but focus on the core business and acquire needed knowledge by taking advantage of the cooperation partners' expertise. It is important not to take responsibility for matters of which the firm has inadequate knowledge. On the other hand, it is important to ensure that an adequate level of technological know-how is maintained in the firm. In fields where the firm can improve efficiency and reduce the use of manpower by means of automation, it may be critical to be close to the frontline of technological development.

· customers. Marketing should not be seen as a cost only but as an investment for the firm's future success. It is essential to focus on a customer segment consisting of an adequate number of solvent customers. Focusing in business increases the firm's credibility in the market: the firm's know-how can be questioned if the firm is offering everything to everyone. It is important to take care of the possible risk of losing one's big customers, and try to avoid strong dependencies. This is especially important for subcontractors who have no products or services of their own, and who collaborate with one customer who accounts for a high proportion of the firm's turnover.

· financing. It is essential that the firm has an adequate amount of working capital from the very beginning. Sufficiency of financing is a critical element in successful firm growth. Also, slack financial resources are important, and profits from

good years should be used to increase the firm's competitiveness in the future. Many entrepreneurs of failed SMEs recommended avoiding a big amount of debt financing. It is also important that a firm has more than one financier. In big projects, using a partial debiting method is recommended, avoiding the accumulation of uncollected receivables.

8.6 Summary and conclusions

Despite the fact that SMEs in different industry sectors differ from each other in numerous and significant ways, it was possible to identify similarities among failed firms, on the one hand, and among successful firms, on the other. It seems that some of these similarities are common to all SMEs, and some are cluster specific. However, it seems that SME success is dependent on several interrelated factors. Moreover, success feeds more success, i.e. success in one area usually leads to success in other areas and so creates an upward success spiral. Often, success in the most critical areas of business also positively contributes to avoiding problems which a firm otherwise may face. It also seems that stochastic factors may have a significant impact on firm performance. All this strongly suggests that it would be wise to study the firm in its environment holistically.

Looking at SME failure, it seems that one or a few major factors cause firm failure. There was some evidence of a close relationship of factors causing a threat and failure, i.e. one severe problem may be a major cause of threat, and the co-existence of such problems may lead to SME failure. However, in the same way as success factors, failure factors also seem to be interrelated. In many cases, the lack of strategic management (Boyle & Desai 1991; Jennings & Beaver 1997) was strongly associated with SME failure. Often, there was one initial reason triggering and causing together with other problems a downward vicious spiral generating new problems (cf. Hambrick & D'Aveni 1988).

Of the factors studied, lack of prior managerial experience (Haswell & Holmes 1989; Lussier & Corman 1995) was the only factor characteristic of the entrepreneurs of failed SMEs only. The other factors typical of these entrepreneurs were to some extent characteristic of the entrepreneurs of threatened SMEs as well. Such factors were lack of prior experience as an entrepreneur (Storey 1994), lack of marketing skills (Lussier & Corman 1995), and parents who were not entrepreneurs (Lussier & Corman 1995). However, more entrepreneurs of failed SMEs than those of threatened SMEs were characterized by these factors.

Moreover, inadequate technical know-how (Vesper 1990) and a small number of products (Reid 1991; Storey 1994) were factors exclusively characteristic of failed

SMEs, but only a few failed firms were characterized by these factors. Clearly more failed than successful SMEs were characterized by factors such as a firm founded by one individual (Vesper 1990; Lussier & Corman 1995), a firm managed by one individual (Vesper 1990; Lussier & Corman 1995), lack of planning (Vesper 1990; Boyle & Desai 1991; Lussier & Corman 1995), no use of business advisors (Vesper 1990; Gaskill et al. 1993; Lussier & Corman 1995; Lussier 1995), and inadequate financing (Vesper 1990; Storey 1994; Lussier & Corman 1995). In addition, characteristic of some failed and threatened SMEs was dependency on one or a few big customers (Vesper 1990; Hall & Young 1991; Storey 1994; Hewitt-Dundas & Roper 1999). It seems that the root causes of failure are largely firm internal, and so under the management's control (cf. Boyle & Desai 1991).

In the cluster of stable independent survivors, failed SMEs had risks in customers and the timing of investments. Demand was more unstable and unpredictable, and they were dependent on a few big customers. Big investments in premises and production facilities just before the economic recession and the collapse of demand was typical of these firms. As a matter of fact, unexpected and sudden changes in the environment seem to be a major source of causes of SME failure. In contrast, characteristic of successful SMEs were a more network-oriented way of doing business, and a small step and risk avoidance strategy. Moreover, their businesses were more planned than in the case of failed SMEs.

In the cluster of innovators with continuous growth, characteristic of the entrepreneurs of failed SMEs was lack of prior managerial experience and of marketing skills. The failed SMEs were led by one person, they had products tailored individually for each customer, and their strategic planning and risk management were inadequate. They were vulnerable due to their dependency on one provider of some critical resource. The general economic recession had a great impact on the failures. In contrast, the successful SMEs had a wider range of products, they invested more in R&D, and their actual and potential customer segments were wider and more varied. Moreover, careful strategic planning was characteristic of these and of non-threatened SMEs particularly. Threatened SMEs did not pay attention to strategic planning until they had faced a crisis.

In the cluster of networkers with leapwise growth, characteristic of successful SMEs were entrepreneurs with prior experience as entrepreneur and with prior managerial experience, and the fact that they were family firms. In the case of the failed SME, the number of potential customers in the market was very limited, and the firm expanded its operation to a new business area where it had no know-how. In this particular case the failure was strongly related to one single incident – to one project – which finally caused a shortage of working capital.

It seems that there are factors characteristic of failed SMEs only, i.e. failure factors which are not found among successful SMEs. On the other hand, there are also factors characteristic of failed and threatened SMEs but not of non-threatened SMEs. Some of these were factors characteristic of threatened SMEs identified in the survey by statistical analysis of threatened and non-threatened SMEs. For instance, in the cluster of stable independent survivors, threatened SMEs had a higher proportion of turnover due to the biggest customer, and failed SMEs were dependent on a few big customers. However, comparisons between the results of the survey and the case studies are problematic due to, for instance, the small number of cases analyzed in the each cluster, and the differences in these two kinds of approaches, i.e. between quantitative (survey) and qualitative (case studies) approach.

When asked "what is the most important thing for business success?", the entrepreneurs presented a variety of factors (cf. e.g. Simon 1996). According to the entrepreneurs, an entrepreneur should have certain entrepreneurial characteristics. Also, many factors associated with successful business are related to products, customers, an entrepreneurial team, personnel, and know-how. Many entrepreneurs emphasized the importance of strategic management, particularly risk management. Also, they said that special attention should be paid to significant financial decisions, which should be made with care and on the basis of thorough planning.

On the other hand, from the responses to the question "what should be avoided in business?", seven lessons can be abstracted. The first lesson, "don't destroy your life", suggests one should take care of one's personal health. The second lesson, "don't build on daydreams", claims that business should not be based on assumptions and that entrepreneurship really does require hard work. The third lesson, "don't lose focus", recommends focusing on one's strengths and core business. The fourth lesson argues that the conditions fostering the firm's and individuals' continuous development are important. The fifth lesson, "don't lose control", suggests that an entrepreneur should manage himself or herself, the business, and the firm. This means, for example, avoiding the potential risks involved in the entrepreneur's behavior and decision making. The sixth lesson recommends avoiding unprofitable businesses. Finally, the seventh lesson recommends observing the rules of the game, and avoiding unfair competition and fraudulence.

The entrepreneurs of threatened SMEs suggested paying attention especially to potential credit losses, networking and stakeholder relations, action, and firm-internal relations. On the other hand, five major themes were presented when the entrepreneurs of failed SMEs were interviewed and asked about what they had learnt from the firm's failure. Those "lessons" are related to planning, business-like thinking, know-how, customers, and financing. The importance of planning appears at many levels, and relates to both the entrepreneur's self-management and the firm's strategic

management. According to business-like thinking, the welfare of the business should be the firm's primary goal. It is important to ensure that the firm possesses adequate know-how. Also, a special attention should be paid to customers, their acquisition and selection, as well as to risk management. The lessons of financing relate to the sufficiency of financing and working capital, slack resources, avoidance of debt financing, and the limitation of the amount of uncollected receivables.

Altogether, it seems that an entrepreneur(s) and the management of the firm should take into consideration several factors to achieve success and to avoid failure in business. However, the study brought out some issues which should be treated with special care. While the results of the case studies seem to support the results of the survey, they also provide valuable complementary information which can help us to better understand the diversity of factors which – at least potentially – may affect SME performance. Interestingly, there were no differences between the groups of non-threatened, threatened, and failed SMEs in the responses to the question about what is the most important for business success. Similarly, no differences between these groups can be found in the responses to the question about what should be avoided in business. The lessons presented summarize the entrepreneurs' learning from firm success, threat, and failure.

9 CONCLUDING DISCUSSION

9.1 The main results and conclusions

9.1.1 Goal setting and previous research on SME performance

The purpose of this study was to identify the main factors affecting SME performance. On the basis of the literature review, several deficiencies in this research area were found. The research problem was approached by studying configurations of successful SMEs, trying to capture the phenomenon more holistically than previous research has done. The study's goal setting had an exploratory, empirical and pragmatic emphasis, because of the lack and fragmented nature of previous research. This meant that the existing literature could not provide adequate knowledge about the factors affecting the performance of established SMEs in peripheral locations.

It was argued above that SMEs have a great importance in western countries for several reasons. To date, little research on the factors affecting SME performance particularly in established SMEs located in peripheral regions has been carried out. However, such factors may differ between the SME context and the large company context, between established and new firms, and between peripheral and core locations. It was also argued that such firms' performance also has great importance in local economic development. Despite intensive research focused on growth firms, little is known about firm growth. Moreover, few firms succeed in avoiding a situation where their existence is threatened, and a high proportion of firms fail every year. Moreover, since the world is changing all the time, the ways firms do business are likely to change continuously.

Foundations of SME performance. Firm performance can have two mutually exclusive strategic outcomes – success or failure, and it can be approached, conceptualized, operationalized, and measured in several ways. It has been shown that success and failure are multidimensional concepts. Survival and growth seem to be the most appropriate measures of success in small firms.

Firm performance is based on the match between the firm and its environment. It can be approached by several theoretical perspectives, each taking into account at least partly different factors, with different weights, and neglecting some other factors. The two currently most popular theoretical approaches – the strategic management approach and the population ecology approach – can significantly contribute to our

understanding of the factors affecting firm performance, and hence, as suggested by several researchers in the field, they can also be seen as the extremes of a continuum. Altogether, firm performance is bounded up with firm-internal factors and with environmental factors, and in the final analysis is based on their fit.

Firm performance is much affected by firm strategies, which match a firm's resources to its changing environment. In general, firms may follow an active, market-creating strategy, or, as is usually the case, they have to adapt to the changes in their environment. In addition to generic strategies, firms often have objective- and situation-based strategies, e.g. growth and turnaround strategies. Flexibility of resources increases the compatibility between a firm and its environment, and thus enhances the chances of high performance. However, firm-external factors may also significantly affect firm performance.

Factors contributing to SME success and failure. Research into firm success and failure does not provide a comprehensive explanation for SME performance. On the one hand, it seems that very many variables are associated with firm success and failure. On the other hand, the findings of previous studies of the factors associated with firm success and failure are contradictory. Moreover, a large variety of research approaches have been used. Narrowness and a lack of a holistic approach are characteristic of many studies, and so several researchers in strategic management and entrepreneurship have called for a more integrated and holistic approach to firm performance. Most studies have focused on large companies, and those investigating small firms often concentrate on new ventures. In addition, few studies have focused on the factors affecting the performance of SMEs in peripheral locations.

Firm success is closely related to firm growth and that has been a "hot topic" in strategic management and entrepreneurship research for a long time. In addition, several explanatory approaches have been used, but it seems that not even very strong explanatory factors emerge. Moreover, the growth of established SMEs seems to attract less attention in research, most studies focusing on large companies or new ventures. While a number of studies have focused on firm success and growth, few recent studies have focused on SME failure. The factors contributing to firm failure are often closely related to the causes of decline and crises. Recovery strategies may provide valuable information on successful turnarounds but, however, few studies have focused on the turnaround strategies of SMEs.

To date, comparative studies of factors affecting firm success and failure have been rare, but it seems that there are few differences between successful and failed firms in general. However, in the light of previous research, it can be concluded that there are certain factors related to success and failure. On the one hand, success seems to be associated with the entrepreneur's higher education and experience, an effective

management team, innovativeness in products, good customer relationships and avoidance of dependency on only a few customers, good cooperation relationships, adequate financing, skilled personnel, strategic planning, firm growth, firm flexibility, focusing on core business, and operation in favourable economic conditions. On the other hand, failure often seems to be related to the absence of these qualities. Many times, the root cause of failure can be traced to problems in management. In general, a firm's inability to adjust to changing circumstances can be seen to be the reason for failure.

Given the high number of studies focused on firm performance, it is surprising that much of the research is non-cumulative. There can be several reasons for this: there is a striking diversity in the definitions of central concepts, for example, and the field of research focusing on firm performance is fragmented because of the several research streams and approaches. In addition, there are several contingency factors which may affect and blur the results. It is also worth noting that research results always represent selected views of reality, so research is always partial and can never thoroughly capture all the bits of the phenomenon in question. However, on the basis of the literature review it seems obvious that numerous issues should be taken into account in studying the factors affecting SME performance. All this suggests that more research on factors affecting SME performance is needed, but also indicates challenges related to such a study.

9.1.2 The empirical study of SME performance

Empirical research methods. Though the theoretical part of this report introduced both firm-internal and firm-external perspectives, i.e. strategic management and population ecology perspectives, on firm performance and contrasted them, the empirical research was conducted from a firm-internal viewpoint. In the empirical study, the abductive, taxonomic and configurational approaches were applied. Taxonomic approaches have been rare in research because they require much work. The empirical intersectoral material was based primarily on two sources of information: data of an extensive survey, and in-depth case interviews.

A mail survey was made of entrepreneurs of 145 successful independent SMEs in Eastern Finland operating in the sectors of manufacturing, business services, and tourism. In addition to being successful in terms of survival, most of these SMEs were established and growth firms, and based on the entrepreneurs' subjective evaluations they had succeeded better than their most important competitors. The variables used relate to the characteristics of entrepreneurs and enterprises, their life cycles, the strategic choices made, success factors of SMEs, and the nature of their

environment. Case studies were then used to increase the understanding of the survey results including the in-depth investigation of the current situation and life cycles of the case firms, and to compare firms with different levels of performance by identifying differences and similarities between the cases. In case studies, the 'matched triplets' approach was used.

Characterizing successful SMEs. *Characteristics of the entrepreneurs*. Of the entrepreneur-related factors, the importance of varied work experience (e.g. Siegel et al. 1993), higher education (e.g. Barkham 1992; Macrae 1991; Dunkelberg & Cooper 1982; Yusuf 1995), and long-term efforts on behalf of the business were supported by the empirical evidence. Successful and growth-oriented SMEs were typically led by middle-aged men who had gained varied work experience before starting as entrepreneurs in their present firms. Typical of them was prior work experience in sales and marketing or production, including managerial tasks. It seems that the entrepreneur's marketing skills (e.g. Wynarczyk et al. 1993) and managerial know-how (e.g. Macrae 1991; Dunkelberg & Cooper 1982) play an important role for firm growth. Success followed long-term work and investments in business: most entrepreneurs have been entrepreneurs for more than a decade. Higher education is perhaps the most frequently mentioned entrepreneur-related success factor (Storey 1994: 109), and obviously it has had growing importance for firms operating in an environment characterized by greater need for knowledge than ever before.

SME performance may not be either gender nor ownership issue (see e.g. Willard et al. 1992). No performance differences were found between male-led and female-led SMEs or between owner-managed and non-owner-managed SMEs. However, business goals may differ between firms owned by women and men (see Brush 1992), and this might explain performance differences between women-owned and men-owned firms. The findings provided more evidence that growth firms are typically led by men, as e.g. Koskinen (1996: 169) has also found.

An interesting entrepreneur-related finding was the high prevalence of multiple-firm entrepreneurs among successful SMEs (see Stuart & Abetti 1990; cf. Storey et al. 1987; Westhead & Wright 1998a; 1998b; Rosa & Scott 1999). Moreover, multiple-firm entrepreneurs were often both portfolio and serial entrepreneurs at the same time. This highlights the importance of prior entrepreneurial experience, but may also be associated with an entrepreneurial personality. These findings concerning multiple-firm entrepreneurship also suggest that researchers should pay more attention to the investigation of portfolios of firms rather than single firms, and they may have important implications for e.g. local economic development.

Characteristics of the SMEs. Successful SMEs constitute a heterogeneous group of firms with a large variety of characteristics, in terms of e.g. industry sector, size, and age. However, common to them is that they have clear goals and objectives.

A high proportion of firms with several founders and owners, firms led by an entrepreneurial team, and growth-oriented firms are worth noting.

SME success is not related only to high-growth industry sectors: successful SMEs could be found in each selected industry sector. Previous studies have reported the association between firm growth and the growth rate of an industry sector/markets. It should be noted that the growth within an industry sector can be fragmented: sales in one subsegment may grow rapidly, while it may fall in another. It has been discovered that many of the SMEs studied operated in narrow market segments of their industry (Pasanen 1997). Though many studies focusing on favourable business environments have pointed out the important role of demand in the region (e.g. Johannisson 1993a), the demand of local markets may be less important for the firms studied than for firms in general. Naturally, the role of local demand is much more significant for firms in the sector of business services and for other firms which are bound up with the volume of local demand.

SME success is not related to a certain size or age of the firm either, though bigger and older firms can obviously be regarded as more successful than smaller and younger firms, if firm size or age is used as a measure for firm performance. Most of the successful SMEs were small firms, operating in one establishment. Though new firms were excluded from the sample, there was a wide range of firms in terms of age. Previous research has shown that age does not distinguish high-growth firms from others (e.g. Smallbone et al. 1993b). The empirical evidence of this study supports previous findings according to which younger firms have a higher growth rate than older ones (e.g. Cambridge Small Business Research Centre 1992; Variyam & Kraybill 1992). This can be explained by, for instance, the fact that a young firm has to reach the scope of operation which enables efficient use of resources. On the other hand, however, research has never been able to define the optimal size of a firm despite intensive research.

The findings seem to indicate the importance of multiple founders (e.g. Bruno et al. 1987; Barkham 1992; Feeser & Willard 1990; Woo et al. 1989; Dunkelberg et al. 1987; Westhead et al. 1995) and their strong commitment to the firm: most firms were founded by more than one founder, of which at least one was still involved in the firm's operation. Moreover, most firms still had more than one owner at the time of the survey. There was evidence suggesting the important role of entrepreneurial teams (Rosa & Scott 1999): most successful firms were led by an entrepreneurial team. It might be that an entrepreneur in an SME has to be an all-rounder who should understand and be able to manage the whole range of business activities. Team entrepreneurship may provide better conditions for high performance, enabling the division of labour and the specialization of the members of an entrepreneurial team

(see e.g. Timmons 1999: 278). In such a case, capabilities and special knowledge areas of team members can complement each other (Westhead et al. 1995).

Pursuing growth is typical of successful SMEs: two thirds were growth-seeking, which is a considerably higher proportion than among Finnish firms in general (see Ministry of Trade and Industry 1998; cited by Kauppalehti 1999a). The firms' growth-seekingness may naturally depend on the firm's life cycle stage, i.e. more younger firms than older ones are seeking growth. Most SMEs studied were in the stage of growth or expansion, though there were also SMEs at the beginning of their life cycle, and also some in the mature stage.

Life cycles. Staying close to the original business seems to be typical of successful SMEs (e.g. Feeser & Willard 1990): most successful SMEs had stayed close to their original business. However, there have been significant changes in the firms' turnover: during their life cycle, most SMEs had faced periods of significant growth and/or recession. In contrast with traditional life cycle models, the present findings reveal that a firm can have several separate stages of high growth during its life cycle.

The entrepreneurs thought that high growth, defined as an annual growth of more than 20% (e.g. Fischer et al. 1997), was based mainly on firm-internal factors, of which the most important ones were related to the expansion of markets and investments in marketing, and investments in production. However, firm-external factors also play a role in firm growth, strong growth in demand being the most common firm-external growth factor. Organic growth seems to be more common than non-organic growth: one fifth of the SMEs had grown through an acquisition or a merger, which are considered a risky growth strategy in the literature (e.g. Duchesneau & Gartner 1990). Moreover, non-synergistic diversification seems not to be used among successful SMEs: almost in all cases a business connection was found between the firm studied and the purchased or mergered firm.

In contrast, of the factors affecting a fall in turnover, four fifths were considered firm-external factors related to the general economic recession. The causes of a fall in turnover were clearly more often firm external than in the study of Slatter (1984), for instance (cf. also Boyle & Desai 1991; Heany 1985; Finkin 1985). This may be partly explained by the special characteristics of the sample, i.e. successful SMEs, and the time of investigation (after the general economic recession in the 1990s).

During their life cycle, half of the SMEs had faced at least once a situation where the firm's existence had been threatened. Typically, firm-external rather than firm-internal factors were seen as the causes of threat (cf. Boyle & Desai 1991). There were two common alternative ways of adaptation: firm development with investments, or adaptation through retrenchment activities. In the light of the debate on

retrenchment vs. turnaround strategies (Barker & Mone 1994; Castrogiovanni & Bruton 2000), this was an interesting finding providing support for both strategies. Significant changes in the principles and practices of management and in the ways of doing business during the firm's life cycle seem to be typical of successful SMEs. The firms were mostly growth firms, since during the last decade, their turnover had mainly grown, and in most cases the growth had been stable. Moreover, successful SMEs often operated in growing markets: for most firms the demand in the markets had grown during the last decade.

In other words, success in terms of firm growth was seen mainly to be based on firm-internal factors. On the other hand, the difficulties in terms of a fall in turnover and threat were seen mainly to be based on firm-external factors. This is consistent with the main body of previous findings (e.g. Storey 1994: 105; Jenkins & Johnson 1994: 3; Vanhala et al. 1994: 105). However, in their study of new venture failures, Zacharakis et al. (1999) showed that entrepreneurs acknowledged that firm-internal causes contributed to their venture's failure. Hence, it is worth noting that there are several factors which may affect SME growth and decline.

Strategic choices. Internationalization, innovativeness, specialization, and networking are important strategic choices, as argued by e.g. Hitt and Ireland (2000: 48-52), since most of the successful SMEs were characterized by these qualities. Moreover, these qualities were often combined with each other in the same firm. For example, interfirm cooperation was more common among internationalized firms and firms producing new products in the markets. Exporting seems to be associated with other modes of internationalization: the higher the proportion accounted for by export markets in the firm's total sales, the more the firm also had different modes of internationalization. The importance of innovativeness was empirically supported in many ways: for example, few firms had products identical to those of their competitors, and half of the firms had products which were new in the markets. Almost all firms actively developed their products, indicating a high R&D orientation.

It is evident that specialization is a necessity: the SMEs were specialized by their product range (cf. Kauranen 1996; Lehtonen 1997), and they usually served one or a few clear-cut customer segments. Specialization was also shown by the fact that the firms in general thought that their competitive power in their main markets was at least quite good. This may indicate that these SMEs can transfer their costs forward in the supply chain, which is commonly regarded as one of the main problem characteristic of small firms. Probably due to specialization, interfirm cooperation plays a critical role for SME success: entrepreneurs considered interfirm cooperation important for the firm. Cooperation and networking among these SMEs seem to be more intensive than in the SME sector in general (e.g. Curran et al. 1993: 24). It should be noted that higher growth may be achieved via a cooperation strategy than

via an internal development strategy (Farrell & Doutriaux 1996). The findings concerning the use of subcontracting were similar to e.g. those revealed by the study of peripheral small industrial firms in Northern England (Smallbone et al. 1999).

Success and survival factors. SME success seems to be a multidimensional phenomenon. Factors relating to customer and supplier relations, personnel, knowledge, flexibility, quality, and planning were considered to be success factors by all successful SMEs. The single most important success variables were related to customer relations and personnel, as many previous studies of successful firms have also highlighted (e.g. Simon 1996). On the other hand, innovativeness and R&D was considered to be an important success factor by many firms but it was not an important success factor for all SMEs.

Long-term customer relations contribute to customer closeness, i.e. good knowledge of customers and their changing real needs, and thus they contribute to the firm's learning from customers. Customers are often located far away, so keeping them may be extremely important since new customer acquisition may be more expensive to firms in peripheral areas than to firms located near to their markets. Thus, it is important to know one's customers and their real needs, which is often claimed to be a problem for many SMEs compared with large firms with more-developed information systems. Confidential customer relations can facilitate firm survival and they have an important role in firm renewal and continued success (cf. Räsänen 1999).

Also, good reputation relates to customers' trust in the firm and its products and services (see Caruana 1997). Good, long-term customerships are promoted by personal relations (see e.g. Putnam 1993; Lechler & Gemuenden 1999). Customer proximity promotes long-term customer relations, and vice versa. For production networks, reliable delivery is a critical precondition, because many of these SMEs operate as subcontractors for their customer firms. The role of reliable and fast delivery is particularly important for customers who are not end-users when the product is used as an input in the customer firm's production process. Good customer relations have been found to be a source of competitive advantage more for small firms than for large companies, and regardless of their strategic focus and the growth of the industry sector (McDougall et al. 1994: 552; see also Halborg et al. 1997; Stalk et al. 1996; Wijewardena & Cooray 1996).

Good supplier relations can be regarded as customer relations from the opposite viewpoint. Good supplier relations relate to the quality of raw materials and reliable suppliers. This reinforces the previous notion concerning the importance of reliable delivery, i.e. reliable customer relations both forward and backward. Reliability is a critical precondition for the successful operation of interfirm networks, which can be seen to be built on inter-personal relations. There was more variation in the importance of good supplier relations than in the other high-scoring success

variables, indicating that the respondents were not unanimous in its importance for SME success. However, well-organized supplier relations may provide the firm with cost advantages in many ways.

Having personnel with advanced knowledge is a necessary and more central condition for SME success now than ever before (cf. Ministry of Trade and Industry 1998; Arola & Larimo 1998; Lehtonen 1997). Often firms with good knowledge of products can apply a wide range when pricing and have good preconditions for differentiation and product development. Good know-how is a precondition for high quality, since high quality of products is followed by high quality of operations. To maintain advanced knowledge in the firm, continuity of key persons and personnel capable of teamwork is important. Recruiting new personnel may be more difficult for firms in peripheral locations, because of the more limited supply of a workforce with advanced knowledge. For that reason, keeping the current staff satisfied with their work is important. Quality influences the firm's image, and for these firms, it may often be harder to achieve credibility than for firms in core regions. Moreover, the possibility of changing suppliers and subcontractors may be more limited than for firms in core regions.

Flexibility is often seen to provide a central source of competitive advantage more in small firms than large ones. There were two high-scoring success variables related to firm flexibility. Both (the ability to respond flexibly to customers' needs, and simple and flexible organization) promote firm's adaptation process in a changing environment. SMEs have to be very sensitive to weak signals in markets.

Planning is related to goal-oriented behavior and logical actions of the firm. Often it means long-term investments to achieve the goals the firm has set. Today, planning is strategic visioning, learning and searching for tools for implementing the vision rather than formal strategic planning (Mintzberg 1994; see also Pearce et al. 1987; Duchesneau & Gartner 1990; Campbell & Alexander 1997; Miller & Cardinal 1994). It is important that business operations are well-planned, to compensate for the drawbacks due to the location in remote and sparsely populated areas.

The most important success factors found in this study are strongly congruent with those identified in other recent studies, e.g. with capability- and customer-based strategic thinking (e.g. Stalk et al. 1992; Friedrich & Seiwert 1994). However, it cannot be claimed that a firm is guaranteed success if it only takes good care of these success factors. But it is likely that a firm which does not deal adequately with these factors will decrease its probability of success compared with firms which pay adequate attention to these issues (cf. e.g. Lehtonen 1997).

The least important structured success factors were mostly firm-external factors related to external advisers and support, and competition. Interestingly, these factors as well as, for instance, difficult-to-imitate products, low delivery costs, and

strong growth in demand, were considered to have only a small or moderate importance for SME success. However, it should be noted that there was much variation in the importance of several success factors among the firms. This means that these factors may also be extremely important for some SMEs.

The exploratory factor analysis of the structured success statements yielded 12 factors with eigenvalues over 1.0, indicating the multidimensional nature of SME success. However, one success factor, 'proactiveness, flexibility, and distinctiveness', explained 35% of the total variance. Continuous environmental scanning, proactiveness and flexibility play an important role in firms' process of adaptation to changes in their environment, and especially for SMEs in peripheral locations (see e.g. Beal 2000; Lang & Calantone 1997). The distinctiveness of the firm is important, because the markets of these firms are often located quite far away and they cannot compete with standard products with firms located near to markets. The other main underlying dimensions of SME success were planning and risk management, motivated personnel and high-level customer service, chain management, product knowledge, leveraging external advisers and public financial aid, and relationship management and customer closeness. These seven dimensions accounted for only 59% of the total variance, so there are also numerous other dimensions. These findings support a "both-and" approach in explaining SME success (see Simon 1996: 272-274).

The unstructured success factors show that there are also some other important factors for SME success in addition to those revealed by the analysis of the structured success factors. The entrepreneur's personal contribution, advanced technology, and focusing on core business may be highly important for SME success. It is quite obvious that the smaller the firm, the more important is the owner-manager's personal contribution. Operating in a global environment, SMEs in peripheral locations may be forced to apply advanced technology and to focus on their core business by outsourcing their outer businesses, as do firms in core regions.

It seems that success factors are quite different from survival factors, and so it seems useful to make a distinction between them. The contribution and flexibility of the personnel was considered to be particularly important for SME survival, suggesting that employees may be a firm's most valuable resource. Other most important survival factors were good relationships with external stakeholders, of which customer and supplier relations were considered to be important success factors by all SMEs (cf. Lechler & Gemuenden 1999). Also, Duchesneau and Gartner (1990), among others, found that successful new ventures invested more than less successful new ventures in relationships with stakeholders, e.g. customers, suppliers, and personnel. For SME survival, early reaction to problems and decision making without delay were also important survival factors.

The key findings concerning the characteristics of successful SMEs are summarized in Table 9.1.

Table 9.1 Summary of the characteristics of successful SMEs

	Key characteristics
Entrepreneurs	• varied work experience • higher education • long-term efforts on behalf of the business • multiple entrepreneurship
SMEs	• several founders • led by an entrepreneurial team • clear goals and objectives • growth-seekingness
Life cycles	• staying close to the original business • growth firms
Strategic choices	• internationalization • innovativeness • specialization • networking
Success factors	• customer relations • supplier relations • personnel, know-how, and quality • flexibility • planning

A taxonomy of successful SMEs. Three distinct clusters of successful SMEs emerged: (1) stable independent survivors; (2) innovators with continuous growth; and (3) networkers with leapwise growth.

Stable independent survivors were often family firms in local markets with stable demand. They were older than those in the other clusters, and the entrepreneurs had rarely any prior experience in business as venture owner. A clearly bigger proportion of the firms in this cluster than in the other clusters were led by women. Typically they were non-growth firms, their products were quite similar to those of their competitors, and sales volumes were stable. Characteristic of them were more fragmented customers than in the other clusters, a small number of network relations, and a reluctant attitude towards interfirm cooperation. Their success was based on high-standard customer service and flexibility in adapting to their customers' special needs. Often, the survival of local firms is dependent on high-level know-how and good reputation among customers (cf. Kettunen 1985: 31). Moreover, the CEO's own contribution is typically critical for firm success. Entrepreneurship could be interpreted here as a way of living and as small business ownership rather than maximizing profits (cf. Bridge et al. 1998: 140-142). When facing serious crises, a common way to adapt was to minimize costs.

Innovators with continuous growth operated in growing and very often global markets. The entrepreneurs had prior work experience particularly in planning and R&D. These firms had significant growth and strong growth aspirations. They strongly emphasized research and development, and had new products with strong growing sales volumes, and many of these products were unique in the market. They had a few big clients, and most of these SMEs exported. These entrepreneurs thought that their firms had succeeded clearly better than their most important competitors (cf. McCann 1991), and they were the most satisfied with their firm's success. This is in line with previous findings showing that pioneer firms or first movers have advantages over their competitors in terms of higher profits and bigger market shares (see Schumpeter 1934; Lieberman & Montgomery 1988). Their success was based on their innovativeness (cf. Lehtonen 1997; Wiklund 1998). However, the ability to offer good after-sale services, low financing costs, planning, and consistency in decision making were also very important for the success of these firms. In addition, strong basic values of the firm were important for these firms, which may indicate a strong culture of the firms (e.g. Schein 1985), which has been found to be characteristic of successful firms (see e.g. Peters & Waterman 1982; Deal & Kennedy 1987). Early reaction to problems and openness in problem solving were crucial for their survival when they faced serious problems (see Eisenhardt 1989b).

Networkers with leapwise growth operated often in traditional industry sectors, where the demand had grown slightly. More entrepreneurs here than in the other clusters had prior work experience in management and tasks requiring mathematical skills. These SMEs were bigger than those in the other clusters, they were growth seeking, and had experienced significant leapwise growth. These firms had the clearest goals and objectives in business. Often the leapwise nature of their growth could be explained by acquisitions, which have been found to be particularly important for bigger firms (Davidsson & Delmar 1998; see also Anslinger & Copeland 1996). The sales volumes of their products were quite stable but a considerable proportion of their products also had a growing sales volume. These SMEs could be characterized as internationalized, specialized and network intensive. They had the most globalized ways of doing business: they both exported and imported, and many had subsidiaries or joint ventures abroad. They were the most concentrated on narrow product ranges and customer segments. Also, these SMEs were the most active in interfirm cooperation, and they used subcontracting extensively. Firm success was considered to be slightly better than that of their most important competitors. The success was based on focusing on their core business, good network partners, and reliable information systems (cf. Donckels & Lambrecht 1995). For their survival, the personnel's flexibility, good network partners and relations, and new customers were considered to be important.

In comparing the clusters, stable independent survivors differed from the others because of the firms' reluctant attitude towards growth and their conservative (Covin 1991) characteristics. The CEOs in this cluster could be called small business owners rather than entrepreneurs (see Carland et al. 1984). They create a small number of new jobs (cf. Storey 1993; Birch et al. 1993). The other two clusters consist of growth firms. The entrepreneurs perceived their firms' success to be better in these clusters than in the first cluster (cf. Kotey & Meredith 1997). The profile of the second cluster, 'innovators with continuous growth', represented an entrepreneurial configuration with organic growth, while growth in the third cluster, 'networkers with leapwise growth', was based, to a significant extent, on non-organic growth, e.g. growth by acquisitions.

The latter two clusters encompassed growth-oriented SMEs but the underlying nature of growth was different in each cluster. In these clusters the competitive advantages seem to be related to the firm's innovativeness or to the efficiency of operations (cf. Zammuto 1988; Brittain & Freeman 1980; Miles & Snow 1978). For a firm's long-term success, using one of these approaches but not both has been claimed to be crucial (Bantel 1998: 208). Innovators with continuous growth were pioneers, with an attitude "we are the first in the market". On the other hand, networkers with leapwise growth emphasized efficiency and exploitation of existing business opportunities. The association between the firm's greater development orientation and generally better performance outcomes has been confirmed by McMahon (2001), for example.

Hence, the first cluster differs sharply from the others. This distinction reflects especially the difference between non-growth and growth firms. Cameron et al. (1987) also suggested that the central distinction in investigating organizational life cycles should be the one between growth and non-growth, rather than the one between decline and non-decline, which has been prevalent in the literature. The second distinction between the two growth clusters reflects the difference between incremental and organic, and leapwise, non-organic growth, in particular. However, in interpreting the results it should be noted that some characteristics are clearly shared by at least two of the types of SMEs (cf. e.g. Hornaday 1990; Woo et al. 1991; see also Chell et al. 1997). On the other hand, at least in the short run, firm transitions from one cluster to another can be considered unlikely, because the foundation of success in each cluster seems to be based on considerably different factors.

The findings suggest that there are several types of successful SMEs (cf. Barkham et al. 1996; Simon 1996: 40). It is, indeed, useful to group successful SMEs into clusters because of the relevant differences identified. The study's data-driven approach helps create meaningful ideal types reflecting the natural behavioral differences of successful SMEs. More importantly, the approach reveals the different

"success formulas", i.e. sets of typical behaviors in each cluster. The configurations, i.e. the profiles of the clusters, differ from each other not only in the clustering variables, but also in many other variables, which indicates the viability and robust nature of the configurations.

Unfortunately, no straight comparisons between the results of this study and those of previous ones can be made, for several reasons (see Bailey 1994: 33). However, on the one hand, the results obtained here have some obvious similarities with typologies and taxonomies of entrepreneurs, firms, and their strategies previously presented in the literature (see Smith 1967; Mintzberg 1973; Stanworth & Curran 1976; Filley & Aldag 1978; Miles & Snow 1978; Porter 1980; Carland et al. 1984; Zammuto 1988; Covin 1991; Birch et al. 1993; Johannisson 1993b; Storey 1994; Bridge et al. 1998). On the other hand, many configurations presented in the literature cross and overlap the configurations revealed in this study (see e.g. Galbraith & Schendel 1983; Gartner et al. 1989; Lafuente & Salas 1989; McDougall & Robinson 1990; Merz et al. 1994; Greene et al. 1997a).

The key findings concerning the strategic behavior of three types of successful SMEs are summarized in Table 9.2.

Table 9.2 Summary of the strategic behavior of the three types of successful SMEs

	Key characteristics of strategic behavior
Stable independent survivors	• serving existing customers in the local markets • high-standard customer service • flexibility in adapting to their customers' special needs • stability in business
Innovators with continuous growth	• seeing new business opportunities and exploiting them • innovativeness • ability to offer good after-sale services • continuous, organic growth
Networkers with leapwise growth	• focusing on core business and building effective networks • efficiency of operations • a global way of doing business • leapwise, non-organic growth

A comparison of threatened and non-threatened SMEs. Threatened and non-threatened SMEs differ from each other: there were significant differences between SMEs that had never been threatened and those that had been at some time. A threat to existence seems to be related to many factors and to vary according to the type of firm. Factors differentiating threatened and non-threatened SMEs were often typical of the cluster of SMEs in question. Moreover, the differences identified by statistical analysis seem to be interlinked to some extent with the causes of the threat and the ways firms adjust as revealed by qualitative analysis. The causes of the threat as well as the ways

firms adjust to changing conditions and circumstances seem to be to a large extent cluster specific.

Comparing all threatened and non-threatened firms, several factors distinguishing the two groups of SMEs can be found. In SMEs whose existence had never been threatened, entrepreneurs were more satisfied with business success than those in other SMEs. Also, they thought that their firm's business success had been better than their competitors'. No differences between the groups were found in terms of the entrepreneurs' background. This may be explained at least partly by the changes in management which had happened after the threat in the SMEs studied.

A threat to existence or the absence of such a threat was strongly related to firms in two industry sectors, in particular: almost all the SMEs in the food industry had never faced any threat to their existence, whereas almost all those in the building material industry had encountered such a situation. This is an interesting finding, since several studies have found that there seems to be no association between failure rates of firms and industry sectors (e.g. Phillips & Kirchhoff 1989; Storey 1994: 94; Gallagher & Stewart 1985).

More threatened SMEs than others had experienced significant periods of decline, their growth had been fluctuating, and they had had more changes in their business base. Previous studies have also found that changes in business base are associated with lower firm performance (Feeser & Willard 1990). Also, threatened SMEs were older than non-threatened SMEs. However, it should be noted that the SMEs studied were successful firms, and no new firms, i.e. firms less than four years old, were involved in the study. Previous research has found that younger and smaller firms have a lower probability of survival than older and bigger firms (e.g. Aldrich & Auster 1986: 194-195; North et al. 1992), and it has been explained by reference to the accumulated learning of older firms and to the fact that governmental support is more likely to be targeted at big firms than at small ones. On the other hand, the longer the time period, the higher the probability that the firm will face a situation in which its existence is threatened, as a result of external shocks in the markets for example.

The role of the domestic market, excluding the local market, was more important for threatened SMEs than for others, and threatened SMEs expressed more positive attitudes towards interfirm cooperation. Starting or expanding exporting, specialization and cooperation, in particular, were used as ways of adapting. The ability to find quick solutions for changing customer needs was valued more highly by threatened SMEs than by non-threatened ones.

In the cluster of stable independent survivors, entrepreneurs in SMEs that had never had any threat to their existence thought that their firms' competitive power in the market of the main products was stronger than that of other SMEs. In non-threatened SMEs, the proportion of products with a stable volume was higher, and the

proportion of turnover due to the biggest customer lower, than in threatened SMEs. Many studies report that dependency on one or a few customers is linked with lower probability of surviving (Storey 1994: 107; Reid 1991; Hall & Young 1991). Non-threatened SMEs had also stayed close to their initial business, and they seemed to attach more importance to the success factors typical of the SMEs in this cluster. It seems that threatened SMEs had more positive attitudes towards interfirm cooperation, and they often operated as subcontractors for other firms.

In the cluster of innovators with continuous growth, entrepreneurs of non-threatened SMEs were almost all founders of their firms, and they often came from the local area. In the case of non-threatened SMEs, the local market's share in the firm's sales was higher, and they rarely imported. On the other hand, the R&D attitude "we are the first in the market" was considered more important by threatened SMEs, even though all SMEs in this cluster could be characterized as pioneers in the market. Good inter-personal relations with customers and suppliers and long-term customer relations were considered more important in threatened SMEs than in others.

In the cluster of networkers with leapwise growth, the only variable which differed statistically significantly between the two groups was a success factor, investment payments by self-financing. This, together with long-term customer relations, was valued more highly by non-threatened than by threatened SMEs. In threatened SMEs, on the other hand, environmental scanning seemed to be given higher priority. Threatened SMEs also had more changes in the principles and practices of management.

Discriminant analysis showed that the most accurate results were obtained when threatened and non-threatened SMEs in the same cluster were compared. However, there seems to be no single variables with particularly high predictive power. The original discriminant models built on five to ten variables that had showed statistically significant or almost significant differences between the two groups of SMEs, and later, the new discriminant models based on four to five variables with over 0.3 value of standardized canonical discriminant function coefficients explained one quarter to one half of the total variance between the groups. In these models, according to the degree of predictive accuracy measured by the percentage of cases classified correctly, 76-86% of the cases were correctly classified. Furthermore, 70-83% of the cross-validated (Lachenbruch 1975: 32) grouped cases were correctly classified. Thus, it is clearly useful to study SME survival within homogeneous clusters of firms.

Comparing SMEs in these two groups helps throw light on the success strategies of SMEs. On the one hand, the results give us some clues about how some SMEs succeeded in avoiding situations where their counterparts had come under threat. For instance, non-threatened networkers with leapwise growth valued investment payments by self-financing more highly than did other SMEs, indicating

that it may be one important factor characterizing their strategic behavior in avoiding situations where their existence could come under threat. In the same way, the more moderate R&D orientation of non-threatened innovators with continuous growth may point to the risks involved in a more radical R&D orientation. Also, the higher proportion of products with stable volume and lower proportion of turnover due to the biggest customer in non-threatened stable independent survivors may reflect a conscious decision in managing business risks associated with products with changing volume and a high proportion of turnover being due to one customer.

On the other hand, the results reveal potential causes of threat and how the SMEs had succeeded in overcoming the problems they have met. Moreover, the results may reflect the fact that entrepreneurs in the threatened SMEs had learned from the difficulties. For instance, it seems that entrepreneurs in threatened SMEs had realized the importance of interfirm cooperation, which can be regarded as a flexible safety net and as an important way of adjusting to changing conditions and circumstances (cf. Niittykangas 1996). Also, entrepreneurs in the SMEs in the group of threatened innovators with continuous growth valued good inter-personal relations and long-term customer relations more highly than did entrepreneurs in other SMEs, suggesting that those factors might have been extremely important for the survival of these SMEs in their struggle through difficult times.

The comparison of threatened and non-threatened SMEs specified the information concerning the strategic behavior of SMEs. For example, as the investigation of the clusters showed, the competitive advantage of innovators with continuous growth was related to their innovativeness. However, this analysis brought out the risks involved in their highly innovative strategic behavior. Also, as shown previously, networkers with leapwise growth considered important efficiency and the exploitation of existing business opportunities. However, new customers may also have a great importance for their survival in certain situations.

Comparisons of failed and successful SMEs. It was possible to identify similarities among failed firms, and among successful firms. Some of these similarities are common to all firms, and some are cluster specific. However, it seems that SME success is dependent on several interrelated factors. Moreover, success feeds more success, creating upward success spirals. Often, success in the most critical areas of business also positively contributes to avoiding problems which a firm otherwise may face. It also seems that stochastic factors may have a significant impact on firm performance.

One or a few major factors seem to cause firm failure. In many cases, the lack of strategic management (Boyle & Desai 1991; Jennings & Beaver 1997) was strongly associated with SME failure. Often, there was one initial reason triggering and causing together with other problems a downward vicious spiral generating new problems (cf.

Hambrick & D'Aveni 1988). There seems to be a close relationship between factors causing a threat and failure. Moreover, it seems that there are factors characteristic of failed SMEs only, i.e. failure factors which are not found among successful SMEs. On the other hand, there are also factors characteristic of failed and threatened SMEs but not of non-threatened SMEs.

Of the factors studied, lack of prior managerial experience (Haswell & Holmes 1989; Lussier & Corman 1995) was the only factor characteristic of the entrepreneurs of failed SMEs only. The other factors typical of these entrepreneurs were to some extent characteristic of the entrepreneurs of threatened SMEs as well. Such factors were lack of prior experience as an entrepreneur (Storey 1994), lack of marketing skills (Lussier & Corman 1995), and parents who were not entrepreneurs (Lussier & Corman 1995). However, more entrepreneurs of failed SMEs than those of threatened SMEs were characterized by these factors.

Clearly more failed than successful SMEs were characterized by factors such as a firm founded by one individual (Vesper 1990; Lussier & Corman 1995), a firm managed by one individual (Vesper 1990; Lussier & Corman 1995), lack of planning (Vesper 1990; Boyle & Desai 1991; Lussier & Corman 1995), no use of business advisors (Vesper 1990; Gaskill et al. 1993; Lussier & Corman 1995; Lussier 1995), and inadequate financing (Vesper 1990; Storey 1994; Lussier & Corman 1995). In addition, characteristic of some failed and threatened SMEs was dependency on one or a few big customers (Vesper 1990; Hall & Young 1991; Storey 1994; Hewitt-Dundas & Roper 1999). The root causes of failure seem to be largely firm internal, and so under the management's control (cf. Boyle & Desai 1991).

The key findings concerning the factors associated with SME failure in general are summarized in Figure 9.1.

- lack of prior managerial experience
- lack of prior experience as an entrepreneur
- lack of marketing skills
- parents who were not entrepreneurs
- a firm founded by one individual
- a firm managed by one individual
- lack of planning
- no use of business advisers
- inadequate financing
- dependence on one or a few big customers

Figure 9.1 Factors associated with SME failure

In the cluster of stable independent survivors, failed SMEs had risks in customers and the timing of investments. Demand was more unstable and unpredictable, and they were dependent on a few big customers. Big investments in premises and production

facilities just before the economic recession and the collapse in demand was typical of these firms. As a matter of fact, unexpected and sudden changes in the environment seem to be a major source of causes of SME failure. In contrast, characteristic of successful SMEs were a more network-oriented way of doing business, and a small step and risk avoidance strategy. Moreover, their businesses were more planned than in the case of failed SMEs.

In the cluster of innovators with continuous growth, characteristic of the entrepreneurs of failed SMEs was lack of prior managerial experience and of marketing skills. The failed SMEs were led by one person, they had products tailored individually for each customer, and their strategic planning and risk management were inadequate. They were vulnerable due to their dependency on one provider of some critical resource. The general economic recession had a great impact on the failures. In contrast, the successful SMEs had a wider range of products, they invested more in R&D, and their actual and potential range of customers was wider and more varied. Moreover, careful strategic planning was characteristic of these and of non-threatened SMEs particularly. Threatened SMEs did not pay attention to strategic planning until they had faced a crisis.

In the cluster of networkers with leapwise growth, characteristic of successful SMEs were entrepreneurs with prior experience as entrepreneur and with prior managerial experience, and the fact that they were family firms. In the case of the failed SME, the number of potential customers in the market was very limited, and the firm expanded its operation to a new business area where it had no know-how. In this particular case the failure was strongly related to one single incident – to one project – which finally caused a shortage of working capital.

A variety of factors was presented by the entrepreneurs as the most important factors for business success (cf. e.g. Simon 1996). An entrepreneur should have certain entrepreneurial characteristics. Also, many factors associated with successful business are related to products, customers, an entrepreneurial team, personnel, and know-how. Many entrepreneurs emphasized the importance of strategic management, particularly risk management. Also, they said that special attention should be paid to significant financial decisions, which should be made with care and on the basis of thorough planning.

According to the entrepreneurs, it is particularly important to avoid destroying one's life, building on daydreams, losing focus, failing to create the conditions fostering the firm's and individuals' continuous development, losing control, unprofitable businesses, and breaking the rules of the game. The entrepreneurs of threatened SMEs suggested paying attention especially to potential credit losses, networking and stakeholder relations, action, and firm-internal relations. On the other hand, five lessons were presented when the entrepreneurs of failed SMEs were asked

about what they had learnt from the firm's failure. These lessons showed the importance of planning, business-like thinking, adequate know-how, customers, and financing.

Altogether, it seems that an entrepreneur(s) and the management of the firm should take into consideration several factors to achieve success and to avoid failure in business. However, the study brought out some issues which should be treated with special care. While the results of the case studies seem to support the results of the survey, they also provide valuable complementary information which can help us to better understand the diversity of factors which – at least potentially – may affect SME performance. Interestingly, there were no differences between the groups of non-threatened, threatened, and failed SMEs in the responses to the question about what is most important for business success. Similarly, no differences between these groups can be found in the responses to the question about what should be avoided in business.

The key findings concerning the factors associated with SME success and failure by clusters are summarized in Table 9.3.

Table 9.3 Summary of the factors associated with SME success and failure by clusters

	Successful SMEs	Failed SMEs
Stable independent survivors	• a more network-oriented way of doing business • a small step and risk-avoidance strategy • a more planned business	• risks in customers • risks in the timing of investments • more unstable and unpredictable demand • unexpected and sudden changes in the environment
Innovators with continuous growth	• wider range of products • invested more in R&D • wider and more varied range of actual and potential customers • careful strategic planning	• products tailored individually for each customer • inadequate strategic planning and risk management • dependence on one provider of some critical resource
Networkers with leapwise growth	• family firms	• small number of potential customers in the market • expansion into a new business area where the firm had no know-how

Finally, the results can be useful for entrepreneurs and those who are fostering entrepreneurship and SME development. In studying the factors affecting SME performance, the investigation has produced new knowledge which is valuable for nascent and acting entrepreneur and those in charge of the firm. Also, venture capitalists, financiers, and consultants can take advantage of these results. Moreover, based on the results, organizations fostering entrepreneurship and SME development can better direct their actions and develop their products, advisory services and

education. For those who are responsible for public SME policy, the results provide some guidelines for decision making and the allocation of public actions, as well as an opportunity to evaluate the present SME policy and its developmental needs.

9.2 Theoretical and methodological implications

It seems that several factors related to the characteristics of entrepreneurs and SMEs, their life cycle, the strategic choices made and success factors of the SMEs, and the nature of their environment may be associated with SME performance. Moreover, successful SMEs are largely different from each other, though they have some common characteristics. This indicates that there is a clear need for classification of successful SMEs, and that successful SMEs should be studied in clusters of firms.

The study showed that there are both common and cluster-specific factors affecting SME performance. The foundation of SME performance is different in each SME cluster, implying that the "success formulas", i.e. sets of typical behaviors of SMEs, differ significantly between the clusters. Thus, on the one hand, studying all successful SMEs as one group may provide a distorted view of reality and lead to incorrect interpretations. On the other hand, however, the variation within an SME cluster may refer to the existence of "sub-types" of SMEs within the cluster. For instance, in the cluster of stable independent survivors, selected case firms seem to be more network oriented than could be expected on the basis of the survey results. However, the study's small sample size restricted possibilities for further analysis in the investigation of potential sub-types of the clusters.

A major theoretical contribution of this study, the taxonomy of successful SMEs, helps to show how successful SMEs cluster into homogeneous clusters in terms of the growth mode and strategies of firms. The taxonomy is supported by some other distinctions presented in the literature, and it provides new more fine-grained information. In particular, distinctions between non-growth and growth firms (e.g. Carland et al. 1984; Cameron et al. 1987; Covin 1991) as well as between incremental and organic, and leapwise, non-organic growth were identified and analyzed in this study.

Identifying the configurations of successful SMEs makes it possible to detect factors associated with SME performance. Since scientific discussion about firm performance is highly fragmented, this study provides a holistic and integrated view of the factors affecting SME performance.

It seems that firm growth is closely associated with firm success, since the entrepreneurs in growth firms considered their firms' success to be better than that in non-growth firms. In fact, many previous studies have regarded firm growth as

comparable with firm success. However, this can also be questioned due to differences in business goals between man- and woman-led firms (see e.g. Brush 1992). In contrast to traditional life cycle models, the present findings show that a firm can have several separate stages of high growth during its life cycle. Thus, such models may not be particularly useful in describing the reality of established and long-lived SMEs.

It was discovered that threatened and non-threatened SMEs differed significantly, and that this is an important distinction expanding our knowledge of factors affecting performance differences in SMEs. On the one hand, the results give us some clues about how some SMEs succeeded in avoiding situations where their counterparts had come under threat. The results might tell us something about these firms' ability to foresee potential problems. On the other hand, the results reveal potential causes of threat and how the SMEs had succeeded in overcoming the problems they have met. Moreover, the results may reflect the fact that entrepreneurs in the threatened SMEs had learned from the difficulties.

The distinction between threatened and non-threatened SMEs also affirmed the usefulness of the clusters: the causes of the threat as well as the ways firms adjust to changing conditions and circumstances seem to be to a large extent cluster specific. It seems that threat can be a pre-phase of failure: there were many similarities in the causes of threat and failure. Moreover, the distance from threat to failure may be very short. It was also discovered that both retrenchment strategies and turnaround strategies may be important for SME survival, so both should be taken into account in studies focusing on the recovery strategies of SMEs.

In addition to the distinctions made between the clusters and performance groups of SMEs, important evidence for some conceptual distinctions was found. For example, it is important to make a distinction between team entrepreneurship and family entrepreneurship, though many family firms are owned by family members. There are significant differences between family-owned and -managed firms and those not family controlled (see e.g. Chua et al. 1999; Morris et al. 1997). Family firms were rarely growth seeking (see e.g. Donckels & Hoebeke 1992), whereas team-based firms often sought for growth. Also, it was shown that success and survival factors are quite different, and so it is important to make a distinction between them. Though SME success is often interpreted as firm survival or firm growth, the entrepreneurs believe that factors affecting SME success are quite different from those affecting SME survival or SME growth.

It seems evident that the strategic choices of SMEs do matter: in studying SMEs it is essential to pay attention to the strategic choices such as internationalization, innovativeness, specialization, and networking. Moreover, since they are often combined with each other, it is useful to study them together. However, each of them is a multidimensional concept, and so can be measured several ways, and

further, depending on the operationalization, they may provide different views of the issue under investigation.

To achieve business success, many factors should be optimal simultaneously, since SME success is a multidimensional phenomenon. Both firm-internal and firm-external factors affect firm performance. The results clearly show that regardless of the critical role of planning, stochastic factors may also have a significant impact on SME success and failure. The findings clearly support a "both-and" approach in explaining SME performance (Simon 1996: 272). Entrepreneurs in successful SMEs and those in failed SMEs thought that pretty much the same factors are the most important for business success, and held the same views on the factors to be avoided in business. It turned out that it is useful to study success factors by using several methods, i.e. quantitative and qualitative approaches, structured and open-ended questions, since each one reveals different factors. However, on the other hand, comparisons between the results of the survey and the case studies were problematic due to, for instance, the small number of cases analyzed in each cluster, and the differences in these two kinds of approaches, i.e. between quantitative (survey) and qualitative (case studies) approaches.

Both success and failure seem to generate self-reinforcing spirals. Factors affecting SME success generate positive upward spirals. Similarly, factors affecting SME failure generate vicious downward spirals. Thus, a starting success spiral itself feeds further success. On the other hand, when a vicious spiral has begun, one problem feeds the creation of others and stopping such development becomes more and more difficult. As shown, several very different factors may be involved in these processes, and thus a holistic approach in studying them is required.

It is evident that the holistic approach applied in this study was useful for the purpose of this study. It is important to note that there are several interrelated variables affecting SME performance in a rather complex way. The study expands our knowledge of the factors affecting SME performance and their mutual connections. However, the scope and hierarchy of central concepts and their complex relationships makes such a study particularly challenging. Moreover, the researcher has to make several choices which may not be easy. An intersectoral approach could reveal factors affecting SME performance which are common to SMEs in several industry sectors and thus are not industry specific (see Snow & Hambrick 1980: 537).

The study shows that clustering successful SMEs is a useful approach and can provide a solid basis for further analysis. The data-driven approach used makes it possible to create meaningful ideal types reflecting the natural behavioral differences of successful SMEs. However, it should be noted that such an approach requires a large sample, which is important to take into account in planning a research design. It was also found to be important to study both successful and failed firms to better

understand firm performance (cf. Duchesneau & Gartner 1990). Moreover, a matched pairs or "matched triplets" approach requires similar cases in terms of their backgrounds, i.e. a match in industry sector, location, size and age. Thus, while such firms could be identified, it is a demanding method because there are numerous contingency factors that may make the comparison difficult.

The results of this study also suggest that we should pay more attention to the unit and level of analysis. For instance, studying firm growth at the firm level may ignore firm portfolios, and so, for example from the regional economic development point of view, it may not be possible to identify portfolio entrepreneurs and their firm portfolios which may play an important role (see e.g. Rosa & Scott 1999). Moreover, it is worth noting that growth and new firm formation may be interchangeable concepts. Also, to obtain a more complete picture of the issues under investigation in firms led by an entrepreneurial teams, it might be useful to interview all members of the team, not only the CEO.

9.3 Managerial implications

The study provides some clues for recommending strategic behavior of SMEs in peripheral areas. As already shown, there is no single secret for success in business, but a variety of factors affecting SME performance. Nascent and acting entrepreneurs can regard the results as business approaches to be recommended and those to be avoided. Therefore, the results can be used as basis for benchmarking. They should also be taken into account in determining firm performance measures (cf. Kaplan & Norton 1992; 1996).

First, entrepreneurs should ensure there is adequate know-how in the firm. On the one hand, this means that the entrepreneur should have sufficient education. On the other hand, varied prior work experience, especially in marketing and production, including managerial tasks, seems to be important. In addition, team entrepreneurship should be considered seriously, in particular, if team members can strengthen the knowledge base of the firm. Moreover, new shareholders and team formation may be one useful way to speed up the renewal process for an SME.

Business success is usually the outcome of goal-oriented long-term work. The business should be planned carefully prior to start up, as successful SMEs have stayed close to their original business. However, the ways of operating should change over time.

Growth is often essential for firm success. The entrepreneur should search for growth opportunities in the market, and consider which would be the most favourable growth pattern for the firm. Usually it is important that the growth is firm-driven,

though external factors may play an important role for firm growth as well. Entrepreneurs should consider several issues. For example, whether the firm's market areas could be expanded and whether the firm's investments in marketing are adequate. Could internationalization be a way to achieve growth and decentralize the market risk? Does the firm have unique products in the market, new commercialized product ideas coming, and is it investing enough in research and development? It could be asked whether the firm is specialized enough in its own core business and whether it could achieve synergy by investing more in cooperation. Could the firm learn in cooperation with other firms, and could they together produce new innovations for the markets?

The firms should be aware of the threats which might harmfully affect the business, and try to protect against them, but also remember that there are many ways to overcome difficulties. Also, the proactive use of those ways is permitted, in which case they could be called success factors. Since the root causes of failure were largely based on firm-internal factors, they are under the management's control. Each firm should pay attention to customer and supplier relations, personnel, quality, flexibility, and planning.

The firm should find out which cluster it belongs to, and then focus the necessary actions on the most critical targets. *Stable independent survivors* should pay special attention to good customer service for existing customers, and maintenance of competent personnel. Also, they should avoid high business risks related to customers contributing a high proportion of the firm's turnover, and pay sufficient attention to environmental scanning. *Innovators with continuous growth* should pay special attention to their research and development, and the ability to maintain their innovativeness. For their success, the ability to offer good after-sale services and long-term and personal relations with customers and suppliers are of great importance. They should also pay special attention to strategic management, and risk management particularly. *Networkers with leapwise growth* should focus on their core business, and take care of the efficiency of operations, in particular. They should pay special attention to the information systems, and carefully observe the changes in their environment.

For a new firm, it is recommendable to be innovative and entrepreneurial, i.e. follow the strategy of innovators with continuous growth. It is useful to operate in growing markets which provide an environment that supports firm growth and more business opportunities. Such an environment enables the creation of slack resources, and so firms are more flexible and are better able to affect their environments. Customer closeness, product development, and continuous growth are important particularly when operating in growing markets (see also Storey et al. 1989; Hamel & Prahalad 1994; Kumar et al. 1998: 207). On the other hand, firms that are stable

independent survivors may not have such a support provided by the markets they operate in. Typically they are characterized by more inertial forces, and they have less business opportunities in their environments. The generation of slack resources is minimal, and causes rigidities by hindering firm renewal. So environmental forces may play a major role, and in the long run there is the threat that the firm may be eliminated.

9.4 Policy implications

Public SME policy makers and organizations fostering entrepreneurship and SME development can also benefit from the results of this research. First of all, in planning public interventions and other actions, the differences between the types of SMEs should be taken into account. This means that an action which may be appropriate for SMEs in one cluster may not be appropriate for SMEs in another cluster. In other words, the actions should be modified according to the needs of the target firms.

This study reveals several objects which seem to have so far underutilized development potential. Public actions could be targeted at e.g. fostering female entrepreneurship, family businesses, export, investments, public advisory services, networking, team entrepreneurship, and portfolio entrepreneurship.

A huge proportion of successful SMEs are led by men. However, there seems to be no association between the gender of an entrepreneur and SME performance. Also, SMEs led by woman are rarely growth seeking. From this point of view, it could be expected that women have underutilized growth potential. On one hand, women should be encouraged to become entrepreneurs, and on the other hand female entrepreneurs should be encouraged to expand their firms.

A high proportion of successful SMEs are family firms. However, compared with other firms, they are rarely growth seeking. Consideration should be given to the ways in which the development potential bound up with family firms could be utilized, and how family firms could be encouraged to grow. Moreover, in a significant number of family firms the transfer of the business from one generation to another has not yet happened. Particularly in these firms, the role of founders may be crucial for firm development (see Kelly et al. 2000). The time of succession might be a natural moment to check the firm's course of action. Also, more attention should be paid to fostering the success of successions. On the basis of the age distribution of entrepreneurs, it can be concluded that in many successful SMEs the management of the firm will change during the next ten years, and this may have important impacts on the future development of the region, so this issue should be given serious thought by

the local and regional organizations supporting SME development. There is also the danger of losing important know-how in the region if these successions should fail.

The most important development areas of SMEs revealed by the SME barometer in Finland (Pesola 1997a: 4) were identical with the major growth factors of SMEs revealed by this study, i.e. the expansion of markets and investments in marketing, and investments in production. Therefore, it seems that it is important to develop instruments for fostering marketing efforts and production investments of SMEs. Policy actions should be used to mitigate problems related to them in SMEs. It seems that there is no adequate support for developing marketing, in particular.

A significant proportion of successful SMEs exported, but typically the proportion of exports in the total sales of the firm was quite low. Increasing the proportion of exports in the total sales of the firms seems to have significant growth potential. In addition, by expanding the market areas, the firm could reduce the market risk due to its operation in one market area only, which caused threat to the survival of many SMEs studied. Moreover, more attention should be paid to risk management in project exports.

A high proportion of successful SMEs had negative experiences in their cooperation with public organizations fostering SME development. It is important to find out where the problems come from, and how the cooperation could be improved. From the firms' point of view, public organizations fostering SME development should invest in the quality of development rather than quantity.

The availability of skilled personnel was considered to be critical for SME success. Those, responsible for planning education should ensure that it will meet the needs of SMEs. Also, anticipation of the future labour needs of SMEs is important as well. A high level of know-how among the personnel was seen as an important way to avoid threat. In addition, there is a need for entrepreneur education, among stable independent survivors in particular. These SMEs should be assisted by helping them to develop their business. Networking might be one way to prevent these firms getting into a vicious circle which may pose a threat to them if the necessary renewal does not happen in their business.

Networking seems to be important both between and within firms. The proportion of SMEs led by an entrepreneurial team was high among successful SMEs and low among failed SMEs, so fostering the formation of entrepreneurial teams in starting up businesses is recommended. In addition, networking can be seen as a preventive safety net, which can flexibly adapt to the changes in the environment. Moreover, it enables specialization, i.e. focusing on the core business, and thus efficient operations. The creation of flexible subcontracting networks should be promoted. Availability and high quality of business services in the area is important for networkers with leapwise growth, in particular.

The entrepreneurs of the failed SMEs may provide valuable knowledge of the factors affecting SME performance. So far, ex-entrepreneurs have been an underutilized resource in society. However, many of them have learned much from their firm's failure and can provide useful knowledge for nascent and acting entrepreneurs as well as for the stakeholders of SMEs. As Scott and Lewis (1984: 53) put it, "the process of failure may be an important learning experience for entrepreneurs who subsequently become effective". This means that the failure may have not only negative but also positive effects.

The primary focus of development by public authorities should be targeted at innovators with continuous growth and networkers with leapwise growth. Supporting already-existing successful, growth-seeking SMEs can maximize output by producing rapid, effective and long-term socio-economic consequences (cf. North et al. 1992). However, successful SMEs are unique actors in the market, so their individual development needs should be investigated thoroughly. It should be noted that the existing standard industrial classification may – at best – offer only some indicative contribution in the selection of the targets of development. However, in addition to already well-developed "pearls", those just being developed can also be found in many industry sectors. Moreover, careful consideration should be given to whether resources should be targeted at firms or at entrepreneurs (see Rosa & Scott 1999). It seems that portfolio entrepreneurs, i.e. multiple-firm entrepreneurs, may play an important role in local development, so identifying them and fostering their efforts may be a useful way to enhance regional economic development.

In addition to the above, the development of firms in this study's empirical setting requires the creation of a favourable environment for SME growth. In terms of the number of employees, most firms represented those size categories that have been found to create the most net new jobs in the long run (see Cambridge Small Business Research Centre 1992; Hakim 1989). Moreover, the majority of the remaining firms were just reaching such a size. On the other hand, it can be expected that one quarter of the firms will need to create formal structures for managing the firm if it is to grow (see e.g. Fombrun & Wally 1989). This has clear implications for e.g. those organizations providing business education.

From the viewpoint of regional economic development, is seems that the successful business in the area is based strongly on endogeneous growth: in many cases the founders of successful SMEs were local people. However, people coming from outside the region also have a role in establishing successful firms. From the regional point of view, the distribution of successful SMEs in terms of the life cycle stage seems to be well balanced.

The results suggest that it may not be recommendable to encourage people with inadequate education and experience to start up a new firm, since lack of

managerial experience and marketing skills were strongly associated with firm failure. On the other hand, it seems important that municipalities and towns ensure that there is an adequate supply of premises at reasonable rents. Education should be targeted at strategic management of the firm and marketing skills.

9.5 Evaluation of the study

Both strategic management and entrepreneurship are young fields of research. Characteristic of both is a conceptual pluralism that may hinder the accumulation of knowledge in these fields. Several concepts such as success, growth, strategy, entrepreneurial team, family firm, etc. are defined, operationalized and measured in many ways. The problem is that comparisons between the results of two studies are rarely possible, and thus theory development is slow and fragmented into several research streams.

Moreover, one the one hand, business is not managed in the same way in different areas, because of cultural and other differences (e.g. Kay 1995: 244; Lukka & Kasanen 1993: 351; Malecki 1997; Taylor 1997; Yusuf 1995). On the other hand, the strategic management literature is to a large extent based on the North American tradition. However, differences between regions should be kept in mind in comparing the results of this study and those of previous studies (cf. Chell et al. 1997). Many of the previous studies have been carried out in the international context and have focused on firms in core regions. On the other hand, the results of this study seem to be highly consistent with the doctrine of strategic management.

The empirical part of this study focused on successful independent SMEs in Eastern Finland. The area can be considered to represent a peripheral region since the firms' customer markets are located largely elsewhere. However, because business is not done in the same way in different areas, the results cannot be generalized to SMEs located in other areas. It is important to note that the aim of this study was not to generalize the results to any other research settings but to explore factors affecting SME performance in this particular research setting.

Sample selection was based on judgemental sampling. Moreover, case selection, for instance, was bound up with the survey results, so the number of triplets was very limited, particularly in the cluster of networkers with leapwise growth, in which only one triplet could be constructed. Thus, theoretical sampling in order to reach theoretical saturation, i.e. the situation where data collection ceases to reveal new data that are relevant to the cluster, was not possible. Instead, the role of triplets was to explore and deepen our knowledge of clusters by shedding new light on the factors and mechanisms affecting SME performance at the firm level. It is important to

note that it is not possible to generalize the findings concerning the cases in the triplets even to SMEs in other industry sectors in the same cluster.

The empirical research was carried out in 1998-2001, and so it was the time of general economic growth after the deep economic recession in the early 1990s. Some of the SMEs involved in the survey managed to avoid major problems following the general economic recession, but some faced problems that caused threat to their survival. However, all the SMEs studied in the survey managed to overcome their problems and were winners, whereas at the same time thousands of SMEs ceased business in Finland because of their failure to respond to environmental changes. To understand the results obtained, it is important to take into account also the temporal context in which the study was carried out.

On the one hand, although the number of questions and variables in the questionnaire was high, it limited the results obtained: what is asked is what one can have. On the other hand, studying a large set of variables can provide a holistic view of SME performance, and a comprehensive and solid starting point for further research. The use of both quantitative and qualitative data was useful in validating the results obtained (see Jick 1979). For example, by using open-ended questions about SME performance, it was possible to catch success factors which otherwise might have been missed and thus to improve the coverage of the survey. However, it should be noted that the list of structured success variables might have guided respondents in their responses to the open-ended questions at least to some extent.

In the questionnaire, rather than using several repeat questions, open-ended questions were used to check reliability. No nonreliable responses were found. Also, interviews provided valuable information that rounded out the information obtained by the mail survey. Using a comparative multiple-case method provided holistic, deep and context-specific knowledge of the factors affecting SME performance in a certain type of SMEs. On the other hand, however, taking into consideration a large number of variables and creating empirical configurations based on them makes it possible to achieve a better understanding of the phenomenon studied than does limiting the study to only a few variables (see Meyer et al. 1993).

A subjectivist approach (Burrell & Morgan 1985) was adopted in the study. The questionnaire was sent to entrepreneurs who were considered to be the most appropriate informants (e.g. Hambrick 1981; see also Chaganti et al. 1989). Responses were largely based on their subjective evaluations and interpretations of reality (see Burrell & Morgan 1985). This should be taken into consideration when interpreting the results. In previous studies, it has been found that firm success is often considered to be based on firm-internal factors, whereas failure or crisis is often explained by firm-external factors (see e.g. Boyle & Desai 1991; Finkin 1985).

However, it is possible that using respondents' subjective evaluations instead of objective measures leads to a better understanding on SME success (see Ketchen et al. 1993; Bantel 1998; Tsai et al. 1991: 11; see also Dess & Robinson 1984; Lehtomaa 1995). The problems related to objective financial performance measures, for example, were discussed in Chapter 2. Obviously, it should be noted that "memories may grow sweeter with time", and special attention should be paid to this due to the use of one informant in each SME only. It is also worth noting that recent incidents and the current situation in the firm at the time of investigation may affect the entrepreneurs' responses. However, in the survey results the influence of any one respondent was very small.

The reliability of the information obtained in this study was evaluated by comparing it with the information of some documentary sources, e.g. annual reports, financial statements, and newspaper articles. In this way it was possible to verify the reliability of the primary data collected in the study. No inconsistencies between primary and secondary data were found. In other words, the survey data, interview data, and the data obtained form archival and documentary sources were triangulated, and they showed high consistency (Denzin 1978).

Moreover, the entrepreneurs' ability to articulate the factors and events that contributed to their firm's performance vary enormously, which might favour those who were more talented verbally than others. In particular, this should be taken into consideration in the case of failed SMEs, and especially if a long period of time has passed since the failure. Also, the possibility that the entrepreneurs may have rationalized post-hoc why the firm failed should be kept in mind in analyzing the interviews. Moreover, it should be remembered that the threat to the existence of some SMEs may have happened a considerable time ago, and this may erode some differences between threatened and non-threatened SMEs.

It should also be noted that, as found in previous research, the firm's growth intentions were realized in only a small proportion of the cases (Hornaday 1990: 24), i.e. only a small proportion of those who had growth intentions will actually grow. Also, previous studies have shown that, in general, entrepreneurs of new firms tend to exaggerate their firm's chances of success (Cooper et al. 1988). However, for understanding SME performance, it is necessary to find out the entrepreneurs' intentions (e.g. Bird 1988). On the other hand, it is important to be aware that not even all objective measures may not be valid. For example, the entrepreneur's formal education may not be a valid measure for his/her know-how, particularly in the case of those with long experience as entrepreneurs.

As already said, successful SMEs do not constitute a coherent group of firms but are more or less different from each other. However, it should be noted that the survey sample consisted of successful SMEs only, and this may have contributed to the creation

of a clear, distinct clustering solution and to avoiding potential difficulties (see Hambrick 1984). The small sample size in the survey, however, made it impossible to use a hold-out sample, for example, in order to test the reliability of the clustering. Also, despite the intersectoral approach, small sample size did not allow sectoral comparisons, so it was not possible to explore the industry-specificity of the factors in this study. Moreover, it is worth noting that the causal directions were not unambiguous for each difference found between threatened and non-threatened SMEs. However, those differences could also provide valuable information, and can be tested in further studies.

On the other hand, while a statistical test may show a statistically significant difference between groups, there should also be theoretical rationales for the differences identified. Also, for example in applying statistical tests which are based on comparisons of means, the test may show a statistically significant difference even though such a difference in terms of absolute numbers may be extremely small. For this reason, in this study means were first compared with each other, and then a statistical test was employed, so the results and conclusions are not based only on small p values.

In the case studies, it should be noted that the decisions made in the firms are highly situation specific, i.e. contingencies should be taken into account (see e.g. Donaldson 1995). The matched pairs – or rather matched triplets – approach is a highly challenging approach because only a few characteristics can be standardized. Many characteristics, which may have at least a potential effect on the comparison, are beyond the researcher's control. On the other hand, one interesting finding concerning the results of matched pairs studies was reported by Zmijewski (1984), showing that matched pairs studies of financial predictors of bankruptcy do not lead to conclusions that are qualitatively different from those arrived at by random sample. The research design in this study can be considered successful since there were, for example, significant differences between the clusters, between non-threatened and threatened SMEs, and between successful and failed SMEs, with important theoretical, methodological, and practical implications.

However, it would be useful in business planning to take into consideration the factors revealed in this study, although they may not represent sufficient conditions for SME success. Entrepreneurs can use the results as a checklist, and evaluate how well their own firm satisfies these conditions. The results may provide a basis for benchmarking one's own business. In this sense, the results are transferable, and can be regarded as reflecting the best practices in their contexts. Both entrepreneurs, nascent and acting, and organizations responsible for local SME development can learn from the results of this study. In local and regional development, paying attention to the foundations of performance fosters the preconditions of SME success and could direct development operations at the most critical targets.

9.6 Suggestions for further research

Clearly, much work is still needed before a model of SME performance can be launched, if it ever can be. However, studying SMEs within homogeneous clusters seems to be a promising way to proceed, and the present study constitutes a starting point for the construction of appropriate models. Nevertheless, there is an obvious need for an in-depth study of these configurations. There are still many questions without answers. For instance, why did precisely these configurations emerge, and why do these strategic patterns of SMEs seem to have a robust nature? It would be useful to test the suggested taxonomy in a larger sample of SMEs.

For further research, a natural step forward would be to study the temporal continuity of SME success among the SMEs in the sample, and the change in factors affecting SME performance over time (cf. Laine 1991). This calls for a longitudinal study that might be highly useful for the perspectives of strategic choice and of population ecology. Such a study might provide valuable information on the changes in the factors affecting SME performance due to macroeconomic and other changes. This would be very interesting particularly in the light of Storey's (1994: 118) study according to which the longer the period, the more concentrated is employment creation by a small number of firms.

Moreover, such a longitudinal study might provide a basis for the evaluation of the temporal generalizability of the results. However, it should be noted that firms need different strategies at different stages of their life cycle. Also, due to the changes in their environment, strategies should be changed over time. This also means that not all the findings reported in this study may be valid in say ten years for the firms studied or for other firms. It is, indeed, probable that the configurations revealed in this study may change in the long run.

Further research related to the differences between non-threatened and threatened SMEs is also needed. For instance, are the differences indicators of those factors that, on the one hand, have been crucial in avoiding the potential threats, or, on the other hand, do they reflect the learning of entrepreneurs in the threatened SMEs? The latter question relates to the recovery strategies of SMEs, which has been largely neglected in business studies so far. There is an obvious need for further in-depth and qualitative research in these issues. The differences identified here between threatened and non-threatened SMEs, and the causes of the threat and the ways firms adjust, can be used as a basis in designing further research.

Relatively little research has focused on firm failure in the SME context. However, information from failed SMEs can significantly expand our knowledge of SME performance. Research into failed SMEs calls for multisource interviews, i.e. interviews with entrepreneurs, members of management teams or key employees,

financiers, cooperation partners, etc. As Zacharakis et al. (1999), for instance, show, there are differing perceptions of the causes of firm failure between entrepreneurs and venture capitalists. Moreover, it was found that several factors may affect the creation of vicious spirals, and so in-depth studies of failure processes, i.e. of the factors and their causal relationships are highly important. Surely many SMEs and their stakeholders could learn from others' failures.

Though the number of studies of entrepreneurial teams is growing, their role in SME performance and the ways of operation are still largely unknown. This study strongly suggests that their role may be very important for firm performance. However, the factors affecting the performance of an entrepreneurial team constitute a highly important area to be explored. Moreover, it would be interesting to find out whether there are analogies among factors affecting firm performance and those affecting team performance. Entrepreneurial teams in established SMEs are often closely related to management teams in SMEs, which themselves and in comparison with entrepreneurial teams have received little attention in entrepreneurship and management studies.

Non-organic growth, i.e. growth by acquisitions and mergers, has attracted much research in the large company context, whereas in the SME context little research related to these issues has been carried out. However, there was evidence that a significant proportion of SMEs grow by acquisitions and mergers, and thus there is a clear need to study the issue more thoroughly in the SME context. The phenomenon is particularly interesting due to the more limited resources of SMEs compared with large companies. Also, it would be interesting to compare the advantages and disadvantages of organic and non-organic growth and to explore the factors affecting the success of different growth strategies.

Also, the findings concerning multiple-firm entrepreneurship call for more research, since portfolio and serial entrepreneurship has a high prevalence among successful SMEs. Moreover, a surprisingly high proportion of the entrepreneurs were both portfolio and serial entrepreneurs simultaneously. An interesting question is whether this is particularly characteristic of successful SMEs only, or is it not related with firm performance? In further studies it would be interesting to explore the motives of the entrepreneurs in setting up new firms, giving up extant ones, and managing a portfolio of several firms simultaneously. Exploring the roles of multiple-firm entrepreneurs in local economic development might provide useful information for those responsible for such development.

Finally, there is also a need for deeper study of the success factors identified in this study. While there are many single case study reports describing how firms have nurtured their critical success factors, there is no comprehensive study of the alternative ways of nurturing those factors in practice in the SME context. However,

such knowledge would be extremely valuable particularly for nascent and acting entrepreneurs.

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APPENDIX 1: QUESTIONNAIRE

The original questionnaire (in Finnish), see Pasanen (1999).

CONFIDENTIAL

For each question, please select one point or else write your response.

THE ENTREPRENEUR

Gender
1 male
2 female

Position
1 an owner-manager
2 a professional manager

<u>If you are an owner-manager:</u>

Are you the founder of the firm?
1 yes
2 no, how many years have you been owner-manager in the firm? _____ years

<u>If you are a paid professional manager:</u>

How many years altogether have you been in the service of the firm?
_____ years

In what year were you born? 19_____

What is your highest level of education?

Basic education
1 9 years
2 12 years

Further education
1 none
2 lower level
3 mid-level
4 university

Which of the following statements best describes your work experience (excluding experience in your own firm)?
1 no experience
2 experience mainly as an employee
3 experience mainly as a manager
4 as much experience as an employee and as a manager

If you have work experience (excl. experience in your own firm):

In what functional areas of the firm you have mainly gained experience?
(you can choose several points)
1 planning and research & development
2 purchasing and logistics
3 production
4 sales and marketing
5 financing
6 other, what? _____

How many years' work experience do you have altogether (excl. experience in your own firm)? _____ years

Have you ever before been an owner in some other firm and participated in the management and operations of the firm?
1 yes
2 no

For how many years altogether have you been an entrepreneur (incl. time as a member of an entrepreneurial team)? _____ years

Are you a shareholder of some other firm at the moment (excl. ownerships in the listed companies)?
1 yes, in how many firms? _____
2 no

If you are a shareholder of some other firms:

Are there business connections between this firm and the other firms?
1 no
2 yes, what kind? _____
_____

THE FIRM

When was the firm founded? In the year _____

How many founders were there? _____

How many of them are still shareholders in the firm? _____

Where did the founders come from?
1 from Northern Savo (the local region)
2 from outside of Northern Savo
3 both from Northern Savo and outside of it

How many establishments does the firm have at the moment? _____

How many employees does the firm have at the moment?

full-time _____ persons
part-time _____ persons

Which of the following statements best describes the firm's ownership structure?

1 the firm has one owner
2 the firm has one main owner owning more than 50%
3 the firm has one main owner owning less than 50%
4 the firm has a few (2-5) main owners owning equal shares
5 the firm has several (6 or more) owners none of whom owns more than 20%
6 other, what?_____
_____
_____

If the firm has several owners:

Do more than one shareholder participate in the management and operations of the firm continuously with a significant contribution?

1 yes
2 no

Is the firm a family firm?

1 yes
2 no

If the firm is a family firm:

Has the firm been transferred from one generation to the next, and is succession possible among the family members?

1 transition was made in the year: _____
2 transition is being made at the moment
3 transition has not been made, but can be done among the family members
4 transition has not been made, and cannot be made among the family members

THE LIFE CYCLE OF THE FIRM

Has the firm stayed in the original business?

1 the firm has stayed in the original business since its foundation
2 the business has changed significantly
3 the present business is entirely different from what it was at the beginning

Please briefly describe the firm's present business:

_____
_____
_____

If the present business of the firm is different from the original business:

Please briefly describe the firm's original business:

_____
_____
_____

a. Look at *the development of the firm's turnover from the first year to the last year*.
In the table, please write in each row the years when turnover grew or fell significantly (more than 20% from previous year). What were the most important firm-internal or firm-external factors affecting the growth or decrease in turnover?

Years	Change in turnover	The most important reasons for the change
____ - ____	1 grew 2 fell	_____
		_____
		_____
		_____
____ - ____	1 grew 2 fell	_____
		_____
		_____
		_____
____ - ____	1 grew 2 fell	_____
		_____
		_____
		_____

b. Have there been other significant changes in the firm's ways of doing business (e.g. starting to use subcontracting) during the firm's life cycle?

Year	A brief description of the change
_____	_____
	_____
_____	_____
	_____
_____	_____
	_____

c. Has the firm's survival been severely threatened at some point of time?
1 yes, in the years: _____
2 no

If yes:

What were the main reasons for the threat? _____
_____
_____
_____

How did the firm survive the threat and what happened then?_____
_____
_____
_____

How much have the firm's management principles and practices changed over the years?
1 considerably
2 to some extent
3 no changes

How has the firm's turnover changed *in the 1990s*?
1 grown rapidly
2 grown to some extent
3 stayed at the same level
4 fallen

Which of the following best describes the nature of the development in turnover *in the 1990s*?
1 stable
2 leapwise
3 fluctuating

Have any acquisitions been made by the firm or has the firm mergered with another firm?
1 no
2 yes, in the year(s): _____

If yes:

From the viewpoint of the business of your firm, was the acquired or mergered firm:
1 a supplier (located at a higher level in the supply chain than your firm)
2 a competitor (located at the same level in the chain of supply of the same or substitute products)
3 a customer (located at a lower level in the supply chain)
4 the firm had none of the above-mentioned business linkages with our firm

How have the markets (demand) for the firm's present main products developed *in the 1990's*?
1 markets (demand) have grown considerably
2 markets (demand) have grown to some extent
3 markets (demand) have not grown
4 markets (demand) have decreased to some extent
5 markets (demand) have decreased considerably

Which of the following best describes the firm's goals and objectives?

1 The firm's aim is to grow and develop by actively seeking and exploiting new business opportunities. The firm can be characterized as growth-oriented.
2 The firm's aim is to provide a reasonable livelihood to the entrepreneur. Growth is not a primary goal of the firm.

How would you characterize the firm's goals and objectives?

1 the firm has no goals and objectives
2 the firm has goals and objectives which guide the decision making, but are not clearly specified
3 the firm has consciously determined specific goals and objectives

Which of the following best describes the firm's stage of development *at the moment*?

1 The firm's products are new and they require improvement. Also, customer segments are vague and the firm is searching for the most promising ones. The firm has not yet found the most efficient way of operation. (inception)
2 The firm's products have been accepted by customers. The ways of operation are modified for the customer segments. The ways of operation are efficient enough to increase the firm's market share. (growth)
3 The firm's products have occupied their own niche in the market, and the operations are well established. Due to increasing competition, new market acquisition is a tough job. The boundaries of the firm's territory are established. (expansion)
4 Due to the stiff competition in the market, the firm modifies and improves its products and operations. The firm is looking for new customer segments. (mature)
5 The firm's profitability is under threat, since its competitors have launched products which outdo the firm's products. The firm is having to revise its course. (decline)

How are the firm's products/services divided into these categories:

1 new products/services in the markets	_____ %
2 products/services with more than 10% annual growth in sales	_____ %
3 products/services with a relatively stable sales volume	_____ %
4 products/services with a decreasing sales volume	_____ %
all products/services	100 %

How has the firm succeeded in comparison with the most important competitors?

1 clearly better than the most important competitors
2 slightly better than the most important competitors
3 as well as the most important competitors
4 slightly weaker than the most important competitors
5 clearly weaker than the most important competitors

How satisfied are you with the firm's success during recent years?

1 fully satisfied
2 somewhat satisfied
3 not quite satisfied
4 not at all satisfied

INTERNATIONALIZATION AND THE ROLE OF LOCAL MARKETS

What percentage of the firm's total sales is accounted for by the following market areas?

1 local markets (Northern Savo) _____ %
2 other domestic markets _____ %
3 export markets _____ %
total: 100 %

Does the firm have foreign owners?
1 no
2 yes, they own: _____ %

If the firm exports (excl. indirect export):

When did the firm start to export? In the year _____

If the firm exports:

What are the ways of direct export? (you can choose several points)
1 the firm sells products directly to foreign customers
2 the firm exports projects
3 the firm exports through its foreign sales office, branch office, production unit or subsidiary
4 the firm exports through foreign import firms, wholesale firms, retail shops, agents, brokers, or commission agents
5 the firm exports through domestic export firms, agents, commission agents or associations, and possibly foreign import firms, wholesale firms, retail shops, agents, brokers, or commission agents
6 in some other way, how?_____
_____
_____

Does the firm have subsidiaries or joint ventures abroad?
1 no
2 yes, what is their role in the firm's business? _____
_____
_____

Does the firm have indirect exports (the firm as a subcontractor for some firm which has direct exports)?
1 yes
2 no

Does the firm itself import material regularly?
1 yes
2 no

INNOVATIVENESS AND TECHNOLOGY

Which of the following statements best describes the firm's products/services?
1 products/services are unique in the markets
2 products/services are rare in the markets
3 products/services are quite similar to those of its competitors
4 products/services are identical to those of its competitors

Which of the following statements best describes the firm's production technology?
1 production technology is newer than that of the most important competitors
2 production technology is as new as that of the most important competitors
3 production technology is older than that of the most important competitors

Which of the following statements best describes the firm's managerial know-how?
1 managerial know-how is higher than that of the most important competitors
2 managerial know-how is as good as that of the most important competitors
3 managerial know-how is lower than that of the most important competitors

Which of the following statements best describes the firm's attitude towards research and development?
1 the firm strives to be the first in the market to achieve an adequate advantage over competitors and to be able to seize the opportunities of emerging markets for a new product
2 the firm focuses on improving the quality of existing products, to add to their value
3 the firm strives to be the second in the market to avoid the high risk and high research and development costs characteristic of pioneers
4 the firm produces existing products to avoid all risks and costs related to research and development

Please evaluate the probability of the firm's risk of failure compared with Finnish firms in general:
1 the firm's risk of failure is higher than in Finnish firms in general
2 the firm's risk of failure is as high as in Finnish firms in general
3 the firm's risk of failure is lower than in Finnish firms in general

SPECIALIZATION

Which of the following best describes the firm's products (*products* refers to both physical products and services, and *product areas* refers to products which are closely interlinked with each other by their use)?

1 In production, the firm has focused clearly on *one* product or product area. The sales of this product or these products cover most of the firm's total sales.
2 The firm produces *a few* products or operates in a few product areas. These are highly connected with each other e.g. by the *same* raw material, the same production technology or machinery, or the same professional skills. The product areas are clearly defined.
3 The firm produces *a few* products or operates in a few product areas. In the production, it is not able to use the same raw material, the same production technology or machinery, or the same professional skills. The product areas are clearly defined.
4 The firm produces *several* products or operates in several product areas. The boundaries of the product areas are indefinite. Products and product areas change often. The firm's total sales consist of these several small flows.
5 If none of the above, how would you describe the firm's products?

_____
_____
_____

Which of the following best describes the firm's customers?

1 the firm has focused on serving one relatively coherent and clear-cut customer segment whose share in the firm's total sales is very high
2 the firm has a few relatively coherent and mutually distinctive customer segments
3 the firm has no clearly defined customer segments and the customers can be regarded as fragmented

What proportion of turnover is due to the firm's biggest customers?

the proportion of turnover due to the firm's biggest (1) customer is
_____ %
the cumulative proportion of turnover due to the firm's three (3) biggest customers is
_____ %
the cumulative proportion of turnover due to the firm's five (5) biggest customers is
_____ %

Which of the following best describes the firm's competitive power in the market of the firm's main products?

1 The firm's competitive power is low. There are several competitors, and many are bigger than the firm.
2 The firm's competitive power is quite good. There are some competitors, and most are as big as the firm.
3 The firm's competitive power is good. The firm is a market leader or near to that position. There are a few competitors, and they are smaller than the firm.

COOPERATION AND NETWORKING

Which of the following *types of interfirm cooperation* are used by the firm? (you can choose several points) ***Cooperation* refers here to cooperation beyond the conventional customer relationship.**

1 cooperation in purchasing
2 cooperation in R&D
3 subcontracting
4 cooperation in production (incl. licencing and cooperation in services)
5 cooperation in marketing
6 cooperation in financing (incl. joint ventures and partnerships)
7 other, what? _____
_____

Which of the following are the most important firm-external cooperation partners, how long has the cooperation continued, and what kind of experiences does the firm have of cooperation?
(experiences: -1 = negative, 0 = no experience, 1 = positive;
the importance of cooperation: 1 = not at all important, 7 = very important)

Experience	The duration of cooperation	The importance of cooperation	Cooperation partner
- 1 0 1	____ years	1 2 3 4 5	suppliers
- 1 0 1	____ years	1 2 3 4 5	subcontractors
- 1 0 1	____ years	1 2 3 4 5	major customers
- 1 0 1	____ years	1 2 3 4 5	firms in the same field
- 1 0 1	____ years	1 2 3 4 5	deliverers (delivery channels)
- 1 0 1	____ years	1 2 3 4 5	major financiers
- 1 0 1	____ years	1 2 3 4 5	public organizations fostering SME development
- 1 0 1	____ years	1 2 3 4 5	universities and research institutes
- 1 0 1	____ years	1 2 3 4 5	vocational schools
- 1 0 1	____ years	1 2 3 4 5	other, what: _____
- 1 0 1	____ years	1 2 3 4 5	other, what: _____
- 1 0 1	____ years	1 2 3 4 5	other, what: _____

How important is *interfirm cooperation* for the firm?

1 interfirm cooperation is extremely important for the firm
2 interfirm cooperation is useful for the firm
3 interfirm cooperation has no importance for the firm

Which of the following best describes the firm's attitude towards *interfirm cooperation*?

1 the firm actively looks for new interfirm cooperation relationships
2 the firm is interested in investigating cooperation possibilities if some other firm approaches it
3 the firm tries to avoid cooperation so as to avoid dependency on others

Does the firm buy subcontracting, and what is the proportion of bought subcontracting in terms of turnover?
1 yes, the proportion of bought subcontracting in terms of turnover is _____ %
2 no

Does the firm sell subcontracting, and what is the proportion of sold subcontracting in terms of turnover?
1 yes, the proportion of sold subcontracting in terms of turnover is _____ %
2 no

SUCCESS FACTORS

Please evaluate the importance of the following factors for the firm's success (scale 1-7: 1 = not at all important, 7 = very important).

1 2 3 4 5 6 7	Quality of raw materials and reliable suppliers
1 2 3 4 5 6 7	Good knowledge of customers and their needs
1 2 3 4 5 6 7	Ability to respond flexibly to customers' special needs and requirements
1 2 3 4 5 6 7	Low delivery and transportation costs
1 2 3 4 5 6 7	Low total costs
1 2 3 4 5 6 7	Good relations with distribution channels
1 2 3 4 5 6 7	Acquaintance with an influential distribution channel
1 2 3 4 5 6 7	Long-term customer relations
1 2 3 4 5 6 7	Strong inter-dependency with customers
1 2 3 4 5 6 7	Good marketing skills
1 2 3 4 5 6 7	Internationalization
1 2 3 4 5 6 7	Good inter-personal relations with customers and suppliers
1 2 3 4 5 6 7	Good after-sales service
1 2 3 4 5 6 7	Difficult-to-imitate product
1 2 3 4 5 6 7	High quality products
1 2 3 4 5 6 7	Weak competition
1 2 3 4 5 6 7	Good reputation of the firm
1 2 3 4 5 6 7	Fast and reliable delivery
1 2 3 4 5 6 7	Direct selling (no intermediaries)
1 2 3 4 5 6 7	Difficult-to-imitate knowledge-based production system
1 2 3 4 5 6 7	Good production premises and equipments
1 2 3 4 5 6 7	Multifunctional production equipments
1 2 3 4 5 6 7	Simple and low-cost production technique
1 2 3 4 5 6 7	Good knowledge of products/services
1 2 3 4 5 6 7	Continuous development
1 2 3 4 5 6 7	Customer feed-back
1 2 3 4 5 6 7	Strong basic values of the firm
1 2 3 4 5 6 7	Clear-cut identity of the firm
1 2 3 4 5 6 7	Simple and flexible organization

1 2 3 4 5 6 7 Personnel training
1 2 3 4 5 6 7 Availability of skilled staff
1 2 3 4 5 6 7 Personnel with advanced knowledge
1 2 3 4 5 6 7 Cooperative personnel
1 2 3 4 5 6 7 Continuity of personnel
1 2 3 4 5 6 7 Continuity of key persons
1 2 3 4 5 6 7 Flexible use of family members as work force (in family businesses)
1 2 3 4 5 6 7 Quality of management
1 2 3 4 5 6 7 Good information and control systems
1 2 3 4 5 6 7 Low costs in financing
1 2 3 4 5 6 7 Investment payments by self-financing
1 2 3 4 5 6 7 Good financial base and adequate cash resources
1 2 3 4 5 6 7 Good terms of payment
1 2 3 4 5 6 7 Small no. of owners
1 2 3 4 5 6 7 External owners
1 2 3 4 5 6 7 Public financial support
1 2 3 4 5 6 7 Public consulting support
1 2 3 4 5 6 7 Private consulting
1 2 3 4 5 6 7 Good cooperation partners and relations
1 2 3 4 5 6 7 Planning
1 2 3 4 5 6 7 Incremental development instead of radical changes
1 2 3 4 5 6 7 Ability to find quick solutions for changing customer needs
1 2 3 4 5 6 7 Environmental scanning
1 2 3 4 5 6 7 Strong growth in demand
1 2 3 4 5 6 7 Adequate slack resources for maintaining firm's flexibility
1 2 3 4 5 6 7 Anticipation of new business opportunities

What has been the most critical for the firm's success?

_____
_____
_____
_____
_____
_____

What has been the most critical for the firm's survival when it has faced problems?

_____
_____
_____
_____
_____
_____

THANK YOU!

APPENDIX 2: LIST OF VARIABLES

Variables (type of variable):

Criteria for success
Firm age (ratio), Growth in turnover (ordinal), Business success compared with competitors (ordinal), Entrepreneur's satisfaction with business success (ordinal), Competitive power in the market of the main products (ordinal)

Characteristics of the entrepreneur
Gender (nominal), Position in the firm (nominal), Founder (nominal), Time as owner-manager (ratio), Time as paid professional manager (ratio), Age (ratio), Basic education (ordinal), Further education (ordinal), Prior work experience (nominal), Functional areas of prior work experience (nominal), Length of prior work experience (ratio), Prior experience in business as owner-manager in another firm (nominal), Total length of experience as owner-manager (ratio), Current ownerships in other businesses (nominal), Number of firms in which is owner (ratio), Business connections between firms in the portfolio (nominal), Nature of business connections between firms in the portfolio (open-ended, nominal)

Characteristics of the firm
Age (ratio), No. of founders (ratio), No. of founders still involved in the firm (ratio), Founders' place of living (nominal), No. of establishments (ratio), No. of full-time personnel (ratio), No. of part-time personnel (ratio), Structure of ownership (nominal), Team enterprise (nominal), Family business (nominal), Goals for growth (nominal), Clarity of business goals and objectives (nominal), Life cycle stage of business (ordinal), Being one of the "top firms" (nominal), Cluster membership (nominal)

The life cycle of the firm
Changes in the business base (ordinal), Present business (nominal, open-ended), Original business (nominal, open-ended), Periods of significant changes in turnover (nominal, open-ended), No. of periods of significant growth (ratio), No. of periods of significant decline (ratio), Reasons for growth (nominal, open-ended), Reasons for decline (nominal, open-ended), Changes in the ways of doing business (nominal, open-ended), Threat to existence (nominal), No. of times the firm has been threatened (ratio), Reasons for threats (nominal, open-ended), Ways of adaptation (nominal, open-ended), Changes in principles and practices of management (ordinal), Growth in turnover (ordinal), Nature of growth in turnover (nominal), Acquisitions and mergers (nominal), No. of realized acquisitions and mergers (ratio), The firm's business linkages with an acquired or mergered firm (nominal), Realized succession (nominal)

Strategic choices for an SME

Internationalization: Local market's share in the firm's sales (ratio), Other domestic market's share in the firm's sales (ratio), Export market's share in the firm's sales (ratio), Foreign ownership (nominal), Length of experience in exporting (ratio), Ways of exporting (nominal), Subsidiaries or joint ventures abroad (nominal), Subsidiaries' or joint ventures' role in the firm's business (nominal, open-ended), Indirect exporting (nominal), Importing (nominal)

Innovativeness: Proportion of new products in the markets (ratio), Proportion of products with growing volume (ratio), Proportion of products with stable volume (ratio), Proportion of products with declining volume (ratio), Uniqueness of the products in the markets (ordinal), Newness of production technology (ordinal), Managerial know-how (ordinal), R&D orientation (ordinal), Risk of failure (ordinal)

Specialization: Specialization in products (ordinal), Specialization in customers (ordinal), Proportion of turnover due to the biggest customer (ratio), Cumulative proportion of turnover due to the three biggest customers (ratio), Cumulative proportion of turnover due to the five biggest customers (ratio), Competitive power in the market of the main products (ordinal)

Cooperation and networking: Types of interfirm cooperation (nominal), No. of network relations (ratio), Cooperation partners (nominal), Cooperation experiences (nominal), Length of cooperation (ratio), Importance of interfirm cooperation (ordinal), Attitude towards interfirm cooperation (ordinal), Bought subcontracting (nominal), Bought subcontracting as a share of turnover (ratio), Sold subcontracting (nominal), Sold subcontracting as a share of turnover (ratio)

Environment

Industry sector (nominal), Location (nominal), Growth in demand in the main markets (ordinal)

Success factors (interval)

Quality of raw materials and reliable suppliers, Good knowledge of customers and their needs, Ability to respond flexibly to customers' special needs and requirements, Low delivery and transportation costs, Low total costs, Good relations with distribution channels, Acquaintance with an influential distribution channel, Long-term customer relations, Strong inter-dependency with customers, Good marketing skills, Internationalization, Good inter-personal relations with customers and suppliers, Good after-sales service, Difficult-to-imitate product, High quality products, Weak competition, Good reputation of the firm, Fast and reliable delivery, Direct selling (no intermediaries), Difficult-to-imitate knowledge-based production system, Good production premises and equipments, Multifunctional production equipments, Simple and low-cost production technique, Good knowledge of products/services, Continuous development, Customer feed-back, Strong basic values of the firm, Clear-cut identity of the firm, Simple and flexible organization, Personnel training, Availability of

skilled staff, Personnel with advanced knowledge, Cooperative personnel, Continuity of personnel, Continuity of key persons, Flexible use of family members as work force (in family businesses), Quality of management, Good information and control systems, Low costs in financing, Investment payments by self-financing, Good financial base and adequate cash resources, Good terms of payment, Small no. of owners, External owners, Public financial support, Public consulting support, Private consulting, Good cooperation partners and relations, Planning, Incremental development instead of radical changes, Ability to find quick solutions for changing customer needs, Environmental scanning, Strong growth in demand, Adequate slack resources for maintaining firm's flexibility, Anticipation of new business opportunities

Most important success factors (nominal, open-ended), Most important survival factors (nominal, open-ended)

APPENDIX 3: RESULTS OF THE FACTOR ANALYSIS

Table A3.1 Means and standard deviations of success variables

Rank	Variable	Mean	SD
1	Good knowledge of customers and their needs	6.55	.81
2	Long-term customer relations	6.46	.79
3	Good reputation of the firm	6.37	.78
4	Fast and reliable delivery	6.26	.90
5	Personnel with advanced knowledge	6.25	.86
6	Good knowledge of products	6.24	.84
7	Quality of raw materials and reliable suppliers	6.22	1.31
8	Continuity of key persons	6.20	.88
9	Cooperative personnel	6.16	1.09
10	Ability to respond flexibly to customers' special needs and requirements	6.08	.88
11	Good inter-personal relations with customers and suppliers	6.05	1.26
12	High quality products	6.02	.91
13	Simple and flexible organization	6.02	1.01
14	Planning	5.99	1.03
15	Ability to find quick solutions for changing customer needs	5.91	1.03
16	Customer feed-back	5.90	1.01
17	Quality of management	5.87	1.09
18	Availability of skilled staff	5.87	1.14
19	Good cooperation partners and relations	5.82	1.31
20	Good marketing skills	5.77	1.18
21	Low total costs	5.72	1.20
22	Continuous development	5.70	1.31
23	Environmental scanning	5.67	1.30
24	Clear-cut identity of the firm	5.64	1.26
25	Good financial base and adequate cash resources	5.56	1.38
26	Continuity of personnel	5.46	1.25
27	Good information and control systems	5.43	1.32
28	Anticipation of new business opportunities	5.42	1.41
29	Good after-sale service	5.42	1.44
30	Strong basic values of the firm	5.36	1.45
31	Adequate slack resources for maintaining firm's flexibility	5.31	1.13
32	Personnel training	5.30	1.34
33	Good production premises and equipment	5.26	1.25
34	Investment payments by self-financing	5.21	1.53
35	Direct selling (no intermediaries)	5.20	1.75
36	Low costs in financing	5.19	1.55
37	Strong inter-dependency with customers	4.88	1.54
38	Incremental development instead of radical changes	4.84	1.46
39	Simple and low-cost production technique	4.74	1.62
40	Good relations with distribution channels	4.74	1.76
41	Multifunctional production equipment	4.67	1.72
42	Strong growth in demand	4.64	1.58
43	Low delivery and transportation costs	4.61	1.85
44	Small no. of owners	4.49	1.88
45	Internationalization	4.38	2.09
46	Difficult-to-imitate knowledge-based production system	4.35	1.83
47	Difficult-to-imitate product	4.12	1.87
48	Flexible use of family members as work force (in family businesses)	4.03	2.46
49	Good terms of payment	3.82	1.74
50	Acquaintance with an influential distribution channel	3.75	2.13
51	Weak competition	3.42	1.61
52	Public financial support	3.09	1.95
53	Public consulting support	2.96	1.76
54	Private consulting	2.75	1.53
55	External owners	2.48	1.83

Table A3.2 Factor analysis with principal component extraction and varimax rotation: success factors

Factors and items:	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	C[a]
Factor 1: Proactiveness, flexibility, and distinctiveness								
Environmental scanning	.73							.78
Clear-cut identity of the firm	.61							.73
Anticipation of new business opportunities	.60							.75
Ability to find quick solutions for changing customer needs	.60		.44					.69
Simple and flexible organization	.59							.68
Incremental development instead of radical changes	.59							.65
Difficult-to-imitate product	.57							.66
Personnel training	.55						.53	.78
Adequate slack resources for maintaining firm's flexibility	.45							.68
Good after-sale service	.44							.59
Strong basic values of the firm	.44							.67
Strong growth in demand	.43							.57
Factor 2: Planning and risk management								
Investment payments by self-financing		.78						.74
Good financial base and adequate cash resources		.70						.75
Low costs in financing		.55						.64
Quality of management		.52					.49	.71
Planning	.50	.51						.83
Good terms of payment		.51						.54
Good information and control systems	.44	.50					.45	.79
Small no. of owners		.49						.65
Good cooperation partners and relations		.41						.61
Factor 3: Motivated personnel and high level customer service								
Continuity of personnel			.69					.68
Good reputation of the firm			.68		.43			.82
Ability to respond flexibly to customers' special needs and requirements			.66					.77
Fast and reliable delivery			.55					.68
Personnel with advanced knowledge			.54					.73
Customer feed-back			.54		.43			.73
Continuity of key persons		.43	.47					.70
Cooperative personnel			.46				.41	.78

Factor 4: Chain management								
Low delivery and transportation costs				.74				.68
Good relations with distribution channels				.69				.78
Acquaintance with an influential distribution channel				.67				.72
Low total costs				.65				.75
Quality of raw materials and reliable suppliers				.60				.64
Factor 5: Product knowledge								
Good knowledge of products					.67			.70
Continuous development					.63			.78
High quality products					.61			.71
Good marketing skills					.45			.70
Factor 6: Leveraging external advisers and public financial aid								
Public consulting support						.81		.79
Public financial support						.77		.72
Private consulting						.71		.73
Factor 7: Relationship management and customer closeness								
Good inter-personal relations with customers and suppliers							.76	.78
Good knowledge of customers and their needs							.63	.76
Long-term customer relations							.43	.79
Eigenvalues	19.16	3.07	2.60	2.27	1.93	1.79	1.65	
% of variance explained	34.84	5.57	4.73	4.13	3.51	3.25	3.00	
Cronbach's alpha[b]	.83	.83	.75	.81	.77	.83	.73	

[a.] communalities
[b.] three items with the highest factor loadings

Loadings of >.40 entered

APPENDIX 4: DIFFERENCES BETWEEN THE CLUSTERS

Table A4.1 The main differences between the clusters

	Stable independent survivors	Innovators with continuous growth	Networkers with leapwise growth
Characteristics of entrepreneurs	• the highest proportion of female entrepreneurs • prior experience as an owner-manager in another firm was rare	• the highest proportion of firms led by owner-managers • entrepreneurs were younger than in the other clusters • prior work experience especially in planning and R&D • the shortest work experience	• prior work experience in managerial tasks was slightly more common • prior experience in tasks requiring mathematical skills
Characteristics of the SMEs and their life cycles	• more SMEs than in the other clusters operated in the industry sectors dependent on the demand of local markets • no significant changes in turnover • problems in management and difficulties related to a big customer were more commonly causes of a fall in turnover and causes of threat • firms were older than in the other clusters • a small proportion of firms was led by an entrepreneurial team • a high proportion of family firms • few changes in principles and practices of management and the ways of doing business	• more SMEs than in the other clusters operated in growing industry sectors • significant and stable growth in turnover • typically, the periods of significant change in turnover were growth periods only • investments in production and marketing as growth factors in particular • the youngest firms • growth-seeking firms • business ideas were at the earliest stage of development • typically never been threatened • growing demand • success better than that of their competitors • entrepreneurs were the most satisfied with their firm's success	• almost all SMEs operated in the sectors of manufacturing • firms were bigger than in the other clusters • rapid growth in turnover • leapwise growth • acquisitions and purchases of production units, and founding new establishments were more common growth factors • the general economic recession was more commonly a cause of the fall in turnover • the ways of doing business had changed more frequently than in firms in the other clusters • firms were the most goal-oriented • mainly growth-seeking firms

	• the most unspecified goals and objectives • non-growth-seeking firms • business ideas were at a further stage of development • minimizing all possible costs, cutting down the firm's scale of operation, greater personal input by the entrepreneur into the firm development, or change of management were more commonly used ways of adaptation • no significant changes in demand • business success was thought to be as good as that of their main competitors		• the highest proportion of threatened firms • financial arrangements and additional financial inputs by the owners were more commonly a way of adaptation • growing demand • the success of the firms was somewhat better than that of their most important competitors • the highest proportion of firms classified as the "top firms" in the region
Internationalization and the role of local markets	• the role of local markets was important • export firms had the longest experience in exports • typically neither indirect exports nor own imports • no subsidiaries or joint ventures abroad	• two thirds were export firms • short experience in exporting	• the highest proportion of internationalized SMEs • the most export-oriented cluster of SMEs • more SMEs with indirect exports than in the other clusters • own imports • subsidiaries abroad
Innovativeness and technology	• products were quite similar to those of their competitors • there were more products or services with a relatively stable sales volume than in the other clusters • R&D focus on improving the quality of existing products to add to their value	• the proportion of firms which had unique or rare products or services in the markets was higher than in the other clusters • a high proportion of products or services with more than 10% annual growth in sales • R&D-oriented with an attitude of "first in the market"	• typically, products or services with a relatively stable sales volume played the major role, but there were also new products or services in the market, and products or services with more than 10% annual growth in sales

		• the firm's risk of failure was assessed to be lower than in Finnish firms in general in more of the SMEs in this cluster	
Specialization	• the most fragmented customers	• a few big customers	• the most focused SMEs in terms of products and customers (the most specialized SMEs)
Cooperation and networking	• the most reluctant to undertake interfirm cooperation • little interfirm cooperation and few cooperation partners • only a small part of the firms bought or sold subcontracting		• the most active in cooperation • they were subcontractors and bought a considerable amount of subcontracting
Structured success factors distinctive and characteristic of the firms in the cluster	• good knowledge of products • personnel with advanced knowledge • ability to respond flexibly to customers' special needs and requirements	• continuous development • good after-sales service • low costs in financing • strong basic values of the firm • flexible use of family members as a work force • good production premises and equipment • multifunctional production equipment *for a significant number of the SMEs in this cluster*: • difficult-to-imitate knowledge-based production systems • public consulting support	• good cooperation partners and relations • low total costs • good information and control systems • investment payments by self-financing • adequate slack resources for maintaining firm's flexibility *for a significant number of the SMEs in this cluster*: • low delivery and transportation costs • public financial support
Unstructured success factors more typical of firms in the cluster than in other clusters	• entrepreneur's personal contribution • flexibility in business • good reputation of the firm and trust of customers	• planning, goal-orientedness and perseverance • skilled personnel • advanced technology	• focusing on core business

Survival factors more typical of firms in the cluster than in other clusters	• cost reductions • good relationships with external stakeholders • good financial position	• early reaction to problems and decision making without delay • belief in the future	• personnel's contribution and flexibility • good relationships with external stakeholders • acquisition of new customers and increased efforts in marketing

APPENDIX 5: RESULTS OF THE DISCRIMINANT ANALYSES

Summaries of canonical discriminant functions

A TAXONOMY OF SUCCESSFUL SMES

Table A5.1 Eigenvalues

Function	Eigenvalue	% of variance	Cumulative %	Canonical correlation
1	3.781[a]	63.5	63.5	.889
2	2.176[a]	36.5	100.0	.828

[a.] First 2 canonical discriminant functions were used in the analysis.

Table A5.2 Wilks' Lambda

Test of functions	Wilks' Lambda	Chi-square	df	Sig.
1 through 2	.066	365.898	24	<.0005
2	.315	155.441	11	<.0005

Table A5.3 Standardized canonical discriminant function coefficients

	Function 1	Function 2
Growth in turnover	.337	.436
Leapwise growth of the turnover	.900	.033
The growth of demand in the main markets	.070	.225
Goals for growth	-.115	.926
The number of personnel	-.600	.398
Local market's share in the firm's sales	.075	.214
The uniqueness of the products in the market	.129	.102
Attitude towards interfirm cooperation	.109	.172
Stable growth of the turnover	-.303	.329
The importance of strong growth in demand	-.217	.019
Acquisitions and mergers	-.086	-.321
The life cycle stage of business	-.067	.126

Table A5.4 The correlations between the discriminant functions and the discriminating variables

	Function 1	Function 2
Leapwise growth of the turnover	.700*	-.077
Stable growth of the turnover	-.542*	.151
The number of personnel	-.208*	.014
Acquisitions and mergers	-.129*	.002
Goals for growth	.097	.656*
The growth of demand in the main markets	.057	.354*
Local market's share in the firm's sales	.141	.326*
Growth in turnover	.105	.308*
The uniqueness of the products in the market	.045	.221*
The life cycle stage of business	-.005	.149*
Attitude towards interfirm cooperation	.091	.099*
The importance of strong growth in demand	-.064	-.078*

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function.
[*.] Largest absolute correlation between each variable and any discriminant function.

Table A5.5 Functions at group centroids

Ward method	Function 1	Function 2
Innovators	1.092	-1.744
Survivors	1.059	1.603
Networkers	-3.445	-0.002

Unstandardized canonical discriminant functions evaluated at group means.

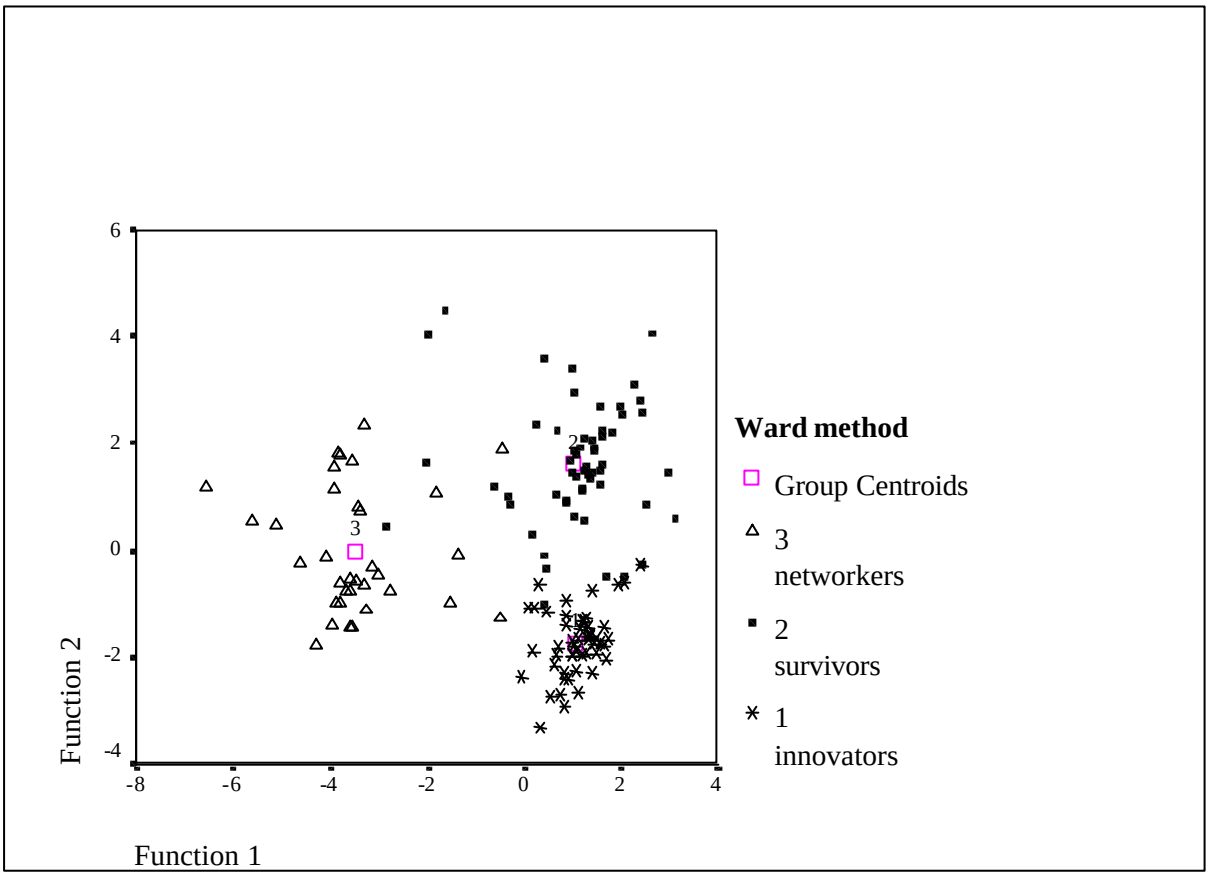

Figure A5.1 Canonical discriminant functions

Table A5.6 Classification results [a]

Ward method		Predicted group membership			Total
		Innovators	Survivors	Networkers	
Original count	Innovators	52	0	0	52
	Survivors	6	49	2	57
	Networkers	1	1	32	34
Original %	Innovators	100.0	0	0	100.0
	Survivors	10.5	86.0	3.5	100.0
	Networkers	2.9	2.9	94.1	100.0

[a.] 93.0% of original grouped cases correctly classified.

THREATENED AND NON-THREATENED SMES

The whole sample

Table A5.7 Eigenvalue

Function	Eigenvalue	% of variance	Canonical correlation
1	.414[a]	100.0	.541

[a.] First 1 canonical discriminant function was used in the analysis.

Table A5.8 Wilks' Lambda

Test of function	Wilks' Lambda	Chi-square	df	Sig.
1	.707	43.466	9	<.0005

Table A5.9 Standardized canonical discriminant function coefficients

	Function 1
Changes in the business base	.430
Periods of decline	.487
Sawing nature of the development of the turnover	-.272
Firm age	.180
Business success compared with competitors	.145
Respondent's satisfaction with business success	.468
Other domestic market's share in the firm's sales	.385
Attitude towards interfirm cooperation	-.104
Ability to find quick solutions for changing customer needs	.283

Table A5.10 The correlations between the discriminant function and the discriminating variables

	Function 1
Periods of decline	.525
Respondent's satisfaction with business success	.481
Sawing nature of the development of the turnover	-.435
Other domestic market's share in the firm's sales	.303
Changes in the business base	.302
Business success compared with competitors	.287
Attitude towards interfirm cooperation	-.278
Ability to find quick solutions for changing customer needs	.226
Firm age	.111

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function.

Table A5.11 Function at group centroids

Threat	Function 1
Yes	.619
No	-.658

Unstandardized canonical discriminant function evaluated at group means.

Table A5.12 Classification results[b,c]

Threat		Predicted group membership		Total
		Yes	No	
Original count	Yes	50	18	68
	No	12	52	64
Original %	Yes	73.5	26.5	100.0
	No	18.8	81.3	100.0
Cross-validated[a] count	Yes	44	24	68
	No	19	45	64
Cross-validated[a] %	Yes	64.7	35.3	100.0
	No	29.7	70.3	100.0

[a.] Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
[b.] 77.3% of original grouped cases correctly classified.
[c.] 67.4% of cross-validated grouped cases correctly classified.

Stable independent survivors

Table A5.13 Eigenvalue

Function	Eigenvalue	% of variance	Canonical correlation
1	.755[a]	100.0	.656

[a.] First 1 canonical discriminant function was used in the analysis.

Table A5.14 Wilks' Lambda

Test of function	Wilks' Lambda	Chi-square	df	Sig.
1	.570	16.028	11	.140

Table A5.15 Standardized canonical discriminant function coefficients

	Function 1
Length of prior work experience	.327
Changes in the business base	.053
Proportion of products with stable volume	.278
Proportion of products with growing volume	-.042
Competitive power in the market of the main products	.731
The most important customer's share of the firm's turnover	-.347
Attitude towards interfirm cooperation	-.036
Subcontracting (sold)	.096
Personnel with advanced knowledge	-.032
Ability to respond flexibly to customers' special needs and requirements	.188
Availability of skilled staff	.407

Table A5.16 The correlations between the discriminant function and the discriminating variables

	Function 1
Competitive power in the market of the main products	.775
Subcontracting (sold)	.359
Personnel with advanced knowledge	.321
Availability of skilled staff	.302
Proportion of products with stable volume	.282
The most important customer's share of the firm's turnover	-.281
Changes in the business base	-.267
Length of prior work experience	.253
Proportion of products with growing volume	-.224
Ability to respond flexibly to customers' special needs and requirements	.185
Attitude towards interfirm cooperation	.067

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function.

Table A5.17 Function at group centroids

Groups	Function 1
Threatened stable independent survivors	-.674
Non-threatened stable independent survivors	1.058

Unstandardized canonical discriminant function evaluated at group means.

Table A5.18 Classification results[b,c]

Groups		Predicted group membership		Total
		Threatened survivors	Non-threatened survivors	
Original count	Threatened	21	1	22
	Non-threatened	3	11	14
Original %	Threatened	95.5	4.5	100.0
	Non-threatened	21.4	78.6	100.0
Cross-validated[a] count	Threatened	17	5	22
	Non-threatened	7	7	14
Cross-validated[a] %	Threatened	77.3	22.7	100.0
	Non-threatened	50.0	50.0	100.0

[a.] Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
[b.] 88.9% of original grouped cases correctly classified.
[c.] 66.7% of cross-validated grouped cases correctly classified.

Innovators with continuous growth

Table A5.19 Eigenvalue

Function	Eigenvalue	% of variance	Canonical correlation
1	.533[a]	100.0	.590

[a.] First 1 canonical discriminant function was used in the analysis.

Table A5.20 Wilks' Lambda

Test of function	Wilks' Lambda	Chi-square	df	Sig.
1	.652	14.310	7	.046

Table A5.21 Standardized canonical discriminant function coefficients

	Function 1
Founder of the firm	-.378
Founders' place of living	.030
Local market's share in the firm's sales	.198
Import	.410
R&D orientation	.317
Long-term customer relations	.067
Good inter-personal relations with customers and suppliers	-.568

Table A5.22 The correlations between the discriminant function and the discriminating variables

	Function 1
Good inter-personal relations with customers and suppliers	-.667
Local market's share in the firm's sales	.600
Founder of the firm	-.518
Import	.475
R&D orientation	.446
Long-term customer relations	-.422
Founders' place of living	-.038

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function.

Table A5.23 Function at group centroids

Groups	Function 1
Threatened innovators with continuous growth	-1.006
Non-threatened innovators with continuous growth	.503

Unstandardized canonical discriminant function evaluated at group means.

Table A5.24 Classification results[b,c]

Groups		Predicted group membership		Total
		Threatened innovators	Non-threatened innovators	
Original count	Threatened	7	6	13
	Non-threatened	2	24	26
Original %	Threatened	53.8	46.2	100.0
	Non-threatened	7.7	92.3	100.0
Cross-validated[a] count	Threatened	7	6	13
	Non-threatened	6	20	26
Cross-validated[a] %	Threatened	53.8	46.2	100.0
	Non-threatened	23.1	76.9	100.0

[a.] Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
[b.] 79.5% of original grouped cases correctly classified.
[c.] 69.2% of cross-validated grouped cases correctly classified.

Networkers with leapwise growth

Table A5.25 Eigenvalue

Function	Eigenvalue	% of variance	Canonical correlation
1	.836[a]	100.0	.675

[a.] First 1 canonical discriminant function was used in the analysis.

Table A5.26 Wilks' Lambda

Test of function	Wilks' Lambda	Chi-square	df	Sig.
1	.545	14.884	5	.011

Table A5.27 Standardized canonical discriminant function coefficients

	Function 1
Changes in principles and practices of management	.512
"Top firm" in the are	-.699
Long-term customer relations	.424
Environmental monitoring	-.100
Investment payments by self-financing	.629

Table A5.28 The correlations between the discriminant function and the discriminating variables

	Function 1
Long-term customer relations	.515
"Top firm" in the area	-.474
Investment payments by self-financing	.441
Environmental monitoring	-.317
Changes in principles and practices of management	.277

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function.

Table A5.29 Function at group centroids

Groups	Function 1
Threatened networkers with leapwise growth	-.592
Non-threatened networkers with leapwise growth	1.315

Unstandardized canonical discriminant function evaluated at group means.

Table A5.30 Classification results[b,c]

Groups		Predicted group membership		Total
		Threatened networkers	Non-threatened networkers	
Original count	Threatened	19	1	20
	Non-threatened	3	6	9
Original %	Threatened	95.0	5.0	100.0
	Non-threatened	33.3	66.7	100.0
Cross-validated[a] count	Threatened	17	3	20
	Non-threatened	3	6	9
Cross-validated[a] %	Threatened	85.0	15.0	100.0
	Non-threatened	33.3	66.7	100.0

[a.] Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.

[b.] 86.2% of original grouped cases correctly classified.

[c.] 79.3% of cross-validated grouped cases correctly classified.

APPENDIX 6: DIFFERENCES BETWEEN THREATENED AND NON-THREATENED SMES

Table A6.1 Differences between threatened and non-threatened SMEs in the whole sample [a]

	Variables	Threatened SMEs	Non-threatened SMEs
Characteristics of the SMEs and their life cycles	• typical industry sector (nt)	• building material industry (86% of SMEs in the industry sector)	• food industry (83% of SMEs in the industry sector)
	• no changes in the business base *	• 73% of SMEs	• 89% of SMEs
	• never periods of significant decline in turnover (more than 20% annual change) ***	• 25% of SMEs	• 65% of SMEs
	• exporting as a growth factor (nt)	• 11 SMEs	• 3 SMEs
	• cooperation as a growth factor (nt)	• 5 SMEs	• 2 SMEs
	• general economic recession as a cause of fall in turnover (nt)	• 28 SMEs	• 11 SMEs
	• fluctuating growth in turnover **	• 10% of SMEs	• 1% of SMEs
	• no. of establishments	• bigger	• smaller
	• firm age *	• typically more than 9 years old	• typically less than 10 years old
	• firms led by an entrepreneurial team	• infrequently	• frequently
	• of all changes in ways of doing business (nt)	• 62%	• 38%
	• specialization as a change in the way of doing business (nt)	• 11 SMEs	• 6 SMEs
	• business success **(*)**	• lower	• higher
	• entrepreneurs' satisfaction with business success ***	• two thirds	• almost all
Strategic choices	• other domestic market's share in the firm's sales on the average (md) *	• 50% (50%)	• 40% (30%)
	• of SMEs with project export	• 62%	• 38%
	• attitude towards interfirm cooperation *	• actively looking for new interfirm cooperation relationships	• interested in investigating cooperation possibilities if some other firm would approach them

	• average number of types of cooperation **(*)** • of SMEs practising interfirm cooperation in purchases **(*)** • of SMEs practising interfirm cooperation in production (excl. subcontracting) • of SMEs practising interfirm cooperation in financing **(*)** • average length of time of cooperation (md) • sold subcontracting as a share of turnover (for subcontractors only) • of SMEs buying subcontracting • bought subcontracting as a share of turnover	• 2.00 • 67% • 59% • 29% • 54 (37) years • higher • 82% of SMEs • higher	• 1.61 • 33% • 41% • 71% • 46 (31) years • lower • 70% of SMEs • lower
Structured success factors	• more important than in the other group	• simple and flexible organization • public consulting support • private consulting • good cooperation partners and relations • ability to find quick solutions for changing customer needs **(*)** • strong growth in demand • adequate slack resources for maintaining firm's flexibility • anticipation of new business opportunities	• high-quality products • fast and reliable delivery • good production premises and equipment • personnel with advanced knowledge • investment payments by self-financing • small no. of owners
Unstructured success factors	• characteristic of the group (nt)	• early reaction to problems and decision making without delay	
Survival factors	• characteristic of the group (nt)	• belief in the future • good relationships with external stakeholders	

[a.] ***=p<.001; **=.001<p<.01; *=.01<p<.05; (*)=.05<p<.10; (nt)= not testable

Table A6.2 Differences between threatened and non-threatened SMEs in the cluster of stable independent survivors [a]

	Threatened stable independent survivors	Non-threatened stable independent survivors
Characteristics of entrepreneurs	• more frequently firm owners • more frequently firm founders • typically, prior work experience as an employee only (40%)	• longer experience as firm owners • typically, prior work experience both as an employee and as a manager (37%) • longer prior work experience **(*)** • in portfolio entrepreneurship cases no business linkages between the firms in the portfolio
Characteristics of the SMEs and their life cycles	• more metal industry SMEs (nt) • investments in production, specialization, R&D and innovations, starting or expanding exports, or big single order were more frequently growth factors (nt) • increasing interfirm cooperation, specialization, and investments in marketing were more frequently changes in the ways of doing business (nt) • more SMEs had changes in principles and practices of management	• more food industry and business service SMEs(nt) • almost all (96%) had stayed close to their original business **(*)** • entrepreneurs were more satisfied with their business success
Strategic choices	• a higher share in the firm's sales came from other domestic markets • a higher proportion of new products in the market and products with growing volume [proportion of products with growing volume *****] • more SMEs considered the risk of failure to be lower than in Finnish firms in general • a higher proportion of turnover due to the biggest customer (34%, md=19%) ***** • most of those (86%) who considered their firm's competitive power low ****** • more SMEs actively looked for new interfirm cooperation relationships **(*)** • more SMEs practised interfirm cooperation in purchases, subcontracting, and marketing • typically a subcontractor **(*)** • sold subcontracting as a share of turnover typically more than 50% • more SMEs bought subcontracting	• a higher share in the firm's sales came from local markets • a higher proportion of products with stable volume (almost all) **(*)** • most of those (70%) who considered their firm's competitive power good ****** • typically no interfirm cooperation • all who thought that interfirm cooperation has no importance (n=5) • all who practised interfirm cooperation in financing (n=4) • more SMEs had negative experiences in cooperation (65% of those who had negative experiences in cooperation) • of those who have had cooperation with public organizations fostering SME development, almost half (44%) had negative experiences • typically not a subcontractor

Structured success factors distinctive and characteristic of SMEs in the group	• quality of raw materials and reliable suppliers • adequate slack resources for maintaining firm's flexibility • anticipation of new business opportunities	• good knowledge of products • personnel with advanced knowledge **(*)** • ability to respond flexibly to customers' special needs and requirements **(*)** • continuity of key persons • good reputation of the firm • cooperative personnel • availability of skilled staff **(*)** • high-quality products • customer feed-back • continuous development • personnel training • good production premises and equipment • good after-sales service • multifunctional production equipment
Structured success factors distinctive and characteristic of a significant number of the SMEs in the group[b] (nt)	• internationalization	• direct selling • continuity of personnel • incremental development instead of radical changes
Unstructured success factors more typical of SMEs in the group than in the other group (nt)	• entrepreneur's personal contribution • innovativeness and R&D • skilled personnel • decision making without delay • planning, goal-orientedness, and perseverance • intimate customer relationships • interfirm cooperation	• good reputation of the firm and trust of customers • strict cost control • good customer service
Survival factors more typical of SMEs in the group than in the other group (nt)	• personnel's contribution and flexibility • good relationships with external stakeholders • entrepreneur's personal contribution • belief in the future • goal-orientedness and an ability to distinguish essentials	

[a.] ***=p<.001; **=.001<p<.01; *=.01<p<.05; (*)=.05<p<.10; (nt)= not testable

[b.] Those success factors ranked with a score of 7 by at least one third of all respondents or with a score of 6 or of 7 by at least half of all respondents but which were not success factors for all SMEs.

Table A6.3 Differences between threatened and non-threatenedSMEs in the cluster of innovators with continuous growth[a]

	Threatened innovators with continuous growth	Non-threatened innovators with continuous growth
Characteristics of entrepreneurs	• younger entrepreneurs	• more frequently firm owners • almost all were firm founders ***** • more frequently they had prior work experience in production • more founders came from the local area **(*)**
Characteristics of the SMEs and their life cycles	• more business service SMEs (nt) • investments in production, starting or expanding exports, or cooperation arrangements were more frequently growth factors (nt) • older on average • typically one owner (35%) or one main owner (35%) (nt) • specialization, and investments in marketing were more frequently changes in the ways of doing business (nt) • all SMEs had operated in markets with a growing demand during the last decade	• more woodworking industry and tourism SMEs (nt) • investments in marketing were more frequently a growth factor (nt) • typically 2-5 main owners (nt) • more SMEs led by an entrepreneurial team
Strategic choices	• a higher share in the firm's sales come from other domestic markets and from export markets • typically own imports • a higher proportion of new products in the market • typically "we are the first in the market" attitude towards R&D • typically actively looked for new cooperation relationships • more SMEs practised interfirm cooperation in production, marketing, and R&D • almost all (88%) those who had negative experiences in cooperation; those experiences related particularly to cooperation with public organizations fostering SME development, subcontractors, and universities and research institutes	• a higher share in the firm's sales came from local markets ******* • typically no own imports ***** • typically "improving the quality of the products in the market" attitude towards R&D ***** • more SMEs applied newer production technology than did their most important competitors • typically interested in investigating cooperation possibilities if some other firm would approach them • all who had interfirm cooperation in financing (n=4)

Structured success factors distinctive and characteristic of SMEs in the group	• long-term customer relations ** • good inter-personal relations with customers and suppliers ** • continuity of key persons • internationalization (for internationalized SMEs) • simple and flexible organization • good cooperation partners and relations • good after-sales service • clear-cut identity of the firm • anticipation of new business opportunities • simple and low-cost production technique • strong inter-dependency with customers	• cooperative personnel • flexible use of family members as a work force (in family firms) • good information and control systems • high-quality products
Structured success factors distinctive and characteristic of a significant number of the SMEs in the group[b] (nt)	• ability to find quick solutions for changing customer needs • acquaintance with an influential distribution channel • internationalization • adequate slack resources for maintaining firm's flexibility	
Unstructured success factors more typical of SMEs in the group than in the other group (nt)	• good personnel (excl. personnel's skills) • intimate customer relationships • marketing	• planning, goal-orientedness, and perseverance • skilled personnel • personnel training • focusing on core business • flexible, reliable, and fast delivery
Survival factors more typical of SMEs in the group than in the other group (nt)	• belief in the future • good relationships with external stakeholders • widely applicable and advanced technology	• early reaction to problems and decision making without delay • entrepreneur's personal contribution • acquisition of new customers and increased efforts in marketing

[a.] ***=p<.001; **=.001<p<.01; *=.01<p<.05; (*)=.05<p<.10; (nt)= not testable

[b.] Those success factors ranked with a score of 7 by at least one third of all respondents or with a score of 6 or of 7 by at least half of all respondents but which were not success factors for all SMEs.

Table A6.4 Differences between threatened and non-threatened SMEs in the cluster of networkers with leapwise growth[a]

	Threatened networkers with leapwise growth	Non-threatened networkers with leapwise growth
Characteristics of entrepreneurs	• typically prior work experience as a manager only • more entrepreneurs with prior experience in purchasing and logistics	• more frequently firm owners • all owners were firm founders • typically prior work experience both as an employee and as a manager • more founders came from the local area
Characteristics of the SMEs and their life cycles	• more building material, metal, or woodworking industry SMEs (nt) • a higher number of establishments • founding a new establishment or expanding an old one, starting or expanding exports, or cooperation arrangements were more frequently growth factors (nt) • typically no acquisitions or mergers • specialization was more frequently a change in the ways of doing business (nt) • more SMEs had changes in principles and practices of management **(*)** • growth was more frequently a primary goal of the firm (81 %) • more SMEs had operated in markets with a growing demand during the last decade • typically not classified as the "top firms" in the region	• SMEs in several industry sectors (nt) • one big single order was more frequently a growth factor (nt) • all SMEs had grown in terms of turnover during the last decade • more SMEs had faced significant changes in turnover which had been growth only • half of the SMEs had made an acquisition or mergered • none of the family firms (n=5) had made a transition from one generation to the next • increasing efforts in marketing were more frequently a change in the ways of doing business (nt) • typically "top firms" in the region **(*)**
Strategic choices	• a higher share in the firm's sales came from other domestic markets • more SMEs operated in domestic markets only • typically no own imports • a higher proportion of products with stable volume • all who considered the risk of failure to be higher than in Finnish firms in general (n=3) • typically, actively looked for new cooperation relationships • all who thought that interfirm cooperation has no importance (n=2) • typically not a subcontractor	• typically own imports • a higher proportion of new products in the market and products with growing volume • more SMEs had "we are the first in the market" attitude towards R&D • a higher proportion of turnover due to the biggest customer • more SMEs considered that interfirm cooperation is extremely important • typically, interested in investigating cooperation possibilities if some other firm would approach them • almost all (83%) who had negative experiences in cooperation • typically a subcontractor

		• sold subcontracting as a share of turnover was lower; among subcontractors, almost half of the SMEs it was less than 20%
Structured success factors distinctive and characteristic of SMEs in the group	• good reputation of the firm • internationalization (for internationalized SMEs) • good knowledge of products • continuity of key persons • customer feed-back • environmental scanning **(*)** • strong growth in demand • personnel training	• long-term customer relations **(*)** • fast and reliable delivery • low total costs • good financial base and adequate cash resources • flexible use of family members as a work force (in family firms) • investment payments by self-financing***** • personnel with advanced knowledge • good information and control systems • low costs in financing • continuity of personnel • incremental development instead of radical changes • low delivery and transportation costs
Structured success factors distinctive and characteristic of a significant number of the SMEs in the group[b] (nt)	• planning • internationalization	• high-quality products • simple and low-cost production technique • acquaintance with an influential distribution channel
Unstructured success factors more typical of SMEs in the group than in the other group (nt)	• focusing on core business • skilled personnel • personnel training • intimate customer relationships • entrepreneur's professional skill • managerial know-how • external cooperation relations	• innovativeness and R&D • strict cost control • flexible, reliable, and fast delivery
Survival factors more typical of SMEs in the group than in the other group (nt)	• personnel's contribution and flexibility • belief in the future • good relationships with external stakeholders • acquisition of new customers and increased efforts in marketing	

[a.] ***=p<.001; **=.001<p<.01; *=.01<p<.05; (*)=.05<p<.10; (nt)= not testable

[b.] Those success factors ranked with a score of 7 by at least one third of all respondents or with a score of 6 or of 7 by at least half of all respondents but which were not success factors for all SMEs.

APPENDIX 7: FRAMEWORKS FOR INTERVIEWS

Code:
Time:

Cluster:
Industry sector:
Performance level:

NON-THREATENED FIRMS ONLY: First, please tell about your firm's philosophy and main principles of operation, and whether you think that they have affected firm performance in such a way as to prevent your firm's existence ever being threatened.

THREATENED FIRMS ONLY: First, please tell about the firm-internal and -external factors and conditions that were associated with the threat your firm faced.

FAILED FIRMS ONLY: First, please tell about the firm-internal and -external factors and conditions that were associated with your firm's failure.

* * *

Firm's present situation, past development, and future plans

1 The business and collaborators (present; in failed firms the situation before stopping the business):
- products/services (what)
- customers (to whom)
- the way of doing business (how, with whom)
- dependencies on market developments or other economic factors (what and how)
- competitive advantages (where and how better than competitors)
- competitive disadvantages (where and how worse than competitors)

2 Foundation of the firm and development to current position (modified from the EKS model) (past)
- the founding process: why was the firm founded? were there special strengths or competitive advantages?
- the selection of the field of business: why was the particular business selected? how attractive was the selected business?

- the selection of target group (customers): why was the selected target group selected? how attractive was the selected target group?
- customer needs: observed customer needs and their importance to customers?
- innovations and continuous development: how was the customer need solved? how has research and development carried out?
- cooperation: how were cooperation networks built? how have they been maintained?
- specialization: how constant is the customer need that the firm satisfies?

3 Factors explaining changes in the firm's turnover and profitability (critical incidents/conditions, factors that have previously restricted firm growth) (past):

- What factors have most affected changes in turnover?
- What factors have most affected changes in profitability?

<u>Changes in the firm's</u>

- owners, management, key persons
- financing and securities
- research and development: changes in intensity
- production: production investments, adoption of new production technology
- products/services: generations of products/services, introductions of new products/services, withdrawals of products/services
- marketing and sale: marketing and delivery channels, ways of marketing
- customers: new customers, customer losses, new markets, withdrawal from markets
- way of doing business and cooperation partners (starting/stopping cooperation, changes in modes or content of cooperation, acquisitions and mergers, specialization, organizational changes, launching new systems, changes in systems e.g. in financial management, information gathering, logistics etc.)
- means of competing
- goals and objectives

<u>Changes in the firm's environment, particularly in</u>

- the industry sector: development, changes in competition
- local surroundings: entry/exit of an important local customer/supplier/other cooperation partner
- financial markets: devaluations, changes in interest rates, foreign currency regulations, and behaviour of banks
- political/legal environment: restrictions of legislation, changes in the labour markets, unforeseen events abroad
- economic environment: general economic trends
- social environment
- technological environment: introductions of new technology

4 Foci in the near future (future):

- the firm's planned investments in the near future (the most important targets of development)?

- *SUCCESSFUL FIRMS ONLY*: the firm's vision for the next few years? how does it differ from the present situation? what factors may restrict or hinder the implementation of the vision?

- *SUCCESSFUL FIRMS ONLY*: how does the entrepreneur see her/his own position in the firm in the next few years? how does it differ from the present situation? what factors may restrict or hinder the achievement of that position/situation?

- *FAILED FIRMS ONLY*: what has the entrepreneur done since the firm's bankruptcy?

- how has the environment of the firm developed? outlook for the development of the industry sector in the near future?

* * *

SUCCESSFUL FIRMS ONLY: **Searching for explanations for the characteristics common to all successful SMEs** (to be applied)

Characteristics of entrepreneurs

- the importance of education?
- the importance of prior work experience?
- the importance of prior experience as an entrepreneur?
- other important starting points for becoming an entrepreneur?
- motives for becoming a serial and/or portfolio entrepreneur?

Characteristics of the SMEs

- firms with several founders: reasons/motives for founding the firm by several people?
- firms with an entrepreneurial team: the importance of the entrepreneurial team?
- family firms: the importance of the family for the business?
- non-growth firms: why is growth not a central objective of the firm?
- the importance of growth for the firm?
- the importance of the selected location of the firm? reasons/motives for the selection of the location?

Success factors: How does your firm ensure that it takes good care of the following factors in practise (in failed firms: what are the ratings of the following success factors on a scale of 1-7):

1 customer relations

- Good knowledge of customers and their needs [__]
- Long-term customer relations [__]
- Good reputation [__]
- Fast and reliable delivery [__]
- Good inter-personal relations [__]

2 supplier relations

- Quality of raw materials and reliable suppliers [__]

3 personnel, know-how, and quality

- Personnel with advanced knowledge [__]
- Good knowledge of products [__]
- Continuity of personnel [__]
- Cooperative personnel [__]
- High quality products [__]

4 flexibility

- Ability to respond flexibly to customers' special needs and requirements [__]
- Simple and flexible organization [__]

5 planning

- Planning [__]

Innovativeness and continuous development [__]

Other important success factors of the firm:

Survival factors: What is the importance of the following factors for the firm's survival, and how have they appeared in practise?

- Personnel's contribution and flexibility
- Good relationships with external stakeholders
- Early reaction to problems and decision making without delay
- Good financial position
- Belief in the future
- Entrepreneur's personal contribution
- Cost reductions
- Acquisition of new customers and increased efforts in marketing

* * *

SUCCESSFUL FIRMS ONLY: **Searching for explanations for the characteristics specific to certain clusters of successful SMEs** (to be applied)

Stable independent survivors

- why is the firm not growth seeking?
- why has the firm no new products in the market or products with growing volume?
- why is the firm not innovative?
- why is the firm reluctant to undertake interfirm cooperation?

Innovators with continuous growth

- what are the factors contributing to continuous growth in turnover?
- what are the firm's sources of innovativeness?
- why does the firm have a few big customers?
- why are the firm's strong basic values important?
- why is the flexible contribution of family members important?

Networkers with leapwise growth

- why does the firm have a leapwise growth in turnover (acquisitions etc.)?
- how do cooperation partners (subcontractors etc.) keep up with the pace of leapwise growth?

* * *

THREATENED FIRMS ONLY: **Exploring the causes and consequences of threat** (in parentheses, the findings based on the survey)

FAILED FIRMS ONLY: **Evaluation of the causes of failure**
(as retrospective comparisons only; to be applied)

What role did the following factors play in the threat of the firm?

<u>Stable independent survivors</u>

- factors affecting firm growth: production investments, specialization, R&D (consequence), starting export or expanding export market areas (consequence), a big project
- changes in the ways of doing business: more cooperation, specialization, investments in marketing
- changes in the principles and practices of management
- a bigger proportion of products with growing volume (consequence)
- a bigger proportion of turnover due to the biggest customer
- cooperation orientation (consequence)
- joint purchases with other firms, subcontracting and cooperation in marketing
- sold subcontracting

Innovators with continuous growth

- factors affecting firm growth: production investments (consequence), starting exporting or expanding export market areas (consequence), interfirm cooperation (consequence)
- changes in ways of doing business: specialization, investments in marketing (consequence)
- a smaller share of the firm's sales from the local market
- imports
- "first in the market" attitude in R&D
- active search of new cooperation partners (consequence)
- cooperation in production, marketing and R&D

Networkers with leapwise growth

- factors affecting firm growth: new or expanded establishments, starting exporting or expanding export market areas, interfirm cooperation
- changes in ways of doing business: specialization (consequence)
- changes in principles and practices of management
- active search of new cooperation partners (consequence)

All firms

- changes in the business base
- factors affecting firm growth: starting exporting or expanding export market areas, interfirm cooperation
- changes in ways of doing business: specialization
- a bigger share of the firm's sales from domestic markets excepting local markets
- project export
- active search of new cooperation partners
- more types of cooperation
- joint purchases with other firms

* * *

Evaluation of the role of factors associated with firm failure in the literature

Entrepreneur

- lower education
- lack of prior industry experience
- lack of prior managerial experience
- lack of prior experience as an entrepreneur
- lack of marketing skills
- younger age
- parents who were not entrepreneurs
- belonging to some minority

The firm

- smaller size (are dependent also on the smaller number of customers)
- smaller initial firm size
- no growth after starting the business
- slower growth rate
- younger age

Management/know-how

- one founder/manager
- lack of planning and clear goals and objectives
- no use of business advisors
- inability to recruit and retain quality employees
- lack of diversification
- inadequate technical know-how

Financing

- inadequate financing (initial financing, working capital)
- weak information systems and lack of financial control
- R&D costs higher than expected
- selling without a profit margin

Products/services

- products/services for undeveloped markets or out-of-date products/services
- small amount of products/services, lack of R&D and new products/services
- weak quality (in relation to market expectations or to competitors' products/services)

Customers/markets

- dependency on one or a few big customers (e.g. customers' problems in payment)
- failure to reach the target customer segment

Cooperation

- weak quality of suppliers
- inefficient delivery channels

Environment

- services (vs. manufacturing) as an industry sector
- macroeconomic conditions and development
- starting the business during a recession

* * *

What is most important for business success?

* * *

What should be avoided in business?

* * *

TREATENED FIRMS ONLY: **Briefly, what were the most important reasons for the threat?**

* * *

TREATENED FIRMS ONLY: **What did you learn from the threat, i.e. what has been done differently in business since the threat?**

* * *

FAILED FIRMS ONLY: **Briefly, what were the most important reasons for the failure?**

* * *

FAILED FIRMS ONLY: **What did you learn from the failure?**

* * *

What and when were the most significant changes in the firm's operation? If you look at the firm's life cycle now, can you distinguish and name separate stages of development there?

* * *

What are/were your firm's most important competitors?

* * *

Do you know whether any of your firm's competitor have gone into liquidation in the last five years?

APPENDIX 8: CASE COMPARISONS

Table A8.1 A comparison of stable independent survivors in the metal industry

	Non-threatened case S1A	Threatened case S1B	Failed case S1C
Firm origin and initial conditions	• continued the business formerly carried out by the entrepreneur's previous firm	• a family firm where the entrepreneurs came along with marriage	• a family firm where the entrepreneur grew up with the firm • the entrepreneur continued to run the firm set up by his father
The entrepreneur	• prior experience in the field as an SME owner • the firm led by an entrepreneurial team • focused on their own professional strengths • entrepreneurship as their way of living	• varied prior work experience • the firm led by an entrepreneurial team • social pressures in starting to run the firm	• prior experience from the family firm • one-man firm: no time for planning • social pressures to continue the family firm
Products and R&D	• focused on metal fixtures and articles • no own products, no need for R&D • ready-made products to customers • focused on a limited number of products at a time; products were changed over the years	• focused on light metal constructions • no own products, no need for R&D • the aim: more and more ready-made products to customers • large range of products, the basis of products remained the same over the years	• focused on metallic roofing sheets • continuous development in production lines and products • customer-tailored products • focused on a limited number of products which were changed gradually
Customers and markets	• mainly in the public sector • reliable payers • long-term contracts • the role of local markets: 60%	• building firms, big companies, and organizations in the public sector • the role of local markets: 90%	• hardware stores, wholesale firms, consumers, and building firms • the role of local markets: 80%

Way of doing business: production and cooperation	• acting as a subcontractor • networking: no need for expensive investments, flexibility in production	• acting as a subcontractor • networking	• independent manufacturer • a few cooperation partners
Resources, financing, investments	• small capital commitment to unfinished products • small credit losses • no big investments • good financial situation	• high capital commitment to unfinished products (in construction sites) • big credit losses • now good financial situation: no borrowed capital	• high capital commitment to unfinished products • big credit losses • significant labour costs with no income in winters
Strategic behaviour, strategic decisions	• risk avoiding behavior • a decision not to grow with a big customer • a decision not to invest in expensive special machines	• a decision to add value to present products instead of expanding product range or market areas	• an innovator running in front of “giants” • trials to expand into installation business and exporting failed • the firm as a big family and treatment of employees accordingly
External environment	• no competitors in local markets • dependent on the public construction industry sector and decisions made by public policy makers • no seasonal variation in demand and prices	• a number of competitors in local markets • dependent on the highly fluctuating construction industry sector • high seasonal fluctuations in demand and prices	• a small firm competing with “giants” • dependent on the highly fluctuating construction industry sector • problems with tax authorities • high seasonal fluctuation in demand and prices
Other	• the importance of stochastic factors: luck		

Table A8.2 A comparison of stable independent survivors in the field of bookkeeping agencies

	Non-threatened case S2A	Threatened case S2B	Failed case S2C
Firm origin and initial conditions	• a new firm founded to provide the entrepreneur with a livelihood	• a new firm founded to provide the entrepreneur with a livelihood	• a new firm founded to provide the entrepreneur with a livelihood
The entrepreneur	• professional education • prior work experience in similar tasks in SMEs in many industry sectors • one-man firm • focused on his own professional strengths • parents have been entrepreneurs	• professional education • prior work experience in similar tasks in small and big firms • most of the time a one-woman firm • focused on her own professional strengths • participation in many networks	• the entrepreneur was changed after ten years of operation • originally based on the first entrepreneur's professional strengths
Products and R&D	• a full-service bookkeeping agency • personal service • R&D-orientedness: in the frontline of technical development	• a bookkeeping agency: bookkeeping and auditing • interpretation and consulting important • R&D-orientedness: in the frontline of technical development	• a full-service bookkeeping agency • R&D-orientedness: close to the frontline of technical development • applying new production technology in order to achieve cost savings
Customers and markets	• in many industry sectors: fragmented customer structure • selecting the most profitable jobs	• mainly in service sectors • a few big customers • loss of clients because a bookkeeper left the firm	• one highly dominant customer segment: SMEs in the forestry, woodworking, and related industries
Way of doing business: production and cooperation	• active networking with the group, specialists, and a software company • leaving less profitable jobs to competitors • quality-orientedness	• active networking at many levels	• cooperation with the Union, a software company, and the Chamber of Commerce

Resources, financing, investments	• investments in new technology and education of workforce • good financial situation • follow-up of costs • little debt	• investments in new technology and education of the workforce • lack of follow-up • credit losses	• lot of debts in foreign currencies • big investments in office building • big credit losses
Strategic behavior, strategic decisions	• high quality of operations, and the use of new technology with holistic human treatment of customers • stable, non-growing and managed by the entrepreneur • planned, careful development	• active networking • new technology • unbalanced customer structure (a few big customers) as a threat all the time • stable, non-growing • weak profitability: "a shoemaker's children have no shoes" • never learned from credit losses • careful, but not particularly planned development	• aimed at becoming number one in the location area • strong growth aspirations • taking advantage of new technology • a high-risk investment decision • a high risk in focusing on SMEs in one dominating industry sector
External environment	• stable environment • "dependent on the performance of SMEs in the area"	• dependent on the general economic trends	• competition in the field had no effects • devaluations and economic recession were a surprise
Other	• the importance of stochastic factors: luck		

Table A8.3 A comparison of innovators with continuous growth in electronics

	Non-threatened case I1A	Threatened case I1B	Failed case I1C
Firm origin and initial conditions	• a new firm • first in the field in Finland • based on an attractive business opportunity: a significant first customer was known • several founders	• a new firm • based on a technical invention made in university research • a technical innovation rather than a solution for customer's problem as a starting point • several university-related founders	• a new firm • a spin-off, initially based on the founders' know-how gained in "the parent firm" and operating as a subcontractor for it • the business changed a lot after the first years of operation • several founders who formerly worked for "the parent firm"
The entrepreneur	• a few years' prior work experience as an employee and a few years' experience as a CEO in a previous firm • business was based on the entrepreneur's hobby • the entrepreneur wanted to implement his ideas in this firm	• a few years' prior work experience in the field	• later the firm was owned and led by the members of one family • non-professional managerial approach to doing business • the entrepreneurs had no business education
Products and R&D	• studio monitor loudspeakers and home theatre loudspeakers • a narrow product segment • the product was part of a system • R&D-orientedness: continuous development with significant inputs in R&D • many product generations • a strong brand • good after-sales service	• devices for measuring and testing muscles and the related software • a narrow product segment • products more 'expert systems' than just 'products' • R&D-orientedness: continuous development with significant inputs in R&D • a known brand in the field • good after-sales service	• customer-tailored production lines • products were sold to other firms solely • a narrow product segment • dependency on one product • R&D in designing each individual production line
Customers and markets	• export more than 90% of sales • regular buying customers	• exports more than 80% of sales • good worldwide dealer network	• exported nearly 100% of sales • agents in different parts of the world

Way of doing business: production and cooperation	• an assembly factory • the importance of good relations with suppliers and delivery channels	• bought much subcontracting	• the firm designed and assembled products, and bought much subcontracting
Resources, financing, investments	• good financial situation • investments financed by cash flow	• inadequate initial capital • adequate financing since venture capitalists' investments • big investments in R&D, quality systems, marketing and export	• no accumulation of slack resources • financial situation difficult all the time • a need for bank guarantees • precalculation of costs difficult • investments in new premises
Strategic behavior, strategic decisions	• aimed at being the first in the world in the field • innovator based on customer needs • new technology: a technical pioneer • high quality • a narrow product segment, global markets • investments in R&D, cooperation relationships • active environmental scanning	• inadequate strategic management in the beginning: unfinished products to undeveloped markets • a growth-seeking firm • innovative niche-strategy • from technical invention through learning to the satisfaction of customer needs • a narrow product segment, global markets • investments in R&D, quality systems • the importance of staff • active communication with customers	• no long-term strategic planning • a high-quality manufacturer • each product was unique: customer-tailored lines • a narrow product segment, global markets
External environment	• no domestic competitors in the markets • sales were dependent on the general economic activity in the market areas	• no domestic compet-itors in the markets • sales were dependent on the general economic situation and especially on the governmental budgets for public health care and research • many governmental rules and regulations regulated the firm's operation	• sales were dependent on the general economic fluctuations • competitors were bigger firms • high variation in the numbers of orders • failure of the bank
Other			

Table A8.4 A comparison of innovators with continuous growth in the electro-technical industry

	Non-threatened case I2A	Threatened case I2B	Failed case I2C
Firm origin and initial conditions	• a new firm founded on the basis of the business done by a big firm's closed local production unit • business was built up on the former business relations • several founders	• a new firm founded on the basis of the founders' education and recognition of an opportunity by family members • several founders	• a new firm founded on the basis of business ceased by another firm • business was built up on the previous business relations • one founder
The entrepreneur	• the firm led by an entrepreneurial team • all were workmates in the previous work place and knew each other • functional division of labour: strong know-how	• the firm led by an entrepreneurial team • functional division of labour	• one-man firm • previously served a firm which ceased business
Products and R&D	• electric distribution centres for office and industrial buildings • a narrow product segment: three products • each product was partly customer-tailored • unprejudiced attitude towards product development	• electric distribution centres for machines • a narrow product segment • each product was designed for a certain machine • the production of repetitive product series • innovation oriented • followed technological development	• electric cable conduits and their supporting systems • a narrow product segment • each customer-tailored • continuous product development
Customers and markets	• electricity contractors and industrial firms • for building of office and industrial buildings • market area was Finland and St. Petersburg	• machine manufacturers • exported more than 50% of sales • active new customer acquisition	• big industrial firms • dependency on a small number of potential customers • a narrow customer segment: operation in domestic markets only
Way of doing business: production and cooperation	• production and assembly by the firm	• designing and assembly by the firm	• no subcontractors

Resources, financing, investments	• adequate initial capital • investments financed by initial capital and cash flow • no debt financing • no big investments	• in the beginning, inadequate demand led to inadequate incomes to cover the fixed costs due to the economic recession • new production premises financed by cash flow	• a big investment in production premises using borrowed capital • a big loan in foreign currencies
Strategic behavior, strategic decisions	• clear goals, controlled growth with cautious steps • a high-quality producer with very extensive know-how • a “superteam” firm • invested in continuous R&D	• the firm strives for active cooperation partnership with machine manufacturers by developing intimate customer relationships • unprejudiced attitude towards development and new technology • quality as a wide term • efficient family member team with high confidence • into success through exports with a narrow product range	• no adequate slack resources
External environment	• stiff competition	• stiff competition	• unhealthy competition • competitors’ tax evasion • demand highly sensitive to economic fluctuations • devaluations • failure of the bank
Other			

Table A8.5 A comparison of innovators with continuous growth in the field of software firms

	Non-threatened case I3A	Threatened case I3B	Failed case I3C
Firm origin and initial conditions	• a new firm founded on the basis of business done by a big firm's closed local office • business was built up on the former business relations • several founders	• a new firm founded on the basis of the founders' profession • business was built up on professional connections • several founders	• a new firm founded to provide the entrepreneur with a livelihood • an alternative to unemployment • one founder
The entrepreneur	• the firm led by an entrepreneurial team • all were workmates in the previous work place and knew each other	• the firm led by an entrepreneurial team • all were workmates in the previous work place and knew each other	• one-man firm
Products and R&D	• information systems, their designing, implementation, maintenance, development, and customer guidance and training • a narrow product segment • customer-tailored products • investments in new technology and development of own products	• software subcontracting, particularly for production automation systems • design and production • customer-tailored products	• customer-tailored software applications, support services, consulting and training • no own product • a vague, unfocused product segment
Customers and markets	• hospitals, institutions, and software firms • close customer relations with long-term contracts • all around the country	• mostly big industrial firms, some small high-tech firms • close customer relations • all around the country	• small local firms and societies • a vague customer segment • a weak customer base • no marketing, no marketing skills • no market research in the beginning
Way of doing business: production and cooperation	• cooperation with customers and software firms	• production largely together with customers	• no cooperation partners

Resources, financing, investments	• adequate initial capital • investments financed by initial capital and cash flow • no debt financing • no big investments	• in the beginning, irresponsible use of money, weak financial follow-up and information systems • after the first years indebtedness of the firm • later no debt financing • no big investments	• incomes not adequate to cover fixed costs • indebtedness of the firm • inability to meet financial obligations
Strategic behavior, strategic decisions	• clear goals, thorough planning, and total quality management • risk minimizing behavior • a team enterprise with extensive know-how • strive to develop intimate customer relationships • continuity in business by means of long-term contracts • growth and profitability through new own products • cooperation with big software firms made it possible to participate in bigger projects • investments in new technology, product development and employee training	• in the beginning, no strategic planning, one customer only • later a more professional approach to business and management, more planning • focus on software in business and on big firms as customers • reduction of customer dependency • decision to grow, founding a new establishment	• an entrepreneur with lack of entrepreneurial skills • lack of planning • no own product • no focus • a problematic customer segment • no cooperation partners • no new technology • no competitive advantage • the firm scraped a living with a few occasional customers
External environment	• quite steady environment	• dependency on one or a few customers caused high risk in the environment sensitive to economic fluctuations • a changing competitive environment	• competitive environment was perceived to be quite stable • little demand
Other			

Table A8.6 A comparison of networkers with leapwise growth in the metal industry

	Non-threatened case N1A	Threatened case N1B	Failed case N1C
Firm origin and initial conditions	• continued the business done in the entrepreneurs' previous firm and work place • several founders • a family firm	• a new firm • several founders • a family firm • business was based on the entrepreneur's know-how gained in his previous firm	• continued the business outsourced by the entrepreneurs' former employer • several founders
The entrepreneur	• the firm led by an entrepreneurial team • varied prior work experience in the field, also as an entrepreneur	• the firm led by an entrepreneurial team • varied prior work experience in the field, also as an entrepreneur	• the firm led by an entrepreneurial team • varied prior work experience in the field
Products and R&D	• tanks, pressure vessels, and industrial chimneys • rather special products • turnkey projects: from design to installation • a narrow product segment: a need for internationalization	• pipe-supporting systems and their maintenance • standard products manufactured from customers' drawings • a turnkey deliverer using subcontractors • a narrow product segment: a need for internationalization	• planning, production and installation of high-pressure pipe systems and other parts for soda and steam boilers • turnkey projects: from planning to installation • a narrow product segment: a need for internationalization • standard products
Customers and markets	• an existing customer base • process industry • reliable payers • exported 60% of sales • a clear market niche	• no existing customer base • power plant suppliers, industrial piping contractors, and pulp and paper mills • expansion of export markets • 20% of sales were direct export • high dependency on a few customers	• only one customer in the beginning • big builders of power plants and soda boiler plants, and also some final customers, e.g. power plants or pulp mills • the number of potential customers in the markets very limited • a high dependency on single projects • 50% of sales were direct export

Way of doing business: production and cooperation	• a turnkey deliverer • networking, the use of subcontractors • focusing on core business • self-made production equipment	• a turnkey deliverer • networking, the use of subcontractors • focusing on core business	• a turnkey deliverer • networking, the use of subcontractors • focusing on core business • strong trust in subcontractors
Resources, financing, investments	• adequate initial financing, and good financial situation • investments financed mainly by cash flow and public financial support • no need for big investments • replacement invest-ments in machineries • no loans in foreign currencies during devaluations • investments in employee training	• adequate initial financing • a big loan in foreign currencies for buying new premises • difficult financial situation after devaluations	• adequate initial financing • investments in machines; financed mainly by cash flow • no loans in foreign currencies • lack of securities • one project with costs many times higher than expected; short of working capital
Strategic behavior, strategic decisions	• a turnkey deliverer in special products produced by special production equipment in a narrow niche • accumulated know-how and high quality • unprejudiced attitude with careful risk management • good reputation in the market	• a turnkey deliverer in special industrial products with a network of subcontractors • firm growth necessary for efficient production and participation in big projects	• a turnkey deliverer in special industrial products with a network of subcontractors • firm growth necessary for efficient production and participation in big projects • taking responsibility in an area where the firm had no know-how • high growth with inadequate risk management
External environment	• fluctuating demand • no stiff competition	• fluctuating demand • sensitivity to economic fluctuations • external shocks: devaluations • Finnvera's support • an extended credit limit given by a supplier • negotiations with the tax authorities	• weak competition in the market niche • fluctuating demand • a big role of single projects
Other	• important role of luck		