

JYVÄSKYLÄ STUDIES IN BUSINESS AND ECONOMICS 8

Hannu Littunen

# The Birth and Success of New Firms in a Changing Environment

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JYVÄSKYLÄN YLIOPISTO

JYVÄSKYLÄ 2001

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## ABSTRACT

Hannu Littunen

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Diss.

This thesis consists of an introduction and ten empirical studies, in which the factors affecting the birth, survival, growth, and decline of new firms are examined. The background, objectives and contents of the thesis, as well as a summary and the conclusions drawn from the findings are presented in the introductory chapter. The introductory chapter also introduces three different mathematical models related to various situations of entrepreneurship, and these models are tested in the empirical section of the thesis. The theoretical basis for the models is provided by contingency thinking. Contingency thinking connects the situational factors of the start-up situation with the entrepreneur's know-how, and the changes that occur in the situational factors during the critical operational phase and the established phase with the success of firms.

The second chapter consists of three empirical studies on the birth of new firms (1,2 and 3). The first study is an analysis of factors related to the economic situation and the immediate environment that affect the birth of new firms. These factors are analysed from a regional viewpoint. The main finding is that the production structure of a particular region affects the birth of new firms. New entrepreneurship is formed through combinations of existing entrepreneurial activities and their component parts. When a new firm is established, situational factors in the immediate environment such as the entrepreneur's family, personal relationship networks, place of residence and the firm's customers and markets are component parts of the strategy complex of the new firm. Two different start-up situations are examined in the second empirical study: family firms and firms that are born through reorganisation. The findings show that actual or impending unemployment as a start-up motive is more typical of family entrepreneurs, whereas positive situational factors are more common motives for other entrepreneurs. For family entrepreneurs the level of educational background is lower than for other entrepreneurs. Regardless of their lower educational status family entrepreneurs consider their entrepreneurial know-how versatile. The third empirical study connects the birth of a new firm with necessity or lack of alternatives preceding entrepreneurship. Desire to lead is a typical characteristic of entrepreneurs who regard unemployment or the threat of it as a motivation for starting up a firm. Another observation is that for the firms in the metal industry for whom the start-up situation was characterised by necessity a competitive environment is distressing and susceptible to change, although the element of necessity as such does not indicate insufficient preconditions for development.

The third chapter consists of three empirical studies (4, 5 and 6) examining the success of new firms in the critical operational phase. The fourth study

examines the survival of firms in the critical operational phase. The main finding is that the entrepreneur's know-how - defined as versatile work experience and vocational training - affects the survival of firms in the critical operational phase. Another finding is that there are a number of operational factors in family firms that sustain continuity. A family that owns a firm is committed to the firm's activities in several ways. The fifth study examines the success of firms in metal industry in different action environments. The main finding is that there are regional differences in the success of new metal industry firms. A versatile production structure in a region decreases the number of market barriers, and in these service centres it is more usual than in other regions that people with insufficient entrepreneurial skills take up entrepreneurship. The sixth empirical study examines the growth of new firms in the critical operational phase. The findings show that the entrepreneur's know-how and changes in the firm's strategic behaviour affect the development of the new firm's activities. Another finding is that new firms have equal chances for growth irrespective of their locality. On the other hand, changes in a firm's competitive situation affect its growth, and especially in the more developed service centres, growth depends on an expanding market area in the critical operational phase.

The fourth chapter consists of three empirical studies (7, 8 and 9) examining the development of new firms in the established phase. The seventh study examines the effects of various networks on the survival of firms. The results indicate firstly that it is the internal networks of firms that bring about competitive advantage, innovations and efficiency. Group management is emphasised in the firms that continue in business. On the other hand, uncontrollable risks lead some firms to close down, because in unsuccessful firms the rate of growth is too fast for the financing and management of the firm. In the eighth study various indicators of control orientation are compared with each other. According to the findings the strategic control orientation indicator provides a more accurate prediction of the success of new firms than the indicator of internal attributing. The advantage of the strategic control orientation indicator is that it predicts the success of the start-up process in addition to other strategic factors related to the firm. The ninth study examines the changes in the entrepreneur's personality traits in two different phases of entrepreneurship. The main finding is that entrepreneurship molds the entrepreneur's personality traits. Another finding is that changes in the entrepreneur's relations with others also have an effect on the entrepreneur's personality traits: entrepreneurs whose personal relations increased also showed a clear increase in mastery.

The fifth chapter presents a summary of the findings, illustrating how in different situations the processes of change in business vary in accordance with the firm's success. The chapter provides surveys of the most important situational factors affecting the different phases of entrepreneurship from the viewpoints of both the entrepreneur and entrepreneurship.

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## ORIGINAL ARTICLES

- Art. 1** Littunen Hannu (1992), The Location Choice of Firms in a Changing Environment, Environment, published in University of Jyväskylä, Centre for Economic Research, 'Tutkimusta ja pohdintaa yhteiskunnasta' (in Finnish). Nenonen Tuomo and Littunen Hannu (1994) published in University of Jyväskylä, Centre for Economic Research, Five Essays on Regional development, publications 131 (in English). Paper also presented at the IV World Congress of the Regional Science Association, Mallorca, Spain 26-29 May 1992.
- Art. 2** Littunen Hannu and Hyrsky Kimmo (2000), The Early Entrepreneurial Stage in Finnish Family and Non-Family Firms, published in Journal of the Family Firm Institute, Family Business Review, vol. XIII (1), 41-54.
- Art. 3** Niittykangas Hannu, Littunen Hannu and Kinnunen Ulla (1998), Forced Founding - Does it Matter ?, published in the Finnish Journal of Business Economics 1/1998 (in Finnish). Paper also presented at 10th Nordic Small Business Congress in Växjö University 1998.
- Art. 4** Littunen, Hannu (1997), The Critical First Years of Firms, published in Academy of Entrepreneurship, International Journal of Entrepreneurship, vol. 1 (1), 37-50.
- Art. 5** Littunen Hannu, Storhammar Esa and Nenonen Tuomo (1998), The Survival of Firms over the Critical First 3 Years and the Local Environment, published in Entrepreneurship and Regional Development, An International Journal, vol. 10 (3), 189-202.
- Art. 6** Littunen Hannu (1999), The Birth and Growth of New Firms in a Changing Environment (manuscript being refereed for Journal of Small Business & Enterprise Development).
- Art. 7** Littunen Hannu (2000), Networks and Local Environmental Characteristics in the Survival of New Firms, published in Small Business Economics 15 (1), 59-71.
- Art. 8** Littunen Hannu and Storhammar Esa (1999), The Indicators of Locus of Control in the Small Business Context (forthcoming in Journal of Enterprising Culture).
- Art. 9** Littunen Hannu (2000), Entrepreneurship and the Characteristics of the Entrepreneurial Personality, published in International Journal of Entrepreneurial Behaviour and Research, vol. 6 (6), 295-309.

**Art. 10** Littunen Hannu (1999), The Birth and Success of New Firms, earlier version (Nenonen, T. and Littunen, H.) of this paper presented at the 43rd World Conference of the International Council for Small Business, Singapore Suntec Center, Singapore, 8-10 June.

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# CHAPTER I

## INTRODUCTION

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# 1 INTRODUCTION

## 1.1 Background of the study

In recent years attitudes toward entrepreneurship have been shifting in an increasingly positive direction and growing attention has been paid to the significance of new firms. In Finland, as well as in Europe as a whole, there exists a strong belief in the power of new firms. It is commonly agreed that the resources used to secure social and economic development are to a great extent tied to competitive entrepreneurship and to a business environment that promotes the growth and opportunities of new firms. New firms with growing capacity are often associated with the production and distribution of innovations. Among the strengths of new competitive firms is their internal flexibility both in solutions to problems of production and administrative issues. The birth and development of new firms is more and more widely considered to be bound up with social changes and the needs for these changes.

By supporting the establishment of new firms and the development of small and middle-sized firms, economic growth can be promoted in society as a whole and solutions can be found to problems of adaptation to various structural changes. Recently the promotion of the birth of new firms and lending support to their activities have been considered crucial, especially in improving the employment situation, since it is assumed that in the near future new jobs will emerge in competitive and stabilised small firms and firms that are just starting out. As far as economic growth is concerned, international comparisons point in the same direction. A structure of production with an emphasis on small firms has been regarded as a factor promoting the growth of new firms (Okko, 1997; Caree and Thurik, 1997).

Increasing the number of new firms with as much competitive ability as possible is thus a positive fact in many respects and especially when taking the employment situation into consideration. On the other hand, the establishment of firms with a high probability of failure could be avoided by means of

education and counselling. Some new firms grow and develop, some hold to their original role, and some of them have to step aside fairly soon in order to make room for new firms. Approximately 13 % of the new firms established in Europe close down during their first year of business, and only 55 % survive for five years (Tilastokeskus 1995). Similarly in Finland most of the firms that file a bankruptcy petition are small firms employing less than five people. Small firms make up over 80 % of firms filing a bankruptcy petition. Nonetheless, the share of small firms of the total number of firms is significant in all lines of business, but especially so in the service sector (SME report 1998).

Generally the most important factors in the survival of firms are age, line of business, size, and location. Large firms continue in business much more often than small firms (Bates and Nucci 1989; Storey and Wynarczyk 1996). Older firms have usually found their own customer groups and stabilised, in which case it is rare that business activities are closed down. The most critical operational phase for the survival of new firms is the period of two to three years following their establishment (Gibb 1990). According to an English study, approximately 67 % of small and medium-sized firms are still in operation two years and 40 % five years after establishment (Foley and Green 1989). According to another study about 62 % of English firms are estimated to disappear from the market before their fifth year in business (Cressy 1996).

Few new firms can be described as fast growing, because the fastest-growing 4 % of firms provide half of the jobs created by new firms (Storey et al. 1989). In the United States 4 % of the 814,000 firms established during 1977-78 provided 74 % of the increase in employment levels for the study population of 1984 (Kirchhoff 1994). According to a German study, approximately 26,800 new firms that were established during 1985-86 provided a total of 58,000 new jobs and those firms surviving after the fifth year had approximately 68,000 employees. The same study states that 76 % of these firms continued in business two years and 62 % five years after start-up (Bruderl et al. 1992). According to a Dutch study started in 1996, nearly 90 % of new firms continue in business after their first year (Schutjens et al. 1998).

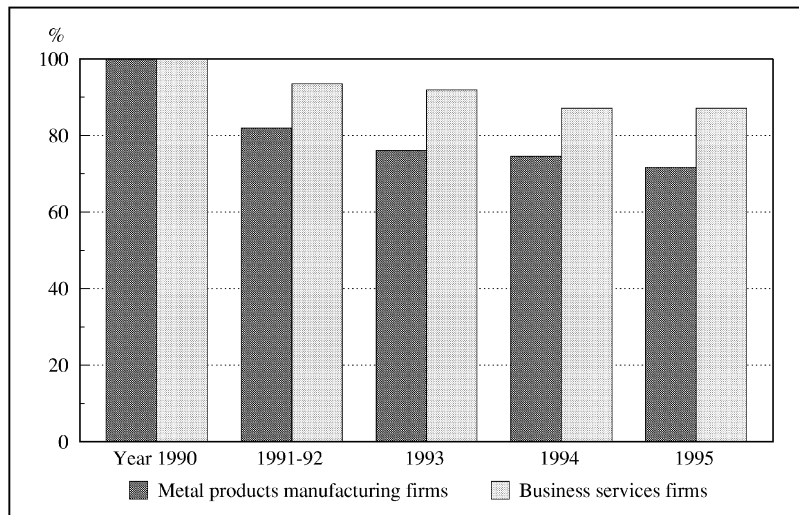


FIGURE 1.1.1 The life cycle of new firms in the interview data

The life-cycle of Finnish firms can be examined in the light of the follow-up data (Littunen 1998). Approximately 76 % of the new firms in the metal industry and nearly 92 % of those in business services that were interviewed are still functioning three years after establishment. The proportion of firms with a short life cycle is slightly greater in the metal industry than in business services. Studies have shown that the life span of Finnish firms appears to correspond to that of English and German firms. These results are also affected by differences in the sampling data. According to the information gathered from some countries by Eurostat, the loss is especially large in firms that start up without employing outsiders (SME report 1996).

There is strong interaction between entrepreneur, firm, and the firm's action environment. As the action environment changes, new entrepreneurs must possess more versatile know-how, make closer observations of changes in environmental conditions and develop faster reactions to changes than before if they want to succeed. In studies on small firms, these entrepreneurial connections have been evaluated from several different perspectives, but especially as inter-related, changing and developing processes (Low and MacMillan 1988). As far as the firms are concerned, the emphasis is on the birth, growth and development of firms, their organisational structures and the ability to adjust and change according to the demands imposed by the action environment. However, earlier studies have not linked factors affecting the birth and success of new firms with the various situational factors of entrepreneurship. Part of the scope of this study is to determine the most important of these factors in the different stages of entrepreneurship.

## 1.2 Purpose and aims of this study

The aim of this study was to determine what kind of factors affect the birth of new firms, and the influence of these factors, situations and events influence on the critical operational phase (1-3 years) and on the established phase (4-6 years). A firm that survives the first three years can be described as having passed through the valley of death (Gibb 1990). Rapidly growing firms that survive the critical operational phase are of great importance both locally and in terms of the national economy, because these firms are the real employers: according to one study they provide as much as 16 % of new jobs (Foley and Green 1989). In a study on family firms Alcorn (1982) calls the critical operational phase the entrepreneurial phase, during which the economic prerequisites for the operations are developed and the entrepreneur is most eager to take risks.

Steady development characterises firms more in the established phase of entrepreneurship than in the critical operational phase. Various studies have shown that the survival of a new firm is less difficult in the established phase than in the critical operational phase, because the problems encountered in these two phases clearly differ from each other (Churchill and Lewis 1983). According to a study by Alcorn (1982), during the established phase the entrepreneur prioritises security in entrepreneurship as well as in other spheres of life. Also the various life cycle models that describe the growth of firms divide firms' development into different stages (Greiner 1972, Slevin and Covin 1997). These life cycle models for growth do not, however, take into account the features, objectives and starting points of new firms, which are very different in each case (Turok and Richardson 1989; Koskinen 1996).

This study examines the development of new entrepreneurial activity and entrepreneurs and the factors affecting this development in three different stages in the life of a firm: the birth of a firm and the start-up situation, the critical operational phase and the established phase. From these starting points the aim of this study is to determine:

- **what are the circumstances in which firms are born and the factors affecting the birth of new firms;**
- **which factors connected with the birth and start-up situation of firms enable development and which factors lead to failures in the critical operational phase;**
- **which factors affecting the critical operational phase and the established phase enable development and which factors lead to failures in the established phase;**
- **how the factors influencing the action environment of a firm affect the development of entrepreneurial activities and the characteristics of entrepreneurs.**

The achievement of the study's objectives is examined on the basis of cross-section data and follow-up data on new firms. Cross-section data is included in this study because the circumstances and factors affecting the birth of a firm vary according to the firm's size and location environment. At the same time it gives an idea of the general factors connected to the economic situation that affect the birth of new firms.

However, the primary focus of this study is on the success of new firms in the metal industry and business services that started up in 1990. This part of the study is an empirical, longitudinal investigation focusing on the development of new firms' activities and on the features and situational factors of entrepreneurial activity that have a central effect on the activities of firms and entrepreneurs. The research objectives are scrutinised from the viewpoints of the entrepreneur and of the firm, although the features of the firm's action environment are also examined. The importance of the action environment for the success of new firms is heightened by the facts that the action environment converges with the competitive environment, firms are often established within the entrepreneur's home district, business activities are directed at the local market, and the firms are small (Littunen 1991).

### **1.3 A review of the literature and the research strategy**

#### **1.3.1 Theories and the results of previous studies**

The study of the birth and development of new firms can be advanced by examining the evolution of the different stages of this process (Bygrave and Hofer 1991; Koskinen 1996). This means exploring the objectives and personality of the entrepreneur and the changes in and development of new firms from the viewpoint of both the entrepreneur's activities and the action environment. The first stage in the entrepreneurial process is closely connected with the factors affecting the birth of new firms (Liles 1974; Brockhaus 1980; Shapero and Sokol 1982; Hauta-aho 1990; Huuskonen 1992; Davidsson 1993; Koiranen 1993; Koskinen 1996; Niittykangas ja Tervo 1996; Reynolds 1995; Littunen 1998; Laukkanen 2000). This stage is connected with the entrepreneur's earlier phases of life and experiences and the various situations in which the entrepreneur has been involved before establishing a firm. During this stage the future entrepreneur's attitudes and values become more favourable toward entrepreneurship and, as a result of various experiences and situations, the establishment of a new firm becomes more probable (Gibb and Ritchie 1982). According to the study of Autio and Kauranen (1994) internal personal motivations may be decisive for the decision to establish a new firm (cf. Davidsson 1989).

The second stage is related to the decision to establish a firm, which leads to a specific business idea and to the establishment of the firm. The entrepreneur's know-how and the functionality of the start-up plan, financing, networks, the aims of business activities and external factors connected to the

establishment of the firm are central starting points for the firm's birth and start-up situation (Whittington 1984; Blanchflower and Oswald 1990; Gilad and Levine 1986; Kauranen 1996; Tervo and Niittykangas 1996; Laukkanen 1999). Previous studies have connected the third stage to the launching of a firm's activities and to the directing of activities according to the defined goals. The funding and the innovativeness and know-how of the entrepreneur during this start-up phase of entrepreneurship have been central subjects of study (Churchill and Lewis 1983; Routamaa and Vesalainen 1987; Gibb 1990; Koskinen 1996; Slevin and Covin 1995,1997; Autio 1995; Littunen 1989,1998; Laukkanen 2000). In addition to the critical operational phase, this study also examines the established phase (Alcorn 1982).

### **The trait model**

Due to different forms of entrepreneurship and differences in the development of new firms, becoming an entrepreneur and the birth of new firms can be investigated from several theoretical starting points (Koskinen 1996). The trait model emphasises the role of individual personality factors in the birth and success of new firms. In trait model studies the basic question is why certain individuals establish firms or succeed as entrepreneurs. On the basis of McClelland's (1961, 1965) theory it can be presumed that individuals with a high level of achievement motivation succeed better as entrepreneurs than others. According to McClelland (1961), a high level of achievement motivation is connected to an average-level willingness to take risks. Bird (1989) divides risks into five types, four of which are relevant to potential entrepreneurs: willingness to take economic risks, risks in social relations, risks in career development, and psychological and health risks. The findings of Brockhaus (1982) show that the risk preferences of entrepreneurs do not differ from the preferences of professional managers or the general population, nor are there differences between the preferences of successful and failed entrepreneurs. Various studies have presented different categories of entrepreneurial types. For instance, Webster (1977) suggested five types of entrepreneurs: cantillon, industry-maker, administrative, small business owner, and independent. Smith (1967) made a distinction between the craftsman entrepreneur and the opportunistic entrepreneur. Nevertheless, such studies have not adequately demonstrated how personality characteristics are linked with various entrepreneurial types and how risk behaviour differs in each of these types (Woo et al. 1991).

Studies have shown that optimism and a belief in one's own abilities for which different terms have been used by different researchers, are characteristics typical of entrepreneurs. This may be a question of self-confidence (Timmons 1976), of the ability to make objective observations (Scharage 1965) or to identify opportunities at one's disposal (Shapiro and Sokol 1982). Closer investigation of the belief in one's own abilities can usefully draw upon studies on the concept of the attribution of control. According to Rotter (1966), the locus of control is connected with learning in the sense that an internal control expectation motivates active striving and supports it. An

external control expectation, on the other hand, hampers learning. Several researchers have criticised Rotter's (1966) assumption that the locus of control is uni-dimensional: internal - external. An internal control expectation is regarded as positive and an external control expectation as negative (Levenson 1981; Vesala 1991). The new conception of locus of control treats internal and external control expectations as two independent dimensions. Overall, external control may be viewed as either positive or negative control. Positive external control supports and co-operates with personal control, there by increasing the expectancy of success. Negative external control hinders or limits personal control, decreasing the expectancy of success (Wong and Sproule 1984).

The trait model has also been criticised as regards its suitability for describing the birth and success of firms. No clear connection has been found between the personality traits of an entrepreneur and the success of a firm, while various studies show that compatibility between the firm's line of business and strategy is an important success factor (Brockhaus 1980; Low and MacMillan 1988). Thus the trait models do not provide a sufficient description of the actual behaviour of the entrepreneur and that of the firm (Chell 1985). Neither the need to become an entrepreneur nor other personality traits connected to the success of firms have been found (Sexton and Boman 1983; Smith and Miner 1983).

Criticism has especially been directed toward the assumption that entrepreneurs' personalities remain unchanged, even though changes in a firm's action environment are accompanied by several other factors that are also changing (Carsrud and Johnson 1989; Huuskonen 1992). Psychological theories also neglect the various personal networks of the entrepreneur, co-operation between firms and the specific characteristics of the line of business. Entrepreneurship ought to be understood as a set of relationships between the phase of life, previous experiences and the social environment (Chell 1986).

Also, studies on management have included elements that stand against trait model thinking. No personality traits have been found that would distinguish firms' managers from the rest of the population. Firms' managers can be distinguished from others only in situations directly related to management. In addition, different people may display manageriality in situations that are not related to entrepreneurship or the management of firms (Aldrich and Zimmer 1986, Huuskonen 1992). People, entrepreneurs, the firm's action environment and the entrepreneur's personality traits are constantly changing. Therefore it is difficult to point to the specific dimensions of personality that influence the process of becoming an entrepreneur and the success of firms (Littunen 2000).

### **The sociological approach**

Sociological approach extends the analysis of the birth of new firms to factors related to the growth environment and the previous experiences of the individual. These factors include family background, work experience and hobbies. According to Gibb and Ritchie (1982), entrepreneurship can be understood in terms of the types of situations that the person has encountered



and of the social roles of this person. The model is based on the conception of a constantly changing individual and the shaping influence of social behaviour on the individual. The considerations of the social development model in the establishment of a firm depend on the individual's age or phase of life and they are:

- (a) the amount of experience that a novice entrepreneur brings into a firm will vary and thus affect the success of the firm,
- (b) a novice entrepreneur's ability to take risks will vary according to the person's other commitments and obligations.

These facts undoubtedly bring an extra dimension into the question of why certain individuals establish a firm of their own. According to Gibb and Ritchie (1982), there are at least four different typologies that cover the life cycle of an individual and emphasise certain key effects in each phase of the life cycle:

- (1) improvisors, who are small-firm owners in the starting phase of the life cycle or career,
- (2) revisionists, who are slightly older and close to the middle phase of their working career,
- (3) superceders, who are in the latter half of their life and in the starting phase of a new career,
- (4) reverers, who are at a mature age and in the final stages of their working career.

Social circumstances change throughout life and affect the individual's behaviour and chances of changing the direction of life by establishing a firm. However, Chell (1986) criticises the model on the grounds that it has no point of contact with the personality of an individual, because it interprets individual behaviour as resulting solely from social influences. Also the amount of experience that the individual brings into the firm varies and thus affects the success of the firm. In a similar manner the individual's ability to take risks varies according to that person's other commitments and obligations. The social development model also neglects the general economic situation in which entrepreneurship is realised. The social development model is also incapable of making a distinction between successful and unsuccessful firms.

### **Structural location theory**

An attempt to explain the effects of changes in firms' ways of action on regional structure has been made within the so called structural location theory that evolved in the 1980s (Lundmark and Malmberg 1988). Structural location

theory connects the birth of new firms with the action environment and does not accept the idea of an independent start-up decision.

The first starting point is that the establishment of a firm is examined as a part of the firm's strategy complex. According to the structural location theory, establishment depends on the firm's strategy: what is produced and to whom (customers, markets), and how things are done. Another starting point connects the firm with the structural basis of its action environment. In a firm's action environment a distinction can be made between general prerequisites for industrial activities and specific prerequisites for one particular firm's activities. General prerequisites for industrial activities consist of general starting points for industrial activities at a certain time. The specific prerequisites of an individual firm consist of the indirect and direct factors that affect the firm's activities. The third starting point entails the examination of the local resource structure and its effects on the formation of the regional division of labour.

According to Lundmark and Malmberg (1988) there is a dialectic relationship between the location of the industry and the regional resource structure. When new firms emerge in a particular region, the physical and social structures of that region change. This may add to the region's locational attractiveness in the form of agglomeration advantages. On the other hand, the region may attract firms precisely because the region's resources have not been used yet (this is the concept of the 'advantages of being backward'). According to this line of thinking a peripheral region has locational advantages for the precise reason that is peripheral (Silander et al. 1997). Structural location theory has been criticised for one-sidedness, because it turns the attention to the investigation of macro-economic limitations, and overlooks the micro-economic factors affecting the birth of firms. The contribution of structural location theory is, in fact, that it brings up the general situational factors describing the economic situation and affecting the birth of new firms.

### **Economic rationality approach**

Studies utilising a psychological, sociological or regional approach share the emphasis on analysing the firms' start-up situation with the help of the 'supply side'. An analysis that starts from the micro-level point of view is clearly demand-oriented, as is an analysis starting from the traditional, more broader economic viewpoint (Mäkinen 1977). The operational prerequisites of new firms develop in situations where the market demand for commodities exceeds the supply. On the level of lines of business this can be connected to the framework of structure paradigm that categorises firms according to their strategies. The firms' reactions to external stimuli and their methods of competition depend on which group the firm belongs to. The concept of strategic groups is connected with concept of market access barriers (Porter 1979, Hatten, K. and Hatten, M. 1987). The firms that operate in a particular line of business form barriers to market access, the strength of which depends on changes in the strategic position of the firms in that line of business.

## Network approach

According to Low and MacMillan (1988) network theories are increasingly being applied to entrepreneurship research. From the viewpoint of a firm, the scope of different interest networks is ultimately to support the operation of the firm. Entrepreneurial networks can be categorised into two types derived from different sources: informal and formal networks (Birley 1985; Johannisson 1985). Informal networks consist of personal relationships, families and business contacts. Formal networks consist of venture capitalists, banks, accountants, creditors, lawyers, and trade associations (Das and Teng 1997). Different entrepreneurial networks can also be divided into production networks and personal interest networks. The advantages of production networks lie in the fact that they create closeness, certainty and develop activities. Through personal interest networks a firm is able to create new models of action and find connections with supporting persons and organisations (Johannisson 1985).

The networks entrepreneurs build for themselves and their ventures stand out in a number of respects (Johannisson 1995). These networks are genuinely personal. By way of personal networking the entrepreneur forges her/his venturing career into existential projecting, into a way of life. A second major characteristic of entrepreneurial networks is formed by the historical, practical, and symbolic reasons why the entrepreneur and thus her/his firm is rooted in a particular location. A third characteristic is that the active part of an entrepreneur's network is supposed to vary over time with respect to both content and structure (Johannisson 1998).

According to Curran et al. (1993), whose view differs from that of other network theory, the importance of co-operational relations is dependent on the situation and excessive networking may pose a threat to the independent status of the entrepreneur. In others words, small entrepreneurs have contacts with their environment, but the importance of these contacts is more limited than network theory implies. Owner-managers tend to have relatively small and non-extensive networks with little resort to expected external contacts such as accountants and bank managers. Neither do owner-managers commonly use networks based on family, kinship or social groupings for business purposes (Curran et al. 1993).

## The models of new venture performance

A critical question in the field of entrepreneurship is what the factors explaining new venture performance are. Over the past twenty years or so, much research has been devoted to answering this question. Sandberg (1986) carried out one of the earliest studies integrating the effects of various forces on new venture performance. Sandberg's model was stated as:

$$NVP = f(E, IS, S)$$

Where NVP stood for new venture performance, E represented the characteristics of the entrepreneur, IS stood for the industry structure and S for

strategy. Sandberg and Hofer (1987) tested their model on a sample of 17 ventures drawn from the files of venture capital firms. They found no support for the effects of the entrepreneur's characteristics, even though they did find support for the interactive effects of venture strategy and industry structure on venture performance (Sapienza and Grimm 1997). Another important contribution to the development of the NVP model, McDougall (1987), and McDougall et al. (1992) set forth a model that explained a great deal of the variance in new venture performance. This model was:

$$\text{NVP} = f(\text{O}, \text{S}, \text{IS})$$

Where NVP stood for venture performance, O for the origin of the new venture, S for strategy and IS for industry structure. McDougall et al. (1992) demonstrated that not only are strategy and industry structure important by themselves, but also that the interaction between strategy and industry structure affects new venture performance. The interaction of strategy and industry environment was an important addition to the new venture performance model (Ensley and Spencer 1997). Sapienza and Grimm (1997) developed three separate models of goal achievement performance in shortline railroads on the basis of the founder's characteristics, start-up processes, and the combination of strategy and industry structure:

$$\text{NVP} = f(\text{E}, \text{O}, \text{S}, \text{IS}).$$

While specific variables within these dimensions may vary from industry to industry, Sapienza and Grimm (1997) suggest that all four dimensions are important in determining performance and that the best models are likely to be those that combine perspectives rather than tackle the issue from one perspective only. In general, the strategy/structure perspective appeared the strongest when other variables were left out of the models, but clearly the best models incorporated founder and start-up process characteristics as well (Sapienza and Grimm 1997). The model of Ensley and Spencer (1997) can be extended as follows:

$$\text{NVP} = f(\text{ET}, \text{S}, \text{Env}, \text{S} \times \text{Env}).$$

Where NVP stands for new venture performance, ET for the behaviours, actions, and state of the entrepreneurial team, S for strategy, Env for environment, and S x Env represents the interaction of strategy and environment. According to this study the entrepreneurial team is a logical theoretical addition to the new venture performance model. It is the job of the entrepreneur or the entrepreneurial team to fit together the task environment and strategy. It is the entrepreneurial team that understands the environment and the strategies of the firm well enough to make them fit and meld. Further study of extended models with reliable and valid scales are necessary before a more complete and scientific view of the new venture performance model can be established (Ensley and Spencer 1997).

### Contingency theory approach

In recent years, the approaches that emphasise the characteristics and activities of individuals have been accompanied by a theoretical school that emphasises contingency thinking. The idea of contingency thinking was first introduced by Lawrence and Lorsch (1967). According to this theory, the efficiency of a firm depends on the organisation's compatibility with its functions, its environment and the needs of the organisation's members. In their study they adopted the organic theory of the framework of open systems, which is based on the analogy with an organism and that views organisations as systems of inter-related environment-sensitive elements. According to Lawrence and Lorsch (1967) the behaviour of an organisation's members is influenced by many variables, such as formal integration, the assigned task, the personalities of individuals, and unwritten rules. They state that no individual person's behaviour is determined solely by that persons' own needs and motives, but all the factors that guide behaviour are linked together. Their study showed that particular organisational principles apply to different environmental conditions and even to different sections within the same organisation. The results were also utilised in managerial theory in the meaning that there is no one correct management style but that the style will vary according to the situation (Burrell and Morgan 1979).

According to a study by Gilad and Levine (1986) the personality traits and activities of an individual do not explain alone the birth of a firm. This can also be interpreted to mean that no distinctive entrepreneurial standards exist, but entrepreneurship is a potential option for most people. The theoretical model used in the study of Gilad and Levine (1986) is expressed mathematically as follows:

$$E_t = E (P_t, PS_t, O_t),$$

where  $E_t$  is the level of entrepreneurial activity in the economy at time  $t$ ,  $P_t$  measures the strength of the pull forces at time  $t$ ,  $PS_t$  is the strength of the push forces in the economy at time  $t$ , and  $O_t$  stands for all the other economic and financial forces which affect the level of entrepreneurial activity other than those already included in the previously mentioned pull and push factors. From the framework of push and pull factors the economic approach can be interpreted, eg. in the way presented by Storey (1991), as an approach that is broader than the traditional micro-theoretical view and that takes into account the central economic factors and phenomena. The pull factors that affect entrepreneurship could hence include a high rate of general economic activity and as its mirror image a low level of unemployment level, a positive attitude to entrepreneurship, an increase in the supply of money, the willingness of individuals to take up loans and the rate of technological change. The most important push factor may be unemployment, which is reflected on the level of the individual as the growing uncertainty of paid labour and decreasing income expectations (Niittykangas and Tervo 1993). Thus the establishment of new

firms is connected to overall economic development and the features of the business and locational environment.

The factors affecting entrepreneurship can be partly reduced to those that are emphasised by analyses utilising psychological and sociological approaches. In this case various factors connected to the start-up situation of a firm are included in the analysis. The situational factors can be divided into the following three groups:

- (1) factors describing the economic situation,
- (2) factors describing the immediate surroundings,
- (3) factors describing the individual's phase of life.

Of the factors describing the general economic situation, unemployment is connected to the number of new firms (Gilad and Levine 1986). On the other hand Reynolds (1992) states that as inflation declines entrepreneurial activity tends to increase in the United States. Of the factors describing immediate surroundings, the business and firm structure, region's state of development and the local value and attitude environment, for example affect the number of new firms (Niittykangas 1996). Factors describing the phase of life are connected to the individual's phase of life and know-how (Gibb and Ritchie 1982).

Contingency thinking may provide the best starting point for the examination of the birth and success of new firms in different situations (start-up situation, critical operational phase and the established phase) and for the analysis of the different, perhaps opposing forces that act in these situations. The framework of contingency thinking also gives an opportunity to a new interpretation of the traditional disciplinary approach and removes the need for the often artificial divisions made between psychological, sociological and economic approaches.

### **1.3.2 Theoretical models and framework of this study**

Central issues addressed in this study are the birth of new firms and their success - survival, growth, development, and decline. In the study three different situations related to entrepreneurship are examined: the birth of a firm, the critical operational phase (1-3 years) and the established phase (4-6 years). In this study the founding of a firm is interpreted to be a progressive phase-by-phase process that ends in a specific business idea on the basis of which the firm is set up. The start-up decision can be said to be based on experimentation, self-confidence or planning. In the case of experimentation, entrepreneurship may at first be part-time entrepreneurship, when the business idea is tested in practice (Lehti 1990). In the case of self-confidence, the establisher of the firm has a strong belief in his or her capability to make a difference. Entrepreneurship based on planning is closest to the process view.

Interpretation of the establishment of a firm as a process entails the stance that the entrepreneur's personality traits alone cannot explain the birth and success of new firms. The framework uniting this study is contingency theory. The study also, however, draws on the trait model and regional theory and, through the strategic choices of firms, on the framework of strategic thinking and through the entrepreneur's interactional relationships to the network approach. Three different mathematical models are tested in this study. The first mathematical model describing the birth of new firms is:

$$(1) E_{1..j} = (Pl_{1..j}, Ps_{1..j}, Es_{1..j})$$

where j stands for the number of firms, E for the birth of a firm, Pl for the pull factors affecting the birth of a firm, Ps for the push factors affecting the birth of a firm, and Es for the situational factors affecting the start-up situation. The second mathematical model that describes the success of new firms in the critical operational phase is:

$$(2) NVP_{1..j} = (Pl_{1..j}, Ps_{1..j}, Es_{1..j}, Cs_{1..j}),$$

where j stands for the number of firms, NVP is the success of a new firm in the critical operational phase, Pl stands for the pull factors affecting the birth of a firm, Ps for the push factors affecting the birth of a firm, Es for the situational factors affecting the start-up situation and Cs for the changes in those situational factors affecting the start-up situation. The third mathematical model describing the established phase of new firms is:

$$(3) NVP_{1..j} = (Pl_{1..j}, Ps_{1..j}, Es_{1..j}, Cs_{1..j}, Ds_{1..j}),$$

where j stands for the number of firms, NVP is the success of a new firm in the established phase, Pl stands for the pull factors affecting the birth of the firm, Ps for the push factors affecting the start-up situation, Es for the situational factors affecting the start-up situation, Cs for the changes in those situational factors affecting the start-up situation, and Ds for the changes in those situational factors affecting the critical operational phase. Figure 1.1.2. presents the framework of this study.

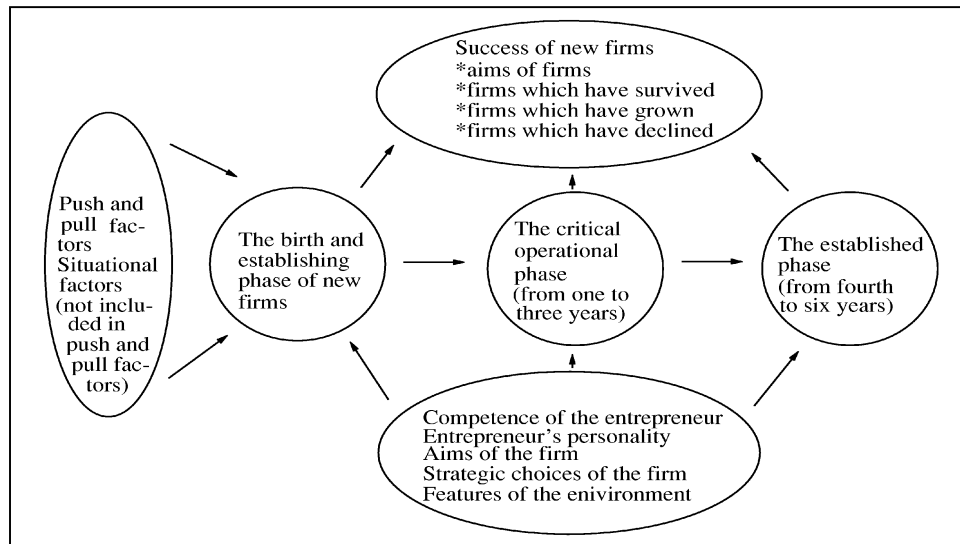


FIGURE 1. 1. 2 Framework of the study

In the mathematical models that were used the factors which influence entrepreneurial activity are divided into two groups: push factors and pull factors (Gilad and Levine 1986; Storey 1991). In this study the analysis covers those pull factors that are connected to the entrepreneur's values and attitudes, such as striving for self-realisation and independence. Other pull factors that were included in the examination were for example the possibilities provided by the market situation and previous customer contacts. The push factors that the establishment of a firm may be connected to concern the reorganisation of entrepreneurship. In this case, either the firm is established to follow a bankrupt firm, or branch rationalisation affects the establishment of the new firm. Other push factors may include actual or impending unemployment, negative experiences in the previous job, outside encouragement or the effects of family background.

The analysis of a firm's start-up situation makes it possible, on the basis of the idea underlying contingency theory, to evaluate the factors affecting the birth of new firms on a scale broader than allowed by the push and pull factors alone. General factors describing the economic situation and immediate surroundings and the individual's phase of life are included in the analysis. The immediate surroundings should provide the entrepreneur, entrepreneur's family and the firm's employees with the necessary prerequisites for life. The immediate surroundings should also provide them with the opportunity for a stimulating environment. These are connected to the preconditions of the birth of a firm and entrepreneurship at least through the availability of a labour force. Also, the costs and know-how of the labour force are connected to the preconditions of entrepreneurship.



Traditionally the choice of location for a firm is connected with the so called external operational preconditions, which include land areas, availability of raw materials and transportation and telecommunications. The firm itself does not have much influence over these, at least not on a short-term basis. On the other hand, from the viewpoint of network theory the firm's action environment should provide the opportunity for co-operation between firms as well as for the use of outside experts. All these general situational factors connected to the firm's start-up situation also affect the birth of new firms, although the causal relationships are not very clear.

The motives for the establishment of a firm can be clarified by a closer examination of the firm's start-up situation using contingency theory. The various situational factors that describe the individual's phase of life, which are included in the analysis, can be seen as reflections of the overall situation of the economy, and they push toward entrepreneurship and connect the firm with the founder's previous situations and the start-up situation. In this study the situational factors are divided into seven groups:

- the significance of previous work experience for becoming an entrepreneur (employment approach) (Halttunen 1981; Hauta-aho 1990),
- the significance of comprehensive, advanced and vocational training,
- the entrepreneur's other know-how areas and characteristics,
- the quality of the advice received in the start-up situation and the functionality of the start-up plan,
- efficient contact networks,
- strategic choices, arrangements for financing the firm and other firm characteristics,
- features of the local environment.

In this study the situational factors connected to the various situations of entrepreneurship do not include push and pull factors, although some of the situational factors can be considered to have a guiding effect on entrepreneurship. In this definition the situational factors include competence of a entrepreneur. Firstly, the situational factors underline the importance of past work experience, education and the social groups to which the individuals relate (Gibb and Ritchie 1982). Secondly, the situational factors integrate the effects of start-up process, and the interaction of strategy and environment in new firms' success (Sandberg and Hofer 1987; McDougall et al. 1992; Sapienza and Grimm 1997; Ensley and Spencer 1997; Chrisman et al. 1998). It is generally agreed that time plays a crucial role in new venture organisational structure, processes and systems (Slevin and Covin 1997; Das and Teng 1997; Chrisman et al. 1998). Thirdly, the definition of this study considers the time dimension in new venture development.

The situational factors can be interpreted as mainly related to the compatibility requirement between products, customers and the path of action

(Norman 1976). The path of action is connected with the strategic choices that firms make. The contingency thinking framework links the business ideas of firms with the situations preceding the start-up of the firm and with various start-up situations. Also, Cooper and Dunkelberg (1987) noticed that entrepreneurs and the processes they use in starting their firms may vary by industry, by time period, by geographical area and possibly by the background and goals of the entrepreneurs.

In the contingency theory framework the situational factors affecting the development of entrepreneurship and the changes in the strategies of firms are analysed with the help of business idea thinking in the start-up situation, critical operational phase and the established phase of new firms. Business idea thinking involves not only the compatibility of products, markets and the path of action, but also the learning of entrepreneurs. With business idea thinking the strategic changes in firms can be seen as marking the learning process of the entrepreneur during the follow-up period. One of the aims of this study is to determine the most important situational factors in different stages of entrepreneurship.

### 1.3.3 Data description

This chapter examines the reliability of the follow-up data on new firms only, given that the main focus of the study was on the birth and success of new firms. <sup>1</sup>The follow-up study targets the firms in the metal industry and business services across Finland that were established in 1990. In 1990, 2,583 firms were established in both lines of business. These new firms accounted for nearly 12 % of the total number of firms in these lines of business. The population of firms in the field accounted for nearly 34 % of the total number of established industrial firms in 1990. The emphasis of the research data was intended to be on firms in the metal industry. A total of 138 firms were interviewed in the metal industry and 62 firms in business services (figure 1.1.3). Comparisons between the study population and the sample by line of business, size, form of company and region has been presented in intermediary reports during the process of the follow-up study (Littunen 1992, 1994, 1995, 1997, 1998).

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<sup>1</sup> The data for the first article published on the basis of this study, 'The location choice of firms in a changing environment' is outlined in the article and in Littunen's (1991) study.

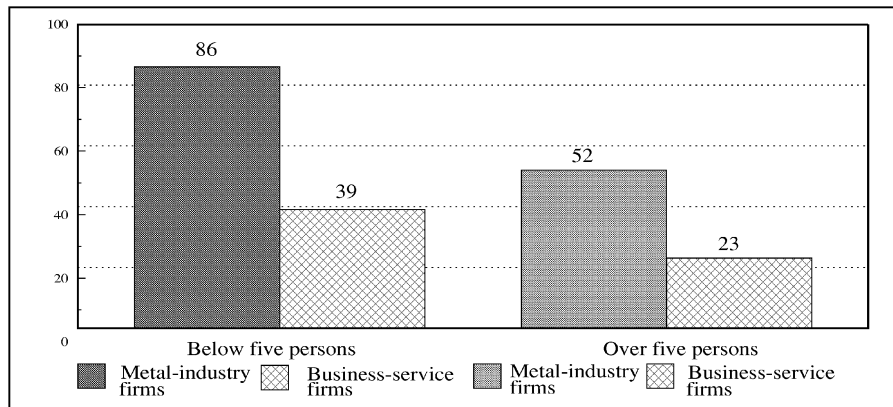


FIGURE 1.1.3 The interviewed firms categorised by their line of business

In the data the shares of metal industry firms and of firms employing at least five people were larger than in the study population. For this reason weighting coefficients that match the sampling relations were used throughout the analysis of the research data. In the present study sample, the metal products industry and the manufacturing of machines and equipment were the most strongly represented areas of activity in the metal industry firms. Within business services, technical, management, juridical, and marketing services were numerically dominant. The focus on the metal industry was natural, because that industry has good preconditions for growth and development (Littunen 1992). Business services were selected because that particular line of business has in recent years also grown rapidly in Finland (Tervo and Niittykangas 1994). Another reason was the fact that the changes in the firms' action environment, internationalisation, and the heightened importance of know-how as competitive advantages have increased the need for interaction, especially between growth-oriented firms. Business services, as well as the service sector in general, may play a notable role in the on-going changes, and this role may be comparable to that of manufacturing industry itself (Illeris 1989).

### The sampling process and the selection of the studied set of firms

The external reliability of the results relates to the sampling procedure used. In this study stratified sampling was used, and the strata were the firm's size and line of business. The selection of the strata resembled Neyman's allotment (Pahkinen and Lehtonen 1989). The sampling was done from the different strata through simple random sampling, which requires that observations are weighted to correspond to the general population. Firms that employed only one person were excluded from the study. The basic data for this study were collected through personal interviews (n=200). Before the actual interviews were started, four preliminary interviews were conducted in order to evaluate the planned data collection. The selected interviewers were given a half-day

training session. They were also given written interviewing instructions, the aim of which was to ensure a consistent interpretation of the questions in the interviews (Littunen 1992).

The firms and entrepreneurs under study were selected through a process comprising several stages. In the first, personal interviews with entrepreneurs, 200 firms were selected from the population of Statistics Finland register of firm (N=2583) as the subjects of the follow-up study. The interviewers were provided with extra firms that resembled the original firms as closely as possible in order to substitute for an original firm in case if it proved impossible to include in the study. Nearly every other firm selected for the sample had to be substituted by an extra firm. The most important reasons for using a substitute were:

- the selected firm was a one-person firm,
- the selected firm was old,
- the selected firm could not be found.

This procedure did not, however, completely eliminate the possibility of systematic error from the research data, because the substitute firms were not exact matches for the original firms. However, the possibility of a systematic error is fairly small. The development of the follow-up data can be illustrated as follows.

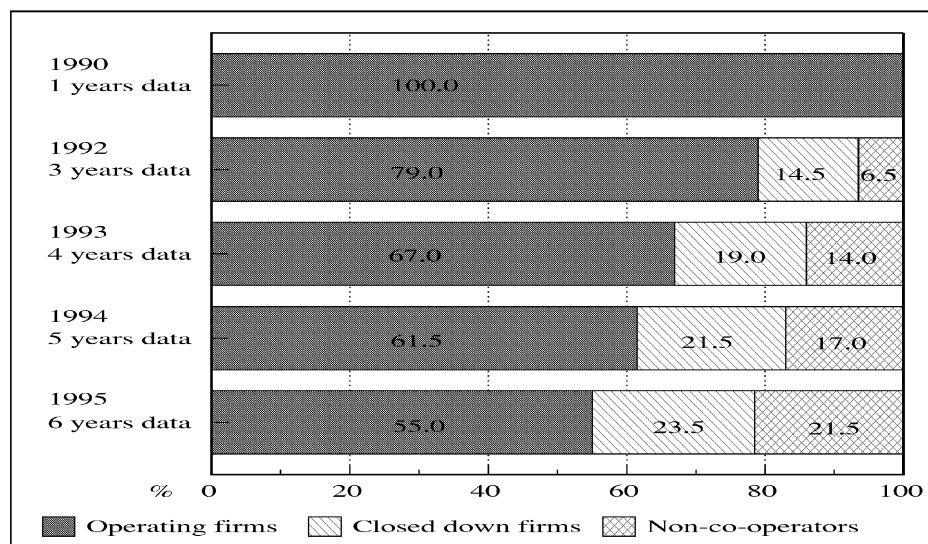


FIGURE 1.1.4 The development of the follow-up data (%)

Year	Operating firms	Closed down firms	Non – co-operators	Total
1990	200	-	0	200
1992	158	29	13	187
1993	134	38	28	172
1994	123	43	34	166
1995	110	47	43	157

### **The representativeness and reliability of the research data**

The follow-up interview data consisted of a representative sample of the firms that were established in metal industry and business services in 1990, and the results can be generalised to new metal industry and business services firms. However, the findings may have been influenced by the economic situation, because a severe depression began in the early 1990s and the number of Finnish firms began clearly to decline. The effects of the economic depression were not examined as such in this study.

It is important to note in the evaluation of the reliability of the data that interviews were used in collecting the data and that every round of interviews aimed at giving a picture of the situation of the firms at the time of the interview. This means that the results are not confounded by different kinds of evaluation errors or slips of the memory. The follow-up interviews for the study were mainly conducted by telephone. However, each year the researcher conducted 20-25 interviews personally in order to spot possible inaccuracies in the telephone interviews.

Due to the manner in which the data collection was carried out, the basic data do not have the non-response bias that results from missing observations. During the follow-up stages of the study the proportion of entrepreneurs who declined to be interviewed was approximately 6 % for each stage of the study. Some of these entrepreneurs declined because their firm had merged with another firm. During the entire follow-up period 7.5 % of the new firms merged. Owing to the nature of the method used in collecting the data, the data may be considered much more reliable than is generally the case in questionnaire studies on small firms and entrepreneurs.

### 1.3.4 Concluding comments and main results

This research report consists of five chapters. Chapter II contains three articles, and it examines the conditions and factors affecting the birth of new firms.

#### Articles of Chapter II:

1. Littunen, H. (1992), *The Location Choices of Firms in a Changing Environment*, published in University of Jyväskylä, Centre for Economic Research (in Finnish).
2. Littunen, H. and Hyrsky, K. (2000), *The Early Entrepreneurial Stage in Finnish Family and Non-Family Firms*, published in *International Journal of Family Business Review* 13(1).
3. Niittykangas, H., Littunen, H. and Kinnunen, U. (1998), *Forced Founding- Does it Matter ?*, published in the *Finnish Journal of Business Economics/1998* (in Finnish).

The first of these articles is an analysis of factors related to the economic situation and the immediate environment that affect the birth of new firms. From the contingency theory viewpoint the situational factors describing the general economic situation and immediate surroundings and affecting the birth of a firm were of particular interest.

It finds the structure of production and quality factors of a particular region influence entrepreneurship. The structure of entrepreneurial activities may have an effect on the formation of new activities. By incorporating the already existing structure or parts of it, new entrepreneurial activities, especially manufacturing industries, are started. New firms are usually established in the home district of the founder. The proximity of customers as a locational factor was emphasised more by firms in business services than those in the metal industry. The establishment of a firm is rarely a complex selection process with a variety of options for the firm's location. Rather, it seems that entrepreneurs settle for a location that guarantees sufficient preconditions for the firm, i.e. one which is in a familiar region, often in the entrepreneur's home town ( e.g. Littunen 1992). The broad interpretation of this fact is that the entrepreneur's family, personal contact networks, residence etc. together with customers and markets are part of the strategy complex utilised when establishing a new firm.

The second article of chapter II examines two different situations in which firms come into being. One of these is a business developed by the entrepreneur himself where the central factor is the personality of the entrepreneur or her/his family acting as entrepreneurs. Business activities begin to develop as a personal life strategy, as a way of earning one's living, and are very strongly marked by the personality of the entrepreneur. The other possible starting point is that of an established firm within the framework of which new businesses ensue or are created in-between the old ones.

Family entrepreneurs differed from 'other' entrepreneurs in terms of background. Family entrepreneurs had a lower education level than 'other' entrepreneurs. They had neither vocational training nor a diploma from a

technical school or college. However, family entrepreneurs considered the versatility of entrepreneurial know-how to be more important than 'other' entrepreneurs. Although, according to the push hypothesis, the birth of family firms was seldom connected with the reorganisation of entrepreneurship, family entrepreneurship was often preceded by necessity or lack of alternatives (cf. Storey 1982; Smallbone 1990; Storey 1991; Meager 1992; Marlow and Storey 1992; Niittykangas et al. 1998). Actual or impending unemployment as a motivation for the establishment of a firm was more characteristic of family entrepreneurs, whereas for 'other' entrepreneurs positive situational factors or inner motives were more likely. According to the pull hypothesis (Gilad and Levine 1986), the aim of fulfilling a dream, being independent, creating something new and acting on one's own plans and according to one's own goals as motives for establishing a firm were more typical of other than family entrepreneurs. The picture of the strategic choices of family firms was fairly positive. In local markets family firms often have a product that can be differentiated from that of their competitors, for which the entrepreneur often has adequate resources once the firm is established. The competitors of family firms were often located away from the market area, and small size or a sub-contracting network were among the family firms' competitive advantages.

In the third article of chapter II the background to the establishment of a firm was, according to the push hypothesis, related to necessity or the lack of alternatives. The findings showed necessity to be reflected in the characteristics of new entrepreneurs and in the strategic choices of established firms. Dominance, according to which an entrepreneur's behaviour is influenced by self-evaluation through significant others, was a typical characteristic of those who considered actual or impending unemployment to be one of the reasons for establishing a firm. In other words, the entrepreneur believes in his or her ability to lead others and control events, and also aims at putting them into practice.

The strategic choices of those firms in the metal industry who named actual or impending unemployment as one of the reasons for setting up in business were related to new, original products or to customers with no prior experience of products. Entrepreneurs also co-operated with other firms and believed in market growth. These firms, however, were smaller than average and their main competitors often operated in the same municipality, which meant their competitive environment was stressful and prone to change. However, the findings showed that actual or impending unemployment were justifiable reasons for considering the establishment of one's own firm and becoming an entrepreneur. It could not be inferred on the basis of the findings that the element of necessity as such indicates insufficient preconditions for starting a business.

TABLE 1.1.1 Summary of main findings of chapter II

The start-up situation of a firm (E1 , E2, E3)	Influencing factors
Strategic decision-making situation: birth/expansion (E1)	Birth of new firms: P1: customers, markets Ps : the characteristics of the region's structure of production Es : the characteristics of the region's structure of production, quality factors of the labour force, residence, recreation and leisure time, family, home district
A firm's start-up situation: family firms/firms born through reorganisation (E2)	Family firms: P1 : customers, markets Ps : actual or impending unemployment Es : low level of education, versatile entrepreneurial know-how, close markets
The firm's start-up situation: positive situational and pull factors/ necessity in the background of entrepreneurship (E3 )	Necessity in the background of entrepreneurship: P1 : customers, markets Ps : actual or impending unemployment Es : low level of education, dominance, New products and customers, co- operation between firms, small size of firm

Chapter III consists of three articles and it examines the success of firms in the critical operational phase.

**Articles of Chapter III:**

4. Littunen, H. (1997), *The Critical First Years of Firms*, published in *Academy of Entrepreneurship, International Journal of Entrepreneurship*, vol. 1 (1).
5. Littunen, H., Storhammar, E. and Nenonen, T. (1998), *The Survival of Firms over the Critical First 3 Years and the Local Environment*, published in *Entrepreneurship and Regional Development, An International Journal*, vol. 10 (3).
6. Littunen, H. (1999), *The Birth and Growth of New Firms in a Changing Environment*, manuscript being refereed for *Journal of Small Business & Enterprise Development*.

The first article investigates, from the contingency theory approach, how the push and pull factors and the factors related to start-up are connected to the firm's survival in the critical operational phase. It shows that family firms are more likely to continue in business than other firms. In this phase family firms often possess lines of action that sustain continuity. A family that owns a family firm is committed to the firm's activities in many ways. The findings also show that the entrepreneur's personal characteristics alone do not explain the survival of firms in the critical operational phase. Of the entrepreneur's personality traits a strong work ethic was, through the insufficient planning of



the start-up process, connected to the closing down of activities. The findings showed that a strong work ethic lowers the threshold for establishing a firm, but does not guarantee the necessary operational preconditions such as adequate know-how on the part of the entrepreneur. The importance of the entrepreneur's previous work experience clearly showed in firms that were successful due to product features. The entrepreneur's vocational training explained the continuation of entrepreneurship. Dominance and mastery were emphasised in those entrepreneurs who had undergone vocational training prior to the establishment of a firm. The findings on the influence of interactional relationships on the survival of firms tended to support the view that they were of more limited importance than that indicated by the network approach (Curran et al. 1993).

The second article of chapter III examines the survival of firms in the critical operational phase in different action environments. The success of new firms is strongly affected by the start-up phase. The plans of the entrepreneur and what actually happened was not the same in firms that had closed. Lack of know-how was primarily manifested in insufficient planning of the start-up phase. Firms that continued to function had attempted to differentiate their products from those of their competitors and in this way controlled the forces of competition. A number of new firms had been started in service centre regions where the production and vocational structure are varied. Surprisingly, the closure of firms was clearly most common in these regions, even though the environment provided opportunities for innovation and differentiation. Those who started a firm in a service centre area had lower educational levels than their counterparts in the other regions, despite the fact that the educational level in service centre areas is generally higher than elsewhere. The study indicates that a more developed structure of production lowers barriers to market and thus persons who lack entrepreneurial skills start firms more frequently in such areas.

In the third article of chapter III the growth of new firms is analysed in the critical operational phase. The findings show that the factors at start-up provide opportunities and preconditions for the new firm's growth in the critical operational phase. Entrepreneur's know-how at start-up showed in the qualities of the product and enabled the implementation of measures connected to the firms' growth. At start-up the pull factors that affected the growth of new firms were the entrepreneur's inner motives. As far as the characteristics of the firm's action environment are concerned, the findings indicated that the firm's location had no influence on the growth of new firms. Instead the changes in a firm's competitive environment explained the growth of new firms. The findings showed that as far as firms with a specialisation strategy are concerned, the empirical data supports the significance of entrepreneurs' interactional relations for the growth of firms. The growth and specialisation of a firm constitutes a situation in the development of a new firm's activities in which the intensity of interactional relationships is strongest.

TABLE 1.1.2 Summary of main findings of chapter III

The success of a firm during the critical start-up phase (NVP1, NVP2, NVP3)	Influencing factors
The success of a firm: survival/closing down of business activities (NVP1)	The survival of a firm: Pl: opportunities provided by the market Ps: actual or impending unemployment Es: entrepreneur's vocational training, entrepreneur's versatile work experience, entrepreneur's dominance and mastery, functionality of the start-up plan
The success of metal industry firms in different action environments: survival/closing down of activities (NVP2)	The survival of a firm: Pl: opportunities provided by the market situation Ps: features of the firm's region: (capital area, industrial urban area, rural areas) Es: entrepreneur's work experience in production management, entrepreneur's mastery, functionality of start-up plan
The success of firms: growth/ decline of activities (NVP3)	The growth of a firm: Pl: entrepreneur's values and attitudes Ps: features of region's immediate surroundings (firms born through reorganisation) Es: entrepreneur's vocational training, entrepreneur's know-how Cs: changes in the market conditions, changes in the competitive environment, changes in the personal networks

Chapter IV consists of three articles, only the first of which actually examines the success of new firms in the established phase.

**Articles of Chapter IV:**

7. Littunen, H. (2000), Networks and Local Environmental Characteristics in the Survival of New Firms, published in *Small Business Economics* 15(1), 59-71.
8. Littunen, H. and Storhammar, E. (1999), The Indicators of Locus of Control in the Small Business Context, forthcoming in *Journal of Enterprising Culture*.
9. Littunen, H. (2000), Entrepreneurship and the Characteristics of the Entrepreneurial Personality, published in *International Journal of Entrepreneurial Behaviour and Research*, vol. 6 (6), 295-309.

The first study dealt with the importance of networks and local environmental characteristics in the survival of new firms. The results were supported by the differences in the dimensions portraying different styles of management. Group management and internal networks were emphasised in firms continuing in business. Firms' eagerness to grow and their high level of specialisation had

often led to a situation of growing risk which they had tried to level down through their external networks. However, in spite of external networks the firms' uncontrolled risks had led some of the firms to close down. After a successful start the failed firm at first grows rapidly, developing its product idea, but the rate of growth is too high both for the finances of the firm and for its management. In firms which had closed down the aim-setting connected with growth had been too ambitious in relation to the resources of the entrepreneurs. During the critical operational phase the entrepreneur's work experience and training had a clear effect on the success of firms. During the established phase these situational factors did not appear to have any influence on the success of the firms.

The second article of chapter IV examines with empirical data how the indicators of work locus of control and strategic locus of control function in the small business context. The empirical results of this study support the view that the indicator of strategic locus of control is no more sensitive to changes in the environment when adapted to the entrepreneurial context than the indicator of internal locus of control. The indicators used differed from each other in their relation to external control. The indicator of internal attributing had a negative correlation with the indicator of chance attributing. Similarly, the indicator of strategic locus of control had a negative correlation with the indicator of powerful others. The indicator of strategic locus of control was dependent on firms' strategic factors (the firm's targets, strategic decision-making and success) and did not directly correlate with the other characteristics of the entrepreneur apart from the features of his/her personality. The indicator of internal attributing was also dependent on the characteristics of the entrepreneur's professional skills. The measurement of control orientation through strategic thinking and the firm's action combines the features of the entrepreneur's personality with the firm's competition situation and environment. One important advantage of the strategic control orientation indicator is the fact that it can predict the systematic nature of the start-up process in addition to other strategic factors connected with the firm. The indicator of internal attributing, on the other hand, shows better links with the entrepreneur's control of his/her own life.

In the third article of chapter IV the achievement motivation and locus of control are compared in different phases of entrepreneurship, and the effects of changes in the entrepreneur's personal relationships on the characteristics of the entrepreneur are studied. According to the empirical results, mastery increased and powerful others decreased during the study period. A decrease in the external locus of control can be interpreted according to Rotter (1966) as the entrepreneur's learning and becoming more independent. Also, the results showed that both the number of co-operative partners and control by powerful others had decreased.

The versatility and abundance of entrepreneur's personal interest networks increase the resources of entrepreneurship because they fill possible gaps in the entrepreneur's training and experience (Johannisson and Spilling 1986). In this study the resources of entrepreneurship were related to achievement motivation. According to the empirical results, those

entrepreneurs whose interrelationships had improved during the study period had also clearly improved in terms of mastery. The findings of this study indicate that entrepreneurship and personal characteristics cannot be studied separately from the features of the environment.

TABLE 1.1.3 Summary of main findings of chapter IV

The success of a firm and the entrepreneur's characteristics in the established phase of entrepreneurship	Influencing factors and connections
The success of a firm: survival/closing down of business activities (NVP1 )	Es : focus of marketing area, line of business, main product Cs : style of management, changes in production process, changes in market conditions, internal networks
Comparison of the indicators describing the entrepreneur's personality: work locus of control/strategic locus of control	Dependence of strategic locus of control on strategic factors in a firm: *firm acting as subcontractor (-) *product-differentiated firm (+) *specialisation of the firm (+) *planning of the start-up process (+) *action planning (+) *management by groups (-) *firm's profitability (+)
The personality of an entrepreneur in the different phases of entrepreneurship	The changes in the entrepreneur's personality: Effects of entrepreneurship: *mastery (+) *powerful others (-) Decrease in the entrepreneur's personal interest networks: *pursuit of excellence (-) Increase in the entrepreneur's personal interest networks: *pursuit of excellence (+) *mastery (+)

The article in chapter V presents a summary of the findings of the follow-up study. This summarising article presents the findings of this study verbally, without statistical models.

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## CHAPTER II

### ARTICLES ON THE BIRTH OF NEW FIRMS

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<sup>1</sup> Littunen, H. (1992) published in University of Jyväskylä, Centre for Economic Research, 'Tutkimusta ja pohdintaa taloudesta ja yhteiskunnasta'. Paper (Nenonen, T. & Littunen, H.) presented also at the IV World Congress of the Regional Science Association, Palma de Mallorca, Spain 26-29 May 1992.

<sup>2</sup> Littunen, H. and Hyrsky, K. (2000) published in International Journal of Family Business Review, XIII (1), 41-54.

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<sup>3</sup> Niittykangas, H., Littunen, H. and Kinnunen, U. (1998) published in the Finnish Journal of Business Economics 1/1998 and presented at 10<sup>th</sup> Nordic Small Business Congress in Växjö University 1998

## **THE LOCATION CHOICES OF FIRMS IN A CHANGING ENVIRONMENT**

### **Abstract**

This study examines how a change in the economic environment of a firm affects its location choice. The choice of a location can be assumed to be based on a relatively few factors, while the qualities of a good location consist of many different features, which affect the development of a firm. The purpose of this study is to incorporate the concept of economic networks into an empirical study of location choice. This study examines 201 Finnish industrial firms and 45 business service firms. The results suggest that the structure of production in an area, and qualitative factors connected to the labour force, influence the location decisions of firms. The existing structure of entrepreneurial activities may have an effect on the development of new activities. By adopting the existing structure or parts of it new entrepreneurial activities, especially manufacturing industries are started.

# 1 INTRODUCTION

The processes of change in society, especially technological change, leads firms to scrutinise their environment and location in relation to these factors. The processes of change can be approached either from the point of view of regional structure or from that of the organisation of production.

Views concerning the decentralising and centralising effects of technological change on regional structure have lately been put forward. According to transaction cost theory (Williamson 1985) regional structure tends to take a form which minimises transaction costs. A decentralised structure normally means extra transaction costs for both production and consumption.

When the emphasis is on knowledge firms must specialise and be able to deal more flexibly with market and technological change. This means specialisation in the key area of the firm's know-how (Christensen 1987; Niittykangas 1991). At the same time flexible specialisation means that more attention is paid by firm to the needs of their customers and to the speed and reliability of delivery. The firm does not necessarily try to tap the efficiency of the production process by repetition of the existing phases of production or by extended series of the standard product, but instead the aim is productive flexibility (Eskelinen and Kaiponen 1990). The stimulus for the interest in the concept of economic networks among regional economists has in fact been the tendencies towards change in production and delivery systems (NordREFO 1987).

When firms concentrate on the key area of their business activities they need, in addition to their own resources, to co-operate with other firms. With specialisation, the functional relationships between firms increase and become more versatile. These more stable network connections between firms can be seen as solutions to two problematic areas, the importance of which are emphasised in the success of a modern firm. These areas are technological know-how and marketing.

From the point of view of network connections the role of the regional structure is stressed in the success of a firm. Firms choose environments which offer opportunities to versatile, co-operative network connections (Johanson

and Mattson 1987; Perrin 1988; Vuorinen 1988). The aim of neoclassical location theory is to find the optimal location for a firm. In traditional location studies the basic hypothesis is that the firms function rationally and try to maximise their gains. Entrepreneurs and firms are also thought to have access to perfect information in an unstable and changing environment (Smith 1970; Bater and Walker 1970).

The classical location theories were judged to be unrealistic, which led to the development of decision models, the forerunner of which was that of Pred (1967, 1969), who deals with the possibilities of choosing between different strategies of minimising uncertainty when making a location decision. Aside from economic factors a central feature in behaviour and organisation studies lies in the behaviour of the entrepreneur and the organisation. The so called structural location theory (Lundmark and Malmberg 1988) developed in the 1980s seeks to explain how changes in firms' ways of functioning (production paradigm) affects the regional structure. The structural location theory does not accept the idea of the independent location decision; instead, it is based on three different starting points:

- 1) The location decision of a firm is connected to the investment decision which is part of the firm's strategic decision.
- 2) The firm does not function blindly but the chosen strategy is adapted to the existing structures of the environment.
- 3) The firm's location choice is affected by the resources of the region and the exploitability of these resources.

Thus structural location theory works on three levels. First, on the micro-level where location is seen as connected to the firm's strategy. The second level concerns the structural bases of the firm's location, on which the basic prerequisites of functioning on a general and a specific level are sketched. For a firm the general prerequisites are one part of the general conditions of industrial production at a certain point of time. The more specific prerequisites are formed out of the direct and indirect factors present in the environment. The third level concerns the existing regional resources and the regional structure based on it together with its physical and social range. To summarise structural location theory sees the location decision as being one of the firm's vital decisions, of which the other are:

- the product or products of the firm
- in what way production is carried out (technology, organisation, labour force)
- to whom the products are directed (markets and their scope)
- how much is produced (production volume, production series)

At one point the neoclassical location theory and the structural location theory meet. Both theories aim at finding the optimal location for a firm. In the neoclassical location theory the starting point is the location decision itself, in the structural location theory the location decision is looked at as a part of the firm's investment decision, which is affected by the firm's strategy. The present empirical study is based on the structural theory.



## 2 THE LOCATION DECISIONS OF FIRMS

The most vital issues affecting the location choice of a firm are the decision to start a firm and the decision to expand a firm (Lehmusto 1987). In this empirical study the location decisions of the smallest firms (often self-employers) were left out. The reason for this is that these firms are often started in the immediate neighbourhood of the entrepreneur, in which case different location choices are seldom considered.

The expansion of a firm can be carried out in many different ways. With respect to this study the most essential question is whether the expansion is carried out at the original location or in a new journey-to-work area. Possible ways in which a firm can expand include the following:

1. The original location is unchanged
  - \* expansion at the present location
  - \* increasing co-operation with subcontractors
  - \* fusion, changing the owner
  
2. Moving from the original location
  - \* transitions (all functions)
  - \* setting up a new firm
  - \* purchase of a firm in another location

The firm's expansion of its functions at its original location may be because the firm is dependent on the regional market. It is also possible that internal, regional connections between firms tie the firm to its present location. It is important to find out to what extent the firm's production affects its network connections. Besides production networks, Johannisson and Spilling (1986) also incorporate the idea of personal and cultural networks into economic networks. Networks between regions and within firms are often looked at as forming a

part of the regional networks of bigger firms or as networks connected to them. It can be assumed that a firm will expand at a new location by starting up new establishments to the point where the costs of starting a new firm is as high as purchasing an existing firm. When a business is bought the change to a new region does not necessarily lead to increasing costs of network development, as is the case when a firm moves to a new location. This is because the internal resources of the firm are already connected to other firms and their resources.

## 3 STUDY

### 3.1 The aims and the framework of the study

This study examines how a change in the economic environment of a firm affects its location choice. Location choice is seen as part of the investment decision. Two questions are examined:

1. The factors affecting the location choice of firms
2. The qualities of a good location for a firm.

Choice of location is assumed to be based on a few factors, while the qualities of a good location consists of many different features which affect the development of a firm. One central issue in our study is to examine the location choice of a firm as part of the firm's strategy and verify empirically the factors affecting location choice from the point of view of strategy choices.

The study seeks to incorporate the concept of economic networks into an empirical study of location choices. The characteristics of location, the firm, and the entrepreneur will affect the development to entrepreneurial activities. The environment must also offer the necessary prerequisites of living to the entrepreneur, his/her family, and to the workers of the firm. The environment must offer them also possibilities for stimulating activities. These factors are connected to the prerequisites to entrepreneurial activities at least through the availability of the labour force, which has traditionally been one of the main factors affecting location choice. In the figure below the factors affecting location choice and the qualities of a good business location are illustrated from the point of view of economic networks.

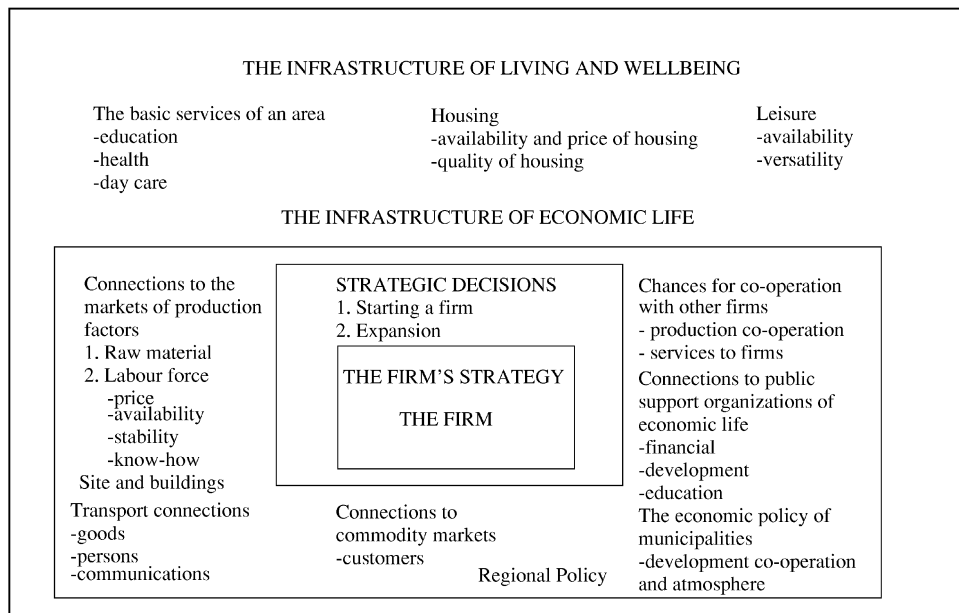


FIGURE 2.1.1 The qualities of business location and factors affecting the location choice of firms

Traditionally the location choice of a firm has been connected to so called external conditions for corporate activities, for example, land, the availability of raw materials, and transport and telecommunication systems. It is not possible for firms to influence these factors, at least in a short term. On the other hand, from the point of view of economic networks, a firm's location must offer possibilities for co-operation between firms and experts outside the firm. All these factors play a role in the location choice decision process, although previously how remains unclear. On the basis of an empirical analysis several questions will be studied:

- \* what kind of firms have tried to gain competitive advantage by their location choice ?
- \* what kind of competitive advantage is in question ?
- \* how does the firm make use of its competitive advantage and how it is further developed ?
- \* how does the firm maintain its competitive advantage ?

### 3.2 Data

The aim of the interviews with Finnish business managers is to study the prerequisites of an entrepreneurial environment and the status of different environments in relation to these prerequisites. The interviews were conducted with 201 industrial firms and 45 producer service firms. The selection of the firms to be interviewed was made so that firms who had changed their location and firms in different fields of business were represented as well as possible. The firms interviewed were chosen evenly from 13 journey-to-work areas. One half of the firms interviewed were situated in the centre of their region. Carrying out the selection procedure in this way ensured that different strategic criterion governing location choice were represented.

TABLE 2.1.1 Number of interviews in the different regional categories

Region	Number of interviews
Capital area	43
Big cities	53
The centres of provinces	72
Small towns	78
Total	246

#### Size and age of firms

Because the smallest firms are generally started in the home region of the entrepreneur and large-scale enterprises tend to be founded several decades ago, the data for this study was collected from firms employing 10-499 persons.

TABLE 2.1.2 Number of interviews in firms of different sizes

Size of firm	Number of interviews
Less than 20 persons	79
20 – 49 persons	28
100 – 199 persons	33
200 – 499 persons	24
Total	246

The firms interviewed were fairly young. More than 40% were less than ten years old. A little more than 25% had been started in the 1970s and about 30% earlier than that. Young firms were the most appropriate for this study because the location factors and problems concerning the location choice were well remembered. It was also possible to study differences in location choice made by firms with only one establishment, compared with those with several establishments, as 161 of the interviewed firms had only one establishment and 85 had several.

## 4 RESULTS

### 4.1 Location choices of firms

Firms were asked if they had changed location and how the changes in their corporate activities had been carried out. The firms were classified into two groups:

A.	The firm has not changed its location (journey-to-work area)	
	* activities in location where started	34 %
	* moved all of its activities to that location	29 %
	* expanded its activities in that location (starting a new establishment)	9 %
B.	The firm has changed its location (journey-to-work area)	
	* moved to a new location	4 %
	* expanded its activities to a new location	5 %
	* by purchasing a firm moved all activities in a new location	2 %
	* by purchasing a firm expanded its functions in a new location	17 %
	* total	100 %

Relocation of the firm's activities was proportionately most usual in small firms employing less than 20 persons. The better availability of sites and establishments in the neighbouring municipalities was the main factor affecting the expansion of activities within locations. The moving of firms from Helsinki to neighbouring municipalities was more general in the capital area than the moving of firms from other city areas to neighbouring municipalities. Moving

all the activities of a firm was rare: only 4 % of the interviewed firms had totally moved from their original location. Moving from one location to another was most usual with firms with many establishments, and moving was generally carried out by expanding the firm's activities. The starting of a branch in a new location was mostly due to the desire to be close to customers. When transition between locations was in question, purchasing a firm was the more commonly used way than starting a branch. With the firms which had moved to another location by buying a firm or expanding their activities the choice had been made in a way different from other firms. Firms with many establishments had dispersed their activities from the capital area to the other locations where the production structure and the quality of the labour force suited their production prerequisites. In general, during the 1980's boom, labour shortages were important influences in dispersing larger firms in Finland.

## **4.2 The importance of a firm's strategy to its location choice**

Today's technological and economical changes reflect a shift from a mass production to a flexible production model. In traditional production, products are standardised and the cost advantage which firms seek is based on economies of scale. In the flexible production model the products are tailored to the needs of customers and the firm aims at the economies of scope (Okko 1990). Piore and Sabel (1984) present a flexible specialisation strategy as the model for a successful firm.

Kettunen (1985) defines three basic types of business idea which are differentiated by the solution arrived at while creating a market:

1. operating as subcontractor or in co-operation with other firms
2. specialising in the local market
3. specialising in a specific group of customers.

A firm's products can also be differentiated from those of competitors by qualified design, efficient delivery or some other property of the product. This strategy, presented by Porter (1984), of product differentiation is taken in our study as a fourth basic type of business idea. Also, the role of different establishments in the parent company's total strategy is examined.

The firms were classified into four groups according to their strategy: 1) subcontractors, 2) local marketing, 3) differentiated products, 4) customer centred. Subcontractors were defined as those firms which sell more than 50% of their business volume as subcontractors to other firms. The sales of a firm concentrating on the local market were directed to the neighbouring area. Firms classified according to differentiated products were classified according to their main product: a product completely different from the products of the competitors or a unique product. Firms concentrating on the needs of customers were classified as 'customer-centred' if they had one-off production - one-off products are usually made following customers' suggestions to a small

group of customers. Firms which could not be included in any of the other four groups made up a fifth group: 'a mixed strategy group'.

TABLE 2.1.3 Location decisions of the firms in the different strategy groups

Strategy	Activities in the original Region		Moved from the original Region		Total
	Activities in the location where started	Expansion of activities/ Transition	Expansion of activities /transition	Purchasing a firm exp./ Transition	
Subcontractors	13	13	4	4	34
Local markets	16	15	4	3	38
Diff. products	16	24	6	13	59
Customer centred	12	9	6	7	34
Mixed strategy	26	32	4	19	81
Total of firms	83	93	24	46	246

The subcontractor firms had mainly expanded within their home region (table 2.1.3) and their network connections had, according to business managers, influenced the choice of a new location inside the original region. Some of the metal manufacturing subcontractors had become customer centred; products were made according to the main contractors' orders and service connected to the main product had become important. On the basis of interviews it can be stated that subcontractors, tend to locate near their main contractors, and, when such firms develop, their tendency to move decreases due to their network contacts. Those firms which concentrated on the local market, the market had guided their location choice - these firms had expanded their activities inside their original region (table 2.1.3). Due to the local nature of the functioning of these firms, strong local marketing contacts reduce their tendency to move from the region.

On the basis of this study it appears that aiming at flexible production became more general in Finland in 1980's. Firms representing a flexible specialising strategy - specialising in specific products and functioning in a customer- centred manner - constituted the majority of the interviewed firms, about 38%. These firms had considerable co-operative product development and marketing, both in Finland and abroad, and were clearly more interested in research work than other firms. The firms specialising in differentiated products had expanded their activities considerable within the original region, but they also have in many cases expanded their activities by purchasing a firm in a new region (table 2.1.3). It can be seen that the small and medium sized firms which had expanded their activities within a region and specialised in specific products were dependent on local production and product development. Correspondingly, firms with several establishments had brought from their new region a new kind of know- how to be assimilated to their total



strategy. Network connections had been formed between different regions and different establishments.

Most customer-centred firms were in services. For these firms expanding into another region was common. Starting a new establishment was nearly as common as purchasing a firm in another region (table 2.1.3). The output of these firms is very customer-centred and the total service connected with the product is very important. The so-called mixed strategy firms had expanded a lot inside their region, but expanding into a new region by purchasing a firm was also common (table 2.1.3). This was connected to the total strategy of the firm so that the bigger firms had increased their production capacity by purchasing a firm. By taking up their new production capacity such firms had aimed at increasing their output capacity or widening their range of products. The increase in output had been searched for both by exporting and by selling to the domestic market.

### The competitive advantages of firms

Product characteristics provided firms with their clearest competitive advantage. In some firms reliability of operation, and factors connected to the labour force, were also considered important competitive advantages (table 2.1.4). Subcontractors and firms with differentiated products were more likely to consider the characteristics of their products as an important competitive advantage. Labour factors and reliability of delivery were important competitive advantages for all firms (table 2.1.4). The strategic choices of firms had been a more important reason for dispersing their production activities outside the capital area more than had external circumstances governing their activities.

TABLE 2.1.4 The most important competitive advantages of firms in the different strategy groups (%)

The competitive advantages	Subcon-tractors	Local markets	Product diff.	Customer centred	Mixed strategy	Total
Labour forces	27	35	26	30	28	29
Characteristics of the product	89	54	74	48	58	65
Efficiency of production	7	11	11	8	17	12
Service	21	33	14	20	16	19
Reliability of delivery	39	37	32	53	42	40
Flexibility of the firm	9	7	16	18	10	12
Price competition advantage of the firm	21	22	12	25	25	17
Total of firms	34	38	58	33	78	241

Labour factors and the characteristics of products had strongly influenced on the location decision of firms with several establishments.

### 4.3 A good location for a firm

The business managers were asked to evaluate the importance of 45 location factors if they had to choose a new location for their present firm. The different factors were ranked: 1=no importance, 2=little importance, 3=rather important, 4=important, and 5=very important.

The order of importance of the location factors was defined by calculating the so called weighted points for each factor. This was done by multiplying by five the number of business managers who considered the factor in question to be very important, by four the number of business managers who regarded it as important, by three the number of business managers who saw it as rather important, by two the number of business managers who placed little importance on that factor, and by one the number of business managers who considered that factor unimportant, and then adding the points together (table 2.1.5).

TABLE 2.1.5 The opinions of the business managers on the most important location

Location factor	Rank	Points
Productivity of labour force	1	1077
Craftsmanship of labour force	2	1067
Stability of labour force	3	1051
Availability of labour force	4	1045
Level of labour costs	6	1018
Level of education of labour force	6	1018
Good transportation and transport connections	5	1035
Good telecommunication connections	11	965
Attitude of the municipality towards entrepreneurship	8	1014
Good housing situation	9	1002
Good child day care situation	12	961
Contentment with the environment	14	940
Cost of the business site	15	938
Expanding market	10	969
Proximity of customers	13	954
Total of firms	246	

Generally speaking, the factors connected with the quality of the labour force were clearly regarded as the most important location factors. Other important factors were good transport connections, the attitude of the municipality towards entrepreneurship, the availability of good housing in the municipality, and an expanding market (table 2.1.5).

### **The importance placed on different location factors by different branches of business**

Factors associated with the labour force were considered important in all branches of business. However, most had placed importance on specific factors connected to their particular branch. The food industry in Finland relies mainly on regional markets. For this reason proximity of customers was regarded as more important than in other branches. In clothing labour costs (ranked 1) was emphasised more than in the other branches. In the clothing industry there seems to be a lot of willingness to move abroad to countries where labour costs are lower than in Finland. In the woodworking and paper industries transport factors (ranked 1) were particularly important. In the metal and machinery industries the proximity of subcontractors (ranked 19) was weighted higher than average.

The location prerequisites of the electrical machinery industries was clearly different from those of other industries. Whilst labour factors were important, as in the other branches of business, good telecommunication connections (ranked 1) and the proximity of an airport (ranked 3) were much more important reflecting the internationalisation of this branch. Also, versatile data networks were regarded as more important by the electrical machinery industries than elsewhere. Firms in this sector also prized centres built around large-scale enterprises. For service firms the important prerequisites of a good location were the quality factors connected with labour force, the proximity of customer industries, and an expanding market. The ideal location for a service firm is an area with a versatile production structure with the availability of highly skilled labour.

### **Appreciation of different location factors according to the chosen strategies of firms**

Discriminant analysis was used to determine whether the strategic groups of the firms differed in relation to location factors. The discriminant analysis used 45 variables which were studied in the five strategy groups presented previously. The analysis produced one statistically significant discriminant function. Those firms concentrating on regional markets, subcontractors, and the firms specialising in differentiated products each formed a group of their own. The fourth group of firms was formed from the customer-centred and the so called mixed strategy firms. In these groups 17 variables showed statistically significant discrimination (table 2.1.6). The results of the discriminant analysis can be interpreted to indicate that the proximity of customers and an expanding market are especially important prerequisites of a good location for firms concentrating on regional markets but also important to subcontractors. For firms specialising in differentiated products these factors have little importance (table 2.1.6). For firms with a strategy of differentiated products the most important prerequisites of a good location are: the cost of the business site, the level of labour costs, the availability of labour, the stability of the labour force, the productivity of the labour force, good transportation connections, the

proximity of an airport, good telecommunication connections, the local tax rate, a good day care situation in the municipality, good recreational facilities, good cultural facilities, the proximity of technical schools, the proximity of research centres and a university (table 2.1.6).

TABLE 2.1.6 The results of the discriminant analysis in the different strategy groups: groups correlations between discriminating variables and canonical discriminant functions (=r)

Variables		Discriminant function Coefficients		Correlation r	
Proximity of customers		0.642		- 0.454	
Proximity of an airport		0.275		0.389	
Good day care situation		0.361		0.341	
Proximity of a university		0.131		0.304	
Productivity of labour force		0.324		0.281	
Level of labour costs		0.147		0.240	
Good transportation and traffic Connections		0.120		0.221	
Good recreational facilities		0.177		0.219	
Proximity of technical schools		0.414		0.212	
Local tax rate		0.067		0.208	
Expanding markets		0.046		-0.206	
Proximity of research service		-0.038		0.204	
Availability of labour force		0.076		0.203	
Cost of the business site		-0.030		0.177	
Stability of labour force		0.059		0.174	
Good telecommunication connections		-0.038		0.152	
Good cultural facilities		-0.091		0.148	
Groups	Operating as subcontractor	Local markets	Diff. products	Customer centred	Mixed strategy
Canonical discriminant functions evaluated a group means	-0.340	-1.548	0.9444	-0.075	0.172
Total of firms	29	34	55	33	76
Wilks' Lambda		0.425			
Chi-square		172.01			
Degrees of freedom		132			
Significance		0.011			

The results show that subcontractors seek a location where the creation of a versatile network is possible. The idea that economic networks diminish the regional mobility of a firm was supported by the results of the study of the location choices made by the subcontractors. Correspondingly specialist firms tended to locate near towns with a university where the firm has good opportunities for product development and internationalisation.

#### 4.4 Prerequisites of a good location for firms in Finland and abroad

In co-operation with our "domestic" study a comparative study was carried out in the Lorraine area and in Calais in France and in the Warrington and Newport areas in UK by an international consulting firm. In the table below the results of these studies, concerning the location choice of modern manufacturing firms are briefly compared.

##### Most important location factors in these countries

Finland	France	UK
-productivity of labour force -craftsmanship of labour force -stability of labour force -availability of labour -good transportation connections	-location in the centre of Europe, close to customers -the industrial tradition and efficiency of labour force -low labour costs -good transportation connections	-the availability of labour -good communication networks -low labour costs -location near customers

The main marketing area of the firms interviewed in France and UK was the European market. The location of these firms was strongly tied to the development of these markets. Besides valuing the proximity of customers these firms valued labour and transport factors as important prerequisites for a good location. In France and UK the factors regarded as important were, on the bases of our interview data, similar in different areas and sectors of business, although firms in high technology particularly valued proximity to university and research centres.

Labour and transport factors were also important for the firms interviewed in Finland. For those firms concentrating on local markets proximity to customers was considered of prime importance. Bigger firms dependent on international trade valued proximity to an airport and good telecommunication connections. For Finnish export firms quick and reliable connections to a potential establishment in the marketing area are particularly important. On the basis of our interviews the prerequisites for a good location seem similar in Finland, though in this small scale study it was not possible to control for different stages of economic development, different production structures, different levels of industrialisation, and natural circumstances of the countries and regions.

## 5 CONCLUSIONS

This study demonstrates that the regional production structure and qualitative factors connected to the labour force strongly influence the location decisions of firms. The structure of entrepreneurial activities may have an effect on the formation of new activities. By incorporating the already existing structure or parts of it, new entrepreneurial activities, especially manufacturing industries, are started. Because of the effects existing structures have on the development of new activities, the opportunities for less developing regions to create new industries seem to be diminished. The development of networks may provide a mechanism for renewing the economic structure or at least increasing know-how in established firms in the regions outside the main economic centres.

The building of networks provides an opportunity to renew the production structures of different regions and, at the same time, to guide the location decisions made by firms, because the network structure of the economy probably offers more location options. The location options of firms are increased by the effect on their strategy decisions of the factors connected to strategy choices, such as the properties of products, reliability of delivery, and the qualitative properties of the labour force. All these were evaluated by the firms as the most important competitive advantages.

It is possible to exercise an effect on the factors connected to the strategy choices made by firms by developing 'know-how centres' and by creating new concentrations of specific branches of business. 'Know-how centres' built around universities serve entrepreneurial activities best if the starting point is the existing entrepreneurial structure of the area. The specialisation of the 'know how centres' should be based on the entrepreneurial structure of a university town and the region around it and on the special characteristics of their entrepreneurial structure.

The renewal of the production structure of different areas can also be affected by developing network connections between different location areas; for example, production, business logistics, and technological, marketing, and production development networks. In Finland especially, small and medium-sized firms should to a greater extent gradually become parts of larger influence

and exchange relation networks. Thus the most important development projects for small and medium-sized firms would be developing subcontractor networks, as in Finland many of the small and medium sized firms continue to function as subcontractors to other firms. A project of developing business networks would promote the development of entrepreneurial activities in the rural areas of Finland as well.

By investing in telecommunication networks it is possible to increase the regional effects of information technology in various branches of business, since the firms involved in international activities increasingly value, when making a location decision, fast and reliable data connections. Information technology can be used, for example, in the development of business logistic networks, with the aim of finding ways of diminishing the transportation costs caused by the location of firms.

As the importance of knowledge grows, education becomes a more vital influence than even before. In Finland the improvement of the educational level of the labour force presupposes efficient co-ordination in different areas. The possibilities offered by the environment for a stimulating life are connected to the stability and quality of the labour force. The development of the living environment by co-operating with the various municipalities in a region will create new possibilities for marketing the region as a good location for living and entrepreneurial activities.

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## **THE EARLY ENTREPRENEURIAL STAGE IN FINNISH FAMILY AND NON-FAMILY FIRMS**

### **Abstract**

The study examined factors influencing the survival and success of 200 Finnish family and non-family firms in metal-based manufacturing and business services over the first three years of their operation. The reviewed features included the owner-managers' personality attributes, entrepreneurial competence, and motives for the start-up. Strategic choices of the firms were also examined. The family firms were better equipped to survive beyond the early entrepreneurial stage than the non-family businesses. The entrepreneurial abilities and resources of the family business owners enabled them to operate relatively successfully in the nearby market often with one unique product. The family firms were more conscious of survival and family well being than profitability or market position. A higher mortality rate was discovered among the non-family firms. The failed firms had often been established with unrealistic expectations and their performance deteriorated rapidly after their early success.

# 1 INTRODUCTION

Knowledge about family business has grown rapidly over the last few decades. This development is clearly in response to the recognition that family-owned companies are the prevailing enterprise form all over the world. They have a major impact on the growth of economies as producers, employers, and innovators (Neubauer and Lank 1998). In western Europe, family businesses represent 75% to 95% of all registered corporations (Lank 1995).

Despite its importance, there is no widely accepted definition of a *family business* (Brockhaus 1994; Handler 1994; Litz 1995). Some researchers argue that a family business is any in which family members are normally able to exert their influence on major decisions (Church 1996). Others require that at least two members of the family are actively engaged in the management and/or ownership (Dyer 1986; Jaffe 1991). Still others consider a family business as one where family members representing different generations are active in the business (Bork 1986; Ward 1988). There are also scholars who require the family to be owners of more than 50% of the stock (Gallo and Sveen 1991). In the present study a family business is one where the controlling ownership rests in the hands of one individual or the members of a single family.

Even though interest in family business research is growing across Europe and the USA, too little attention has been paid to family business issues in Finland. The paper aims to provide some first results by exploring the early, entrepreneurial stage of Finnish family and non-family firms in metal-based manufacturing industry and business services. In the literature there is a shortage of information about factors related to the early existence and continuation of family businesses from year to year (Kalleberg and Leicht 1991; Winter and Fitzgerald 1993). This is rather surprising since the potential of newly-established firms in the creation of employment and as producers of innovation cannot be realised unless they outlast the early stage with its inherent trials and tribulations.

Starting a new business is generally deemed to be a high risk activity. The risk of failure for new SMEs has been estimated at 40% in the first year, rising to

90% over ten years (Timmons 1990). Young organisations tend to face greater mortality risk than their more established counterparts. The 'liability of newness' concept posits that this higher mortality risk stems from the costs of learning new tasks, the necessity to invent new roles and the conflicts such roles present, the absence of formal structures, and the lack of stable links with customers (Douglas and Shepherd 1997).

This study addresses these issues by examining factors influencing the survival and success of 200 family and non-family firms over the first three years of their existence. The reviewed features include the owner-manager's personality attributes, entrepreneurial competence, and start-up motives. Strategic behaviour of the firms is also examined.

The rest of the paper is organised into five sections. Firstly, features of Finnish SMEs are outlined. Secondly, past findings on the conception and development stages of SMEs are reviewed. A third section introduces the research framework of the study. It consists of two parts dealing with factors associated with continuity in small business. The first part addresses characteristics of the owner-managers, and the second centers on structural and strategic features differentiating family and non-family firms. This is followed by a description of the data and research methodology. Section five reports the main findings. The final section deals with the main conclusions, drawing together factors previously discussed.

## 2 THE ROLE OF SMES IN THE FINNISH ECONOMY

Traditionally, small business ownership has not been too highly appreciated in Finland. It has not been deemed as a very prestigious or popular pursuit, neither financially nor socially rewarding. Thus, the establishing of small family businesses has been less prevalent than in other Western European countries, such as Germany, UK or our neighbours Sweden and Norway.

After the economic depression of the early 1990s things have begun to change. The year 1990 marked the start of the worst recession in the last 50 years. The traditional large-scale trade with former Soviet Union collapsed at a time when international recession further weakened the western exports. The growth figures of the late-1980s turned sharply down and signalled the start of a steep economic decline which left in its wake high levels of unemployment (from 3.5% in January 1990 to 20% in July 1995) and a financial crisis of the state. Drastic changes in the economy were needed to stimulate business growth and create employment. The ensuing major downsizing of the public sector and the restructuring of the industrial sector has led to the re-discovery of the importance of small scale economic activities.

The recession had a major impact on the business sector: the number and turnover of enterprises temporarily went into a steep decline, but both are now back to their pre-recession level. In total, there were 213,230 enterprises in Finland in 1997. The three largest industries are trade (50,314 firms), construction (26,553 firms), and manufacturing (26,023 firms). The firm base is currently expanding at a rate of 5,000-6,000 new businesses a year, most of these being small enterprises (SME-report 1998).

Sole traders form the largest group of Finnish enterprises (42 %), limited companies account for one third of the total, partnerships for slightly under one quarter, and co-operatives are a marginal group. Small firms (those with less than 10 employees) account for 93.7% of all businesses. According to the Finnish Family Business Network, some 70% of Finnish firms are family owned. No definite lists of family businesses are available since no government agency has statistics tailored to family business.

## 2.1 Conception and Development of SMEs

**New Business Formation.** The establishment of a new SME can be characterised by two starting situations. One of these is a new firm set up by the business founder him-/herself, the central underlying factors being the personality of the founder and his or her family members acting as entrepreneurial role models. Business activities often begin as a personal life strategy, as a way of earning one's living. The other starting point is that of an already established small firm within the framework of which new businesses arise or are created in-between the existing ones.

The personality and entrepreneurial competence of the founder affects the performance of newly-established firms. In family firms the competence of the founder plays a critical role in the formation and destiny of the business. He or she is the beginning of an unfolding process that spawns the entire business (Hollander and Elman 1988). All the owner-managers of family business in the present study represented the first generation of owners. The first generation family business is often a one-man show, mirroring the needs of the founder for centrality (Hershon 1975).

**Stages of Family Business Development.** A lot of research has been based on the assumption that the development of a business follows some uniform pattern. This modelling of business life-cycle stages is prevalent in management literature (Carlock and Johnson 1997; Churchill and Lewis 1983). The approach has also been used in researching dynamics of family business. Development theories share a set of assumptions about how change and growth occur over time. A central theme is that there are predictable periods of stability and intervening periods of more or less tumultuous transition. The theories pertain to individuals, organisations and families addressing developmental tasks during each stage.

In the development of a family business, Alcorn (1982) has identified three stages: an entrepreneurial stage, maturity and succession. In the first stage, efforts are directed at building a sound economic base for the firm. Managing growth and ensuring financial viability are critical tasks. In this phase the owner is most inclined to risk-taking. The need for security, both in personal life and in running the business, is highlighted in the period of maturity. The mature firm requires a different skill set from the owner-manager focusing on balancing the conflicting demands of different stakeholders. In the third phase the owner is looking to step down and is starting to groom a successor, often from his or her immediate family. Alcorn (1982) posits that this stage is the critical one determining the success or failure of the firm. Others think that the most striking problems will arise in the first phase when family ties may come into conflict with management decisions (Levinson 1971).

Ward (1988, 1991) has provided another three-stage developmental model of family business. The model incorporates ages and characteristics of two generations of family members and the individual owner-manager, phase of the organisation, and major challenges in each phase. He delineates how these challenges affect one another in the various stages of the family business. The

model has three stages of growth in the life cycle of a firm: early (0-5 years), middle (10-20 years) and late (20-30 years). Ward (1991) argues that various forces have an effect on the passage of the family business through predictable patterns of growth and change. These forces include a) the nature of the business (type of product, market conditions, etc.), b) the character of the organisation (size and complexity), c) motivation of the owner-manager, d) financial expectations of the family, and e) family goals.

Researchers focusing on the workings of family businesses through models of development stages have made an important contribution. The developmental phase models identify alternating periods of stability and transition that occur in response to the shifting and interactive needs of the business and its environment (Hollander and Elman 1988).

### **3 RESEARCH FRAMEWORK: FACTORS AFFECTING BUSINESS CONTINUITY**

This study examines the relationship between survival and success of family and non-family firms in their early, entrepreneurial stage and various attributes of the owner-managers and the firms. First, we examine potential differences in respondents' personality attributes, entrepreneurial competence, and motives for the start-up.

#### **3.1 Characteristics of the Owner-Managers**

*Personality Traits.* Trait theory focuses on the importance of personality attributes in explaining why certain individuals establish firms or succeed as entrepreneurs. McClelland's notion of Achievement Motivation (1961) and Rotter's Locus of Control construct (1966) are among the most commonly used in entrepreneurship research (Bird 1989).

Locus of Control construct originates from the work of Rotter (1966) and reflects the beliefs individuals have about who controls the key events in their life, themselves or various external factors. Individuals with Internal Locus of Control perceive their life to be controlled by their own actions, skills and abilities. Internal Locus has been associated with entrepreneurial behaviour since it posits that individuals take personal responsibility for their successes and failures, attributing the outcome to their own ability and effort (Perry et al. 1986). Conversely, persons with External Locus of Control sense that fate, in the form of events involving change outside their control, or powerful people, has a dominating influence over their life.

A three dimensional view (Levenson 1981) of Locus of Control is applied in the study: a) belief in one's own control (INTER); b) belief in the control of other people (OTHER); and c) belief in the control of chance or destiny (CHANCE). These and other items dealing with personality characteristics are measured using a five-point Likert scale.

McClelland (1961) defined achievement as "competition with some standard of excellence" and suggested that the key to entrepreneurial behaviour lies in achievement motivation. Need for Achievement (nAch) drives people to become entrepreneurs with high achievers being more likely to succeed. In this study, the concept of achievement motivation formulated by Cassidy and Lynn (1989) is followed. These authors regard achievement motivation as multifactorial. They suggest that the first nAch factor is "pursuit of excellence" (EXCEL). This is a motivation that finds its reward in performing to the best of one's abilities. The second dimension is "work ethic" (WORK ETHIC) which is seen as motivation to achieve based on finding reinforcement in the performance itself. The third one "mastery" (MASTER) refers to the reinforcing properties of problem solving, tackling a difficult task and succeeding in the face of difficulty. Finally, "dominance" (DOMINANCE) is identified as the desire to lead or to be in a position of dominance.

Examining the personality attributes of the founder can help to understand the development of the business. They are also likely to have a strong bearing on the performance of the new firms. Moreover, it is unclear from past literature whether family and non-family business owners possess similar entrepreneurial personality attributes. The first research question addresses these issues and is posed as follows: How do family and non-family business owners compare in their Locus of Control orientations and levels of achievement motivation?

**Entrepreneurial Competence.** Competence was studied with a social development model. It underlines the importance of past work experience, education, family background, and the social groups to which the individuals relate (Gibb and Ritchie 1982). Contacts with entrepreneurship, personal connections and work history are highlighted. All these features are important for the entrepreneurial learning process. Past work experience in small business is seen as an important source of knowledge and skills needed in the new business venture. Entrepreneurial competence was measured by the following five variables (hereafter a cluster analysis is used in most variables to unify the interview data):

Level of basic education (1=high, 0=low) - BASIC EDUCATION; Level of occupational education (1=upper secondary education or higher, 0=other) - OCCUPATIONAL EDU; Type of occupational education (1=business, 2=technical, 3= no occupational education) - TYPE OF OCCUPATIONAL EDU; Work experience (10 items: work years) based on a cluster analysis (1=a wide-ranging experience mostly in production management, 2=one-sided experience as a non-managerial employee, 3=versatile experience in marketing, production and/or product development - WORK EXPERIENCE; Knowledge and skills in different fields of small business ownership (management, marketing, accounting, product development), measured with a five point Likert scale - KNOW-HOW

Sufficient entrepreneurial competence is a crucial prerequisite for a successful operation of a new firm. Differences in mortality rates between family and non-family firms might be related to gaps appearing in the entrepreneurial competence of the owner. The second research question attends



to this and is posed as follows: Do the family and non-family firm owners display similar types of entrepreneurial competence?

***Motives for a New Business Start-up.*** The motives for setting up a firm can be established by examining the firm's start-up situation. We use an approach in which the situational motives are divided into "push" and "pull" factors (Gilad and Levine 1986; Storey 1991). This model distinguishes those motivated by a positive idea, those with specific knowledge of a market opportunity, and those primarily forced into entrepreneurship. The motivations of those attracted by the opportunity of perceived profit are in accordance with conventional economic theory. The "pull" factors may also be more psychological. Such individuals may have a desire to work for themselves or they may want to realise their ambitions.

A negative motivation is in question if the founder feels pushed into starting a firm under pressure of circumstances. Individuals may be dissatisfied with their present work or promotion prospects. They may also be pushed into the management of a firm owned by their family, or they could be facing the prospect of unemployment. In the present study the variable MOTIVE (1=unemployment or threat of unemployment, 2=internal motives and/or positive pull factors) was constructed to reveal motives for founding a new business.

The founders of family and non-family firms might have had different motives for setting up a business. They could have been forced into founding a company or might have found a new business opportunity in the market. This leads to third research question: Do the respondents experience positive or negative motivational factors in the period leading up to the start-up?

### **3.2 Structural and Strategic Differences between Family and Non-family Businesses**

Besides owner-managers, the study compares family and non-family firms in structural and strategic characteristics. There are a few past studies which document differences between these types of businesses (Donckels and Fröhlich 1991; Stoy Hayward 1990; Welsch 1991). Stoy Hayward's 1990 survey of the UK's largest 8,000 was a direct comparison of family and non-family businesses. Family firms accounted for 76% of the total sample. They were older than non-family businesses, held shares closely in the family and were less likely to use external advisors than non-family businesses. The family businesses also had a faster growth rate of sales turnover, and longer tenure was found among their senior management.

Donckels and Fröhlich (1991) conducted a STRATOS (Strategic Orientations of SMEs) study titled "Are Family Firms Really Different?". This cross-cultural survey of managers in 1,132 firms took place in Finland (N=205), Austria, Belgium, France, West Germany, the Netherlands, Switzerland and UK. Family businesses were defined as those firms in the study in which family

members owned at least 60% of the equity. Family firms made up 60% of the sample. The sample included firms in the clothing, food, and electronics industries.

Donckels and Fröhlich (1991) found family firms to be different because: a) they were more "inwardly directed and "closed family-related systems" in which building up a business for the sake of the family tended to be a major objective; b) they needed less socioeconomic networks and less co-operation with other firms. They were perceived as independent and with "less intense interdependencies with the environment-culture and macro-economic situation"; c) among the family business managers there were more organisers and all-rounders and less pioneers in terms of entrepreneurial style, leading to less innovation and growth as well as to risk-aversion; d) they tended to pay better wages than the non-family firms and care more about employee satisfaction; e) their strategic behaviour was defined as "conservative" with less exporting and internationalising taking place.

This short review of published evidence indicates that family businesses can be differentiated from non-family businesses. In the following, we shall outline our own approach to investigating similarities and differences between these two types of firms.

**Strategic Features of the Firms.** In exploring strategic behaviour of the firms, we use a framework in which the strategic choices are characterised by the concept of business idea (Norman 1976). This concept has been constructed to suit small enterprises. The focus is on creativity, flexibility and "a strategy of small steps". The key feature is the business idea - a combination of product line, markets, and the ways of conducting business. The following measures are used in describing the strategic choices related to production issues:

Share (%) of the main product or product group in the turnover - PRODUCT SHARE; Product technology based on the subject's evaluation of the uniqueness of the main product(s) of the company (0=totally different from or quite unique compared with the products of competitors, 1=quite or totally similar to other products) - PRODUCT TECHNOLOGY; Product policy (1=emphasis on existing products, 2=on new products, 3=both existing and new products) - PRODUCT POLICY

Measures of markets and customers: Location of the main competitors (0=same region, 1=elsewhere) - COMPETITOR LOCATION; Size of the main competitors (0=bigger, 1=other) - COMPETITOR SIZE; Character of customers (0=all or most of them have previously used similar products made by other companies, 1=others) - CUSTOMER; Share (%) of the nearby marketing area - MARKET SHARE; Marketing policy (1=emphasis on existing customers, 2=on new customers, 3=on both existing and new customers) - MARKETING POLICY; Growth rate of the market demand (0=quick, 1=slow, stable, irregular or shrinking) - MARKET GROWTH

Measures defining ways of doing business were: Production type (0=one off production or small-scale batch production, 1=other) - TYPE OF PRODUCTION; Collaboration with other firms (0=no, 1=yes) - COLLABORATION; and COMPETITIVE ADVANTAGE which refers to the ways in which businesses try to gain an advantageous position in the market

(Porter 1985). The advantages dealt with firm infrastructure and human resource management. They consisted of the following four variables and were measured by a five point Likert scale: Competitive advantage based on a) small size of the firm - SMALL SIZE; b) versatile skills of the workers - SKILLS; c) a wide range of subcontracts - SUBCONTRACTS; d) different or unique products - PRODUCTS. In the last variable (CONTINUE), continuing in business over the early entrepreneurial stage (the first three years) was taken as the criterion of success.

Past literature has indicated that family and non-family businesses exhibit different types of strategic behaviour. To explore this issue further, the study poses the following research question: Do family and non-family firms differ in their strategic choices in their early years of operation? The above-introduced four research questions will direct our analysis in the empirical section of the paper.

## 4 DATA COLLECTION

The study reported here is part of a longitudinal research which has followed the development of 200 SMEs in metal-based manufacturing and business services since their inception in 1990 (Littunen 1992). In that year the total number of SMEs established in these two industries in Finland was 2,583 which accounted for nearly 12 % of the total number of firms in the two industries. The industries were chosen because of their central role in the Finnish SME field. Metal-based manufacturing industry constitutes the most important sector. The sampled firms in this category manufacture a) metal products and machinery, b) electronic and electric equipment, and c) vehicle machinery and equipment.

Since the 1980s, the greatest volume and rate of small business growth in Finland has been in information-intensive business services (Tervo and Niittykangas 1994). The sampled business service firms came from the following sectors: technical and engineering services, computer services, market research, legal consulting, and other professional and scientific services.

The study employed a stratified sampling technique where the strata were the firm's size and line of business. The selection of the strata resembled Neyman's allotment (Pahkinen and Lehtonen 1989). Sampling from the different strata was done through simple random sampling, which requires that observations are weighted to correspond to the general population in the two industries (N=2,583).

The owner-managers were personally interviewed for the first time at the beginning of 1992. Follow-up data were collected annually through telephone interviews held between 1993 and 1996 and in 1998. In addition, each year the first author conducted 20-25 personal interviews in order to spot possible inaccuracies in the phone interviews. The first set of data from 1992 takes precedence, but the business survival rates of the consequent follow-up phases will also be reported. For the first personal interviews, 200 firms were selected as subjects from the SME register of Statistics, Finland. Interviewers were recruited to carry out the field work. They were given a half-day training

session including written interviewing instructions. The aim was to ensure a consistent interpretation of the questions used in the course of the interviews.

The sample includes 138 metal-based manufacturing firms and 62 business service firms from all across Finland. These consist of 104 family-owned and 96 non-family owned firms. The family firms were set up by the founding owner-manager, and the controlling ownership was in the hands of the founder or the members of his or her family. Most of the non-family firms were established through reorganisation of existing firms. These firms were privately-owned by a group of shareholders and run by an entrepreneur who owned a considerable share of the stock (<50%).

The subject firms were small, 63 per cent with less than five employees. On average, the family businesses had three employees, whereas the non-family firms had five. At start-up, the mean age of the family business founders was 38 and for the non-family founders 39. Reflecting the male dominance in these industries in Finland, 95% of the owners were males and only five percent females.

The data were analysed by grouping the features of the respondents and their firms by means of a cluster analysis. The aim of these groupings was to unify the rather varied interview data. A logistic regression analysis was used as a statistical technique in examining differences between family and non-family firms and their owner-managers in the selected attributes.

## **5 FINDINGS**

### **5.1 Findings on the Characteristics of the Business Owners**

A logistic regression analysis was conducted to compare family and non-family business owners in personality traits, entrepreneurial competence, and start-up motives (see table 2.2.1). The logistic regression model was fairly strong in explaining the location of observations in the examined groups. As is shown in table 2.2.2, some 86% of the family business owners were correctly classified with variables included in the model.

TABLE 2.2.1 A Logistic Regression of Competence, Personality Traits, and Start-up Motives (Dependent variable: Family vs. non-family owner)

Characteristics of Owner-Managers	$\beta$	Standard error	Significance
BASIC EDUCATION	0.398	0.240	0.096
OCCUPATIONAL EDU	0.247	0.257	0.336
TYPE OF OCCUPAT. EDU			0.011
TYPE (1)	1.079	0.370	0.004
TYPE (2)	-0.333	0.253	0.189
WORK EXPERIENCE			0.897
EXP (1)	0.119	0.259	0.646
EXP (2)	0.031	0.277	0.912
MOTIVE			0.123
MOTIVE (1)	0.118	0.255	0.644
MOTIVE (2)	-0.607	0.339	0.074
KNOW-HOW	-0.153	0.067	0.023
EXCEL	0.020	0.515	0.970
WORK ETHIC	-0.084	0.284	0.768
MASTER	-0.207	0.368	0.573
DOMINANCE	-0.039	0.367	0.916
INTER	0.031	0.362	0.932
OTHER	0.354	0.298	0.235
CHANCE	0.057	0.286	0.842
CONSTANT	1.705	2.909	0.558
Model of $\chi^2=0.022$ df=16, n=200			

TABLE 2.2.2 Classification Rates of a Logistic Regression Model: Characteristics of Owner-Managers

	Predicted frequencies		Pct correct of observed frequencies
	Family owner	Non-family owner	
Family owner	111	18	86.1 %
Non-family owner	45	21	31.8 %

**Personality Attributes.** The first research question set out to compare family and non-family business owners in Locus of Control orientations and levels of achievement motivation. No clear differences were discovered in these personality traits. Nevertheless, there was a link between aspects of Locus of Control and forced founding of a business. In prior studies in Finland, business owners who have given unemployment or its threat as a motive for the start-up have exhibited more external Locus of Control orientation than founders motivated by "pull factors" (Niittykangas, Littunen, and Kinnunen 1998). In the present study, the two groups did not differ in aspects of Locus of Control even though there were more "forced founders" among the family business owners.

Perhaps these felt that their influence over business matters was enhanced by support received from a family committed to ensuring the continued existence of the business (Hoy and Verser 1994).

**Entrepreneurial Competence** The second research question addressed potential differences in entrepreneurial competence between the two groups of informants. Non-family business owners had higher educational qualifications: 42% had completed business training or education at upper secondary or tertiary level. Among the family business owners this figure was 24%. Some 62% of family owners had completed technical education at either lower or upper secondary level. The respective figure among the non-family owners was 47%.

The subjects' work experience prior to the start-up was rather similar. Some 70% of them came from private companies with less than 100 employees. Roughly 45% of the family business owners had a wide-ranging background in production management, 40% one-sided experience as an employee, and 15% versatile experience in marketing, production and/or product development. The respective percentages among the non-family business owners were 44, 47, and 9. Parallel with past findings on new business creation (Bird 1989), many founders had to rely heavily on their past work experience in SMEs. This had a notable effect on the structure and operations of the firms, e.g. in most firms the product selection was in the first place based on the founder's prior work experience.

Some 29% of the family business owners and 42% of non-family business owners had previously been in the business for themselves. The average entrepreneurial experience prior the business start-up was 1.8 years and 2.1 years respectively. Despite of their more limited entrepreneurial experience and lower education, family business owners scored significantly higher ( $p=0.02$ ) on entrepreneurial knowledge and skills (KNOWHOW, see table 2.2.1). Perhaps these entrepreneurial abilities contributed to the higher survival rates found among family-owned firms.

**Motivations for Business Start-ups** Third research question addressed motivational factors affecting the founders prior the start-up. Among family business owners unemployment or fear of redundancy were more frequently cited as underlying motives for the start-up. Among non-family owners, the motivating influences were more often positive ("pull") factors linked to new business opportunities or internal motives and values of the individuals.

## 5.2 Findings on the Strategic Behaviour of the Firms

The fourth research question searched for differences in strategic choices between family and non-family firms in their early entrepreneurial stage. A logistic regression analysis was run to compare the strategic behaviour of the firms (see table 2.2.3). The regression model was rather accurate in predicting the location of observations in the examined groups (see table 2.2.4). Some 87% of the family firms were correctly classified.



TABLE 2.2.3 A Logistic Regression Analysis of Strategic Choices (Dependent variable: Family vs. non-family business)

Strategic Choices	$\beta$	Standard error	Significance
PRODUCT SHARE	-0.020	0.009	0.025
PRODUCT TECHNOLOGY	-0.675	0.241	0.005
PRODUCT POLICY			0.355
POLICY (1)	-0.396	0.276	0.150
POLICY (2)	0.171	0.338	0.614
COMPETITOR LOCATION	0.381	0.230	0.097
COMPETITOR SIZE	0.061	0.185	0.742
CUSTOMER	0.045	0.220	0.837
MARKET SHARE	-0.011	0.005	0.032
MARKETING POLICY			0.001
POLICY (1)	-0.172	0.317	0.588
POLICY (2)	0.907	0.255	0.000
MARKET GROWTH	0.671	0.336	0.046
TYPE OF PRODUCTION	-0.112	0.341	0.743
COLLABORATION	-0.020	0.246	0.936
COMPETIT. ADVANTAGE			
SMALL SIZE	-0.395	0.187	0.035
SKILLS	0.524	0.281	0.062
SUBCONTRACTS	-0.526	0.254	0.039
PRODUCTS	0.292	0.228	0.199
CONTINUE	-0.564	0.316	0.075
CONSTANT	2.615	1.815	0.150
Model of $\chi^2 = 0.000$ df=18, n=200			

TABLE 2.2.4 Classification Rates of a Logistic Regression Model: Strategic Behaviour of the firms

	Predicted frequencies		Pct correct of observed frequencies
	Family firms	Non-family firms	
Family firms	108	18	87.1 %
Non-family firms	28	42	60.0 %

The strategic indicators divided the examined groups better than those measuring owner-manager characteristics. In family firms three main features emerged. Firstly, the firms typically had only one unique product and were heavily dependent on the nearby market area. Secondly, the main competitors were often located outside of the local neighbourhood. Thirdly, the core competitive advantages included flexibility and small size of the company and the wide range of subcontracts secured.

In the strategy of the non-family firms, the emphasis was on targeting new customers and extending the market area outside of the local neighbourhood.

In the early stages, the growth rate of market demand was rather rapid and main competitors were often situated in close proximity. The versatile skills of the workers were regarded as the main competitive advantage.

A larger percentage of the family businesses continued in business beyond the first three years. The sampled firms were all established in 1990. Three years later 92% of the family firms and 80% of non-family firms were still in operation (contingency coefficient,  $p=0.02$ ). In 1996 the respective survival rates were 79% and 72% and two years later 73% and 62%. In an upcoming study, the authors will examine the surviving firms during their period of establishment between 1993 and 1996.

## 6 CONCLUSION

The study examined factors affecting survival and success of family and non-family businesses in the early entrepreneurial stage of the firms. The first aim was to compare family and non-family business owners in personality attributes, entrepreneurial competence, and start-up motives. No major differences were found with regard to personality features. Despite their ability to achieve more rapid early business growth, the non-family business owners did not manifest higher levels of achievement motivation. Both sets of respondents also exhibited rather similar Locus of Control orientations.

The family business owners scored higher on entrepreneurial knowledge and skills. Nevertheless, since no major differences between the groups were discovered in personality attributes and length and versatility of past work experience, the actual differences in the competence might be somewhat smaller.

Among the family business owners, the presence of negative situational factors were more important motivating and precipitating factors in the creation of a new business. Despite this, the family firms were better equipped to survive over the early years of operation than non-family firms. Due to their more suitable entrepreneurial competence, those motivated by escape from unemployment or fear of redundancy did not necessarily encounter more problems in business operations than those motivated by "pull factors".

The second objective was to compare the firms in strategic behaviour. The entrepreneurial abilities and resources of the family business founders enabled them to operate relatively successfully in the local market often with one unique or differentiated product. The family-owned firms seemed to be more "inward"-oriented (ie. towards efficiency) than "outward"-oriented (ie. toward new markets) compared to the non-family businesses (cf. Donckels and Fröhlich 1991). Just like in the strategies of Scottish family firms (see Dunn 1996), the focus was on incremental regional expansion rather than rapid or wider geographical expansion.

The mortality rates of the family firms were somewhat lower than those of the non-family firms. The family firms seemed to have a long-term view of the

business. They engaged in more careful strategic planning which helped to strengthen the enterprise and extend its lifespan. They were also more conscious of family well being than profitability or market position. The non-family firms were clearly more profit and growth-oriented than the more cautious family firms whose owners indicated in the interviews that the provision of family income was a central motivating factor for continuing in business. These findings are in accordance with past results which have shown that family firms often have lower growth rates and market-share positions than non-family firms (Gallo 1993). Evidence from across Europe also indicates that family businesses are stable rather than progressive or dynamic forces in their respective economies since their owner-managers are significantly less profit and growth-oriented than their colleagues in non-family firms (Donckels and Fröhlich 1991).

Turning to the strategic choices of the non-family firms, a majority of them operated in a wider, more turbulent market area with rapidly growing demand. Success in the face of stiff competition entailed both considerable financial resources and a high level of entrepreneurial competence. A number of these firms were discontinued when they did not live up to their early growth promise. Such firms had been established with unrealistic expectations and their performance deteriorated rapidly after an early period of promise. Parallel with the findings of Gaskill and Van Auken (1993) poor performance was usually connected with a lack of resources, insufficient planning and entrepreneurial incompetence.

In interpreting the findings of the study, two limitations should be observed. Firstly, since the study was restricted to firms in two industries, caution must be exercised in generalising the results across other sectors. Secondly, at the time of the research the Finnish economy was in the middle of a recession which undoubtedly affected the results. Future studies, conducted during a less turbulent time period and with bigger samples from a wide-range of industries, could yield more conclusive findings. Areas for additional research include identification of other factors affecting the continuity of family firms after the early operational years. These could include an assessment of industry differences, organisational structures and perceptions of the intrusiveness of family life on the business.

The study also has implications for policy makers. The current Finnish SME policy puts much effort in establishing new SME development projects and in extending the scope of services provided by small business service centres. Unfortunately, the special needs of family firms have not been given their due attention. In the present study the family firms exhibited lower mortality rates and achieved better performance than the non-family firms. This implies that the role of newly-established family firms should be more central in implementing the SME policies. To improve the efficiency of the policy and to achieve continued small business growth the officials need to recognise and cater for family enterprises specific needs.

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## **FORCED FOUNDING - DOES IT MATTER?**

### **Abstract**

The origin of this paper lies in two observations. First, earlier results based on official regional statistics show a positive correlation between a change in the unemployment rate and new firm formation. This interdependence is strengthened when enterprise density is high and local market demand is increasing. Second, forced founding is more common than earlier. These observations encouraged us to examine whether forced founding differs from other types of business founding. The data (n=200) consisted of firms in the metal product manufacturing industry and business services founded in 1990. The data was collected by personal interviews. The founders were classified into two groups: (1) new firms where unemployment or the threat of unemployment was an important motive for founding a business; and (2) new firms where pull-factors dominated.

The results concerning the metal product manufacturing industry show that forced founding appears in the characteristics of the entrepreneur and in the firm's strategy. However, differences in personal characteristics were smaller than expected. Chance control was stronger and control of other powerful persons weaker among forced founders, but no differences existed in education or work experience. Differences in strategic choices were more distinct. Forced founding was related to small size, competition with larger firms located in the neighbourhood, pursuit of customers without earlier experience of similar products, and pursuit of specialisation. The results also show that metal product manufacturing differs from business services reflecting differences in the industry environment.



## 1 INTRODUCTION

Previous results have shown that forced founding is relatively common (Storey 1982; Binks and Jennings 1986; Storey and Johnson 1987; Smallbone 1990; Storey 1991; Meager 1992; Marlow and Storey 1992; Niittykangas and Tervo 1993; Niittykangas and Kinnunen 1995). Entrepreneurship is no longer exclusively a positive and feasible alternative but has become more common. This is emphasised by the contingency approach, which points to the different situational factors behind entrepreneurship (Gilad and Levine 1986). However, the magnitude of forced founding depends on what previously is meant by the concept (Storey 1982). On the one hand, even those who unexpectedly became managers of family businesses belong to this group. Dissatisfaction with their current employment may also push a person into entrepreneurship. In small enterprises this can be induced by the feeling that there are no prospects for promotion and in big enterprises by frustration and dissatisfaction with the size of one's influence, biased tasks or limited possibilities for self-fulfilment. On the other hand, forced founding may refer only to persons who became entrepreneurs because of unemployment or the threat of it.

Several survey results based on interviews with the founders of a new firm support the hypothesis that unemployment affects new firm foundation. Storey (1982), for example, found that among businesses established in Cleveland during the 1970s, one quarter of founders claimed they were unemployed, or likely to become unemployed immediately prior to starting the business. Binks and Jennings (1986) found that about 50 per cent of new owner managers in the early 1980s in Nottingham were forced into starting their own business. Similar results have also been obtained in Finland. Approximately one quarter of the enterprises that had been granted regional investment support in 1983 were of the kind where the entrepreneurs pronounced that they had "drifted into entrepreneurship under the force of circumstances". In manufacturing industry the share was even bigger. Of enterprises with less than 5 employees, the percentage was 79 and of larger firms 37 (Niittykangas 1985). In southern Finland, 33% of manufacturing firms with at least 5

employees were of this kind (Tervo 1985). According to Littunen (1989), approximately 20% of those who established a manufacturing enterprise in 1982 regarded unemployment or the threat of it as an important motivational factor in starting a business. According to a study concerning enterprises in the metal product manufacturing industry and business services founded in 1990, the percentage was slightly smaller: in the metal product manufacturing industry 17% and in business services 13% (Littunen 1992). At the same time, however, 39% of the entrepreneurs (n=200) were under the threat of unemployment when founding their firms.

This shows that unemployment or the threat of it may be an important motivational factor in starting a business. Even if only a small percentage of the unemployed or those under the threat of unemployment become entrepreneurs, they form a considerable share of those who have founded an enterprise. Entrepreneurship offers a way to earn one's living and achieve a socially acceptable status. The motives for the individual's behaviour and choices may differ from those traditionally given in the literature concerning entrepreneurship. The individual does not necessarily strive for entrepreneurship but accepts it out of a lack of alternatives, possibly as a temporary stage in his/her life. However, it is not possible to evaluate the actual meaning of unemployment as a motive for entrepreneurship on the basis of the reasons given by entrepreneurs themselves (Marlow and Storey 1992). It may start the process of founding but it is, nonetheless, hard to believe, exceptional cases aside, that it is a crucial reason for entrepreneurship.

The conception that entrepreneurs have certain characteristics in common is not a novel one. This has led researchers to make attempts to identify a set of traits of this kind. Notwithstanding the criticism levelled at it (Chell et al. 1991), the trait model is still common in research. The concepts of achievement motivation and of locus of control appear to be the most common ones utilised. The social development model (Gibb and Ritchie 1982) criticises the view that there are in-born character traits which differentiate entrepreneurs from other individuals. Gibb and Ritchie propose an alternative model which suggests that entrepreneurship can be better understood in terms of the types of situation encountered and of the social groups to which individuals relate. Thus, according to Gibb and Ritchie, class structure, family origin, education, occupational choice and development, career and organisational history and experience, present lifestyles and social attachments are considered to have important influences. Finally, it may be argued that planned behaviours are best predicted, not by attitudes, beliefs, or personality, but by expressed intentions towards such behaviour. In this view (Krueger and Carsrud 1993), personality traits, demographics, contextual factors and other explanatory factors may be argued to create tendencies to act in an entrepreneurial manner, rather than these behaviours directly.

In empirical research, the pull and push hypothesis may offer the best basis for analysing the different, and possibly contradictory, forces simultaneously affecting a founding firm. According to the pull hypothesis (Gilad and Levine 1986), the aim of making a dream come true, being

independent, creating something on one's own and acting according to one's own plans and goals are the positive motives guiding a person into entrepreneurship. Promising possibilities offer a way to achieve these aims. According to the push hypothesis, dissatisfaction with prevailing occupational conditions, unemployment or the threat of it, short-term employment contracts or the threat of being forced to move away are factors that push individuals into entrepreneurship. In this case providing and maintaining a means of subsistence are the central motives behind entrepreneurship.

The aim of this paper is to examine differences between entrepreneurs with different motives for founding a business and also differences between established firms. Do entrepreneurs who reported unemployment or the threat of it as a motive for founding, and their firms, differ from those who emphasised more positive motives. From the point of view of personal differences, the theoretical starting points consist of the trait theory (Chell 1986) and the social development model (Gibb and Ritchie 1982). The analysis of a firm's strategic choices is based on the business idea thinking of Normann (1976).

The interest in forced founding is well grounded in a situation characterised by a growing instability in working life. This instability is reflected in high unemployment, non-standard job forms, labour market segmentation and anxiety about future employment among those who still have work. Moreover, the prognoses about the near future are rather pessimistic. Unemployment is not expected to return to the level of the late 80s. It has been forecast that the working history of individuals will be much more fragmented in the 1990s than before (Kasvio 1990). There are also signs of this development - such as "permanent temporality" (Koistinen and Suikkanen 1990) - which have been strengthened by structural changes (Kasvio 1994; Julkunen and Nätti 1995). An ever smaller group of people are able to plan their future on the basis of a steady income. The emphasis on personal entrepreneurship can be understood against this background. It has been offered as a solution to unemployment notwithstanding findings (Niittykangas and Kinnunen 1995) that the entrepreneurial characteristics of those with an unsteady career are weaker than the characteristics of those who do not.

The paper is organised as follows. First, the data and the measures are presented. Second, on the basis of this empirical material, the effects of founding motives on the characteristics of entrepreneurs and firms are analysed. The metal product manufacturing industry and business services will be examined separately because they differ in many ways (Niittykangas and Tervo 1996). Finally, some conclusions are drawn about the influence of reported motives for founding a business. The results show that entrepreneurship is an option for most of us. It would perhaps be too daring to agree with Smallbone's (1990) observation according to which the main difference between success and failure is whether the entrepreneurs were unemployed or not when founding a business.

## 2 RESEARCH MATERIAL AND MEASURES

### 2.1 Research material

The data consists of firms established in 1990 in the metal product manufacturing industry and business services in Finland (Littunen 1992). Manufacturing industry is a natural choice because, from the point of view of the Finnish economy as a whole, there is no alternative to manufacturing-based development at present or in the near future. Metal product manufacturing is an industry with good growth and development prospects. Business services were chosen because that industry has, in Finland as elsewhere, undergone rapid growth during the past few decades (Tervo and Niittykangas 1994). Another reason was the fact that the changes in the business environment, e.g., internationalisation and knowledge as a competitive advantage have increased the need for collaboration between enterprises. Business services may become comparable even to that of manufacturing, as a result of the changes currently taking place (Illeris 1989).

The data was collected by personal interviews (n=200) (Littunen 1992). Two separate groups were identified: those who gave unemployment or the threat of it as a motive for founding, and those who only emphasised pull and positive situational factors representing the traditional motives of entrepreneurship: the itch to be independent, to be one's own boss, self-advancement, and self-reliance (Boswell 1972). The analysis of the industries (metal products and business services) differ from each other. The size of the database makes it possible to use logistic regression models in the metal product manufacturing industry (n=138). 30 entrepreneurs gave unemployment or the threat of it as a motive for founding a business. In business services (n=62), the measures used in this study are compared on a univariate basis, because only 10 entrepreneurs gave unemployment or the threat of it as a motive for founding. The differences between the two industries are investigated in the same way.

On the basis of the background information, differences emerged between the identified groups which may, from the point of view of the conclusions, have some importance. The average size of the start-up investment differed considerably between the groups but, due to wide standard errors, these differences were not statistically significant: in the metal product manufacturing industry the average start-up investment was FIM 653 000 (to the "forced" firm FIM 306 000) and in business services FIM 291 000 (to the "forced" firm FIM 154 000).

The industries also differed in financing at start-up. In business services, the share of the owner's resources as a proportion of start-up capital was bigger and the share of government programs smaller than in the metal products. Moreover, the share of those who were granted public financing was smaller in business services than in metal products. Among those in metal products who gave unemployment or the threat of it as a motive for founding a business, there were fewer receivers of public financing than in other industrial enterprises. In business services, the start-up process (investment size, timing, technological level and financing) was carried out according to plan as often as in metal product manufacturing. A closer examination, however, shows that in business services, as compared to the metal product manufacturing industry, the share of those whose start-up processes were realised better than expected was bigger and the share of those whose plans were realised worse than expected was smaller.

In the start-up phase, the support of local or state or other authorities was uncommon. More common were contacts with auditors, banks and personal acquaintances with whom about a half of the entrepreneurs had discussed founding-related matters. There was a clear difference between the industries in the utilisation of different authorities (KTM Yrityspalvelu, Kera Oy, bank managers, local or state authorities, personal acquaintances, suppliers, customers, subcontractors). Personal acquaintances excluded, utilisation of different authorities was more unusual in business service enterprises than in metal products. Those who gave unemployment or the threat of it as a founding motive differed from the others only in contacts with personal acquaintances. Forced founders relied on the help of their personal acquaintances more rarely than the others.

## 2.2 Characteristics of the entrepreneurs

The first question was, whether the founders who gave unemployment or the threat of it as a motive for founding a firm differed from the other founders in know-how or personality attributes. According to the social development model, education and experience are of great importance. Work experience relates to knowledge and skills. Halttunen (1981) and Hauta-aho (1990) among others (Vesper 1992; Ray 1993) have emphasised the influence of prior employment on founding a business. The know-how for the new business venture, and often the business-idea, come from the founder's previous employer. The know-how of the entrepreneur was measured by five variables:

- \* the level of primary education (1=high, 0=low) - PRIMEDU
- \* the level of vocational education (1=upper secondary education or university, 0=other) - VOCATEDU
- \* the nature of vocational education based on the results of a cluster analysis (1=commercial, 2=technical, 3=no vocational education) (Littunen 1994) - EDU
- \* work experience, based on a cluster analysis (1=wide-range experience mostly in production management, 2=one-sided experience mostly as a non-managerial employee, 3=wide-range experience in marketing, production and product development) (Littunen 1995) - WORKEXP
- \* the versatility of entrepreneurial know-how in the different aspects of entrepreneurship (management, marketing, accounting, and product development) based on self-evaluations of the entrepreneurs – COMPETENCE

The trait theory emphasises the importance of personality attributes in selection into entrepreneurship. McClelland's concept of achievement motivation (1961) and Rotter's locus of control construct (1966) are the most commonly used in research (Pandey and Tewary 1979; Brockhaus 1982; Chell et al. 1986; Bird 1989; Vesala 1996). According to Rotter (1966), the locus of control of an individual can be seen as either internal or external. An internal control expectation refers to control of one's own life where the results of one's action are considered to be dependent either on one's own behaviour or permanent characteristics. This has been discovered to be a typical characteristic of entrepreneurs (Perry et al. 1986; Niittykangas et al. 1994). An external control expectation refers to the kind of attitude which focuses on the actions of other people or on fate, luck or chance. Several researchers have proposed that internal and external control should be studied as separate dimensions. In Levenson's (1981) application (LASS) there are assumed to be three dimensions, which measure, respectively an individual's belief in internal control, in control by others and in control by chance, fate or luck. According to Levenson, external control can be interpreted as two different dimensions. She argues that control by other people can be seen as more predictable than, for instance, that of chance, since a person has, at least, the potential to influence it. In the present study, a three-dimensional

view (Levenson 1981) of locus of control is applied: first, belief in one's own control (INTER), second, belief in the control of other people (OTHER) and third, belief in the control of chance, destiny etc. (CHANC).

McClelland (1961) defined achievement as "a competition with some standard of excellence" and suggested that the key to entrepreneurial behavior lies in achievement motivation. Need for achievement (nAch) may drive people to become entrepreneurs and high achievers are more likely to succeed. The vitality of this concept is based on the fact that it reveals something fundamental about entrepreneurship which requires the typical characteristics of an achiever. In the present study, in line with Cassidy and Lynn (1989), the concept of achievement motivation is regarded as being multi-factorial. Cassidy and Lynn (1989) suggest that two major nAch factors are "the pursuit of excellence" (EXCEL) which can be described as motivation that finds reward in performing to the best of one's ability and "work ethic" (WORKE) which can be described as motivation to achieve which is based on finding reinforcement in the performance itself. In addition to these, two other factors were also investigated. "Mastery" (MASTE) is also a form of competitiveness, but not with other individuals. It evokes the reinforcing properties of problem solving, tackling a difficult task and succeeding in the face of difficulty. "Dominance" (DOMIN) is based on the results of Cassidy and Lynn (1989) and is identified as the desire to lead or to be in a position of dominance.

The different dimensions of achievement motivation and locus of control were measured with 4 statements (Pitkänen and Vesala 1988; Cassidy and Lynn 1989; Bird 1989) by counting a sum variable score for each value group. The internal reliability as measured by Cronbach's alpha (in parentheses) and intercorrelations between the indicators of achievement motivation and locus of control (\* =  $p < .01$ , \*\* =  $p < .001$ ) are illustrated below:

	1	2	3	4	5	6	7
1. WORKE (.526)	1.000						
2. DOMIN (.483)	.186*	1.000					
3. EXCEL (.474)	.305**	.276**	1.000				
4. MASTE (.460)	.416**	.245**	.449**	1.000			
5. CHANC (.494)	-.078	-.124	-.298**	-.120	1.000		
6. OTHER (.479)	-.005	-.126	-.115	.135	.305**	1.000	
7. INTER (.475)	.218**	.424**	.284**	.189	-.198	-.106	1.000

On the one hand, the dimensions of the achievement motivation are positively correlated as well as are other people and chance attribution of the control expectations. On the other hand, the correlation of internal attribution and two dimensions of external attribution (other people and chance controls) is weakly negative, which means that the more an individual believes in him (her)self the less he/she believes in the influence of other people or chance, fate and luck.

The dimensions of the achievement motivation variable correlate positively with internal locus of control and negatively with the control of other people and chance, fate or luck. That is, people with a high achievement

motivation believe in their own ability to control the outcome of their efforts. A weak achievement motivation, on the other hand, implies a belief in chance events outside one's control or in powerful other people.

### 2.3 The strategic choices of an enterprise

The second question was, whether the founders who gave unemployment or the threat of it as a motive for founding a business differed from the other founders in the strategic choices of that enterprise. In general, the concept of strategy has been characterised by various typologies. Smith (1967) distinguished between a craftsman and an opportunistic entrepreneur. Pleitner (1985) refers to three other classifications of this kind. Dunkelberg and Cooper (1982) distinguished between growth-oriented, independence-oriented and craftsman-oriented entrepreneurs. From the point of view of market orientation, Kettunen (1985) distinguished three types of small enterprises: local market strategy, niche strategy, and networking strategy. Vesper (1980) identifies a total of 11 categories.

The strategic choices of a firm can be characterised by the concept of business idea (Normann 1976), which is constructed to suit small enterprises in particular. Normann emphasises creativity, flexibility and the "strategy of small steps". The key to his approach is the business idea - a combination of markets, product line and way of doing business. In this context, the measures describing the product line were as follows:

- \* the share (%) of the main product or product group in the turnover - PRODSHARE
- \* the product technology, based on the entrepreneur's evaluation of the uniqueness of his products (0=totally different from or quite unique compared with the products of competitors, 1=quite or totally similar to other products) - PRODTECH
- \* the product policy (1=emphasis on existing products, 2=emphasis on new products, 3=emphasis on both existing and new products) - PRODPOL

The measures describing the markets and the customers were:

- \* location of the main competitors (0=same region, 1=elsewhere) - COMPLOC
- size of the main competitors (0=bigger, 1=other) - COMPSIZE
- \* character of customers (0=all or the most of the firm's customers have previously used similar products of other companies, 1=others) - CUSTOMER
- \* marketing policy (1=emphasis on existing customers, 2=emphasis on new customers, 3=emphasis on both existing and new customers) - MARPOL



- \* growth rate of the market demand (0=quick, 1=slow, stable, irregular or shrinking) - MARGROWTH.

The measures describing the way of doing business were:

- \* type of production (0=one off production or small-scale batch production, 1=other) - PRODTYPE.
- \* collaboration with other firms (0=none, 1=yes) - COLLAB.

In addition, competitive advantages are assumed to describe the way of doing business. These were measured by Likert scale variables based on the estimates of the entrepreneurs. Under investigation here were the competitive advantages of infrastructure and human resource management (Porter 1985) which consisted of :

- \* competitive advantage based on ownership - OWNERSHIP
- \* competitive advantage based on worker skills - SKILLS.

The analysis is conducted in two stages. First, the knowledge, skills and personality attributes of the entrepreneurs are examined and, second, the strategic choices of the enterprise are studied. In both cases, the analysis consists of three parts: (1) estimation and interpretation of the logistic regression model in metal products (i.e., do forced founders and their firms differ from the others in metal products ?); (2) comparing the measures and searching for statistically significant differences, variable by variable, between metal products and business services; and (3) identifying differences, variable by variable, within business services ( i.e., do forced founders and their firms differ from the others in business services ?). The results of the first two parts are illustrated in tables 2.3.1 and 2.3.3.

## **3 RESULTS**

### **3.1 Characteristics of the entrepreneur**

The results show that those who gave unemployment or the threat of it as one of the motives for founding an enterprise differed from the other founders. Additionally, the results show clearly that the industry environment is also of great importance. The results are shown in table 2.3.1, where the estimated logistic regression model is presented as well as the differences between the industries. As far as the measures of the classification scale are concerned, only the statistical significance is presented. In all the other cases, the means are also included in table 2.3.1.

TABLE 2.3.1 Estimated logistic regression model for metal products and differences between industries in characteristics of entrepreneurs

Characteristics	Metal products Firms			Differences between industries		
	$\beta$	Standard error	Significance	metal industry	business services	Significance
PRIMEDU	0.782	0.507	0.123			0.000
VOCATEDU	0.751	0.487	0.123			0.000
EDU			0.534			0.000
EDU (1)	0.752	0.677	0.266			
EDU (2)	-0.285	0.398	0.474			
WORKEXP			0.733			0.218
WORKEXP(1)	-0.336	0.446	0.451			
WORKEXP(2)	0.031	0.431	0.943			
COMPETENCE	0.160	0.113	0.157			0.471
WORKE	-0.111	0.375	0.768	4.16 (.69)	4.22 (.65)	0.491
DOMIN	0.847	0.493	0.086	3.09 (.61)	3.38 (.45)	0.000
EXCEL	-0.353	0.717	0.622	4.57 (.39)	4.60 (.39)	0.656
MASTE	-0.399	0.470	0.396	4.19 (.56)	4.26 (.54)	0.391
CHOIC	1.077	0.436	0.013	2.30 (.67)	2.18 (.63)	0.226
OTHER	-0.983	0.499	0.049	2.86 (.61)	2.83 (.64)	0.725
INTER	0.086	0.516	0.868	3.84 (.59)	3.86 (.53)	0.794
CONSTANT	-3.864	4.307	0.370			
	-2 Log Likelihood	$\chi^2 = 116.0, df = 119, p = 0.564$				
	Goodness of Fit	$\chi^2 = 123.7, df = 119, p = 0.368$				

*Metal products:* The correlations between the independent variables slightly hinders the interpretation of the estimated logistic regression model. However, as a whole, the estimated model satisfact predicts the location of the observations in the two groups under examination. 84.3% of all observations were assigned to the correct group by the logistic regression model. This classification ability was mostly based on the correct classification of those who became entrepreneurs out of the positive motives. About a half of those who gave unemployment or the threat of it as one of the motives for founding a business are assigned correctly by the estimated model. The results are presented in table 2.3.2.

TABLE 2.3.2 The classification ability of the estimated logistic regression model in metal products

		Predicted frequencies		Percent correct
		Positive motives	Forced founding	
Observed Frequencies	Positive motives	101	3	97.1 %
	Forced founding	18	12	40.0 %

The logistic regression model in table 2.3.1 and the classification ability illustrated in table 2.3.2 show that those who gave unemployment or the threat of it as a motive for founding a business differed from entrepreneurs with other founding motives. However, the differences were smaller than expected. According to the results, the groups were similar in terms of knowledge and skill indicators like education and work experience. Instead, in the chance locus of control (CHANC) and in the control of powerful others (OTHER) differences emerged between the groups. The first was typical of those who gave unemployment or the threat of it as a motive for founding, whereas was characteristic of those became entrepreneurs for positive motives.

The results also indicate differences in achievement motivation. The desire to lead or to be in a position of dominance (DOMIN) may be typical of those who gave unemployment or the threat of it as a motive for founding. In other words, the drive to dominate supports becoming an entrepreneur in a constraining position. Such an individual believes in his/her ability to lead others and to control events.

The analysis by variables brings out some differences that are not shown in the estimated logistic regression model. In metal products the basic education (PRIMEDU,  $p=.043$ ) of the entrepreneurs and, to some extent, their professional education (VOCATEDU,  $p=.058$ ) differed between the two groups. Low educational level, primary or vocational, was typical of forced founders. A low educational level hinders occupational and regional mobility and creates pressure to seek out new solutions.

*Differences between the industries:* Some of the differences between metal products and business services were to be expected. In business services, which is a knowledge-intensive industry, the level of primary (PRIMEDU) and vocational (VOCATEDU) education of the entrepreneurs was notably higher than in metal products. Differences were also clear in the nature of the entrepreneur's vocational education (EDU) and reflect the different environments of the industries. In business services, the percentage of those with a commercial education was high. In manufacturing, on the other hand, the percentage of those with technical education was higher than in business services. However, with regard to personal characteristics, there were few differences between the industries. A stronger desire to lead or to be in a position of dominance (DOMIN) was typical of entrepreneurs in business services.

*Business services:* In business services those who gave unemployment or the threat of it as a motive for founding their firms differed to some extent from

those who only emphasised positive motives for founding. The differences relate to the characteristics of the entrepreneurs since the knowledge and skill background was quite similar among entrepreneurs in the industry. It is also worth noticing that, as in metal products, the level of primary or vocational education of the entrepreneur did not discriminate between forced founders and other entrepreneurs. Moreover, the results suggest forced founders considered they had a lower level of entrepreneurial know-how than other founders (COMPETENCE,  $p=.084$ ).

“Work ethic” (WORKE), which describes the motivation to achieve based on finding reinforcement in performance itself, did not differ between the groups. Instead, there were clear differences in “the pursuit of excellence”, in “the desire to do well, to do one’s best” (EXCEL,  $p=.021$ ) and in “the desire to lead or to be in a position of dominance” (DOMIN,  $p=.015$ ). The groups also differed from each other in problem solving, tackling a difficult task and succeeding in the face of difficulty (MASTE,  $p=.083$ ). In these respects, the forced founders showed a less than average achievement motivation.

Of the dimensions of locus of control, belief in the control of other people (OTHER) was weaker for those who gave unemployment or the threat of it as a motive for founding a firm ( $p=.005$ ). The groups, however, did not differ from each other in the belief in one’s own control (INTER) or in the belief in the control of other people (OTHER).

### **3.2 Strategic choices**

The strategic choices of enterprises established by forced founders differed from those of other new enterprises. These also differ between enterprises in the metal products and business services sectors. The results are summarised in table 2.3.3, which, in addition to the estimated logistic regression model, shows the differences between the industries in the measured characteristics.

TABLE 2.3.3. Estimated logistic regression model for the metal products sector and differences between industries in strategic choices made by firms

Characteristics	Metal products			Differences between Industries		
	$\beta$	Standard error	Significance	metal industry	business services	Significance
PRODSHARE	-0.020	0.013	0.139	80.6 (20.8)	78.0 (23.2)	0.429
PRODTECH	-0.401	0.350	0.251			0.582
PRODPOL			0.037			0.981
PRODPOL (1)	-0.115	0.444	0.796			
PRODPOL (2)	-1.679	0.677	0.013			
COMPLOC	0.804	0.384	0.036			0.000
COMPSIZE	0.840	0.330	0.011			0.926
CUSTOMER	0.706	0.317	0.026			0.602
MARPOL			0.176			0.043
MARPOL (1)	0.447	0.411	0.277			
MARPOL (2)	0.635	0.449	0.158			
MARGROWTH	1.349	0.584	0.021			0.934
PRODTYPE	0.727	0.409	0.076			0.008
COLLAB	-1.104	0.442	0.013			0.196
OWNERSHIP	0.644	0.374	0.085	3.62 (.87)	3.60 (.89)	0.366
SKILLS	-0.465	0.456	0.308	4.32 (.72)	4.50 (.70)	0.082
CONSTANT	0.011	2.630	0.977			
	-2 Log Likelihood $\chi^2 = 95.9$ , df = 119, p = 0.942					
	Goodness of Fit $\chi^2 = 173.6$ , df = 119, p = 0.001					

*Metal products:* As previously, the correlations between the independent variables make it difficult to interpret the estimated logistic regression model. However, the model satisfactorily predicts the location of the observations in the examined groups quite well. 87.3% of all observations were assigned to the correct group. The classification ability of the model was influenced by the accuracy of correctly classifying those who became entrepreneurs out of positive motives. 60% of those who had become entrepreneurs because of unemployment or the threat of it were classified correctly by the estimated model. The results are presented in table 2.3.4.

TABLE 2.3.4 The classification ability of the estimated logistic regression model in metal products

		Predicted frequencies		Percent correct
		Positive motives	Forced founding	
Observed frequencies	Positive motives	99	5	95.2 %
	Forced founding	12	18	60.0 %

The indicators of strategic choice divided the two groups better than those measuring the knowledge and skills and personal attributes of the entrepreneur. Forced founding was revealed in six ways: (1) the enterprise competes with bigger enterprises (COMPSIZE); (2) the enterprise often collaborates with other enterprises (COLLAB), which is partly explained by the amount of subcontracting in sales and purchases; (3) more entrepreneurs emphasise new products in relation to those who simultaneously emphasise both new and existing products (PRODPOL); (4) the entrepreneur regards the rate of growth of market demand as rapid (MARGROWTH); (5) the firm's customers often have no earlier experience of similar products from other firms (CUSTOMER); and (6) the main competitors are located in close proximity (COMPLOC).

Our interpretation of COMPLOC is that an enterprise is often founded in a region previously familiar to the founder (Niittykangas 1985). Hence the influence of the entrepreneur's previous employment on the strategic choices of the newly established firm is strong (Halttunen 1981; Hauta-aho 1990). An enterprise in the same industry, possibly manufacturing similar products, is considered as more of a competitor than collaboration. Moreover, attitudes of this kind are understandable from the point of view of the motives of entrepreneurship, such as the itch to be independent, to be one's own boss, and self-advancement, which also may reflect the need to search for opportunities to use one's experiences of working life.

The analysis by variables highlighted some differences not included in the logistic regression. Those who gave unemployment or the threat of it as a motive for founding a firm consider ownership a competitive advantage (OWNERSHIP),  $p=.033$ ), which is understandable, given the small share of external financing in the start-up situation. The results also point to a difference in the type of production. One-off production or small-scale batch production appears more typical of forced founder than other firms (PRODTYPE,  $p=.072$ ). Differences in product technology (PRODTECH) may also be possible. Forced founders are more likely to see their products as unique compared with the products of the competitors than other founders.

*Differences between the industries:* Differences between the two industries reflect their environments. Business services may be highly customer-oriented, originating in the needs of the customer (PRODTYPE). Also, the possibility of standardising the firm's products is restricted. In addition competitors are, more often than in manufacturing, located near the enterprise, often in the same region (COMPLOC). The importance of existing customers is more important for manufacturing enterprises than for business services (MARPOL).

*Business services:* The strategic choices of the enterprises within the industry did not differ much, either from each other, or between the two different founding groups. According to Niittykangas and Tervo (1996) (Tervo and Niittykangas 1994), the location behaviour of enterprises in business services seem to be very homogeneous. Those who gave unemployment or the threat of it as a motive for founding tended, more than the others, to emphasise existing or simultaneously existing and new customers whereas enterprises founded out of positive motives only emphasised new customers (MARPOL,  $p=.003$ ). The differences in measures also indicates that forced founders more often than the others emphasised a competitive advantage based on worker skills (SKILLS,  $p=.075$ ).



## 4 CONCLUSIONS

The origin of this study was based on two empirical observations. First, there is a positive correlation between changes in unemployment rates and changes in new firm formation. This interdependence is strengthened when enterprise density is high and local market demand is increasing, i.e., the region provides good opportunities for entrepreneurship (Niittykangas and Tervo 1993). Second, some kind of compulsion is more frequently than ever proposed as a motive for founding a business, and not only in Finland. This is because unemployment or the threat of it is increasingly present. Hence it is important to inquire, whether the personal characteristics and the strategic choices of enterprises founded by entrepreneurs who gave unemployment or the threat of it as a motive for founding differ from those who only emphasised pull factors.

The results show that such differences exist. Not surprisingly, there were differences in personal characteristics: forced founders had a stronger belief than the others in the control of powerful others as well as in chance, fate and luck. However, the forced founders did not seem to differ from the others in their belief in their own control. These differences, however, were smaller than expected, given the results of Niittykangas and Kinnunen (1995) on different working careers, suggest clearer differences.

The results also indicated differences in the strategic choices of the enterprises but in quite a positive way. Forced founders seem to concentrate in new and innovative products and on customers with no previous experience of similar products. Forced founders collaborate with other entrepreneurs and have confidence in the growth of market demand. Their enterprises are, however, smaller than average and their most important competitors are more likely to operate in the same region, implying they face greater competition.

Metal products and business services differ from each other both in the characteristics of the entrepreneurs and in enterprises' strategic choices. These differences reflect very different environments. Business services are knowledge-intensive, so close access to customers is usually a precondition of the birth of firm and its growth. The indicators measuring the developmental

stage of the location take centre stage in explaining the location behaviour of these enterprises (Niittykangas et al. 1994). In manufacturing, factors of this kind are only loosely coupled with location behaviour (Reynolds et al. 1994). Instead, measures like the proportion of small firms and enterprise density are of greater importance.

The results do not show how “forced founders” succeed as entrepreneurs or whether they differ from other entrepreneurs in this respect. The results, however, show that unemployment or the threat of it are well-established influences on new enterprise formation. The results do not imply that forced founding means insufficient preconditions for development. According to the corridor principle, an entrepreneur stands at the very beginning and it is his/her responsibility to take advantage of the “window of opportunity” and move quickly into a new venture.

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## CHAPTER III

### ARTICLES ON THE CRITICAL OPERATIONAL PHASE OF NEW FIRMS

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<sup>1</sup> Littunen, H. (1997) published in Academy of Entrepreneurship, International Journal of Entrepreneurship, vol. 1(1), Academy of Entrepreneurship, 37-50.

<sup>2</sup> Littunen, H., Storhammar, E. and Nenonen, T. (1998) published in Entrepreneurship and Regional Development, vol. 10 (3), 189-202.

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<sup>3</sup> Littunen, H. (1999) manuscript being refereed for Journal of Small Business & Enterprise Development.

## THE CRITICAL FIRST YEARS OF FIRMS

### Abstract

The importance of new firms, for example in generating employment and innovations, is not realised until new firms continue beyond the critical start-up phase. This study clarifies which factors at start-up influence subsequent success. Trait models and contingency theory are examined. Factors influencing the success of newly established firms were found in relation to the characteristics of the entrepreneur, the success of the start-up project, and the features of the firm. The results show that the personal characteristics of the entrepreneurs alone did not explain why some new firms were successful and some were not. Nevertheless the personal qualifications of the entrepreneur, the desire to dominate and mastery were connected with his training and did influence the firm's success. In addition, the opportunities provided by the market situation, such as factors influencing the start-up decision, were emphasised in successful enterprises. The firms which closed, most have failed to overcome problems encountered at start-up. In these cases where the start-up had failed, the firm had been established on the grounds of unrealistic expectations and its profitability had been low. Unrealistic expectations were connected with lack of resources or insufficient planning and entrepreneurial limitations.



# 1 INTRODUCTION

Improving the survival rate of new firms is an international problem. A generally known fact is that only a small proportion of new firms survive and very few grow to be big companies. In Finland, about 59% of the firms operating in 1986 and employing less than five persons had closed by 1993. At the same time, new firms with less than five persons created about 68 500 new jobs (SME Report 1996). In the UK, about 62 % of firms are estimated to disappear from the market before their fifth year of operations (Cressy 1996). Surviving and rapidly growing firms, however, are of great importance both locally and nationally: it is these which really create employment since their share of new jobs has been estimated as high as 16% (Foley and Green 1989). The first 1-3 years are the most critical operational phase for firm survival; once they have survived three years, they can with good reason be described as having passed through the valley of death (Gibb 1990).

The question of how to approach the success of the firms can be seen from the viewpoint of a firm's goals and ways of realising them. The goals of a firm are formulated by its interest groups, such as the entrepreneur himself or other proprietors, the employees and the firm's financiers. Instead of defining the goals of firms, a common approach is to define the preconditions which ensure continuity in business.

The value environment of a firm is connected with the way it finances its activities, and in order to succeed, the firm has to achieve some kind of co-ordination with its environment and obtain sufficient financing in order to be able to stay in business. A certain minimum profitability is a necessary precondition for survival. Once the firm has been established, continuing in business proves that the firm has, at least to some extent, been able to meet the expectations of its interests groups. In the start-up phase of the business it is essential that the firm is able to cope with the costs directly caused by its operations (Rehnman 1972). Continuing in business can, in the critical start-up phase, be interpreted as the minimum aim of the entrepreneur. In this study, continuing in business after the critical active phase (from one to three years) was taken as the criterion of success.

## 2 APPROACHES

Two very different starting situations characterise the development of a new business. One is a business developed by the entrepreneur himself, where the central factor is the person of the entrepreneur or his family acting as entrepreneurs. Business activities begin to develop as a personal life strategy, as a way of earning a living, and are very strongly influenced by the personality of the entrepreneur. A typical family firm is perceived as a small and solid family community where ownership, leadership and family are united (Hoy and Verser 1994, Koskinen 1996).

The second possible starting point is that of an established firm within the framework of which new businesses emerge or are created in-between the old ones. Both starting points are connected with the features prevailing at the moment when the firm is established. In both these cases the crucial question concerning the new firms' success is the qualifications of the entrepreneur or management and the role of the action environment. The importance of the action environment in the success of new firms is emphasised, since it is often the case that the environment and the competitive environment are combined, firms are established in the home district, business activities are concentrated in the neighbouring market and the firms are small.

The decision to establish a new firm is, ultimately, a choice made by an individual, and therefore the entrepreneurial qualifications, the will and opportunities of that individual are matters of crucial concern when studying entrepreneurship. According to Casson (1982), the characteristics which are related to successful entrepreneurship are the ability to take risks, innovativeness, knowledge of how the market functions, manufacturing know-how, marketing skills, business management skills and the ability to co-operate. According to Pickle and Abrahamson (1976), the typical features of a successful entrepreneur are the will to do something, the intellectual characteristics, a facility for human relations and communication, and technical competence. Caird's (1988) entrepreneurial characteristics are a good nose for business, the desire to take risks, the ability to identify the opportunities of the business, the ability to correct errors effectively, and the ability to grasp profitable opportu-

nities tightly. Kettunen's (1985) view is that an entrepreneur needs faith in the possibility to change things, faith in his own abilities to influence things and the ability to activate his own will. Kanter (1989), instead of naming entrepreneurial characteristics, names four success factors for a firm in the 1990's. She takes the view that a firm has to direct its business activities to the core areas of its know-how. In addition to this, the firm has to be quick in its decision-making. In her opinion the firm has to be flexible. The fourth feature linked with success is the ability to make alliances.

In research on entrepreneurship two schools of thought can be distinguished: one emphasising trait model thinking and the other emphasising contingency thinking. Trait model thinking takes a psychological perspective which places the emphasis on the individual. Trait model studies the basic question of why certain individuals establish firms or succeed as entrepreneurs. It is presumed that entrepreneurship can be explained in terms of various qualifications at the individual level, such as motivation and needs (McClelland 1961 and 1965). For many trait model researchers characteristic features of an entrepreneur can be summarised as optimism and a belief in his own abilities. Optimism can be a question of self-confidence (Timmons 1976), of the ability to make objective observations (Schrage 1965) or to identify the opportunities he has at his disposal (Shapiro and Sokol 1982). The belief in one's own abilities has been dealt with in studies dealing with the attribution of control.

In order to succeed, a person has to have self-confidence and a belief in his own abilities. A person's life control can be understood to be the locus of control experienced during the life-course. According to Rotter (1966), an individual's locus of control is either internal or external. An internal control expectation refers to control of one's own life, where the results of one's action are considered to be dependent on either one's behaviour or one's permanent characteristics. An external control expectation refers to the kind of attitude high focuses on the actions of other people or on fate, luck or chance. Rotter's (1966) internal control expectation is connected with learning in the sense that an internal control expectation motivates active striving and supports it, whereas an external control expectation hampers learning and supports passivity. An internal control expectation is usually related to entrepreneurial characteristics.

According to contingency thinking, the establishment of a firm and the success of firms cannot be examined separately from the situation and environment (Gilad and Levine 1986). Accordingly the features of personality required by entrepreneurship are bound up with the start-up of the firm. The crucial question then is what the external factors affect the birth of firms and how these are then linked to the subsequent success of the firms. One approach has been to divide these factors into two groups: push factors and pull factors. Considering the start-up through contingency thinking makes it possible to go beyond the immediate reasons for the start-up to examine the key influences on the start-up phase of business.

Contingency thinking reinterprets the traditional approach and removes the need for the often rather artificial division between psychological and sociological approaches. From the viewpoint of the success of new firms, contingency thinking connects the start-up of a firm to the competence of the

entrepreneur, which is considered crucial in the success of firms. The next step is to identify those factors related to competence, which are within the entrepreneur's control, both to the features of the entrepreneur's personality and to the way he acts.

### **3 AIMS OF THE STUDY**

This study determines the factors connected with the start-up situation of firms and how the critical start-up phase affects the subsequent success of firms. The establishment of a firm is viewed as a phase-by-phase process which ends with a specific business idea upon which the firm is established. The decision to found a firm is based on either experimentation, self-confidence or planning. Entrepreneurship based on experimentation may start as a part-time activity in which the business idea is tested in practice (Lehti 1990). Entrepreneurship based on self-confidence implies that the founder of the firm has a strong belief in his own ability to influence events and to transform his will into practical action. Entrepreneurship based on planning accords most strongly with the process view.

The changes in plans made at start-up and during the starting phase of entrepreneurship repeat defects in planning and/or changes in the action environment which could not be taken into account during the planning phase. The attached figure presents the study framework.

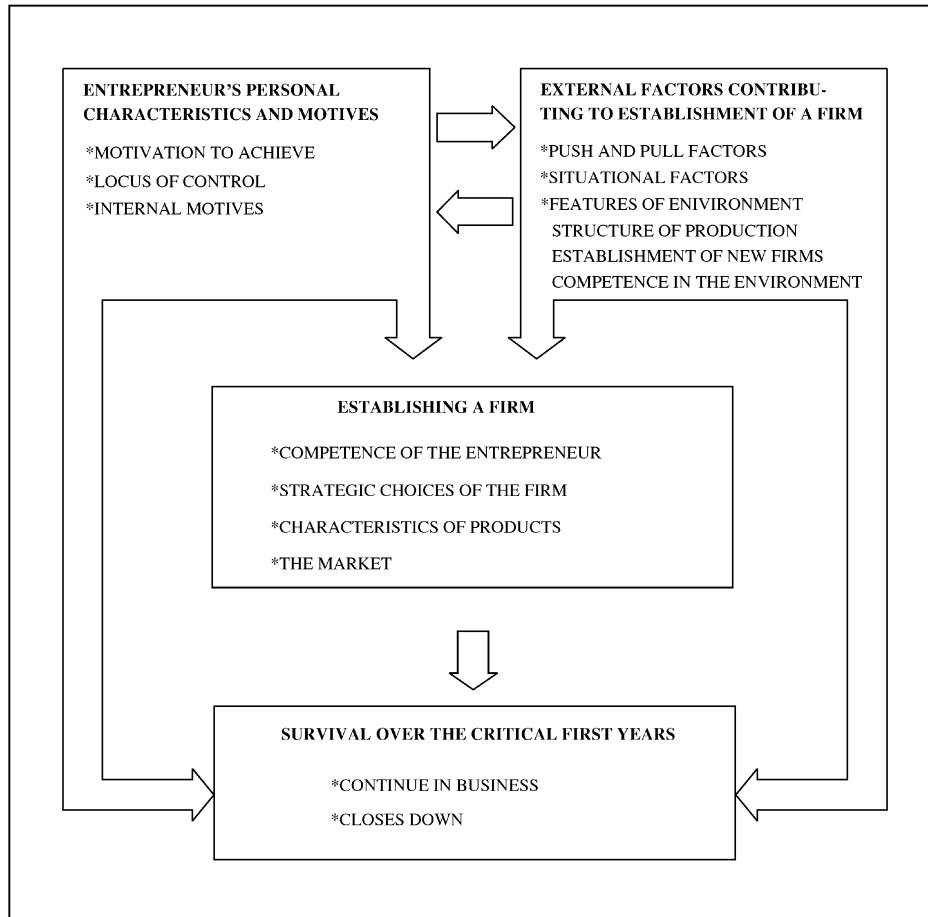


FIGURE 3.1.1 Study framework showing the success of new firms

To interpret the establishment of a firm as a process means the features of the entrepreneur's personality and internal motives are insufficient to explain entrepreneurship and continuing in business. For this reason the present study examines the topic from the viewpoints of the trait model and contingency theory. However, through the strategic choices made by firms and business thinking, there are also links to both strategic thinking and, through the interaction of the entrepreneurs, to network theory. Based on these theoretical starting points, four hypotheses are framed:

- (1) only features of the entrepreneur's personality affect continuing in business,
- (2) a combination of factors connected with the start-up situation of firms and features of the entrepreneur's personality affect continuing in business,

- (3) features within the environment of firms affect continuing in business,
- (4) the different interrelationships of the entrepreneur influence whether the business continues.

In this study, the features of the entrepreneur's personality were measured both through their achievement motivation and their control expectations. These derive from McClelland (1961) and Rotter (1966). The achievement motivation of entrepreneurs was measured by four different dimensions, each consisting of four different items: work ethic, pursuit of excellence, mastery and dominance (Cassidy and Lynn 1989). The locus of control of entrepreneurs was measured by three different dimensions: chance attributing, internal attributing and powerful others (Levenson 1981).

Contingency Theory suggests that the personality of an entrepreneur influences the start-up of the firm. But the second research hypothesis suggests that personal features are not sufficient to explain continuing in business. The external factors affecting the start-up of a firm link this with the way entrepreneurship is realised. External factors can be divided into two groups: push factors and pull factors. Examples of push factors are unemployment or the threat of it, external spurring on or re-organisation of business activities. Pull factors include the possibilities offered by markets or previously created customer contacts.

Contingency Theory also connects the birth and success of new firms with the factors related to start-up. Situational factors lead to entrepreneurship and connect the individual to situations preceding the start-up and to the actual start-up itself. At the start-up various situational factors connect the success of new firms with the knowledge and skills of the entrepreneurs, both of which are crucial to the success of new firms. At start-up the situational factors can be interpreted as mainly related to the compatibility requirement between products, customers and the path of action (Norman 1976). The path of action is connected with the strategic choices that firms make. Contingency Theory links the business ideas of firms with the situations preceding start-up of the firm and with various start-up situations. The factors prior to start-up affect the birth of business ideas.

According to the third research hypothesis, the environment influences business survival. At start-up immediate surroundings are highly influence because most start-ups are in the entrepreneur's home district and the firm's business activities are often directed at the local market. Moreover, as Johannisson (1987) points out, entrepreneurship and the success of firms cannot be studied independently from the local environment. It can be assumed that the birth and success of firms are most beneficial in those areas which are dominated by small firms (Armstrong and Taylor 1985).

According to the fourth hypothesis, different interactive relationships between entrepreneurs affect business survival. From the viewpoint of a firm, the scope of different interest networks is ultimately to support the operation of the firm. The advantages of production networks lie in the fact that they create

closeness, certainty and belief in the firm's opportunities to act, need to transfer information and pressures to develop activities. Through personal interest networks, a firm is able to create new models of action and find connections with supporting persons and organisations (Johannisson 1985). Curran et al. (1993) is altogether more sceptical. Indeed he asserts that excessive networking is the threat to the independent position of the entrepreneur. In others words, small entrepreneurs have contacts with their surroundings, but the importance of these contacts is more limited than network theory implies (Curran et al. 1993).



## 4 SUBJECT AND ANALYSIS OF DATA

The subjects of this study (n=200) were Finnish metal products manufacturing firms and business services firms established in 1990. Data on the firms and entrepreneurs was gathered as part of a follow-up study. The firms were interviewed for the first time at the turn of the year 1992. Follow-up data was also gathered through telephone interviews during the years 1993-94, about three to four years after establishment, is also used in this study.

The subject firms were mostly small, about 60 percent with under five employees, and dependent on the entrepreneur's own work and that of his/her family's work. This was of great importance for the implementation of the study. The connection between the firm and the entrepreneur was strong. The strategy of the firm was chosen by the entrepreneur. Over 45 percent of the entrepreneurs included in the study had basic education, no higher than elementary school. Empirical studies suggest that new entrepreneurs start their firms by relying on work experience gained earlier when employed in a firm owned by someone else. Most of the new entrepreneurs come from small or middle sized firms, a fact which emphasises the importance of firm size in the start-up process. In most of the firms investigated the selection of products was, initially, based on the entrepreneur's previous work experience. Other important factors affecting the choice of the firm's product were a combination of previous work experience and vocational training and identifying the needs of customers in the market.

This paper compares the firms which continued in business with those which closed down. Four years after start-up 81 percent of the firms were in business and 19 percent closed down. Two years previously the respective shares were 86 percent and 14 percent. In the two different follow-up phases, 28 firms refused to participate in the follow-up interviews, i.e. 14 percent of the study group. For some firms the reason for refusal was that they had merged with another firm. Thus 172 firms are included in the present study after those firms which refused to participate in the two follow-up phases had been removed.

## 5 METHODOLOGY

The interviews of the first phase of the study constitute the basis for the investigation of the success of the firms. The results of the follow-up data are studied by grouping the features of the entrepreneurs and firms by means of cluster analysis. The aim of the groupings is to simplify the interview data, which is highly versatile. The results of the follow-up data obtained through interviews are grouped in the same way.

A number of multivariate statistical techniques can be used to predict a binary dependent variable from a set of independent variables. Multiple regression analysis and discriminant analysis are two such related techniques. However, these techniques pose difficulties when the dependent variable can have only two values - an event occurring or not occurring. Linear discriminant analysis does allow direct prediction of group membership, but the assumption of multivariate normality of the independent variables as well as equal variance-covariance matrices in the two groups is required for the prediction rule to be optimal. The logistic regression model requires far fewer assumptions than discriminant analysis; and even when the assumptions required for discriminant analysis are satisfied, logistic regression still performs well (Hosmer and Lemeshow 1989). The logistic regression model can be written as:

$$Y_{i=0,1} = \frac{e^z}{1 + e^z} \text{ or } \frac{1}{1 + e^{-z}},$$

where  $Y_{i=0,1}$  is the dependent variable and where  $Z$  is the linear combination

$$Z = B_0 + B_1X_1 + B_2X_2 + \dots + B_pX_p,$$

In the model  $B_0, B_1, \dots, B_p$  are coefficients estimated from the data,  $X_1, X_2, \dots, X_p$  are the independent variables, and  $e$  is the base of the natural logarithms. In logistic regression the parameters of the model are estimated using the maximum-

likelihood method. Since the logistic regression model is nonlinear, an iterative algorithm is necessary for parameter estimation (Hosmer and Lemeshow 1989). Logistic regression models predict to a certain level of probability that a firm will succeed. Because of the descriptive nature of this study these probabilities have not been calculated.

Here continuing in business after the critical start-up phase is described using logistic regression analysis. The explanatory models describing the continuity in business are constructed in two phases. In the first phase the continuity in business is explained and in the second phase the factors in the background of the continuity in business.

## **6 RESULTS**

### **6.1 A model to explain the continuation of entrepreneurial activities**

From the entrepreneurial viewpoint it is essential to look for those factors describing an individual which prompt an individual to turn to entrepreneurship and predict his success as an entrepreneur. The special features of the entrepreneurs' personality did not have any direct connection with the continuity in business. The model described in table 3.1.1 included the variables which from the theoretical frame of reference best explained continuity in business. Variables with statistically significant coefficients in the model are the start-up situation of the business, the planning of the start-up process and the entrepreneur's training background.

Family firms clearly continued in business more often than firms which had company shareholders. In the critical start-up phase family firms employed several forms of action which help to maintain continuity. A family, as the owner of the firm, commits itself in many ways to the development of the firm. The activities of firms which have arisen through reorganisation quickly come to an end during the first few years, if the firm does not attain the relatively demanding goals that have been set for it (table 3.1.1).

TABLE 3.1.1 Continuity in business of new firms (variable being explained: stopped activities/ continues to function)

Variables	Coefficient	Standard error	Significance
Work ethic	0.565	0.485	0.243
Dominance	-0.645	0.462	0.163
Chance	-0.608	0.458	0.184
Planning of the start-up process <sup>1</sup>	1.583	0.343	0.000
Work experience in many fields <sup>1</sup>	0.098	0.436	0.821
Training <sup>1</sup>	0.768	0.360	0.032
Characteristics of the main product	-0.449	0.329	0.172
Number of products	0.483	0.300	0.107
Start-up situation of business	-0.816	0.302	0.006
Constant	0.182	2.629	0.944
-2 log Likelihood $\chi^2$ test quantity 89.910 (sig=1.000) (df=155) <sup>1</sup>			

Non-surviving firms continued to experience start-up problems in their early years. In these firms there was a poor match between plans and outcomes. The initial investment involved in establishment the firm did not materialise as planned because loan financing had grown too big in the start-up phase. In cases where the start-up had failed the firm was unrealistic and its profitability did not materialise (Argenti 1976). Unrealistic expectations may also have been connected with lack of resources, insufficient planning as well as entrepreneurial incompetence. The nature of entrepreneurs' training explained the continuity in business. As a rule, those entrepreneurs who had training in the start-up phase continued in business.

## 6.2 Factors in the background of the continuity in business

In the second phase of the study, special models were constructed to explain survival. In this way it is possible to examine the influence of the various background factors on the birth of new firms and subsequent survival. Table 3.1.2 shows the key factors affecting the birth of new firms.

<sup>1</sup> Some data has been lost in the independent variables.

TABLE 3.1.2 Birth of firms (variable to be explained: family firms/other firms)

Variables	Coefficient	Standard error	Significance
Characteristics of main product	-0.337	0.183	0.066
Motives for establishing a firm <sup>1</sup>	0.480	0.225	0.033
Share of owners' personal loan financing <sup>1</sup>	0.009	0.005	0.073
Work experience in many fields <sup>1</sup>	0.723	0.338	0.032
Constant	-1.329	0.379	0.000
-2 log Likelihood X <sup>2</sup> test quantity 198.631 (Sig=0.025) (df=162) <sup>1</sup>			

The development of a business can be characterised by two starting positions. One is a family firm where the business starts as a personal life strategy - as a means of earning a living. The second is a firm where new business activities occur or are created beside or amongst the old ones.

The factors influence the success of firms at start-up were the motives for establishing the firm and the characteristics of the main product. In family firms, pull and push factors (= opportunities given by the market situation and threat of unemployment) were particularly important as factors influencing the decision whether or not to establish the firm. According to various studies, in over 50 % of cases, entrepreneurs originally obtained their business ideas from their former employer (Dunkelberg and Cooper 1982, Hauta-aho 1990). The importance of previous work experience could be clearly seen in the characteristics of products. By trying to differ from its competitors a firm can achieve better control over competitive forces. Family entrepreneurs with work experience in many fields and whose products differed from those of their competitors usually continued in business beyond the critical start-up phase.

Typical firms which closed down were those which transferred problems connected with the start-up phase to the critical first years of the firm. In close-downs there was a mis-match between what actually happened and the original plans. The financing of start-up investments did not materialise as planned because loan financing had grown too large.

TABLE 3.1.3 Planning of the start-up (variable to be explained: start-up plan not realised as planned/realised according to plan)

Variables	Coefficient	Standard error	Significance
Work ethic	-0.980	0.4630	0.0342
Mastery	0.536	0.4803	0.2642
Training <sup>1</sup>	0.101	0.3468	0.7694
Work experience in many fields <sup>1</sup>	1.090	0.2726	0.0001
Share of owners' personal loan financing <sup>1</sup>	-0.018	0.0058	0.0011
Motives for establishing a firm <sup>1</sup>	-0.155	0.2780	0.5758
Constant	3.334	2.2535	0.1389
-2 log Likelihood $\chi^2$ test quantity 136.309 (sig=0.893) (df=158) <sup>1</sup>			

There was an interesting connection between entrepreneurs' work experience and personal characteristics and the planning of the start-up process. Versatile work experience and a strong work ethic were emphasised among entrepreneurs whose financing arrangements had not materialised in the way they had planned. The results may indicate that work experience in many fields increases entrepreneurs' knowledge of products and hence their willingness to take risks in the start-up phase of the firm.

TABLE 3.1.4 The nature of new entrepreneurs' training and personality characteristics (variable to be explained: no vocational education/vocational education)

Variables	Coefficient	Standard error	Significance
Work ethic	-1.600	0.559	0.004
Dominance	1.304	0.538	0.015
Pursuit of excellence	0.036	0.781	0.962
Mastery	1.157	0.594	0.051
Chance	-0.839	0.400	0.036
Internal	-1.860	0.645	0.003
Powerful others	-0.464	0.461	0.314
Constant	10.246	3.877	0.008
-2 log Likelihood $\chi^2$ -test quantity= 99.562 (Sig=0.999)(df=159) <sup>1</sup>			

The nature of entrepreneurs' training explained the continuity in business (table 3.1.1). As a rule, those entrepreneurs who in the start-up phase of the firm had training remained in business. The personality features of entrepreneurs explained through the nature of training continuity in business. Dominance and mastery was emphasised among entrepreneurs who had training when the firm was being established. The results can also be interpreted to indicate that training (vocational education) increases the possibility for entrepreneurs to influence the factors prevailing in the firm's environment. A strong work ethic, the role of chance in the action and internal control were linked with the personality characteristics of entrepreneurs without training.

## 7 CONCLUSIONS

This study identifies the factors influencing success the start-ups. It found these to be the characteristics of the entrepreneur, the success of the establishing venture and the characteristics of the firm.

Our empirical results did not support the hypothesis that survival is related to the entrepreneurs' personality. According to the results, a strong work ethic was connected through the planning of the process of establishing the firm with the closing down of the business. The result is contrary to McClelland's (1961) theory and supports Khan's (1986) critique of McClelland's theory. A strong work ethic may lower the threshold related to the start-up of a firm but does not guarantee the preconditions for action if there are shortcomings in the entrepreneur's competence. The dimensions describing locus of control did not directly explain survival/non-survival but, through the entrepreneurs' training, were connected with survival.

According to contingency theory, the factors connected with start-up and the characteristics of the entrepreneurs' personality combine to explain continuity. The importance of earlier work experience could clearly be seen in the characteristics of products. Family entrepreneurs who had work experience in several fields and products which differed from those of their competitors generally continued in business after start-up. Entrepreneurs' training also explained the continuity in business. Dominance and mastery was emphasised amongst entrepreneurs who had training at the time the firm was established. The results can also be interpreted to mean that training increases entrepreneurs' ability to affect through dominance the changes taking place in the firm's environment in the start-up phase. These results contradict Rotter's (1966) theory because entrepreneurs without training believed at the same time in both internal and chance control. According to Vesala (1992), Rotter's hypothesis points to something essential from the viewpoint of entrepreneurship, namely the belief in one's own ability to influence events. In certain respects the relationship between the entrepreneur's own or the environment's ability to influence events and the effect of this relationship on the entrepreneur's ability



to cope failed, however, to explain the external control concept. In this respect the results of this study supported Vesala's (1992) critique of the hypothesis on control expectations.

Contingency Theory implies that the establishment of a firm and its success cannot be studied independently from the environment. The opportunities provided by markets as factors influencing the decision to establish a firm were emphasised in successful firms. Thus, through the environment, entrepreneurship is connected with the traditional micro-theoretical view. The existence of demand is clearly a precondition for entrepreneurship (Mäkinen 1977).

Small firms enter into many kinds of relationships with their environment. The nature of this link can influence business survival. The models were considerably weakened when the variables describing interrelationships were connected with those explaining in business survival. The results suggest that these relationships cannot compensate entrepreneurs for any shortcomings in their own competence. An alternative interpretation was that the shortcomings in the entrepreneur's competence may be reflected when mobilising these interrelationships. The results imply that competence was more important to the continuity in business than the network theory of connections, thus providing support for Curran et al. 1993.

On the whole the results of this study can be compared with those of Argenti's (1976). He separates two types of failure in the establishment of firms. The empirical results obtained in present study support the first type. A firm that closes down in the start-up phase has failed from the very beginning. Such a firm has been established on the basis of unrealistic expectations and its performance cannot throughout its short business life have always been weak. Shortcomings in the entrepreneur's competence were emphasised in unsuccessful firms.

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## **THE SURVIVAL OF FIRMS OVER THE CRITICAL FIRST 3 YEARS AND THE LOCAL ENVIRONMENT**

### **Abstract**

This study examines the factors affecting the success of new firms in different environments. The criterion of a successful firm is that of survival, and firms are divided into two groups: those which have closed down and those which continue after first three years. As the basis for the regional analysis the characteristics of firms and entrepreneurs are first examined. The regional distribution of the firms which closed is then examined, followed by an analysis of regional differences in the characteristics of all firms and entrepreneurs. Regional differences were found in the closure of firms as well as in the factors explaining continuation/closure. Explanations of firms' success were found in the characteristics of the entrepreneur, the success of the start-up phase, and in the characteristics of the firm itself. The effects of the environment on firms can thus be seen through these variables.

*Keywords:* new firms, critical years, success, environment

# 1 INTRODUCTION

Facilitating the survival of firms and the promotion of entrepreneurship are currently seen as more important than ever. However, there are problems in how to find effective ways of facilitating this development in different regions. By studying regional differences between successful and unsuccessful entrepreneurial activities, and the factors affecting these differences, a basis for regional development policy can be formed.

Theories of endogenous growth assume the central regional factors in the growth process (including the establishment and development of firms) are local entrepreneurship, social networks, an innovative milieu, flexibility of production factors and institutional structures (D'Arcy and Giussani 1993). New firm formation is most likely to be successful where: most of the firms in the region are small; most of the personnel/workers have business managerial know-how; the level of education in the region is high - especially the percentage of persons with high technical education; economic life can be characterised as active; people living in the region have property that can be used as security for a loan; and industry in the region is not restricted to lines of business where entering the market is difficult (Armstrong and Taylor 1985). Johannisson (1987) emphasises that it is not possible to study entrepreneurship and the development of entrepreneurial activities as separate from the opportunities offered by the environment. He differentiates five dimensions of interaction between competencies of the individual and of the environment: (1) motives, values and attitudes, (2) skills, (3) social competence, (4) insight, (5) facts.

The regional possibilities for entrepreneurial activities, competence, competition and interactive relationships are, therefore major influences on the birth and growth of new firms. Competence is developed by both the entrepreneurial characteristics of the population and the general level of know-how in the region. The skills and know-how of the entrepreneur are emphasised as factors in the success of small firms. Competition and interactive relationships are factors that maintain successful development by forcing and stimulating firms to be flexible (Niittykangas et al. 1994).

The opportunities for entrepreneurship are influenced by the production structure of the region (Isaksen 1996; Spilling 1996), which, in turn, also affects the strategic choices of new firms. This means that starting a new firm is often a question of reorganising existing business activities (Littunen 1991). An unstable environment presupposes specialisation and the formation of alliances also in the case of newly established firms. This requires know-how from the entrepreneur and the ability to adapt the business to changing circumstances (Johannisson 1987; Courlet and Pecqueur 1991). The general potential for entrepreneurship is connected to the infrastructure of the business life in the region and to the infrastructure of everyday living and welfare.

Although the role of the environment has been stressed above, it must be remembered that entrepreneurship and entrepreneurial action in small firms is closely connected with the personal characteristics of the entrepreneur. Becoming an entrepreneur is always a personal choice, and for this reason the characteristics of the entrepreneur, will and opportunities are central in studying entrepreneurship. However, there are different approaches in studying entrepreneurship (Storey 1994; Chell 1986). It is possible to differentiate between two main schools: the trait model and the contingency theory (Gilad and Levine 1986). In the psychological model the personality characteristics of an individual entrepreneur are seen of prime importance. In studies of this kind the main question is why certain individuals start firms or are successful as entrepreneurs. Entrepreneurship is seen as something explicable - through particular individual characteristics, such as achievement motivation and needs (McClelland 1961, 1965).

According to contingency theory, entrepreneurship cannot be studied in isolation from situational factors such as economic situation, local environment and the life situation of the individual entrepreneur (Gilad and Levine 1986). For example, the opportunities provided by markets are prerequisites for becoming an entrepreneur. A situation in which the demand for a commodity is greater than its supply favours the starting of new firms. At the sectoral level it is possible to connect this with the structural paradigm according to which firms can be grouped according to their strategy. A firm's way of reacting to external stimuli and way of competing reflects its strategic choices. The concept of impediments to entering a market is related to the concept of strategy group (Caves and Porter 1977; Hatten and Hatten 1987). Firms already functioning in a particular sector form impediments to new firms trying to enter the same market. The strength of these impediments is dependent on the changes that take place in the strategic position of the in-situ firms.

From this starting point the aim of this study was to examine the success (survival) of new firms in different environments and the factors affecting that success. First, the aims of this study are presented in more detail. A model explaining the success of the firms is discussed and success is analysed in connection with features of the environment. Finally, conclusions are drawn about the success of new firms and the effects of the environment on this success.

## **2 AIMS AND PROCEDURE**

### **2.1 The Framework of the study**

According to contingency theory, new firms, their birth and their functioning, should be studied in the context of their environment. The environment plays an important role in the success of a new firm because the geographical environment in which a firm operates and its competitive environment are in most cases identical; the firm has been started in the entrepreneur's home area, marketing is concentrated in the local area and the firm is small. The environmental factors affecting entrepreneurial activities can be grouped into the following categories: (1) the general prerequisites for entrepreneurial activities offered by the region, 2) the effects of the region on the characteristics of the firms in it; and 3) the effects of the region on the entrepreneurs heading those firms (figure 3.2.1).

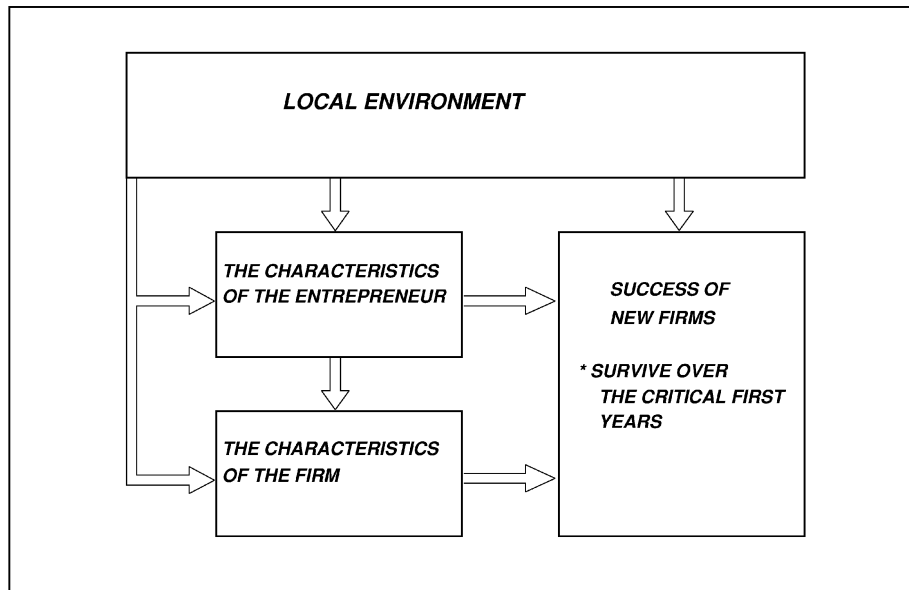


FIGURE 3.2.1 Study framework: factors explaining the success of new firms

On the basis of these factors our aim was to find

- \* *whether there are regional differences in the success of firms, and, if so, the relationship between the characteristics of the environment and the factors affecting the success of the firm, ie. the characteristics of the firm and the entrepreneur.*

In starting a new firm the role of the entrepreneur is vital because the whole process is often heavily dependent on the work of the entrepreneur and his/her family. The success of a firm can be explained in terms of the characteristics of the firm, the know-how of the entrepreneur, and his/her personality. The operationlization of the decision to start a firm, the size of the initial investment and financing required, all affect subsequent development. Problems in establishing the firm, the need for working capital and the high cost of capital as compared to income may derail the firm at an early stage. The knowledge and know-how of the entrepreneur are important factors in establishing a firm - especially vocational training and work experience. In part the know-how in the firm is a result of the personal contacts and networks the entrepreneur has in relation to other firms, and the connections the firm has with organisations supporting the development of firms (Niittykangas 1992; Johannisson 1987).

Broadly speaking, two different starting points exist for the development of new entrepreneurial activity. On one hand, there are entrepreneurial activities where the main factor is the entrepreneur himself/herself. Entrepreneurial activities are developed as a life strategy of the entrepreneur, as a way of making a living, and thus centred around the entrepreneur's personality. On the other hand, there are firms already in existence where new ideas for



entrepreneurial activities arise, either to exist side-by-side with the old activities or to form an integral part of them. The potential for the development of entrepreneurial activities is, in this case, a combination of the qualities of the entrepreneur or the managers of the firm, the established firm itself and the environment. The factors explaining the success of the firm will be sought in the characteristics of the firm as well as in the characteristics of the entrepreneur by answering the following questions:

- (1) *Which characteristics of a firm and which factors affecting the start-up and basic - choices made by that firm will make development possible and which factors will lead to failure at the outset of entrepreneurial activities ?*
- (2) *Which characteristics of entrepreneurs are connected with success and which lead to failure at the outset of entrepreneurial activities ?*

In this study the criteria for the success of new firms will be survival during the critical first 3 years after start-up (Gibb 1990). The characteristics of firms and entrepreneurs who closed down their activities during the first 3 years will be compared with the characteristics of firms and entrepreneurs who continued in business. Continuation of entrepreneurial activities is a clear sign of success (Rehman 1972); the first years of the new firms are also critical for stabilising the entrepreneurial activity. During a short period of studying it is not possible to gather enough data to consider the success of firms in terms of growth and profitability.

As a regional question the regional differences in the success of new firms and the effects of the environment on the success of new firms are also studied. By studying the regional differences in successful entrepreneurial activities and the factors affecting these differences, one can expect to find ways of enhancing regional development. To form a basis for the regional analysis, differences between the characteristics of firms and entrepreneurs in these two groups outlined above are first reviewed. Next, the extent of regional differences in firm deaths within the first 3 years are examined. Then, regional differences in characteristics of firms and entrepreneurs are analysed. In this study the factors affecting the success of new firms are analysed by logistic regression analysis.

## **2.2 Data<sup>1</sup> and classification of regions**

The firms, in this study were Finnish metal products manufacturers established in 1990. Data on these firms and entrepreneurs was gathered as part of a follow-up study in which interviews were carried out in 138 firms. The firms were interviewed initially at the end of 1991 and at the beginning of 1992, and for a second time in 1993 - about three years after their establishment. In this study the critical first three years of the new firms are studied. After three years 82 percent of the firms continued and 18 percent had closed (Littunen 1992, 1994).

The firms were mostly small (= under 50 employees) and largely dependent on the entrepreneur's own work and that of his/her family. In this case the bond between the entrepreneur and the firm was strong, the strategic choice of the firm was made by the entrepreneur himself/herself and the things that the entrepreneur sees as worth attaining in life are reflected in the activities of the firm. About 60 percent of the firms had less than five employees. Start-up investment was, on average, 42 percent of the annual turnover of the first year. The initial investment was mostly found by capital financing and loans.

The education of over 45 percent of the entrepreneurs did not go beyond elementary school. The founders of firms normally had technical training at vocational level. Prior work has shown that entrepreneurs often start their firms by relying on work experience they gained as employees in a firm owned by someone else. Most new entrepreneurs come from small or middle-sized firms, a fact which emphasises the role of the existing production structure in the starting of a new firm. The choice of products in the new firms in the present study had in most cases been made on the basis of the entrepreneur's previous work experience. Other important factors affecting choice of product were a combination of work experience and vocational training, and observations of the needs of customers in the market.

In this paper the regional unit used is the subregions, comprising two or more municipalities<sup>2</sup>. The subregion is relevant to entrepreneurial activities because it usually corresponds to the market area, labour market area and co-operation area of small firms. The subregions have been classified into four categories according to industrial structure (Pikkarainen 1993 - there are seven types of region in the original classification). The four categories are based on the original seven types as follows: (1) the capital area; (2) centres where service industries are dominant and centres where the industrial structure is diverse; (3) industrialised urban areas and rural areas where manufacturing is dominant; and (4) rural areas where service industries and/or primary production are dominant. Restricting the categories to four is necessary, first, in order to analyse regional variation with the available data and, second, because the characteristics of the aggregate regions are similar (for statistical information on the regional categories, see appendix ).

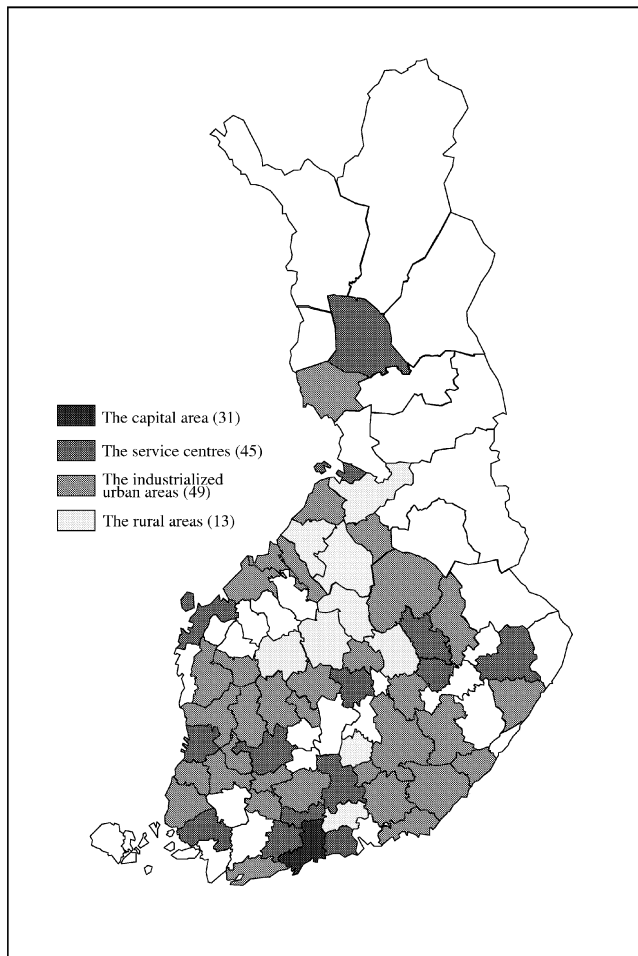


FIGURE 3.2.2 Number of interviews in different regions

The *capital area* clearly stood out from the rest of the country. A second distinct area comprised mainly the provincial centres and other industrialised service centres (= *service centres*). The third region represented industrialised urban areas and industrialised rural areas where industrialised town centres are typical (= *industrialised areas*). The fourth category included rural areas where the primary sector is dominant and rural areas where the share of services - in general tourism and/or public services - is relatively high because there are few manufacturing firms (= *rural areas*). The number of interviews in the different areas is presented in figure 3.2.2.

### **3 THE SUCCESS OF NEW FIRMS**

There are various definitions of the success of a firm. We favour approaching the concept of success from the point of view of the firm's own goals and whether these have been attained. Firm survival proves it has been able to fulfil the expectations of the people involved and so can be considered an appropriate criterion of success. In this study the criterion of a successful firm was defined as survival. Firms are divided into two groups: those which closed down their activities during the first 3 years and those which continued to trade.

#### **3.1 Personality characteristics of entrepreneurs and the success of new firms**

When examining entrepreneurship, psychological studies take the viewpoint of the individual. The basic question they ask is why certain individuals start enterprises or are successful as entrepreneurs. Entrepreneurship is presumed to be explicable in terms of certain characteristics of the individual such as motivation and needs. Situation and environment are either not taken into account in these studies or are implicitly considered stable.

When studying entrepreneurship the most commonly used motivation theory is McClelland's (1961) achievement motivation theory. This assumes persons who have a high achievement motivation are those who want to solve problems by themselves, set goals and attain them on their own. The theory presumes that entrepreneurs with high achievement motivation are more successful than others.

To be successful, people must have self-confidence and believe in their own abilities. Control over one's own life is a fact a person can only have introspective knowledge of. An internal locus of control is defined as the way to control one's life where the results of an activity are seen to be dependent on

one's own behaviour or permanent personality characteristics. A person believing in an external locus of control emphasises the activities of other people, fate, luck or chance. According to Rotter (1966) an internal locus of control affect learning by motivating and supporting a person's activity, whereas an external locus of control hinders learning and supports passivity.

In the present study the connection between the personality characteristics of entrepreneurs and the success of their firms was examined both in the framework of the achievement motivation theory and the locus of control theory. The achievement motivation of the entrepreneurs was described by four dimensions each of which was formed by four components: work ethic, pursuit of excellence, mastery and dominance. The locus of control orientation of the entrepreneurs was described by three dimensions, each of which consisted of four components: internality, powerful others and chance (Levenson 1981).

TABLE 3.2.1 Factor scores in varimax rotation of the achievement motivation and the control orientation of entrepreneurs

Achievement motivation and control orientation	Factor 1	Factor 2	Communality
Work ethic	0.632	-0.091	0.407
Pursuit of excellence	0.628	-0.161	0.420
Mastery	0.766	0.216	0.633
Dominance	0.560	-0.258	0.380
Chance	-0.256	0.753	0.633
Internal	0.446	-0.351	0.322
Powerful others	0.059	0.848	0.722
Eigenvalues	2.242	1.278	
Pct of variance (n= 138)	32.0	18.3	

Two basic dimensions can be seen in the personality characteristics of the entrepreneurs (table 3.2.1). The first showed that those entrepreneurs with a high achievement motivation feel that they are responsible for the results of the activities. This supports Rotter's (1966) theory according to which, a high need for achievement is connected to an internal locus of control. In many other studies of entrepreneurship the connection between an internal locus of control and a high need for achievement has also been seen as one of the basic characteristics of entrepreneurs (Johnson 1990; Pandey and Tewary 1979). The other basic dimension of the entrepreneurs is that some see chance or their environment as responsible for the results of their activities.

### 3.2 A model to explain the continuation of entrepreneurial activities

Survival/Non Survival of entrepreneurs and firms was examined by logistic regression. It is assumed that survival/ non survival is explained by achievement motivation (work ethic and dominance), control orientation (belief in luck

or chance) and the other variables shown in table 3.2.2.

TABLE 3.2.2 The description of the dichotomous variables

Variables	Values
Entrepreneur's evaluation of the start-up - (planning of the start-up process)	Start-up not realised as planned/according to plan
Training	No vocational education/ vocational education
Entrepreneur's evaluation of the quality of their main product (quality of product)	Product similar to competitors' / Different from competitors
The nature of the start-up decision	Family business/shareholders in the firm
The extent of co-operation between the firms	No co-operation/ have co-operation

TABLE 3.2.3 Continuation of activities in new metal products manufacturing firms (variable to be explained: stopped activities/ continues to function)

Variables	Coefficient	Standard error	Significance
Work ethic	-0.547	0.468	0.242
Dominance	0.609	0.438	0.165
Chance	0.667	0.449	0.137
Planning of the start-up process	-0.531	0.267	0.047
Training	-0.150	0.331	0.650
Quality of product	0.771	0.329	0.019
Nature of start-up decision	0.532	0.277	0.055
Co-operation with other firms	0.142	0.270	0.598
Constant	0.693	2.610	0.790
Model of Chi-Square (=0.024) (df=8) (n=138)			

The variables 'planning of the start-up process', 'quality of product' and 'the nature of the start-up decision' have statistically significant values in the model (table 3.2.3), whereas 'co-operation between the firms' is insignificant. Firms that closed were more likely to have had problems which appeared in the start-up phase. The plans made by the entrepreneur and the actual development of the firm had not been the same. The timing of the start-up investment were not realised as planned and investments, were technically of a lower standard or the organising of the financial investment was not carried through as planned.

Surviving firms were more likely to have attempted to differentiate products from those of their competitors and thus gain an advantage. The products of firms that had closed were too much like those of their competitors, and these firms were thus not able make a break-through in the market. Whether firms survived was also dependent on the nature of the start-up decision. Family businesses were more likely to survive than firms with shareholders. The family business is strongly identified with the entrepreneur, who is committed to the firm. On the other hand the closure of firms founded by reorganisation may be because the new firm never quite attains the goals set for it by the shareholders; the reason motivating reorganisation, for example, might have been a new product.

The variables describing the characteristics of the entrepreneur were not statistically significant in explaining the success of firms. Instead, whether the firms survived its early years was strongly related to the way the start-up was planned. Those firms where the size of the start-up investment, timing, technical standards and financing were as planned usually continued their activities after the first 3 years. We now examine whether there were differences in the characteristics of entrepreneurs, in terms of how systematic their planning was during the start-up phase. In the model the characteristics of the entrepreneurs were described in terms of their personality characteristics, training and work experience.

TABLE 3.2.4 Characteristics of entrepreneurs and realisation of start-up plans (variable to be explained: start-up plan realised not as planned/ as planned)

The characteristics of the entrepreneur	Coefficient	Standard error	Significance
Work ethic	-0.490	0.380	0.197
Pursuit of excellence	-0.682	0.654	0.296
Mastery	0.815	0.413	0.048
Dominance	0.085	0.382	0.823
Chance	0.680	0.381	0.074
Internal control	0.674	0.400	0.092
Powerful others	-0.129	0.373	0.729
Training	0.229	0.285	0.421
Experience as a worker	-0.680	0.368	0.064
Experience as a production manager	-0.801	0.371	0.030
Constant	-1.0823	3.517	0.758
Model of Chi-Square (=0.021) (df=10) (n=138)			

The characteristics of the entrepreneur do seem to be connected to whether the start-up was 'systematic' (table 3.2.4). The statistically significant variables in the model were 'Mastery' and 'Experience as a production manager'. In start-up plans that had been realised as planned the role of the entrepreneur as a problem-solver (mastery) was stressed. In other words these entrepreneurs considered various choices of action in the start-up phase and developed their activities from the very beginning. This is supported by the entrepreneur's previous work experiences, which adds to his ability to act in a changing environment from the beginning of the firm's activity.

## 4 THE SUCCESS OF NEW FIRMS AND THE ENVIRONMENT

The success of firms and its relationships with the personal characteristics of the entrepreneur have been examined by analysing the differences between surviving and non surviving new firms. The following examination of regional differences is based on this analysis. The definitions of the different types of region were presented in § 2.2. It is assumed that the success of a firm is related to regional development and vice versa. Illeris (1993) states that the existence of competitive firms is vital to the development of a region. He sees the most important factors affecting the development of competitive firms are the various regional conditions, the most important of which are political conditions, infrastructure, the availability of qualified staff, cultural conditions and modes of life, and compensating changes in factor prices plus the density of local population and the advantages of agglomeration.

TABLE 3.2.5 The developmental stage of the regions and the close-down of firms

Region	Functioning firms	Closed down firms	Closure rates (%)
Capital area	28	3	10.7
Service centres	30	12	40.0
Industrialised urban areas	39	6	15.4
Rural areas	16	4	25.0
Total	113	25	22.1

Table 3.2.5 shows marked differences in closure rates by regional type. Closure rates are high in the developed service centres but lower in the less developed regions (industrialised areas and rural areas) or in the capital area - about 48 % of close-downs were located in the service centres. The difference in the closures of new firms between the service centres and the rest of the country is statistically significant ( $p=0.034$ ). One reason for this could be that the more developed production structure of service centres lowers the barriers to firms entering the market, and thus too many firms are started by persons who are



not 'qualified' as entrepreneurs.

The results permit a closer examination of entrepreneurs and firms in the more developed service centre areas. Because of the small number of observations, it is not possible to study only those firms that closed down. For this reason the aim of this study is to find out whether differences exist between the entrepreneurs and firms in these more developed regions, compared with those in other regions. Those variables which best explained the regional differences were incorporated in the model.

TABLE 3.2.6 Regional differences in characteristics of entrepreneurs and firms (variable to be explained: service centres/ other regions)

Characters of entrepreneur and firm	Coefficient	Standard error	Significance
Work ethic	0.012	0.315	0.967
Internal control	-0.554	0.373	0.137
Training	-0.504	0.244	0.039
Nature of start-up decision	0.421	0.215	0.050
Local market firm	-0.175	0.219	0.424
Type of production	0.649	0.313	0.038
Constant	2.296	1.801	0.202
Model of Chi-Square (=0.019) (df=6) (n=138)			

'Training', 'Nature of start-up decision', and 'Type of production' are statistically significant different in the two groups of regions (table 3.2.6). This implies the characteristics of entrepreneurs and firms in service centre areas are different from those in other regions. Those who started a firm in a service centre area had a lower training levels than their counterparts elsewhere, even though the training level in service centre areas is generally higher than elsewhere. Owing to the influence of the production structure, the reason for starting of a new firm in these regions is often reorganising existing business activities; such firms also produce single products. This all serves to enhance failure rates for the reason given above. The more developed production structure also seems to lower the barriers to entering markets, and so encouraging persons who lack 'qualifications' to start businesses. Moreover, severe competition in the local market decreases the opportunities of making allies, and the lack of skills needed in entrepreneurship hinders specialisation.

## 5 CONCLUSIONS

The aim of this study was to examine the success of firms in different environments and the factors affecting that success. The continuation of business activities was taken as the criterion of success. Regional differences were found in the closure rates of firms as well as in the reasons for these outcomes. Explanations for the success of firms were found in the characteristics of the entrepreneur, the success of the start-up phase, and the characteristics of the firm. The effects of the environment on firms can thus be seen through these variables.

The success of a new firm is strongly influenced by the start-up phase. The plans of the entrepreneur and what actually happened differed within firms which closed. The timing of the start-up investment had not been realised as planned and the investments themselves were either technically of a lower standard or the financial investments were not carried out as planned. Insufficient planning during the start-up phase was related to the characteristics of the entrepreneur. Lack of ability to solve problems and a lack of diversified work experience characterised entrepreneurs whose start-up plans were not realised and who subsequently ceased their business activities. This can be interpreted as a sign of insufficient know-how on their part. This was primarily reflected in insufficient planning of the start-up phase.

The products of a firm are its way of offering clients its know-how. Surviving firms attempted to differentiate their product from those of their competitors and in this way minimise the forces of competition. The products of firms that closed were too similar to those of their competitors and so these firms were unable to breakthrough into the market. Survival also seemed to be dependent on the starting situation. Family businesses were more likely to survive than firms with shareholders. In family businesses the firm is strongly identified with the entrepreneur, and the entrepreneur is committed to the activity of the firm.

Many new firms were started in service centre regions where the production and vocational structures varied. Surprisingly the closure of firms was more frequent in these regions, even though the environment offers good

opportunities for innovation and differentiation. We therefore examined whether the entrepreneurs and firms in these regions differed from those elsewhere, and whether there were differences between surviving and non-surviving firms in these well developed regions.

The study indicates that a more developed production structure lowers barriers to entering the market and so individuals lacking entrepreneurial skills start firms more often in these than in other regions. The training of persons who started firms in these well-developed regions was generally lower than in the other regions. This lack of entrepreneurial skills was manifest in the start-up phase of the firm as insufficient planning and development of the firm's functions. As well as a positive environment the success of a firm demands special know-how on the part of the entrepreneur.

Firms have to be able to adapt to changing circumstances. When the environment becomes more complicated small firms need to specialise and make alliances. A firm can benefit from its ties with the environment, especially in decreasing uncertainty and through a learning process that leads to innovations. Competition and co-operation function as forces for development and increase a firm's awareness of the importance of co-operation. An increasing number of new firms is typical of a developing environment and it both strengthens the production structure of the region and increases jobs in the region. All this adds to the know-how in the region. In any case, the decision to start-up a firm is always made by an individual, and the entrepreneurial properties in an individual strongly affect the success of a firm. The existence of entrepreneurial qualities in an individual does not necessarily mean that the individual will become an entrepreneur. Entrepreneurial features can also be realised in other kinds of activities, but a low level of training may decrease work opportunities and lower the threshold to starting a firm of one's own.

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## Notes

1. There are 43 firms in the follow-up study which have closed down, and 34 firms have refused to give interviews at the various follow-up phases. The analysis does not either include those firms in which the entrepreneur has been replaced during the course of the different research phases.
2. Finland has been divided into 88 subregions by the Finnish Government (19.1.1993) on the basis of small economic areas.

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APPENDIX Descriptive statistics for the four regional categories (in brackets: the values for the unified regions)

	TYPE OF REGION			
	Capital area 1 subregion	Service centres 21 subregions	Industrialized areas 36 subregions	Rural areas 30 subregions
Share of population 1994 in				
-primary sector,%	0,6	7,8 (8,8/7,0)	14,9 (9,7/23,1)	26,7 (20,7/30,7)
-secondary sector,%	19,0	25,5 (21,2/29,4)	34,0 (37,8/29,4)	19,2 (18,8/19,5)
-tertiary sector,%	77,9	63,7 (66,0/61,0)	48,4 (49,9/46,2)	50,9 (57,4/46,5)
Population 1993, 1000's	1054	92 (72/110)	43 (53/27)	21 (22/21)
-change 1980-93,%	15,5	6,6 (8,9/4,6)	1,0 (0,9/1,2)	-2,1 (-1,1/-2,8)
Share of workers in information occupations, %	7,4	3,1 (3,0/3,2)	2,3 (2,6/1,9)	1,7 (1,8/1,7)
Educational level index 1995	418	292 (296/290)	268 (274/261)	255 (258/253)
Economic capacity class <sup>3</sup> 1995	10,0	5,8 (5,2/6,4)	4,5 (5,5/2,9)	1,9 (1,8/1,9)
Business activities 1990-1992:				
*Number of firms per 1000 workers	101,7	105,0	114,6	111,1
*Start-ups per 1000 workers	8,8	7,6	7,8	7,6
-manufacturing	1,0	1,9	2,9	2,5
-services	4,8	4,2	4,0	3,9
-business services	1,5	0,7	0,5	0,3

<sup>3</sup> Municipalities in Finland are classified into 10 categories according to their economic indicators. The amount of state support for a municipality is determined according to this category.

# THE BIRTH AND GROWTH OF NEW FIRMS IN A CHANGING ENVIRONMENT

## Abstract

This study examines the impact of these factors present at start-up and in infancy on the subsequent growth of firms. The factors affecting the growth of a new firm were found in the start-up phase, in the characteristics of the entrepreneur and of the firm, and in the firm's environment. According to the results, the start-up situation of a firm did not solely account for the firm's growth, although it provided certain prerequisites for growth. The know-how and changes in the strategic behaviour of the entrepreneur explained the growth of new firms. On the other hand the characteristics of the firm's environment explained the development of its activities. The empirical results showed that new firms had equal chances for growth irrespective of their locality. However, changes in a firm's competitive situation affected its growth and, especially in the more developed service centres, growth was dependent on an expanding market area in the critical operational phase. The results also clearly indicated that in a small specialising firm personal relationships were part of the entrepreneur's know-how.

Keywords: new firms, critical years, growth, environment

## 1 INTRODUCTION

Due to differences in the development of entrepreneurship the factors preceding the birth of a new firm and becoming an entrepreneur have been investigated from several points of view. The different characteristics of entrepreneurs, the business ideas on which firms are based, choosing a line of business and the characteristics of the new firm are important areas when studying the capacity and differences in the degree of a firm's development (Dyer 1994, Bauchus and Human 1994). Investigating a new firm's development and the entrepreneur's know-how is generally connected with an assessment of the entrepreneur's activities and goals as well as the motivation of his/her actions (Cragg and King 1988).

In addition to know-how, innovation is seen as an important factor affecting the starting up of a new firm. Innovation as factor leading to entrepreneurship has been emphasised, for example, by Caird (1988) and Johannisson (1987). In several studies innovation is associated with the firm's environment (D'Arcy and Giussani 1993). The entrepreneur depends on the local environment and the support it provides, especially during the start-up phase. When investigating the entrepreneur's characteristics, it is natural to connect them with the entrepreneur as an individual and with the environment in which the entrepreneurial activities are carried out (Johannisson 1987).

Much of the entrepreneurship literature is concerned with explaining the factors underlying successful firms. Some studies have contrasted firms that grow rapidly with those that grow marginally. According to Fisher et al. (1998), the factors connected with very rapid growth may contribute to our understanding of success in general. Second, rapid-growth firms are often job creators; hence ensuring that they prosper rather than stumble in a spectacular manner is of considerable economic importance. On inquiry into the determinants of high growth versus marginal survival (Cooper et al. 1994) found that the chances of both survival and high growth were positively associated with having a higher level of education, greater industry-specific know-how, and greater initial financial resources. Another recent study that directly compared



low-growth with high-growth firms found that the range and intensity of business networks was markedly higher in the firms that grew rapidly (Zhao and Aram 1995).

The growth of firms has been evaluated in terms of management and the development of new activities as well as the reformulation of a firm's problems and goals. In studies dealing with the life cycles of firms it has been suggested that the problems encountered during start-up and subsequent growth are different. According to Churchill and Lewis (1983), a small firm grows through five stages. To begin with the firm has to endure the pressures and demands of coming onto the market. Secondly, in order to survive, it must find enough customers. In the third stage, depending on the entrepreneur's goals, the firm strives for either growth or for stable and profitable development. According to Churchill and Lewis (1983), the fourth stage is associated with fast growth and its financing. During the fifth stage the most important factors are the maintenance of flexibility and the spirit of entrepreneurship. However, Churchill and Lewis point out that a firm does not necessarily go through all five stages. Miller and Friesen (1983) also describe the development of a business in five stages: start-up, growth, maturity, competition and regression. Studies of the firm's life cycle have been criticised in many respects. They have not explained how growth is attained or how the capacity of a firm grows, or identified the most crucial factors in this development, especially in small firms (Scott and Bruce 1987, Slevin and Covin 1995; Storey 1994).

On the other hand Storey (1994) has identified three components in the growth of small firms. These are:

- (1) the starting resources of the entrepreneur(s),
- (2) the characteristics of the firm,
- (3) the types of strategy associated with growth.

The three components need to be combined appropriately for growth to be achieved. This means it is very difficult at start-up to predict whether or not a firm will be a success (Storey 1994). This paper focuses on Storey's (1994) key elements. In this study connections between the factors affecting the birth of a firm and the effects of the development of the critical first years (1-3) on the firm's growth are examined.

## 2 AIMS OF THIS STUDY

The purpose of this study was to investigate which of the factors involved in the birth, start-up and critical operational phase of firms also had an effect on growth. In this study the establishment of a firm is interpreted as a progressive phase-by-phase process which ends in a specific business idea on the basis of which firm is set up (Bygrave and Hofer 1991; Gartner 1985; Reynolds 1995). The decision to found a firm is seen here as based on either experimentation, self-confidence or planning. Entrepreneurship based on experimentation may start as a part-time action in which the business idea is tested in practice (Lehti 1990). In entrepreneurship based on self-confidence the founder of the firm has a strong belief in his/her own capacity to influence events and in the ability to transform will into practical action (Reynolds 1992; Shapero and Sokol 1982; Timmons 1976). Entrepreneurship based on planning accords most closely with the process view (Krueger 1993; Krueger and Brazeal 1994; Krueger and Carsrud 1993).

Changes in plans made during the start-up situation of a firm and in the critical operational phase of entrepreneurship are evidence of effects of planning and/or changes in the action environment which could not to be taken into account during the initial planning phase. The following figure presents the framework of the study.

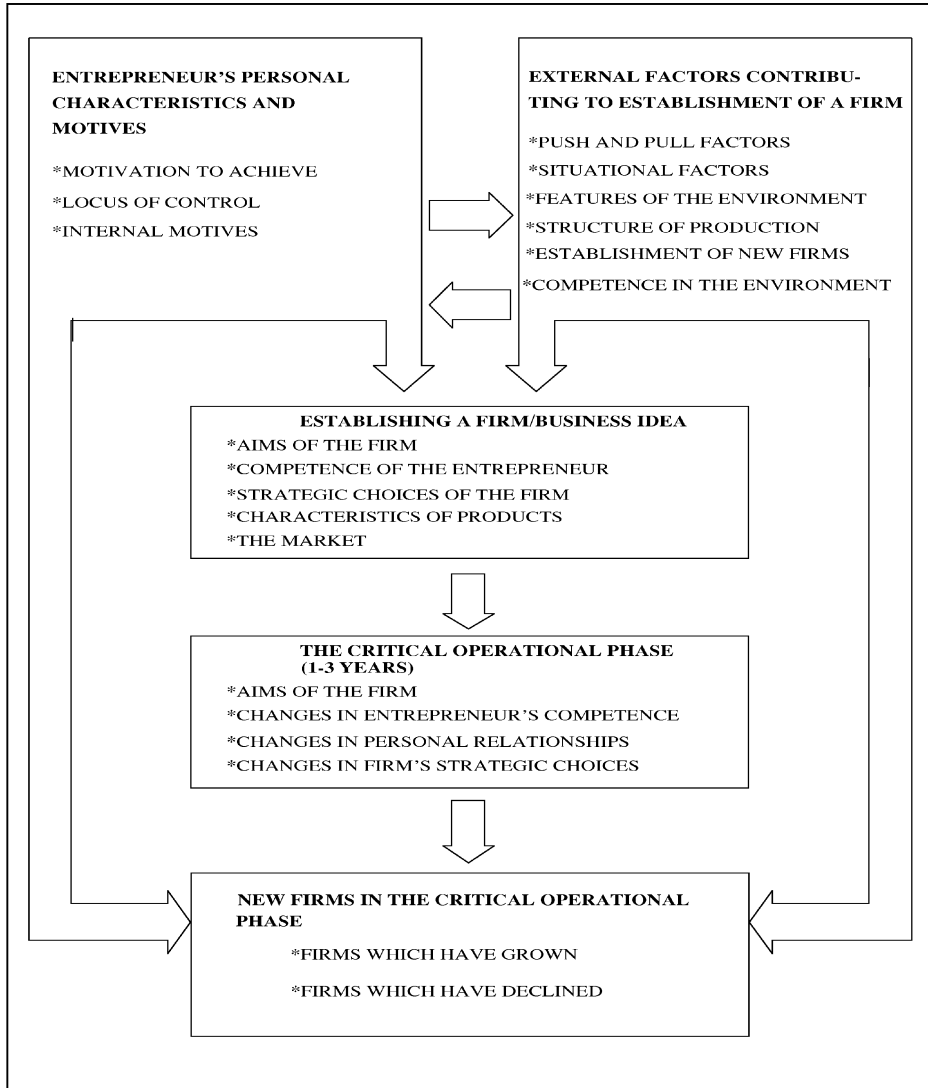


FIGURE 3.3. 1 Study framework showing the growth of new firms

To interpret the establishment of a firm as a process means that the features of the entrepreneur's personality and internal motives are not enough to explain entrepreneurship and the growth of firms. For this reason the present study examines the topic extensively from the viewpoints of contingency theory and the trait model. However, through the strategic choices made by firms and business thinking, there are also links both to the frame of reference of strategic thinking and, through the interaction of the entrepreneur, to network theory. According to contingency theory, the establishment of a firm and the success of firms cannot be examined in isolation from the specific situation and environment (Gilad and Levine 1986). Thus the personality characteristics of the

entrepreneur alone are not enough to explain the success of new firms. The crucial question then is: what are the external factors affecting the birth of a firm? One approach has been to divide these factors into two groups: push factors and pull factors (Storey 1994). Possible push factors include, for instance, unemployment or the threat of it, external support and company reorganisation. Pull factors include, among other things, opportunities offered by the market or previously established contacts with customers. According to the study by Cooper and Dunkelberg (1987) only 22 percent of entrepreneurs left their previous job because of negative "pushes", while 58 percent left because of the positive "pull" of plans for the new business.

Investigation of the start-up situation on the basis of contingency theory makes it possible to evaluate the reasons for the start-up and growth of a firm, as well as taking into account factors other than those of push and pull. These factors can be divided into six groups:

- the effects of previous work or entrepreneurial experiences on the decision to become an entrepreneur (Cooper and Dunkelberg 1987; Ray 1993; Vesper 1992),
- previous vocational or basic training (Cooper and Cascon 1992; Evans and Leighton 1990; Storey and Wyncarczyk 1996),
- other know-how or expert help given to the entrepreneur during start-up and the functionality of the start-up plan (Cooper and Cascon 1992; Sapienza and Grimm 1997; Stinchcombe 1965),
- the strategic choices of the firm (Norman 1976; Sandberg and Hofer 1987; Storey 1994),
- quality of interest networks (Birley 1985; Borch and Huse 1993; Dubini and Aldrich 1991; Johannisson 1998),
- features of the local environment (Almus and Nerlinger 1999; Armstrong and Taylor 1985; Isaksen 1996; Spilling 1996; Storey 1994).

In the start-up situation various situational factors connect the growth of new firms with the knowledge and skills of their entrepreneurs, both of which are crucial to success. In small firms the entrepreneur's knowledge and skills are closely connected with those of the firm. Some the qualities required of the entrepreneur are connected with know-how, some reflect the individual's personality and way of acting. Training and work experience are central because the business idea often stems from previous places of work. Know-how also partly affects the material resources of the entrepreneur. On the basis of these theoretical starting points the first research hypothesis is framed as follows:

- (1) features of the start-up situation and the entrepreneur's know-how affect the growth of a firm.

In this study, the features of the entrepreneurs' personality were measured both through their achievement motivation and their control expectations. The theoretical basis of the study derives from the theories of McClelland (1961) and Rotter (1966). Achievement motivation was measured by four different dimensions, each consisting of four different items: work ethic, pursuit of excellence, mastery and dominance (Cassidy and Lynn 1989). The locus of control of entrepreneurs was measured by three different dimensions, each consisting of four items: chance attributing, internal attributing and powerful others (Levenson 1981). The internal motives of the entrepreneur, like the experience of a challenge or the wish to be independent, have been observed in different studies to affect the birth and growth of new firms. The personality characteristics as well as the effect of the entrepreneur's internal motives are investigated both during the establishment of the firm and the beginning of trading. The second research hypothesis is framed as follows:

- (2) the entrepreneur's personality characteristics affect the growth of a firm.

The suitability of the trait model for describing the birth and success of firms has also been questioned. No clear connection has been found between the personality traits of an entrepreneur and success of a firm, while various studies show that compatibility between the firm's line of business and its strategy is an important success factor (Brockhaus 1980; Low and MacMillan 1988). Thus the trait model does not provide a sufficient description of the actual behaviour of the entrepreneur and the firm (Chell 1985). For example, the drive to become an entrepreneur or other personality traits connected to the firm's success have not emerged (Sexton and Boman 1983).

Criticism has been directed especially toward the assumption that entrepreneurs' personalities remain unchanged, even though the changes in the firm's action environment are accompanied by several other factors that are also subject to change (Carsrud and Johnson 1989). People, the firm's action environment and the entrepreneur's personality traits are constantly changing. It is difficult therefore to point to specific dimensions of personality that influence the process of becoming an entrepreneur and the success of firms (Littunen 2000). Psychological theories also neglect various personal networks, co-operation between firms and the characteristics of the line of business. Entrepreneurship ought to be understood as a set of relationships between the phase of life of the entrepreneur, previous experience and the social environment (Chell 1986).

Social psychologists have long used cognitive models of behavioural intentions with great success in practical applications and in basic research. These cognitive models have consistently shown robustness and replicability in predicting behaviour and intentions, including success in studies of career-related behaviours. The theory of planned behaviour specifies three distinct attitudinal antecedents of intention, each drawn from existing theory and prior evidence. Two of these reflect the perceived desirability of performing the behaviour: the personal attitude toward outcomes of the behaviour and

perceived social norms. The third, perceived behavioural control, reflects subjects' perceptions that the behaviour is personally controllable; it also reflects the perceived feasibility of performing the behaviour and is related to subjects' perceptions of personal situational competence (Krueger 1993; Krueger and Carsrud 1993; Krueger and Brazeal 1994). The theory of planned behaviour posits that exogenous influences on entrepreneurial intentions and behaviour operate by influencing attitudes. The existence of an entrepreneurial role model only weakly predicts future entrepreneurial activity (Brockhaus and Horwitz 1986; Carsrud et al. 1987; Krueger and Carsrud 1993).

### **Features of the environment**

In the birth of a new firm the influence of its immediate surroundings is considerable, since a significant share of births occur within the entrepreneur's home district and these firms' business activities are often directed at the local market. The development and starting of new firms is most likely to be successful in regions that have the following features: most of the firms in the region are small; most of the personnel/workers have business managerial know-how; the level of education in the region is high - especially the percentage of persons with high technical education; the economic life of the region can be characterised as active; the people living in the region have property that can be used as security for a loan; and industry in the region is not restricted to lines of business where entering the market is difficult (Armstrong and Taylor 1985). Storey (1982) has shown that the areas that have declined the most lack the features presented above. Johannison (1987) also emphasises that entrepreneurship and the success of firms cannot be studied separately from the features of the environment. The opportunities for entrepreneurship are connected to the production structure of the region (Isaksen 1996, Spilling 1996). The production structure also affects the strategic choices of new firms. Owing to the influence of the local production structure, starting a new firm is often a question of reorganising existing business activities (Littunen 1991). According to Smallbone et al. (1993) and Storey (1994), there is a strong correlation between a firm's location and its growth, firms located in urban and remote rural areas of the United Kingdom, for example, being likely to grow least rapidly (Storey 1994). Based on these theoretical starting points the third research hypothesis is framed as follows:

- (3) features in the action environment affect the growth of a firm.

In this paper the regional units are subregions, which are formed of two or more municipalities. The subregion is relevant to entrepreneurial activities because it usually corresponds to the market area, labour market area and area of co-operation of small firms. The subregions have been classified into four categories according to their industrial structure (Pikkarainen 1993 - there are seven types of regions in the original classification). The four categories are based on the original seven types as follows: (1) the capital area; (2) centres where service industries are dominant and centres where the industrial

structure is many-sided; (3) industrialised urban areas and rural areas where manufacturing is dominant; and (4) rural areas where service industries and/or primary production are dominant. Restricting the categories to four is in the first place necessary in order to carry out the regional examination with the data described above. A further justification is that the characteristics of the aggregate regions are similar (For statistical information on the regional categories, see Littunen et al. 1998).

### **Strategic choices of firms**

According to Mintzberg (1987), the strategy of a firm can be conceptualised as a plan, position in the market, vision concerning the future and the firm's state or as a model for actions in the stream of decisions. In this study the basic strategic choices of the firms were studied as models of actions. The conceptualising of a firm's strategy as a model of actions is based on the view connecting the business plan with operational management. One purpose of this paper was to study how changes in the firm's competition situation affect growth. Hence the starting point for investigating the firm's model of action is market orientation: a strategy of co-operation, focusing on the local market, and specialisation (Kettunen 1985). The firms which had chosen specialisation as their strategy were further classified into those specialising in products and those specialising in satisfying customers' needs, as the resources connected with these two strategies are very different. In addition, firms concentrating on exports were assigned to a category of their own. In this study four categories based on the firm's strategy were formed: sales as a subcontractor, concentrating on local markets, specialising and internationalisation. By utilising Storey's (1994) key elements in the growth of small firms to study the resources of the entrepreneur and the characteristics of the firm at start-up together with the changes in its strategy, it is possible to interpret the measures to develop a firm as part of the firm's growth process (Storey 1994). In relation to changes in business actions this study focuses on changes in products and the market situation as well as changes in the model of action. From these theoretical starting points the fourth research hypothesis is framed as follows:

- (4) changes in strategic choices affect the growth of a firm.

### **Personal relationships**

According to Low and MacMillan (1988), network theory is increasingly being applied to entrepreneurship research. Sweeney (1987) has underlined that networking is especially important in technological venturing. Entrepreneurial networks can be categorised into two types derived from different sources: informal and formal networks (Birley 1985; Johannisson 1985). Informal entrepreneurial networks consist of personal relationships, families, and business contacts. Formal networks consist of venture capitalists, banks, accountants, creditors, lawyers, and trade associations (Das and Teng 1997). There are many methodological advantages in studying entrepreneurial

networks in small firms (Johannisson 1990). First, the entrepreneur must be explicit about her/his personal network in order to become recognised and able to acquire further resources. Second the entrepreneur's network, including all direct and indirect linkages, gives her/him access to various segments of the environment (Johannisson 1998). The fifth research hypothesis is framed as follows:

- (5) the different personal relationships of the entrepreneur affect the growth of a firm.

Network theory also offers an approach to describing the development of the entrepreneur's know-how. From the point of view of the entrepreneur's developing know-how it is not possible to limit the interrelations only to those between market and firms. From the network thinking point of view the personal relationships of the entrepreneur describe the entrepreneur's efforts to develop as an entrepreneur. They form an independent field of know-how which supplements the entrepreneur's training and work experience. It is possible to see the versatility and number of these relations as enhancing entrepreneurship. According to Johannisson (1998), local knowledge-based entrepreneurs are more concerned with networking than traditional entrepreneurs.



### 3 SUBJECT AND ANALYSIS OF DATA

In this follow-up study stratified sampling was done, and the strata were the firm's size and line of business. The selection of the strata resembled Neyman's allotment (Pahkinen and Lehtonen 1989). The strata were sampled by simple random sampling, which requires that observations are weighted to correspond to the general population. For the first personal interviews with the entrepreneurs (n=200), 138 metal product manufacturing firms and 62 business service firms were selected from the firms' register of Statistics Finland (N=2583) as the subjects of the study. The interview data concerning the firms and entrepreneurs were gathered as part of a follow-up study. The firms established in 1990 were interviewed for the first time at the beginning of 1992. Follow-up data gathered through telephone interviews during the years 1993-94, about three and four years after establishment, have also been used in this study. After the fourth follow-up year 134 firms continued to function (for nine of these firms the measure of growth value was missing). 38 firms had closed down and 28 firms refused to participate in the two follow-up phases. Thus the present study concentrates on the 125 functioning firms for which full data were obtained.

The subject firms were mostly small, about 60 percent employing under five persons, and dependent on the entrepreneur's own work and that of his/her family. This was of great importance for the implementation of the study. The connection between the firm and the entrepreneur was close. The firm's strategy was chosen by the entrepreneur. Over 45 percent of the entrepreneurs included in the study had basic education no higher than elementary school. Empirical studies suggest that new entrepreneurs start their firms by relying on work experience gained earlier when employed in a firm owned by someone else. Most new entrepreneurs come from small or middle-sized firms, a fact which emphasises the firm's structure in the start-up process. In most of the firms investigated the selection of products was in the first place based on the entrepreneur's previous work experience. Other important factors affecting the choice of the firm's product were a combination of previous work experience and vocational training and identifying the needs of customers in the market.

In this paper a comparison chart has been constructed from the data comparing those firms which grew with those which declined. The measure of growth used here is the percentage growth of turnover during 1991-93. The interviews in the first phase of the study form the basis for the investigation of the success of the firms. The data of the first phase are studied by grouping the features of the entrepreneurs and firms by means of cluster analysis. The aim of the groupings is to simplify the interview data, which is highly diverse. The results of the follow-up data obtained through the interviews are grouped in the same way. Here the growth of the new firms after the critical start-up phase is described using logistic regression analysis. The logistic regression models predict to a certain level of probability that a firm will succeed. Because of the descriptive nature of this study these probabilities have not been calculated. The variables in the models are explained in the Appendix.

## **4 THE MODELS EXPLAINING THE GROWTH OF FIRMS**

### **4.1 The models according to firms' strategic choices**

In the models of the growth of new firms it was presumed that features of the start-up situation, the entrepreneur's know-how and changes in firms' strategic choices affect growth. The starting point was that the factors explaining a firm's growth will vary according to the chosen strategy. A model was formed for each of the four models of action (table 3.3.1).

TABLE 3.3.1 The significance of the four models describing the growth of new firms (Dependent variable : firms which have declined/ firms which have grown)

Variables	Subcontracting (significance)	Local market (significance)	Specialisation (significance)	Internationalisation (significance)
Work ethic	0.930	0.608	0.610	0.611
Dominance	0.987	0.792	0.988	0.800
Pursuit of excellence	0.174	0.344	0.444	0.328
Mastery	0.169	0.232	0.270	0.224
Powerful others	0.306	0.415	0.333	0.428
Location	0.538	0.240	0.244	0.274
Focus of marketing	0.068	0.108	0.060	0.109
Planning of the start-up process	0.073	0.131	0.041	0.127
Financing at start-up	0.275	0.310	0.200	0.332
Motives at start-up	0.013	0.010	0.021	0.010
Expert help in the start-up	0.000	0.001	0.000	0.001
Characteristics of the main product	0.003	0.000	0.003	0.000
Nature of start-up decision	0.042	0.090	0.023	0.101
Vocational training	0.059	0.130	0.185	0.113
Work experience	0.629	0.804	0.385	0.881
Changes in production policy	0.131	0.359	0.184	0.361
Changes in production process	0.007	0.011	0.007	0.011
Co-operation between firms	0.927	0.898	0.809	0.887
Changes in personal relationships	0.134	0.129	0.078	0.114
Line of business	0.505	0.950	0.577	0.960
Firm's strategic choice	0.043	0.866	0.056	0.887
Constant	0.214	0.477	0.545	0.497
-2 log likelihood X <sup>2</sup> - test quantity	0.641	0.518	0.630	0.518
df	100	100	100	100
Total classification rates (%)	84.4	83.6	85.2	86.0

The estimated models explained the location of the observations in the examined groups rather well. Of all observations, 83.6 -86.0 % were classified correctly by the logistic regression models. The high classification rates (87.7-89.0 %) of the models were mostly based on the successful grouping of the growth firms, although the firms which declined were also classified correctly. In all four models the following variables were statistically significant: motives for establishing a firm, expert help during start-up, characteristics of the main product and changes in the production process. It is noticeable that the variable 'line of business' was not significant. The growth of new firms was explained by internal motives such as the desire for independence and willingness to meet challenges. According to the results of this study the personality characteristics of the entrepreneur did not explain the growth of the new firms. The firms which had grown had relied on the entrepreneur's personal know-how during the start-up phase as they had rarely used outside

expert help in starting up. Firms which had a product resembling that of a competitor at start-up and which had increased their production capacity were well represented in the group of firms which had grown.

The factors explaining the growth of a firm alternated according to the strategy adopted by the firm. The subcontracting and specialising firms which had grown had often been started as a co-operative venture between existing firms and were owned by other firms. The goal of family firms was often the development and support of the founder's family members, while in firms which originated in the reorganisation of existing firms the goal was profit, effectivity and growth. The strategy guiding subcontracting and specialising firms was to find new customers, while firms which had concentrated on the local market and internationalising firms aimed at extending their market. In these firms a factor behind the strategy of finding new customers may also have been dissatisfaction with the start-up process. On the other hand, in subcontracting firms growth was also explained by the adequacy of the entrepreneur's training in the field.

In the firms aiming at specialisation, growth was also explained by change in the entrepreneur's personal relations. In a small specialised firm the personal relationships of the entrepreneur are part of the know-how controlled by him/her. By increasing his or her personal relations networks the entrepreneur is able to create new models for action with the persons and organisations supporting the business (Johannisson 1998). The strategy of the firm explained growth in the subcontracting and specialising firms. In the subcontracting firms, this was growth in dependence on the development of the main contractors' business and in specialised firms it was the development of activities differing from those of competitors.

According to the empirical results, new firms have equal possibilities for growth irrespective of locality. Locality was not a statistically significant factor in the models describing the growth of new firms, although it played a role in the survival of firms. The closing down of firms was clearly more common in some regions, even if the environment offered good opportunities for innovation and differentiation (Littunen et al. 1998).

## 4.2 Strategy change model

Another starting point in the investigation of firm's growth was the observation that, in some firms, growth had been achieved by changing the firm's strategy during the first three years. Changes in strategy could not be used as an explanatory factor in the previous models describing the strategic choices of firms because their strategic choices had changed. In the following model which describes changes in strategy, the growth of new firms is explained by changes in the models of action (table 3.3.2).

TABLE 3.3.2 The growth of new firms (Dependent variable: model of action unchanged / model of action changed - adaptation strategy (developing strategy))

Variables	$\beta$	Standard error	Significance
Location	-2.069	0.779	0.008
Focus of marketing	0.963	0.789	0.222
Planning of the start-up process	2.649	0.945	0.005
Financing at start-up	0.481	0.570	0.399
Motives at start-up	0.636	1.107	0.565
Expert help at start-up	1.476	0.827	0.074
Characteristics of the main product	-0.728	0.587	0.215
Nature of start-up decision	0.005	0.507	0.991
Vocational training	-0.716	0.859	0.404
Work experience	-1.606	1.034	0.120
Changes in market conditions	-1.668	0.645	0.009
Changes in marketing situation	-3.359	1.064	0.001
Changes in competition environment	-0.399	0.492	0.417
Customers as users of the product	0.141	0.525	0.788
Marketing situation	2.334	1.339	0.081
Line of business	3.179	1.830	0.082
Constant	-4.312	2.335	0.064
-2 log Likelihood $X^2$ -test quantity 1.000			
df=92			
Total classification rate = 88.9 %			

The estimated model explained the location of the observations in the examined groups rather well. Of all observations, 88.9 % were classified correctly by the logistic regression model. The high classification rate (95.5 %) of the model was mostly based on the successful grouping of those firms whose model of action had not changed, but more than one in two of the firms whose model of action had changed were classified correctly by the model. The statistically significant factors in the model were: location, planning of the start-up process, expert help at start-up, changes in market conditions and changes in marketing situation. The results describing the effects of the local environment on changes in firms' strategic choices were rather different from those in the models describing directly the growth of new firms. It was typical of the firms that had changed their strategic choices in the critical operational phase that problems which appeared in the start-up phase had been shifted onto the critical first years of the firm's activities. The timing of the start-up investment had not been realised as planned and investments were technically of a lower standard or financial investment had not been carried through as planned.

Changes in the firm's market conditions affected the changes in firm's strategic choices, and in the developed service centres, especially, changes in a firm's strategic choices were very common. Most of the firms in the developed service centres had expanded their market area. Likewise, in growing firms with developing strategies trust had been put in the entrepreneur's own know-how, as these firms had rarely used external expert help during start-up.

The results also are supported by the observation that the changes in firms' strategies was not explained by the quality of their products, as was the case in the previous models which reflected the strategic choices of the firms. The model of strategy development was weakened significantly when the entrepreneur's personality characteristics and personal relationships were incorporated into the model.

## 5 CONCLUSION

The aim was to investigate how the factors which play a role in the start-up situation and critical first years influence the growth of new firms. In the study factors affecting growth were found in the start-up phase of the firm, in the characteristics of the firm and of the entrepreneur, and in the firm's action environment. At start-up the entrepreneur's internal motives explained growth. An emphasis on loan financing at start-up seemed to be the reason for seeking growth. The results suggest that while the start-up situation alone did not explain growth, factors connected to the start-up situation offer certain opportunities and prerequisites for the growth and development of business activities. With these considerations in mind, the results support the first hypothesis according to which factors connected with the start-up situation and the entrepreneur's know-how affect the growth of firms (Storey 1994).

According to the contingency theory approach, factors present at start-up affect the growth of a firm. The entrepreneur's know-how is reflected in the characteristics of the firm's products and possibly in the execution of activities connected with the growth of the firm. The concept of control expectations offers a approach to understanding the entrepreneur's learning process. In this respect the results of this study were contradictory to Rotter's (1966) theory. The connection of internal attributes with firm growth predicted by Rotter was not found. External control expectations seem to reflect the relation between the entrepreneur and the environment and the activity of the entrepreneur in taking the chances offered by the market (Littunen 2000). Likewise no clear connection was found between the achievement motivation of an entrepreneur and the growth of a firm. The empirical results did not support the acceptance of the second hypothesis regarding the personality characteristics of an entrepreneur.

According to the third hypothesis, features of the action environment affect the growth of a firm. The decision to start a firm is a decision to invest in which the firm's local environment and the features of the action environment condition the firm's strategies. The firm's location affects its survival (Storey 1994; Littunen et al. 1998), but not its growth rate (Almus and Nerlinger 1999).



Instead, changes in the firm's competition situation affected growth. In particular firms' business activities in developed service centres are often directed at the local market, and for these firms growth depends on expanding the market in the critical operational phase. The results support the acceptance of the third hypothesis regarding the competitive environment.

According to the fourth hypothesis, changes in the strategic choice of the firm affect a firm's growth (Storey 1994). In these firms the versatility of the entrepreneur's work experience in production, development and marketing tasks explained the increase in production capacity. On the other hand changes in the market situation were also reflected in increased capacity. An increase in production capacity was common in the metal manufacturing industry. Most of these firms had expanded their market area. These changes in strategy affected their growth. Via business idea thinking changes in a firm's strategy during the beginning of operations can be viewed as evidence of the entrepreneur's learning process. According to the results of the study, changes in the strategic behaviour of the entrepreneur affect the growth of new firms.

The fifth hypothesis is that various personal relationships of the entrepreneur affect a firm's growth. From the viewpoint of network theory, the basic aim of networks is to support the firm's functions. The advantages of networks have been seen to lie in the fact that they create closeness, trust and faith in the success of one's activities, and awareness of the need to communicate and develop. Johannisson and Spilling (1986) also include among the basics of network thinking personal connections and cultural networks. In this way interrelationships are part of the entrepreneur's know-how. Our results, however, do not imply that co-operation between firms explains growth. If anything, they support the contrary view that excessive network formation lessens the independence of the entrepreneur (Curran et al. 1993).

In firms seeking specialisation, growth was explained by changes in the personal connections of the entrepreneur. In small specialist firms, the personal relationships of the entrepreneur must be seen as part of her/his know-how (Johannisson 1998). By developing personal networks, the entrepreneur is able to create new models for action which take into account the persons and organisations supporting his activities. The results can also be interpreted via the entrepreneur's know-how. The manipulation of personal relations in a firm's activities requires know-how on the part of the entrepreneur. The empirical results dealing with innovative firms aiming at specialisation can also be seen in relation to the soft line of the subjective area of strategic thinking (Näsi 1991). Accordingly, the firm has a manager who is in many ways connected with all the firm's activities, to the values of the firm and to the network of personal relations in the firm. The empirical results for the specialising firms supported the importance of the entrepreneur's personal relationships in the growth of firms and thus acceptance of the fifth hypothesis. The growth and specialisation of firms is a phase in the development of firms where the intensity of these relationships is at its highest (see Curran et al. 1993).

Entrepreneurs and the processes they use in starting their firms will vary by line of business, by region and by firm's background and aims. In interpreting the results of this study the central limitations should be kept in mind. First,

because this study was restricted to two lines of business, caution must be exercised in generalising the results across other industries and start-up firms. Second, the results indicated that in the developed service centres a firm's growth was dependent on an expanding market area. However, the influence of production structure on the growth of firms via strategic choices might also be more positive in one region as against another, as the opportunities for entrepreneurship are directly related to the regional production structure. Finally, the background and aims of firms will vary according to line of business and region. More extensive studies focused on a variety of industries and regions may help to elucidate these issues.

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## Appendix Variables used in logistic regression models

Variable	Values of variable
<b>Firm's strategy:</b>	
Focus of marketing	0 = no changes in customers/1 = new customers
Firm acting as subcontractor	0 = no / 1 = yes (over 50 % of sales)
Firm acting in the local market	0 = no / 1 = yes (100 % of sales)
Product-differentiated firm	0 = no / 1 = yes
Customer-oriented firm	0 = no / 1 = yes
Internationalised firm	0 = no / 1 = yes (export firm)
Changes in production policy	0 = stability/specialisation / 1= highly specialisation
Changes in production process	0 = capacity has grown/ 1= capacity has remained unchanged
Changes in firm's strategy	0 = no / 1 = yes
Changes in market conditions	0 = concentrating on key customers/ 1 = expanding the market area, increasing the market
Change in marketing situation	0 = no changes in market area/ 1= market area have changed
Change in competition environment	0= competitors have decreased/ 1 = competitors unchanged or increased
Customers as users of the product	1=customers have started to use the products of competitors /2=customers have not started to use the products of competitors
Marketing situation	1=domestic trade, 2=foreign trade
<b>Strategic decision-making:</b>	
Planning of the start-up process	0 = not as planned/ 1 = as planned or better
Change in personal relationships	1 = discussions unchanged or decreased / 2 = discussions increased
Expert help in start-up	0 = no/ 1 = yes
<b>Firm's characteristics:</b>	
Firm's location	0 = capital area, industrialised urban areas, rural areas/1 = service centres
Motives for start-up	0 = push, pull or situational factors/ 1 = internal motives
Nature of start-up decision	0 = family business, 1 = shareholders in firm
Co-operation between firms	0 = no co-operation / 1 = co-operation
Financing in the start-up	0 = mostly part capital investment of entrepreneur/1 = mostly part loan financing
Characteristics of the main product	0 = different from that of competitors/ 1 = similar to that of competitors
Line of business	1 = metal industry, 2=business services
<b>Entrepreneur's qualifications:</b>	
Entrepreneur's training	0 = no vocational education/ 1= vocational training
Entrepreneur's work experience	0 = one-sided / 1 = many-sided
Work ethic	5-step scale
Dominance	5-step scale
Pursuit of excellence	5-step scale
Mastery	5-step scale
Powerful others	5-step scale

## CHAPTER IV

### ARTICLES ON THE ESTABLISHED PHASE OF NEW FIRMS

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<sup>1</sup> Littunen, H. (2000) published in Small Business Economics 15 (1), 59-71.

<sup>2</sup> Littunen, H. and Storhammar, E. (1999) will be published in Journal of Entreprising Culture.



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<sup>3</sup> Littunen, H. (2000) published in International Journal of Entrepreneurial Behaviour and Research Vol. 6 (6), 295-309.

# NETWORKS AND LOCAL ENVIRONMENTAL CHARACTERISTICS IN THE SURVIVAL OF NEW FIRMS

## Abstract

This study seeks firstly to clarify which networks at the start-up situation and early in life influence the survival of new firms. Secondly the study examines regional differences in the success of new firms. The subjects were firms which had closed down during their fourth to sixth year of operations, and they were compared with firms continuing in business. The results indicate, firstly, that competitive advantage, innovation and efficiency are created by networks internal to the firm. Secondly, management based on working in groups was emphasised in the firms that continued in business. In a typical family enterprise, ownership, management and family are united in a single entity. In other types of firms networks are seen as participating in the strategic management of the firm. Thirdly, closures were often caused by uncontrolled risks. A firm which fails after a successful start-up often tends to grow rapidly in the beginning, leaning on its product idea; however, this rate of growth is too high from the viewpoint of how the firm is financed and managed. In firms which closed the growth objectives were too ambitious compared with the resources of the entrepreneur.

Keywords                      new firms, survival, network, environment

# 1 INTRODUCTION

This paper aims, firstly, to contribute to our understanding of the process of survival in new firms by analysing the management capabilities involved the start-up situation and the critical operational phase. Secondly, the aim of this study is to examine the effects of location in a firm's success. The question of how to approach the success of firms can be seen from a firm's goals and its ways of realising them. The goals of a firm are formed by its interest groups, such as the entrepreneur himself or other proprietor, the employees and the firm's financiers (Carroll 1993, 1995; Freeman 1984). According to Freeman (1984, 1995), an interest group is any group or individual either affecting the activities of a firm or affected by them. The specific purpose of this paper is to model and operationalize these interest groups in order to study how new entrepreneurs use their networks as part of their management resources in running a firm (Birley 1985; Borch and Huse 1993; Dubini and Aldrich 1991; Johannisson 1998).

Several studies have noted that the development and start-up of new firms is connected with the local environment (Armstrong and Taylor 1985; Isaksen 1996; Spilling 1996; Storey 1994; Storey and Wynarczyk 1996). The central regional factors in the establishment and development of firms are local entrepreneurship, social networks, an innovative milieu, and flexibility of production factors and institutional structures (D'Arcy and Giussani 1993). Johannisson (1987) differentiated five dimensions of interaction between the competencies of the individual and those supplied by the environment: (1) motives, values and attitudes; (2) skills; (3) social competence; (4) insight; and (5) facts. The skills and know-how of the entrepreneur were emphasised as factors in the success of small firms. In part, know-how in a firm is a result of the personal contacts and networks the entrepreneur has in relation to other firms, and the connections the firm has with organisations supporting the development of firms (Niittykangas 1992; Johannisson 1987). Competition and interactive relationships are factors that maintain successful development by forcing and stimulating firms into flexibility (Niittykangas et al. 1994).

Generally, the most important factors in the survival of large firms are age,

industry sector, size and location (Storey and Wynarczyk 1996). The first 1-3 years of operations is the most critical operational phase for new firms as regards their survival; once firms have survived for three years, they can, with good reason, be described as having passed through the valley of death (Gibb 1990). It has been argued that problems during the start-up phase of a firm explain closure during the subsequent critical operational phase (Argenti 1976; Gaskill and Van Auken 1993). In the present study, survival beyond the critical operational phase is the criterion of success.

This study examines the success (survival) of new firms and the factors affecting that success. First, the aims and the framework of the study are presented in more detail. A model explaining the success of firms is discussed and success is analysed vis a vis networks and location. Also a description of the data and research methodology is reported in this section. This is followed by the findings of the study. Finally, conclusions are drawn about the success of new firms.

## 2 AIMS AND PROCEDURE

### 2.1 The framework of the study

The first aim of the study is to clarify which networks, at start-up and during the critical operational phase, influence the survival of firms which are 4-6 years old. A second aim is to test for regional differences in the survival of new firms, and, if so, to elucidate what kind of connections exist between the characteristics of the environment and the factors affecting the success of the firm, i. e. the characteristics of the firm and its entrepreneur.

The establishment of a firm is interpreted as a progressive phase-by-phase process which begins with a specific business idea on the basis of which the firm is set up (Bygrave and Hofer 1991; Gartner 1985; Reynolds 1995). The decision to found a firm is based on either experimentation, self-confidence or planning. Entrepreneurship based on experimentation may begin as a part-time activity in which the business idea is tested in practice (Lehti 1990). In entrepreneurship based on self-confidence, the founder has a strong belief in his own power to influence events and the ability to transform his will into practical action (Reynolds 1992; Shaper and Sokol 1982; Timmons 1976). Entrepreneurship based on planning conforms most strongly with the process view (Krueger 1993; Krueger and Brazeal 1994; Krueger and Carsrud 1993). Changes in plans made during start-up and in the starting phase of entrepreneurship are evidence of defects in planning and/or changes in the action environment which were taken into account during the initial planning phase.

The analysis of start-ups makes it possible, on the basis of the idea underlying contingency theory, to evaluate the factors affecting the birth of new firms on a scale broader than allowed by the push and pull theory (Gilad and Levine 1986; Storey 1994). Also, general situational factors describing the firm's immediate surroundings and the individual's phase of life at start-up are included in the analysis. The opportunities for entrepreneurship are connected with the production structure of the region (Isaksen 1996; Spilling 1996). On the

other hand, from the viewpoint of network theory the firm's local environment should provide the means for efficient contact networks. The various situational factors that describe the founder's phase of life at start-up can be seen as reflections of the overall situation of the economy, and it is these that provide the link between founder's previous experience and the start-up situation. The situational factors can be classified into seven groups:

- the importance of previous work or entrepreneurial experience in making the decision to become an entrepreneur (Cooper and Dunkelberg 1987; Ray 1993; Vesper 1992),
- previous basic and professional education and training (Cooper and Cascon 1992; Evans and Leighton 1990; Storey and Wynarczyk 1996),
- how the firm is managed (Carroll 1993; Chrisman et al. 1998; Freeman 1984, 1995),
- functioning interest and communication networks ( Birley 1985; Borch and Huse 1993; Dubini and Aldrich 1991; Johannisson 1998),
- the strategic choices of the firm ( Norman 1976; Sandberg and Hofer 1987)
- functionality of the start-up plan (Cooper and Cascon 1992; Sapienza and Grimm 1997; Stinchcombe 1965),
- features of local the environment (Almus and Nerlinger 1999; Armstrong and Taylor 1985; Isaksen 1996; Spilling 1996; Storey 1994).

The attached figure 4.1.1 presents the study framework.

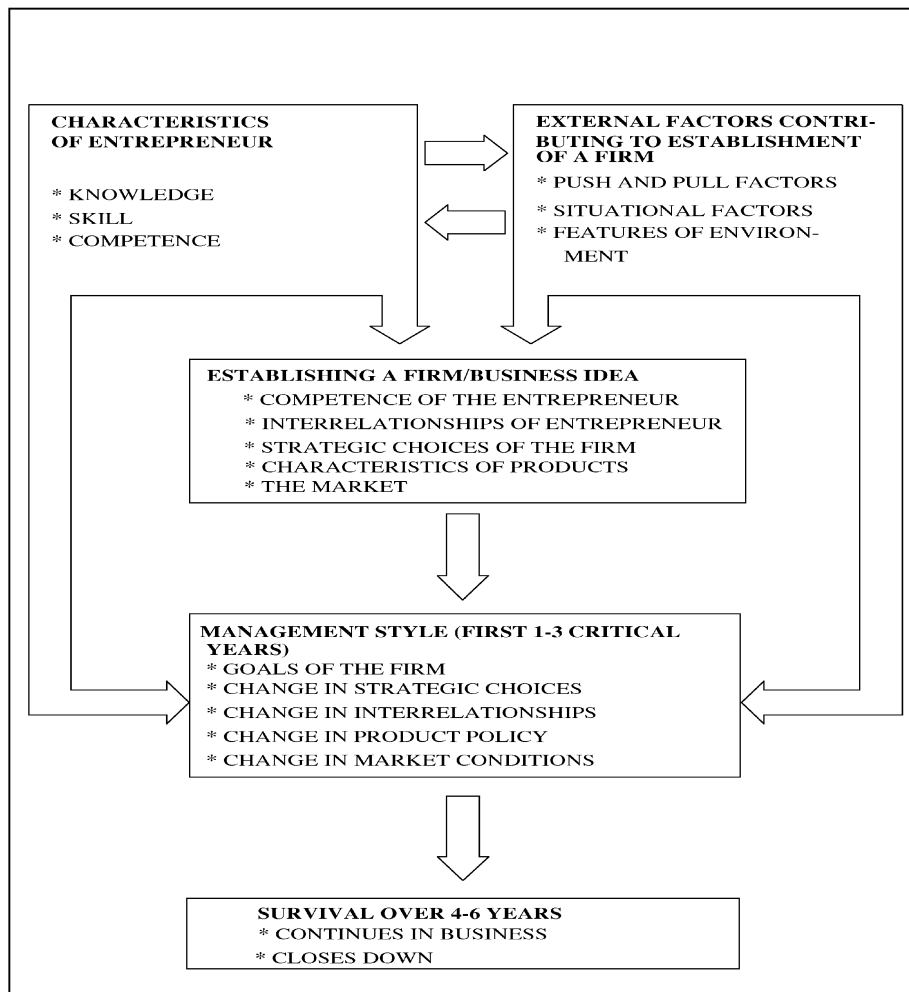


FIGURE 4.1.1. Study framework: factors explaining the survival of new firms

As stated earlier, past studies have indicated that various situational factors often link the success of new firms with specific kinds of entrepreneurial knowledge and skill. In small firms the competence of the entrepreneur and the firm are tightly linked with each other. Some of the qualifications required by an entrepreneur are related to the level of competence at her/his disposal, others to the entrepreneur as an individual and her/his way of acting. Similarly, the experience and skills of the entrepreneur have been linked to decisions regarding strategy (Eisenhardt 1989; Vesper 1990). In this paper, how a firm is managed is seen as a central factor in entrepreneurial competence.

According to Low and MacMillan (1988), network theory is increasingly applied in entrepreneurship research. Entrepreneurial networks can be categorised into two types derived from different sources: informal and formal (Birley 1985; Johannisson 1985). Informal entrepreneurial networks consist of

personal relationships, families, and business contacts. Formal networks consist of venture capitalists, banks, accountants, creditors, lawyers, and trade associations (Das and Teng 1997). There are many methodological advantages to studying entrepreneurial networks in small firms (Johannisson 1990). First, the entrepreneur must be explicit about her/his personal network in order to become recognised and able to command further resources. Second, all direct and indirect linkages in that network give her/him access to various segments of the environment (Johannisson 1998). From the point of view of stakeholder thinking these segments could be argued to constitute the interest groups of a firm. In stakeholder thinking the firm and its activities are seen through the intentional action of the relevant interest groups. The idea is that those groups which share inputs with a firm, through their interaction with it, render its operations possible. In the long run the firm must operate in such a way that each stakeholder is satisfied with what they as a group give and with what they receive. The more dissatisfied the main stakeholders are, the more certain it is that the firm will close (Freeman 1984,1995; Carroll 1993; Calton 1993; Näsi 1995).

Network theory also offers a way of describing the development of the entrepreneur's know-how. From the point of view of the entrepreneur's developing know-how interrelations are not limited only to those between market and firm. From the network thinking point of view the personal relationships of the entrepreneur describe the entrepreneur's activities in developing his or her entrepreneurial skills. They form an independent field of know-how which supplements the entrepreneur's training and work experience. It is possible to see the versatility and number of these relations as enhancing entrepreneurship. These personal relationships can be viewed as external networks since they are usually limited to the entrepreneur's environment. According to Curran et al. (1993), whose view deviates from that of network thinking, the importance of co-operational relations is dependent on the particular situation of the firm, and excessive networking threatens the independent position of the entrepreneur. In other words, small entrepreneurs have contacts with their surroundings, but the importance of these contacts is more limited than network theory implies (Curran et al. 1993).

Several studies have found that team-driven ventures are more successful than non-team ventures (Bird 1989; Rich and Gumpert 1985). Cachon (1990) concluded that team members bring needed skills to the enterprise and Gartner (1985) comments that teams are necessary for firms in highly technical industries because of the wide array of skills needed for the firm's success. These contacts can be viewed as internal networks since they generally consist of the team members. From these theoretical starting points the first research hypothesis in this study concerning management capabilities was formulated as follows:

- (1) the use of internal networks as part of a new entrepreneur's management capabilities will have a more positive effect on the firm's success than the use of external networks.



*Measures of management capabilities* According to the first hypothesis, the survival of a firm will depend upon the entrepreneur's ability to use networks as one of his/her management capabilities. In this context, management capabilities are measured, firstly, as different styles of management (Freeman 1984, 1995). Four styles of management have been distinguished (Ensley et al. 1998): group management (2 items), action planning (6 items), innovativeness (4 items) and interactiveness (2 items). Using cluster analysis, firms were classified into three categories reflecting management styles according to participation by different interest groups. The situational style emphasises the entrepreneur who takes an independent position and makes little use of personal networks. In the network building style the entrepreneur obtains management ideas through discussions with customers, as well as with entrepreneurial and other business contacts or specialists. In the group management style the key affairs of the firm are managed by a group of people. Utilising the definitions for entrepreneurs and entrepreneurial teams, groups founding, owning, managing, and planning for entrepreneurial high growth ventures should clearly be identified as entrepreneurial teams (Carland et al. 1984; Ensley and Banks 1992; Ensley et al. 1998). Secondly, the effects of external personal networks on the success of a firm are investigated. The following measures were used to describe a firm's external networks: co-operation between firms in the start-up phase and changes in external personal networks during the period 1992-96. The latter measure consisted of discussions with personal friends of the entrepreneur concerning the business and was calculated at two time-points: in 1992 and in 1996 (Appendix).

### **The strategic choices of a firm**

The strategy of a new firm must be designed to incorporate its management capabilities in order to attain its goals. (Freeman 1984, 1995; Carroll 1993; Sandberg and Hofer 1987). Without such a strategy there is little hope that the firm will be able to achieve success in its industry sector (Porter 1980,1985). These strategy and management actions are considered in relation to products and markets, changes in products and marketing policy, changes in production processes and changes in management capabilities (Storey 1994). In exploring the strategic behaviour of firms, a framework in which strategic choices are characterised by the concept of the business idea was used (Norman 1976). This concept has been constructed to suit small enterprises. The focus is on creativity, flexibility, and 'a strategy of small steps'. The key feature is the business idea - a combination of product line, markets, and ways of conducting business. The networks of entrepreneurs are studied through business-idea thinking, in which the interrelationships of entrepreneurs are seen as related to the requirement for compatibility between products, customers and mode of operations. The second research hypothesis follows from the above discussion:

- (2) A firm's strategy has a direct and moderating effect on its success.

**Measures of strategic choices** In this context, the measures describing the products and markets during start-up were as follows:

- industry sector; the success of a firm will vary in different sectors of industry (Almus and Nerlinger 1999; Phillips and Kirchhoff 1989; Porter 1980, 1985; Storey 1994).
- number of products, main product, customers as users of the firm's products and focus area of marketing; these are all important strategy components in the success of a firm (Norman 1976; Porter 1980, 1985; Smallbone et al. 1995; Storey 1994).

Secondly, in relation to the above hypothesis the strategy-making process was interest in this study. The following measures were used to describe changes in the strategy components during the critical operational phase:

- changes in product policy, changes in production processes, changes in market conditions and changes in business; as a firm grows and develops, strategy components continue to be critically important (Kazanjian 1988). Phillips and Kirchhoff (1989) considered that growth improves the chances of survival (Almus and Nerlinger 1999; Storey 1994). Changes in strategy processes are key factors in the success of a firm (Norman 1976; Porter 1980, 1985; Smallbone et al. 1995).

### **Features of local environment**

According to Smallbone et al. (1993) and Storey (1994), there is a strong correlation between a firm's location and its growth, firms located in urban and remote rural areas of the United Kingdom being likely to grow least rapidly (Storey 1994). According to Storey and Wynarczyk (1996), locality is of greater significance in explaining the survival/non-survival of young firms. Storey (1994) also found that geographical areas with high rates of new firm formation are also those which have the highest death rates. Littunen et al. (1998) found new firm closures in metal products manufacturing was higher in regions with high rates of new firm formation and where the environment offered good opportunities for innovation and differentiation. A more developed production structure lowers market entry barriers so that individuals lacking entrepreneurial skills start firms more often in these than in other regions. On the other hand, Almus and Nerlinger (1999) found that location had only a minor influence on the growth of new technology-based firms. This implies a third hypothesis:

- (3) A firm's location will affect its success.

**Measure of location** In this paper the regional units are subregions, comprising two or more municipalities. The subregion is relevant to entrepreneurial activities because it usually corresponds to the market area, labour market area and area of co-operation of small firms. Finnish subregions have been classified into four categories according to their industrial structure (Pikkarainen 1993 -

there are seven types of regions in the original classification). The four categories are based on the original seven types as follows: (1) the capital area; (2) centres where service industries are dominant and centres where the industrial structure is diverse; (3) industrialised urban areas and rural areas where manufacturing is dominant; and (4) rural areas where service industries and/or primary production are dominant. Restricting the categories to four is needed to conduct the data analysis, but can also be justified on the grounds that the regions are homogenous (For statistical information on the regional categories, see Littunen et al. 1998).

## 2.2 Data collection and subject

Improving the survival of new firms is an international problem. Approximately 13 % of the new firms established in Europe close during their first year of business, and only 55 % survive for five years (Statistics Finland 1995). Smallbone (1990) found that the discontinuance rate in the first 2.5 years was approximately 37 %. According to a German study, 76 % of new firms continued in business for two years and 62 % to five years after start-up (Bruderl et al. 1992). Several studies have reported average failure rates ranging from a high of 71 % to a low of 31 % in the first five years of a new firm's life (Phillips and Kirchoff 1989; Baldwin and Gorecki 1991; Williams 1993). In one study it was found that over 90 % of the failed business were less than ten years old (Watson and Everett 1996). Surviving and rapidly growing firms, however, are of great importance both locally and nationally: it is these firms which really create employment, since their share of new jobs has been estimated to be as high as 16 % (Foley and Green 1989).

This follow-up study employed a stratified technique where the strata were firm's size and line of business. The selection of the strata resembled Neyman's allotment (Pahkinen and Lehtonen 1989). The sampling was done from the different strata through simple random sampling, which requires that observations are weighted to correspond to the general population. For the first personal interviews with the entrepreneurs (n=200), 138 metal product manufacturing firms and 62 business service firms were selected from the register of firms of Statistics Finland (N=2583). The firms established in 1990 were interviewed for the first time at the beginning of 1992. The follow-up data were gathered through telephone interviews during the years 1993-96. However, during each year the author conducted 20-25 interviews personally in order to spot possible inaccuracies in the telephone interviews.

In this study after 3 years 158 firms remained in business and 29 firms had closed. 13 firms refused to participate in this follow-up phase. After year 6, 110 firms were still trading. Between years 4-6 18 firms had closed and 30 firms refused to participate further. Thus the present study focuses on the 110 continuing firms and 18 closed firms (weighted factors the existing firms totalled 117 and failed firms 17; see table 4.1.1). Here a comparison is made between those firms which continued with those which closed during years 4-6

(Littunen 1992).

The subject firms were mostly small, about 60 percent with under five employees, and dependent on the entrepreneur's own work and that of her or his family. This was of great importance for the study. The connection between the firm and the entrepreneur was close. The firm's strategy was chosen by the entrepreneur. Over 45 percent of the entrepreneurs had not been educated beyond elementary school. Other empirical studies indicate that new entrepreneurs often start their firms by relying on prior work experience. In this study most new entrepreneurs came from small or middle sized firms, a fact which is mirrored in the firm's structure in the start-up process. In most of the firms investigated the selection of products was initially based on the entrepreneur's previous work experience. Other important influences were a combination of previous work experience and vocational training, and identifying the needs of customers in the market (Littunen 1992).

The interviews in the first phase of the study formed the basis for the investigation of the success of the firms. The results of the basic data were studied by grouping the features of the entrepreneurs and firms by means of cluster analysis. The aim of the groupings was to simplify the interview data, which was highly versatile. The results of the follow-up data obtained through the interviews were grouped in the same way. Continuing in business was studied by means of one-way analysis of variance, contingency coefficient and using logistic regression analysis.

### 3 FINDINGS

This study examines, firstly, the importance of management capabilities, in terms of internal /external networks, and the importance of strategies for the survival of new firms. Networks as part of the management capabilities of a new entrepreneur are important resources that show that a firm has, at least to some extent, been able to meet the expectations of all of its interest groups, which usually ensures its survival (Freeman 1984, 1995). Thus Freeman (1984) sees the interest groups around the entrepreneur as belonging to an enlarged sphere of management. Secondly the role of location in the survival of new firms was investigated. According to Johannisson (1998) a major characteristic of entrepreneurial networks is the spatial dimension. It is important to consider both the social and spatial dimensions, when researching networks in relation to the economic features of firms (Johannisson 1998; Storper 1995).

TABLE 4.1.1 Differences between the dimensions describing the management of firms; one-way analysis of variance<sup>1</sup>

Management style	Functioning firms (mean)	Closed down firms (mean)	F-prob.
Group management	3.64	3.10	0.102
Action planning	3.42	4.36	0.000**
Innovativeness	3.98	4.26	0.107
Interactiveness	3.83	4.27	0.055*
	(n=117)	(n=17)	

Table 4.1.1 shows there are no differences in group management and innovativeness between the surviving and non-surviving firms. However, in the firms which closed business planning and analysis of the environment were more likely to be emphasised than in surviving firms. This confirms the findings of

<sup>1</sup> A 5-step scale has been used in the indicator. The results have been weighted by factors calculated from the basic data set and random samples of the study.

Curran et al. (1993) in the sense that, although small firms have contacts with their surroundings, these contacts do not support the operation of these firms to an extent that influences survival.

TABLE 4.1.2. Management style and business survival

Categories	Functioning firms	Closed down firms	Closure rates (%)
Situational style	17	1	5.8
Network building style	43	12	27.9
Group management style	57	4	7.0
Total	117	17	14.5

Table 4.1.2 shows that the network building and group management styles were more common styles of management than the situational style. A distinct connection emerged between the management style of firms and their survival ( $p=0.037$ ). In team-driven firms the closure rate was only seven percent as against about 28 percent in firms that used the network building style of management. This finding tends support the first research hypothesis, which was that the use of internal networks as management capabilities will have a more positive effect on a firm's success than the use of external networks. Overall the main argument for the advantages of team-driven firms is based on the positive effects of a combination of people with diverse personalities, characteristics, knowledge, skills and abilities (Lechler and Gemuenden 1999; Vesper 1990).

The business idea behind the setting-up of a new firm and the goals of the firm often change during the critical operational phase of entrepreneurship. By studying the strategic changes in a firm together with the changes its networks by means of business-idea thinking, it is possible to interpret the measures taken to promote growth as one aspect of the entrepreneurs' learning process (Norman 1976). Table 4.1.3 presents a logistic regression model describing continuity in business where management capabilities and firm's location were adjusted to take account of the various strategic factors contributing to the business idea. The variables are presented in more detail in the Appendix.

TABLE 4.1.3 Continuity in business (Dependent variable: staying in business/closing down)

Variables	Coefficient	Standard error	Significance
<b>Start-up phase:</b>			
Co-operation between firms	-0.3414	0.4189	0.4151
Industry sector	1.1168	0.5227	0.0326
Number of products	0.6884	0.4509	0.1268
Main product	1.0670	0.4996	0.0327
Focus of marketing area <sup>1</sup>	1.3822	0.6577	0.0356
Focus of marketing area <sup>2</sup>	-0.6041	0.4304	0.1605
Customers as users of the firm's products	1.1535	0.6437	0.0731
Firm's location	0.0694	0.4748	0.8838
<b>Critical operational phase:</b>			
Style of management	1.0605	0.4601	0.0212
Changes in external personal networks			0.6949
Networks type (1)	0.7373	0.7711	0.3390
Networks type (2)	0.4435	0.7829	0.5711
Networks type (3)	-0.7309	1.0872	0.5014
Changes in product policy			0.0887
Product policy type (1)	-0.5406	0.5519	0.3273
Product policy type (2)	-1.0390	0.8667	0.2306
Changes in production process	-1.8938	0.7293	0.0094
Changes in market conditions	1.5420	0.6607	0.0196
Changes in business	-0.9018	0.4982	0.0703
Constant	-1.9055	0.7039	0.0068
-2 log Likelihood $\chi^2$ – test quantity 1.0000			
df=105			
Total classification rate = 92.6 %			

The estimated model explained the location of the observations in the two groups of firms extremely well. Of the total observations, 92.6 % were classified correctly by the logistic regression model. The statistically significant variables were 'industry sector', 'focus of marketing area', 'main product', 'style of management', 'change in production process' and 'changes in market conditions'. As in Almus and Nerlinger (1999), Philipps and Kirchhoff (1989) and Storey and Wyncarczyk (1996) industry sector explained success in business. In comparing the survival rates between the metal industry and the business service firms, a larger percentage of business service firms were still in business after six years. In 1996, sixty-three of the metal industry firms and eighty-six of business service firms were still trading (contingency coefficient,  $p=0.001$ ).

The firms surviving after the critical operational phase were often on the way to becoming specialised and were growing, but the risks taken by these firms were under control. This finding indicates that firms which survive tend to grow slowly (Almus and Nerlinger 1999; Phillips and Kirchhoff 1989; Storey 1994). These firms were able to withstand unexpected changes, among others in the market situation, and had not made the mistake of overestimating demand. In surviving firms, customer networks had often been based on key customers, and the introduction of innovative products was based on careful product development in the critical operational phase. Also, management based on working in groups was emphasised in the surviving firms. These entrepreneur-

rial teams bring to the firm the skills needed for the strategy development process (see Cachon 1990; Ensley et al. 1998; Timmons 1979).

The firms which closed in years 4-6 had invested very heavily in product development and at the same time expanded their market area during the first 1-3 years of operations. The high degree of specialisation of these firms led to growing risks which they had offset through their connections in the environment. It was not, however, possible to compensate for inadequate entrepreneurial competence by building networks with customers or with other business contacts in entrepreneurial circles or elsewhere. The failure of these firms can therefore be related to the consequences of too early aspirations for growth (Barrow 1993). It suggests that, if there are gaps in the entrepreneur's competence, the network building style exerts a clear negative influence on survival. In addition, the findings that the variables 'co-operation between firms' and 'changes in external personal networks' were not significant in the model support this conclusion.

The results of the present study suggest that changes in a firm's competition situation, management style and the competence of the entrepreneur, but not locality, affect survival. It implies that survival is not influenced by locality. A successful start-up also distinguished the firms that had closed between years 4-6 of operations. These findings differ from Littunen et al. 1998, who found that region influenced new business closure. Closure was most common in service centre regions. Typical of the firms that had closed during years 1-3 was that problems which appeared in the start-up phase had been moved forward. Such a firm was established on the basis of unrealistic expectations and its performance cannot, throughout its short business life, have been anything but weak. These findings were not in accord with earlier findings on the relations between survival, growth and location (Storey 1994).



## 4 CONCLUSIONS

This study examined the importance of networks as management resources and the local environment in the success of new firms. The criterion of success used was survival in business for four to six years. The subjects were Finnish metal products manufacturing firms and business services firms established in 1990.

According to the first hypothesis, the performance of new firms depends upon more internal networks than external networks. Management through interest groups and networks requires a well-balanced entity in which the right interest groups and processes are adjusted to each other. The empirical results showed a clear connection between style of management and the survival/non-survival of firms. In entrepreneurial team-driven firms a group of people participates in the strategic management of the firm, and these firms were found to have survived more often than the others. In these firms the entrepreneurial team participate directly in the activities of the firm, and also handle interest group relationships (Lechler and Gemunden 1999). The owners of a firm were also found to be the most important interest groups as regards success (Carroll 1995). In a typical family firm ownership, management and family are combined into a single entity (Hoy and Verser 1994; Littunen and Hyrsky 2000). In non-family firms the shareholders can be assumed to direct the strategic management. The findings were supported by the differences found in firms' internal and external networks. The results showed that a firm's internal network provides for greater competitive advantage, innovation and efficiency than a loose external network. New entrepreneurs have external contacts with their environment, but these business contacts were more limited, as implied by network thinking (Curran et. al. 1993).

According to the second hypothesis, a firm's strategy has a direct and moderating effect on its success. Firstly, the results showed that sector of industry affected survival. Past studies have also indicated that economic sector is connected to the success of firms (Audretsch 1991; Cressy 1994; Phillips and Kirchoff 1988; Storey and Wynczyk 1996). Secondly, an interesting result was that business planning, analysis of the environment and interaction were emphasised in the firms which had closed. The firms' eagerness to grow

and their high level of specialisation had often led to a situation of growing risk which they had tried to level down through their business contacts. However, in spite of the interrelationship between these factors uncontrolled risks had led some of these firms to close. The market environment is clearly a factor influencing a firm's opportunities for growth and survival. In most cases active strategies, particularly with respect to key customers, were necessary to achieve survival over an extended period. However, it is clear that in order to survive, most firms had paid some attention to the competitiveness of their products by engaging in product development. The findings indicated that survival could not be explained by any single type of strategy (Smallbone et al. 1995). The successful firms were characterised by the ability to make changes in their production processes to complement an active market development strategy.

According to the third hypothesis, local environmental characteristics affect survival during years 1-3 (Storey and Wynarczyk 1996; Storey 1994). From the point of view of the network theory, start-up and continuing in business cannot be investigated without taking into consideration changes in the action environment and its features (Johannisson 1998). The determination to start a firm is a decision to invest in which the firm's local environment and the features of the action environment condition the firm's strategies. However, the present findings contradict earlier results (Smallbone et al. 1993; Storey 1994) that regional differences contribute to the success of new firms. Although the firm's local environment affects its survival during the critical operational phase (Littunen et al. 1998), new firms have equal chances of surviving 4-6 years irrespective of their locality. Instead, changes in the competition situation and the firm's strategy affected survival over 4 to 6 years.

Entrepreneurs and the processes they use in starting their firms will vary according to line of business, region and their background. In planning future research certain limitations of this study should be kept in mind. First, because this study was restricted to two lines of business, caution must be exercised in generalising the results to other industries and start-up firms. Second, the results indicated that locality did not affect the survival of firms. In future studies larger samples from a wider range of industries and regions could yield more conclusive findings. The findings of the present study also have further implications for policy makers. As far as the development of new firms' activities is concerned, entrepreneurial courses should lay more emphasis on the requirements of entrepreneurship and the content of individual business activity plans, as entrepreneurs cannot necessarily put advice into practice, and therefore need assistance at the implementation stage. The eagerness of the closed firms to grow was based on unrealistic expectations. Therefore it is recommended that the ProStart business plan programme and the PostStart launch programme of the Ministry of Trade and Industry of Finland are backed up by a follow-up programme once the new firm becomes established. Such a programme would aim at helping to develop the business plan by laying an emphasis on the firm's needs and controlling the new firm's excessive eagerness to grow.

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## Appendix Variables used in logistic regression model

Dicotomic variables	Classes of dicotomic variables
<b>Start-up phase:</b>	
Co-operation between firms	1=no co-operation/2=decisive co-operation
Industry sector	1=metal industry, 2=business services
Number of products	1=one product/2=several products
Main product	0=different from that of competitors/1=similar to that of competitors
Focus area of marketing <sup>1</sup>	1=present products/2=present and new products
Focus area of marketing <sup>2</sup>	1=present customers/2=present and new customers
Customers as users of the firm' products	0=has used comparable products/1=has not used comparable products
Firm's location	0=capital area, industrialised urban areas, rural areas/1=service centres
<b>Critical operational phase:</b>	
Style of management	1=situational management style and group management style/2=network building style
Changes in external personal networks	
Networks type (1)	1= no personal networks/2=increase in personal networks
Networks type (2)	1=decrease in personal networks/ 2=increase in personal networks
Networks type (3)	1=no changes in personal networks/2=increase in personal networks
Changes in product policy	
Product policy type (1)	1=specialised/2=highly specialised
Product policy type (2)	1=stable/2=highly specialised
Changes in production process	0=used capacity has grown /1= used capacity has remained unchanged
Change in market conditions	1=expanding the market area/2=increasing the market share and concentrating on key customers
Changes in business activities	1=few changes/2=a lot of changes



## **THE INDICATORS OF LOCUS OF CONTROL IN THE SMALL BUSINESS CONTEXT**

### **Abstract**

There have been divergent opinions as to the suitability of the various indicators of locus of control in business management research. This study examines how the indicators of work locus and strategic locus of control function in the small business context. The study examines first the interrelations between these indicators and second the relation between each of the indicators and the firm's strategic factors. The indicators of locus of control differed from each other in their relation to external control. The indicator of strategic locus of control correlated with the firm's targets, strategic decision-making and success. On the other hand the indicator of internal attributing is useful in research on entrepreneurship and the birth of new firms.

## 1 INTRODUCTION

In small firms the importance of the entrepreneur is crucial since such firms' activities are often strongly grounded on the entrepreneur's own contribution. Consequently, the determinants of a firm's success are the characteristics of the firm, the competence of the entrepreneur and the features of his/her personality, and the factors of the firm's environment. The competence of the entrepreneur is especially emphasised during start-up and crisis situations where educational and work experience are especially important (Littunen et al. 1998). Some of the qualifications required of an entrepreneur are connected with the level of competence at the individual's disposal and some with the entrepreneur's personality and his/her way of acting and ability to take risks (for entrepreneurial qualifications see e.g. Casson 1982; Caird 1988). Bird (1989) divides risks into five types, four of which are clearly relevant to any potential entrepreneur: economic risk, risks in social relations, risks in career development, plus psychological and health risks. The findings of Brockhaus (1982) show that the preference for a particular risk type does not differ between professional managers and the general population, nor between successful and unsuccessful firms. On the other hand, competence inside the firm is partly created through the firm's contacts with organisations supporting business development and through entrepreneurs' personal interest networks and contacts with other entrepreneurs (Johannisson 1987).

In research on entrepreneurship, two schools of thought can be distinguished: one emphasising contingency thinking and the other emphasising trait model thinking (see e.g. Chell 1986). According to contingency thinking, the features of personality required of an entrepreneur are bound up with the firm's action environment and prevailing situation (see Gilad and Levine 1986). Trait model thinking, on the other hand, can be considered characteristic of studies starting from a psychological perspective which places the emphasis on the individual. In such studies the basic question is why certain individuals establish firms or succeed as entrepreneurs (Bird 1989). It has been presumed that entrepreneurship can be explained in terms of different qualifications at the individual level.

One of the most commonly applied theories in entrepreneurship research is Rotter's (1966) locus of control theory (Shaver and Scott 1991). According to Rotter (1966), the locus of control of an individual can be seen as either internal or external. An internal control expectation refers to control of one's own life where the results of one's action are considered to be dependent either on one's own behaviour or on permanent characteristics. An external control expectation refers to the kind of attitude which focuses on the actions of other people or on fate, luck or chance. An internal control expectation is usually associated with entrepreneurial characteristics (e.g. Brockhaus 1982; Cromie and O'Donoghue 1991; Shaver and Scott 1991; Niittykangas et al. 1994; Perry 1990; Kaufman and Welsh 1995).

In Rotter's (1966) theory the individual's locus of control varies along the continuum of internal/external. However, several researchers have proposed that internal and external control should be studied as separate dimensions (Lefcourt 1981). Levenson's (1981) application (=LASS) proposes three dimensions which measure an individual's belief in internal control, in control by others and in control by chance, fate etc. According to Levenson, external control can be interpreted as two different dimensions. Her argument is that control by other people can be seen as more predictable than, for instance, that of chance, since a person has, at least, the potential to affect it. Although Vesala (1992) has criticised Rotter's hypothesis, he takes the view that Rotter captures something essential from the viewpoint of an entrepreneur, namely the belief in one's own ability to influence events. However, other relevant aspects from the entrepreneurial viewpoint, i.e. a belief in the relation between one's own and other people's possibilities of influencing events and the effect of this relation on one's own achievements, remain outside the hypothesis (Vesala 1992).

Indicators drawn up on the basis of Rotter's theory have been widely used in the measurement of the locus of control of entrepreneurs and business management (Caird 1988 and 1993). For example, Nelson (1991) found that female entrepreneurs have a significantly greater internal locus of control than do females in the general population. Bonnett and Furnham (1991) used a three-dimensional (internal, external and chance) locus of control scale and found a significant difference between the locus of control of a student entrepreneur and that of a control group. Levin and Leginsky (1990) found that entrepreneurial social workers tended to exhibit a greater internal locus of control. On the other hand, according to Littunen and Hyrsky (2000), there were no clear differences in locus of control between family and non-family owners. Nevertheless, there was a link between aspects of locus of control and the forced founding of a business. In prior studies in Finland, business owners who have given unemployment or its threat as a motive for start-up exhibited a greater external locus of control orientation than founders motivated by 'pull factors' (Niittykangas et al. 1998). The field-specific application is also supported by the fact that Rotter's locus of control indicator has been applied in various fields e.g. in the context of health (Lau and Ware 1981), politics (Davis 1983), economics (Furnham 1986) and work settings (Spector 1988; Levenson 1981)

Hodgkinson (1992) developed an application of Rotter's general I-E indicator for use especially in the context of the management of firms (=strategic locus of control). He justified the need for a new indicator on the basis of defects discovered in previous studies (e.g. Spector 1982; Boone 1988): the general indicator, the individual's locus of control does not sufficiently take into account the entrepreneurial context, and, in addition, has a tendency to correlate with the indicator of social desirability (e.g. social desirability scale; Crowne and Marlowe 1964). Hodgkinson (1992) measures control orientation through strategic thinking and the firm's action. The arguments used in the indicator (16 items) follow rather broadly those made on the basis of Rotter's theory. With these arguments, belief in the control of the firm's action is clarified both by means of strategic management in general and by linking the control with the firm's strategic management. The strategic locus of control created in Hodgkinson's (1992) study has a relatively strong connection with indicators of the general I-E and work locus of control (correlations 0.34 and 0.43,  $p < 0.001$ ). According to Hodgkinson, the advantages of the indicator are that it does not correlate with the Crowne-Marlowe indicator and that it has a clear connection with those indicators describing the firm's action, such as the firm's strategies, organisation and success.

There have been dissenting opinions about the usefulness of the indicators of general and specific locus of control in the research literature (Hodgkinson 1992 and 1993; Boone and De Brabander 1993, Boone et al. 1996, Boone and De Brabander 1997). It is possible to find arguments on both sides supported by the results obtained in previous studies. Earlier studies have been cited to support the views in which the I-E indicator has been considered to be a satisfactory measure (see Boone and De Brabander 1993). Boone and De Brabander have since (1997) emphasised methodological problems connected with self-report data that need to be taken into consideration if these indicators are used. However, Hodgkinson (1993) points out that several researchers, including Rotter (1975 and 1990), have proved the dependence of the general I-E indicator on an individual's life situation, experiences and changes in his/her life. The criticism has also been expressed that a general concept of control expectations is too unidimensional. Apart from Hodgkinson, both indicators, the general I-E and strategic locus of control, have not been used simultaneously in empirical studies. Hodgkinson has studied the intercorrelation between the various indicators (strategic locus of control, general I-E, work locus of control, social desirability) with empirical data ( $n=94$ ), but subsequent analysis with another data set ( $n=208$ ) of the indicators describing a firm's action has been carried out using Hodgkinson's own context-specific indicator alone.

## 2 METHOD AND RESEARCH HYPOTHESES

The aim of this study is to compare the indicators of locus of control in the small business context. The discussion summarised above about the usefulness of the indicators of general and specific locus of control suggests a number of hypotheses which may be tested in this paper.

### **Hypotheses:**

- H1: The indicators of locus of control measure the same dimension of entrepreneurial qualifications. Both indicators measure entrepreneurs' belief in their own ability to influence events.
- H2: The indicator of strategic locus of control, unlike the indicator of internal control, could be seen as social relationships.
- H3: The indicator of strategic locus of control has a stronger connection than the indicator of internal locus of control with the firm's action, such as the firm's strategies, organisation and success.
- H4: The indicator of strategic locus of control correlates with characteristics of the firm such as size, age etc and with characteristics of the entrepreneur.
- H5: The indicator of internal locus of control has a stronger connection with entrepreneurial characteristics than the indicator of strategic locus of control.

The central assumption is that the indicators described above measure the same dimensions of entrepreneurial qualifications. Thus, it is reasonable to clarify first the interrelations of the indicators of locus of control and then study the relation of these indicators to entrepreneurial characteristics. The second phase examines the differences between the indicators of locus of control in terms of the characteristics of firms and entrepreneurs and a firm's strategic factors.

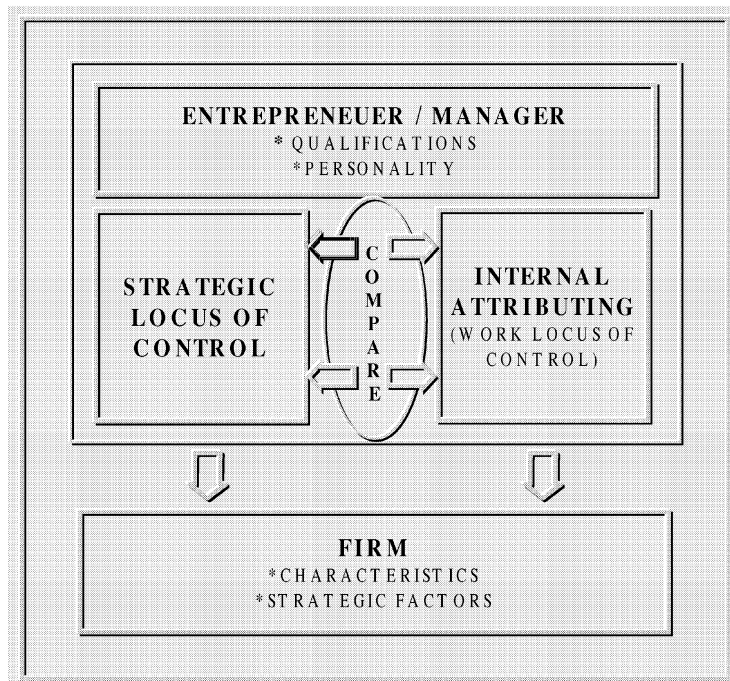


FIGURE 4.2.1 Framework of the study

Using correlation analysis the mutual relations of dependence between the indicators, as well as correlations with other characteristics describing the entrepreneur and the firm, are examined. In this study the entrepreneurs' locus of control was measured by three different dimensions, each consisting of four different items. The dimensions describing the locus of control were: internal attributing, chance attributing and powerful others (Levenson 1981) (Appendix 1). In the measurement of strategic locus of control the questionnaire developed by Hodgkinson (1992) was used (Appendix 1).

The study proceeds as follows. The first section introduces the research data. In the second section the personality indicators of entrepreneurs are compared with each other using correlation analysis. In the next section the relations between the two different locus of control indicators and the firms' strategic factors are examined. Finally, the usefulness of indicators in the small firm context is discussed.

### Data Collection

The study reported here is part of a longitudinal study, which followed the development of 200 SMEs in metal-based manufacturing and business services since their inception in 1990 (Littunen 1992). In that year, the total number of SMEs established in these two industries in Finland was 2583, accounting for nearly 12 % of the total number of firms in the two industries. In the present

study sample, metal products and the manufacturing of machines and equipment were the most strongly represented areas of activity in the metal industry firms. Within the business services sector, technical, management, juridical, and marketing services were numerically dominant. The focus on the metal industry was natural, as that industry has good preconditions for growth and development (Littunen 1992). Business services were selected because that particular line of business has also grown rapidly in Finland in recent years (Tervo and Niittykangas 1994). Another reason was the fact that the changes in these firms' action environment, internationalisation, and the heightened importance of know-how as competitive advantages have increased the need for interaction, especially between growth-oriented firms. Business services, as in the case of the service sector in general, is likely to be playing a notable role in the on-going changes, a role which may be comparable to that of manufacturing industry itself (Illeris 1989).

The study employed a stratified sampling technique, in which the strata were the firm's size and line of business. The selection of the strata resembled Neyman's allotment (Pahkinen and Lehtonen 1989). Sampling from the different strata was done through simple random sampling, which requires that observations are weighted to correspond to the general population in the two industries (N=2583). The sample consisted of 138 metal-based manufacturing firms and 62 business service firms from all over Finland. The entrepreneurs were personally interviewed for the first time at the beginning of 1992. Follow-up data were collected annually through telephone interviews held between 1993 and 1996 and in 1998. In addition, each year, the first author conducted 20 to 25 personal interviews to spot possible inaccuracies in the phone interviews. For the first personal interviews, 200 firms were selected as subjects from the SME Register of Statistics, Finland. Interviewers were recruited to carry out the fieldwork. They attended a half-day training session, which included written interviewing instructions. The aim was to ensure a consistent interpretation of the questions used in the course of the interviews.

After 5 years 123 firms remained in business and 43 firms had closed. 34 firms refused to participate in these follow-up phases. Thus the present study concentrates on the 123 surviving firms.<sup>1</sup> The entrepreneurs' locus of control was measured when the basic data were collected at the beginning of 1992, and the measurement of entrepreneurs' strategic locus of control was carried out in the third phase of the study at the beginning of 1995. Similarly, the indicators describing the firm were also measured during the different phases of the study. This was done to reduce the common method variance, even though the same persons were interviewed on each occasion (see Boone and De Brabander 1997; Renn and Vandenberg 1991). In traditional small Finnish firms there is often no other person except the founder who can answer all the questions about his/her firm.

The firms under scrutiny were mainly small firms, heavily reliant on the contribution of the entrepreneur himself and his/her family. The objectives which the entrepreneur considers worth striving for in his/her own life were reflected in the firm's activities. About 60 per cent of the firms studied em-

ployed five or fewer persons. The emphasis in the interview material was on firms in the metal product and engineering. Over 45 per cent of the entrepreneurs included in the study had no higher basic education than elementary school. The majority of the entrepreneurs had their background in small and medium-sized firms, an aspect of experience which tends to be reflected in the firm's structure in the start-up process.



### 3 RESULTS

From the viewpoint of entrepreneurship it is essential to look for the personal qualities which contribute to an individual's move into entrepreneurship and his or her success as an entrepreneur. The indicators of locus of control are the most commonly used instruments in research on the entrepreneurial personality.

#### 3.1 Comparison between indicators

In Table 4.2.1 the reliabilities of the indicators describing an entrepreneur's locus of control vary between 0.47 and 0.70 (Cronbach 1951). The indicator of strategic locus of control yielded the highest reliability value (=0.70) owing to the greater number of items employed compared with the other indicators. The reliability values of the other indicators (=four items) vary around 0.50, which Nunally (1978) considers as being the lower limit of acceptability.

TABLE 4.2.1 Mean values, reliability coefficients (Alphas) and intercorrelations between indicators of locus of control

Scale	N	Mean	Alpha	Scale intercorrelations			
				1	2	3	4
1.Chance	119	2.27	0.49	-			
2.Powerful others	119	2.83	0.48	0.16	-		
3.Internal	119	3.85	0.47	-0.24*	-0.14	-	
4.Strategic locus of control	117	3.41	0.70	-0.03	-0.26*	0.44**	-
				*P < 0.01, **P < 0.001, (1-tailed)			

The indicator of strategic locus of control has a very strong positive correlation with the indicator of internal attributing ( $r = 0.44$ ,  $d.f. = 115$ ,  $p < 0.001$ ). This strengthens the assumption (hypothesis H1) that both indicators measure

entrepreneurs' belief in their ability to influence events personally.

### 3.2 Differences between indicators

In Table 4.2.1 the indicator of strategic locus of control and the indicator of internal attributing differ from each other in their relation to external control, which in the present study was analysed in two separate dimensions (Levenson 1981). The indicator of internal attributing had a negative correlation with the indicator of chance attributing ( $r = -0.24$ , d.f. = 117,  $p < 0.01$ ). Accordingly, the indicator of strategic locus of control had a negative correlation with the indicator of powerful others ( $r = -0.26$ , d.f. = 115,  $p < 0.01$ ) (table 4.2.1). According to Wong and Sproule (1984), powerful others are seen as social relationships. According to Levenson (1981), there is at least a potential possibility of influencing the control of other people, and thus the control of other people can be seen as more predictable than the eventual influence of chance. Even in the sense of competition theory the control of other people - for instance of competitors - seems to be more predictable than the control of chance (Porter 1980). Seen against the background of changes in the firms' action environment, there are always random factors in business that the manager has to be ready for. However, in its relation to the entrepreneurial environment the indicator of strategic locus of control would seem to conform more with real world conditions than the indicator of internal attributing. The results thus support the acceptance of the second hypothesis (=H2) regarding the control of other people, where the indicator of strategic locus of control in the form of social relationships was related to the 'macro-level' environment (Carsrud and Johnson 1989).

### 3.3 Relation between indicators and strategic factors

Table 4.2.2 describes the dependence of the indicators of locus of control on strategic factors (the variables are explained in Appendix 2). A product strategy which can be differentiated from that of one's competitors correlates positively with both indicators of locus of control (internal attributing:  $r = 0.30$ , d.f. = 112,  $p < 0.01$ , strategic control orientation:  $r = 0.32$ , d.f. = 112,  $p < 0.001$ ). Firms with differentiated products have, through those products, been able to defend themselves against external control (= competitive forces) or to use i.e. external control for their own benefit. The indicator of strategic locus of control is also linked with the specialisation of the firm in target setting ( $r = 0.24$ , d.f. = 115,  $p < 0.01$ ).

TABLE 4.2.2 Dependence of the indicators of locus of control on strategic factors in a firm

Indicator	N	Internal attributing (r)	Strategic locus of control (r)
<i>Firm's strategy:</i>			
Firm acting as subcontractor	114	-0.01	-0.24*
Firm acting in the local market	114	0.10	0.01
Product-differentiated firm	114	0.30*	0.32**
Customer-oriented firm	114	0.05	0.20
Internationalised firm	114	-0.24*	-0.08
<i>Firm's targets:</i>			
Growth of the firm	117	-0.08	0.08
Specialisation of the firm	117	0.21	0.24*
Diversification of the firm	117	-0.10	-0.13
Safeguarding of the family's livelihood	114	0.17	0.11
<i>Strategic decision-making:</i>			
Planning of the start-up process	112	0.17	0.31*
Action planning	112	-0.02	0.22*
Innovativeness	112	0.05	0.13
Interactiveness	112	-0.18	0.12
Management by groups	112	0.07	-0.26*
Willingness to take risks	113	-0.10	-0.17
<i>Success of the firm:</i>			
Growth of the firm's turnover	115	0.08	0.01
Firm's profitability (= gross margin %)	94	0.21	0.25*
Entrepreneur's assessment of success	117	0.15	0.13
<i>Firm's characteristics:</i>			
Size of the firm (= turnover)	117	-0.01	0.03
Co-operation between firms	113	0.09	0.19
<i>Entrepreneur's qualifications:</i>			
Entrepreneur's general education	113	-0.14	0.03
Entrepreneur's professional education	113	-0.18	0.01
Entrepreneur's work experience	112	-0.32**	-0.10
Earlier experience as an entrepreneur	117	-0.14	-0.09
Entrepreneur/professional manager	117	-0.27*	-0.07
*P < 0.01, **P < 0.001, (1-tailed)			

The indicators used in table 4.2.2 differ from each other when looked at on the basis of the firm's strategy. The indicator of strategic locus of control correlates negatively with a subcontractor strategy ( $r = -0.24$ , d.f. = 112,  $p < 0.01$ ). The main suppliers often control the action in a subcontractor relationship. Entrepreneurs who have a strong strategic locus of control prefer to seek a position in the market which they themselves can influence and do not want to be subcontractors. The indicator of internal attributing correlates negatively with the strategy of internationalisation ( $r = -0.24$ , d.f. = 112,  $p < 0.01$ ). The typical small entrepreneur with strong internal control (who often does not have the skills needed in the international market) will often rather seek local development often than expansion in international markets.

The results of the present study carried out on the basis of the strategy adopted by firms clearly show that of the two indicators of control orientation

used strategy is best explained by the external control indicator. In a subcontractor relationship external control can more easily be joined to the control of other people (= main suppliers) than in cases where operations take place in the international market, in which the needs of the market may be subject to sudden change as a result of incidental factors in the action environment.

The indicators of locus of control used in the study differed clearly from each other in their relation to strategic decision-making. The indicator of internal attributing did not correlate with the variables describing strategic decision-making. On the other hand, strategic locus of control had a positive correlation with the planning of the firm at start-up ( $r = 0.31$ , d.f. = 110,  $p < 0.01$ ) and with the planning of the firm's action ( $r = 0.22$ , d.f. = 110,  $p < 0.01$ ). The entrepreneur's strong belief in his/her own ability to control events was channelled into the formation of the firm's strategy through action planning. Here the firm is seen as an active but faceless adapter to the environment, and the idea of action planning is strong with entrepreneurs who are heavily strategically control-oriented. The indicator of strategic locus of control correlated negatively with group management ( $r = -0.26$ , d.f. = 110,  $p < 0.01$ ) (table 4.2.2). In firms with group management a number of people influence the strategic decision-making of the firm. Entrepreneurs with a strong strategic locus of control prefer to act independently. The indicator of strategic locus of control had a positive correlation with the firm's success ( $r = 0.25$ , d.f. = 92,  $p < 0.01$ ) when profitability was taken as the criterion. The results thus support the acceptance of the third hypothesis (=H3) regarding the association of the strategic locus of control with the firm's strategies, organisation and profitability.

The fourth hypothesis stated that the strategic locus of control would correlate with characteristics of the firm or entrepreneur. The indicator of strategic locus of control did not change in response to the size of the firm or with the characteristics describing the entrepreneur's competence. The findings did not support the acceptance of the fourth hypothesis (=H4).

The indicator of internal attributing had a strong negative correlation with the entrepreneur's earlier work experience ( $r = -0.32$ , d.f. = 110,  $p < 0.001$ ) and a negative correlation with the variable entrepreneur/professional manager ( $r = -0.27$ , d.f. = 115,  $p < 0.01$ ). Strong internal control is emphasised by those entrepreneurs who have less work experience. Entrepreneurs with very versatile work experience in production, marketing and product development scored lower on the indicator of internal attributing. The indicator of internal attributing also separates typical owner-entrepreneurs from professional managers. Entrepreneurs are people who believe that by their own action they are able to influence their environment or the events that befall them. The findings support the acceptance of the fifth hypothesis (=H5) that internal control expectation is usually associated with entrepreneurial characteristics.

## 4 CONCLUSIONS

This study demonstrates that the indicator of strategic locus of control is no more sensitive to changes in the environment when adapted to the entrepreneurial context than the indicator of internal locus of control. The indicators used were measured at intervals of three years in the critical start-up phase when the changes in a firm's activities are expected to be big, and it was observed that both the indicators used also measured the entrepreneurs' belief in their own ability to influence events.

The indicators used differed from each other in their relation to external control. The indicator of internal attributing had a negative correlation with the indicator of chance attributing. Accordingly, the indicator of strategic locus of control had a negative correlation with the indicator of powerful others. According to various studies (among others Levenson 1981), the control of other people would seem to be more predictable than the eventual influence of chance. Also, if competition theory is considered, control over other people (e.g. competitors actions) seems to be more predictable than control over chance. On the one hand, in a subcontractor relationship external control could include the control of main suppliers whereas, on the other hand, in team-driven ventures these contacts could be viewed as internal networks since they generally consist of the team members alone.

The indicator of strategic locus of control was dependent on firms' strategic factors (the firm's targets, strategic decision-making and success) and did not directly correlate with the other characteristics of the entrepreneur apart from the features of his/her personality (internal/external). The indicator of internal attributing was also dependent on the characteristics describing the entrepreneur's professional skill. In our opinion the results support those obtained by Hodgkinson (1992) and show that the indicator of strategic locus of control functions better in the case of a small firm than the indicator of internal attributing. The measurement of control orientation through strategic thinking and the firm's action unites the features of entrepreneur's personality with the firm's competition situation and environment (cf. contingency theory). The indicator of internal attributing, on the other hand, shows better links with the

entrepreneur's control of his/her own life and is thus useful in research on entrepreneurship and the birth of new firms.

However, we need further information on the relationships between the indicators of locus of control before we can interpret all of these findings. For example, the strategic locus of control had a positive correlation with the planning of the start-up process and action planning, but not e.g. growth. Partly these findings are in accordance with past studies showing that poor performance is usually connected with a lack of resources, insufficient planning, and lack of entrepreneurial competence (Gaskill and Van Auken 1993; Littunen and Hyrsky 2000). Nevertheless this indicator did not find firms with modest growth goals or 'entrepreneurial ventures' with the goal of creating significant wealth, which could be very important in the early entrepreneurial stage. Overall, in interpreting the findings of this study and planning future research, certain limitations need to be kept in mind. First, because this study was restricted to two lines of business, caution must be exercised in generalising the results across other industries and start-up firms. Second, the reliability values of the locus of control indicators (chance, external and internal) were rather low, which may influence the results. Also, the background and aims of entrepreneurs may vary according to their line of business. More extensive studies focusing on different industries or exploring start-up firms in greater depth may help to elucidate these issues.

## Notes

1. The analysis also excludes those firms in which the entrepreneur has been replaced during the course of the different research phases.

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Appendix 1 The indicators of locus of control used in this study

Items of sum variables	Values of variable
<p><b>Strategic locus of control:</b></p> <ol style="list-style-type: none"> <li>1. There is very little my company can do in order to change the 'rules of competition' in our industry</li> <li>2. Many of the problems experienced by businesses can be avoided through careful planning and analysis</li> <li>3. To a great extent the competitive environment in which my company operates is shaped by forces beyond its control</li> <li>4. Becoming a successful company is a matter of creating opportunities, luck has little of nothing to do with it</li> <li>5. There is little point in the majority of companies taking an active interest in the wider concerns of their industry because only the larger more powerful companies have any real influence</li> <li>6. It is not always wise to make strategic plans far ahead because many things may turn out be a matter of good or bad fortune anyhow</li> <li>7. My company can pretty much accomplish whatever it sets out to achieve</li> <li>8. Most companies can have an influence in shaping the structure of the market</li> <li>9. As regards competing in the market place, most companies are the victims of forces they cannot control</li> <li>10. There is a little point in engaging in detailed strategic analyses and planning because often events occur that my company cannot control</li> <li>11. Usually companies fail because they have not taken advantage of their opportunities</li> <li>12. My company is able to influence the basis upon which it competes with other firms</li> <li>13. Businesses who rarely experience strategic problems are just plain lucky</li> <li>14. There is a direct connection between the interest you take in your competitors' businesses and the success of your own company</li> <li>15. My company has a direct role in shaping the environment in which it competes</li> <li>16. Market opportunities in my industry are largely predetermined by factors beyond my company's control</li> </ol>	5-step scale
<p><b>Chance:</b></p> <ol style="list-style-type: none"> <li>1. I have often found that what is going to happen will happen</li> <li>2. To a great extent my life is controlled by accidental happenings</li> <li>3. Often there is no chance of protecting my personal interests from bad luck happenings</li> <li>4. It's not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune</li> </ol>	5-step scale
<p><b>Internal:</b></p> <ol style="list-style-type: none"> <li>1. I am usually able to protect my personal interests</li> <li>2. My life is determined by my own actions</li> <li>3. I can pretty much determine what will happen in my life</li> <li>4. When I make plans, I am almost to certain to make them work</li> </ol>	5-step scale
<p><b>Powerful others:</b></p> <ol style="list-style-type: none"> <li>1. Getting what I want requires pleasing those people above me</li> <li>2. My life is chiefly controlled by powerful others</li> <li>3. In order to have my plans work, I make sure that they fit in with the desires of people who have power over me</li> <li>4. I feel like what happens in my life is mostly determined by powerful people</li> </ol>	5-step scale

## Appendix 2 Variables used as strategic factors in the correlation analyses

Variable	Values of variable
Dichotomous variables: <i>Firm's strategy:</i> Firm acting as subcontractor Firm acting in the local market Product-differentiated firm Customer-oriented firm Internationalised firm <i>Strategic decision-making:</i> Planning of the start-up process Willingness to take risks <i>Firm's characteristics:</i> Co-operation between firms <i>Entrepreneur's qualifications:</i> Entrepreneur's general education Entrepreneur's professional education Entrepreneur's work experience Earlier experience as an entrepreneur Entrepreneur/professional manager	0 = no / 1 = yes (over 50 % of sales) 0 = no / 1 = yes (100 % of sales) 0 = no / 1 = yes 0 = no / 1 = yes 0 = no / 1 = yes (export firm) 0 = not as planned / 1 = as planned or better 0 = avoid to take risk / 1 = take risks 0 = no co-operation / 1 = have co-operation 0 = primary school / 1 = secondary school 0 = no / 1 = yes 0 = one-sided / 1 = many-sided 0 = yes / 1 = no 0 = entrepreneur / 1 = professional manager
Sum variables: <i>Strategic decision-making:</i> Action planning (6 items) Innovativeness (4 items) Interactiveness (2 items) Management by groups (2 items)	5-step scale
Scale variables: <i>Firm's targets:</i> Growth of the firm Specialisation of the firm Diversification of the firm Safeguarding of the family's livelihood <i>Success of the firm:</i> Growth of the firm's turnover Firm's profitability Entrepreneur's assessment of success <i>Firm's characteristics:</i> Size of the firm	3-step scale (1=no; 2=a little/not much; 3=strongly) (1=no; 2=a little/not much; 3=strongly) (1=no; 2=a little/not much; 3=strongly) (1=no; 2=a little/not much; 3=strongly) growth-% gross margin % 5-step scale turnover (Fim mark)

# ENTREPRENEURSHIP AND THE CHARACTERISTICS OF THE ENTREPRENEURIAL PERSONALITY

## Abstract

In this study the characteristics of the entrepreneurial personality and the effects of changes in the entrepreneur's personal relationships on this personality were measured during different phases of entrepreneurship. According to the empirical findings, becoming an entrepreneur and acting as an entrepreneur are both aspects of the entrepreneur's learning process, which in turn has an effect on the personality characteristics of the entrepreneur. The entrepreneur's drive to solve problems (=mastery) had increased, and control by powerful others decreased since the start-up phase. Changes in the entrepreneur's relations with others were also observed to have an effect on the entrepreneur's personality characteristics. The empirical findings also show that as the number of co-operative partners decreased, control by powerful others also decreased, and that, since the start-up phase, entrepreneurs whose personal relations had increased also showed a clear increase in mastery.

Keywords            entrepreneurship, personality, personal relations, changes, small firms

## 1 INTRODUCTION

Starting a new firm is very much an individual decision, which is why the individual's qualities as an entrepreneur are central to the investigation of entrepreneurship. During the start-up phase of a firm, the important characteristics of an entrepreneur must include innovativeness and the will to act (Tibbitts 1979, Bird 1989). Innovativeness means the entrepreneur must have the ability to resolve problems in new situations. This is presumably linked with the entrepreneur's abilities, attained through training and experience. The will to act, besides being in part the product of experience, is probably connected with the entrepreneur's training and the resources under his/her control. These factors shape the values and attitudes of the entrepreneur. They can also be seen as factors bringing the entrepreneur closer to what he/she expects from life, or negating these expectations.

The characteristics of a successful entrepreneur are the ability to take risks, innovativeness, knowledge of how the market functions, manufacturing know-how, marketing skills, business management skills, and the ability to co-operate (Casson 1982). Caird (1988) mentions a good nose for business, the desire to take risks, the ability to identify business opportunities, the ability to correct errors effectively, and the ability to grasp profitable opportunities as characteristics of an entrepreneur. Bird (1989) divides risks into five types, four of which are clearly relevant to any potential entrepreneur: economic risk, risks in social relations, risks in career development, plus psychological and health risks. The findings of Brockhaus (1982) show that the preference for a particular risk type does not differ between professional managers and the general population, nor between successful and unsuccessful firms. In studies of entrepreneurship it is possible to differentiate between two schools of thought: one based on the trait model and the other on contingency thinking. In studies using the trait model, the basic question is why certain individuals start firms and are successful as entrepreneurs. In these studies the personality traits of the successful entrepreneur are not looked at in the context of the prevailing situation. In models based on contingency thinking, the characteristics needed for entrepreneurship are

bound up with the firms' environment and the prevailing situation (Gilad and Levine 1986). Personality characteristics are formed by the interplay between the individual and the environment. In this interplay, life situation, experiences, and changes in the individual's life play a central role (e.g. Rotter 1975, 1990). Thus becoming an entrepreneur can amount to a change in one's life which is profound enough to have an effect on one's personality characteristics.

The theories most commonly applied in research on entrepreneurship are McClelland's (1961) theory of the need to achieve and Rotter's (1966) locus of control theory. According to McClelland's theory, individuals with a strong need to achieve are among those who want to solve problems themselves, set targets, and strive for these targets through their own efforts. The theory suggests that individuals with a strong need to achieve more often enter entrepreneurship and subsequently succeed better than others. According to Rotter (1966), the locus of control of an individual can be seen as either internal or external. An internal control expectation refers to control over one's own life, where the results of one's actions are considered to be dependent either on one's own behaviour or on one's permanent characteristics. An external control expectation refers to the kind of attitude which focuses on the actions of other people, or on fate, luck or chance. According to Rotter's (1966) theory, the internal control expectation is related to learning, and thus motivates and supports active striving. The external control expectation, on the other hand, impedes learning and encourages passivity. An internal control expectation is usually associated with entrepreneurial characteristics.

In Rotter's (1966) theory the individual's locus of control varies along the internal/external divide. However, several researchers have proposed that "internal" and "external" should be studied as separate dimensions. This new conception of locus of control treats internal and external control as two independent dimensions; therefore different kinds of relationships may exist between these two dimensions. Overall, external control may be viewed as either positive or negative control. Positive external control supports and co-operates with personal control, increasing the expectancy of success. Negative external control hinders or limits personal control, decreasing the expectancy of success (Wong and Sproule 1984). In Levenson's (1981) application (= LASS) locus of control has three dimensions; an individual's belief in internal control, in control by others, or in control by chance, fate, etc. That is to say, for Levenson, external control can be interpreted as two different dimensions. Her argument for this is that control by other people can be seen as more predictable than, for example, that by chance, since a person has, at least, the potential to affect it. Although Vesala (1992) has criticised Rotter's (1966) hypothesis, in his opinion Rotter captures something essential from the viewpoint of an entrepreneur, namely the belief in one's own ability to influence events. However, other relevant aspects from the entrepreneurial viewpoint, i.e. the belief in the relation between one's own and other people's ability to influence events, and the effect of this relation on one's own achievements, remain outside the hypothesis.

The business activity of a new firm is often developed as a part of the entrepreneur's personal life strategy, as a means of earning a living, and is to a

large extent characterised by the entrepreneur's personality characteristics. From the point of view of the trait theory, McClelland's (1961, 1965) hypothesis can be seen as describing the characteristics needed in entrepreneurship. Economic risk, the power to decide due to economic commitment, and the fact that personal income is dependent on the profit of the firm are factors which imply the personal characteristics of an achiever from the entrepreneur. The locus of control theory looks from various angles at the individual's ways of making sense of the social environment and the knowledge gained in different situations. According to findings in several studies, a strong need to achieve is related to targets and the desire to reach these targets, while the locus of control is related to turning these thoughts into actions.

## 2 METHOD AND RESEARCH STRATEGY

### 2.1 Research hypotheses

Time is a fundamental dimension, when studying the lives of individuals and newly established firms (Bird 1992, Butler 1995). The aim of this follow-up study is to compare the motivation to achieve and locus of control in different phases of entrepreneurship. A central theme in studies dealing with entrepreneurship is that the decision to become an entrepreneur is not coincidental. Differences can be found in the values and attitudes of entrepreneurs. This approach is common in studies focusing on the motives of entrepreneurs (McClelland 1961, 1985). Differences can also be found in the growth environment and the experiences of the entrepreneur (Gibb and Ritchie 1982). According to Gibb and Ritchie (1982), entrepreneurship can be wholly understood in terms of the types of situation encountered and the social groups to which individuals relate. Their model assumes individuals change throughout life and that it is the individual's transactions in specific social contexts and reference groups that shape the person. According to Chell (1986) the model developed by Gibb and Ritchie is important because it systematically documents the environmental factors which affect the behaviour of the established entrepreneur and consequently the growth of his or her business. However, it remains an entirely 'situational' model, since it would appear to lose sight of the individual by describing behaviour entirely as a function of social influences (Chell 1986).

Locus of control occupies a central role in Rotter's social learning theory (Rotter et al. 1972). In this theory a distinction is made between situation-specific and generalised expectancies. In the context of entrepreneurship situation-specific expectancies are defined as the experience of entrepreneurs in precisely that situation, i. e. becoming an entrepreneur. Entrepreneurs also develop relatively stable expectancies which are the result of generalising their lifetime experiences in specific behaviour sequences (Rotter 1975). The first aim



of this study is to investigate whether becoming an entrepreneur involves such a profound change in the entrepreneurial individual's life that it affects her/his personality characteristics. On the basis of these theoretical starting points the first research hypothesis is framed as follows:

- (1) entrepreneurship has an effect on the personality characteristics of the entrepreneur.

To test the first hypothesis, following Rotter's (1966) theory, changes in the personality characteristics of the entrepreneur - what she/ he has learned, and the degree of her/ his independence - are investigated. Until now, most studies have concentrated on the relationship between business practice and entrepreneurship. The know-how of an entrepreneur is particularly highlighted in the ability to recognise and react to the changes constantly occurring in the competitive environment of a firm (Gartner 1985). Training, especially in combination with the relevant experience and the tacit knowledge it builds, seems to be a general determinant of the success of firms (Vesper 1992). The nature of entrepreneurs' training explains the survival of new firms. As a rule, those entrepreneurs who had training in the start-up phase of their firms remained in business. Dominance and mastery was emphasised among entrepreneurs who had training when the firm was in the process of being established. These results can also be interpreted to indicate that training increases the potential for entrepreneurs to influence the factors prevailing in the firm's environment (Littunen 1997). The development and the nature of networking by firms and entrepreneurs has attracted increasing attention in recent studies of entrepreneurship. According to Low and MacMillan (1988) network theories are increasingly being applied in entrepreneurship research. Sweeney (1987) has underlined that networking is especially important in technological venturing. Entrepreneurial networks can be categorised into two types derived from different sources: informal and formal networks (Birley 1985; Johannisson, 1985). Informal entrepreneurial networks consist of personal relationships, families, and business contacts. Formal networks consist of venture capitalists, banks, accountants, creditors, lawyers, and trade associations (Das and Teng 1997). There are many methodological advantages to studying entrepreneurial networks in small firms (Johannisson 1990). First, the entrepreneur must be explicit about her/his personal network in order to become recognised and able to acquire further resources. Second the network of all direct and indirect linkages give her/him access to various segments of the environment (Johannisson 1998). The social network also has a wider cultural dimension. Culturally induced values, attitudes and behaviours are of prime importance in explaining the nature of relationships (Johannisson and Spilling 1986; Szarka 1990). An entrepreneur acts in interaction with the environment and when personal networks decrease or increase markedly, it is possible that such changes may also influence the motives, values, attitudes or personal characteristics of an entrepreneur. However, the linkages are not clear. In testing the hypotheses concerning personal networks, changes in the 'micro-level' personality characteristics of the entrepreneur are related to 'macro-level'

changes in social relations (Carsrud and Johnson 1989). Taking these theoretical considerations into account, it is important to study how personal networks influence the characteristics of the entrepreneurial personality. The hypotheses concerning the informal networks of the entrepreneur are formulated in this study as follows:

- (2) an increase in co-operation between entrepreneurs improves achievement motivation,
- (3) a decrease in co-operation between entrepreneurs decreases control of powerful others,
- (4) an increase in the number of the entrepreneur's personal interest networks improves achievement motivation.

In testing the second hypothesis, the effects of the entrepreneur's professional support system on her/his personality characteristics are investigated (Hisrich 1990). In the third hypothesis, the control of powerful others is explained in terms of social relationships (Wong and Sproule 1984). The importance of personal relationships in small firms lies particularly in the fact that they act as the entrepreneur's safety net and resource bank (Johannisson and Spilling 1986). Taking this point of view, the fourth hypothesis is tested by investigating whether an increase in an entrepreneur's personal interest networks has an effect on her/his achievement motivation.

## 2.2 Measures and data

In this study the entrepreneur's achievement motivation was measured by four different dimensions, each of which consisted of four different items: the work ethic, the pursuit of excellence, mastery and dominance (Cassidy and Lynn 1989). The entrepreneur's locus of control was measured by three different dimensions (Levenson 1981): internal attributing, chance attributing, and powerful others. In this study the personality characteristics of the entrepreneur were measured on the basis of interviews carried out during the start-up phase of the firm in 1992. The measurement was repeated with the same items during the fifth phase of the follow-up study in 1996. In addition, sum variables of the entrepreneur's personal network were calculated in 1992 and in 1996. The entrepreneurial personality measures are explained in Appendix 1 and the personal network variables are explained in Appendix 2. Below, the data used is described, and the differences between the entrepreneur's personality measurements are compared by means of the t-test. Following this, the effects of changes in personal networks on the entrepreneur's personality characteristics are investigated.

The subjects were firms in the metal industry and business services which started up in 1990 in Finland. The data in the follow-up study were collected

through interviews, the basic material consisting of 138 metal industry and 62 business services firms. The entrepreneurs were interviewed on five occasions during the years 1992-96. The present study examines the 123 surviving firms.

The firms were mainly small firms, heavily dependent on the contribution of the entrepreneur himself and his/her family. This was of great importance for the implementation of the study. The bond between such a firm and the entrepreneur is strong. For one thing, the strategy of the firm has been chosen by the entrepreneur. The things in life which the entrepreneur considers important are reflected in the firm's activities. About 60 per cent of the firms studied employed less than five persons. The emphasis in the interview material was on metal product and engineering firms. Over 45 per cent of the entrepreneurs had no higher education than elementary school. The majority had their background in small or medium-sized firms, which is reflected in the structure of the enterprise adopted in the new firm's start-up process. In Finland, new firms are typically of the traditional small type. Entrepreneurs in small firms have become increasingly aware of the need to operate their personal networks more strategically, for example creating more diverse and weak ties in order to be able to cope with a complex, global market (Johannisson 1998).

## **3 FINDINGS**

### **3.1 The effect of entrepreneurship on the entrepreneur's personality characteristics**

Entrepreneurship has been defined in many different ways (e.g. Brockhaus 1976, Casson 1982, Wärneryd 1988). In this study, entrepreneurship means activities connected with owning and managing a business firm (Brockhaus 1976). Achievement motivation and the locus of control are psychological factors which have been presumed to explain success as an entrepreneur, and to differentiate between entrepreneurs and other people (Aldrich and Zimmer 1986, Brockhaus and Horwitz 1986, Chell et al. 1991). To investigate the various dimensions of achievement motivation and locus of control, a sum variable was formed from a number of different items (table 4.3.1).

TABLE 4.3.1 The differences between the dimensions describing achievement motivation and locus of control during the years 1992 and 1996 (= means, significance of the t-test, and reliability coefficient)

Dimensions describing Achievement motivation and locus of control	Mean 1992	Mean 1996	Significance of t-test	Reliability 1992	Reliability 1996
Work ethic	4.118	4.123		0.526	0.476
Pursuit of excellence	4.537	4.542		0.474	0.432
Mastery	4.167	4.323	**	0.460	0.344
Dominance	3.252	3.263		0.483	0.567
Chance	2.242	2.198		0.494	0.680
Internal	3.857	3.842		0.475	0.185
Powerful others	2.807	2.634	***	0.479	0.515
* $\leq 0.05$ , ** $\leq 0.01$ , *** $\leq 0.002$					

The investigation of the reliability coefficients of the sum variables showed that not all the scales were totally internally consistent. In particular, the scale describing internal attribution was not as consistent in the measurement of the fifth phase as during the interviews in the start-up phase. A correlation study carried out together with the investigation of the reliability coefficients showed that the entrepreneurs had different views during the second phase about the items 'when I make plans, I am almost certain to make them work,' and 'I can pretty much determine what will happen in my life' if compared to their views in the interviews during the start-up phase. At start-up, the belief in one's own power to affect the execution of one's plans was stronger than during the sixth year of functioning. Changes in the life situation experienced during the start-up phase may be the reason for this link between execution of plans and start-up. In the second measurement of personality characteristics, the execution of plans was connected with other plans (e.g. the development plans of the firm), which do not necessarily bear as strong a relation to the entrepreneur's internal control as the decision to start a firm. The measure of internal attribution was excluded from the subsequent tests of the hypotheses because of its low reliability.

Emphasis on the drive to solve problems is important for the success of the start-up phase and increases the firm's chances of surviving during the critical operational phase (Littunen et al. 1998). The entrepreneurs in 1996 stressed mastery even more than at the start-up phase (table 4.3.1). According to Rotter (1966), control expectation is linked to learning, so that an internal control expectation motivates and supports active striving. An external control expectation, on the other hand, hampers learning and encourages passivity. According to the findings, the external control expectations (control by other people) of the entrepreneurs had decreased significantly since the start-up phase. This can also be interpreted as an increase in the sense of independence of the entrepreneurs brought about by their entrepreneurship (table 4.3.1).

TABLE 4.3.2 Differences between those who had previously been entrepreneurs and those who had no previous experience, in the dimensions describing achievement motivation and locus of control during the years 1992 -96 (means and the significance of t-test)

Dimensions describing achievement motivation and locus of control	Had previous experience as entrepreneur		No previous experience as entrepreneur	
	Mean 1992	Mean 1996	Mean 1992	Mean 1996
Work ethic	4.103	4.052	4.124	4.156
Pursuit of excellence	4.477	4.469	4.566	4.576
Mastery	4.109	4.244	4.193	4.361*
Dominance	3.270	3.221	3.241	3.281
Chance	2.009	2.027	2.356	2.281
Powerful others	2.745	2.547*	2.839	2.678**
*≤0.05, **≤0.01, ***≤0.002	(n=36)		(n=74)	

Mastery increased and attribution to other people decreased in the follow-up measurement among the entrepreneurs who had no previous experience. The decrease in attribution to other people can be interpreted according to Rotter's (1966) theory as being caused by the learning of the new entrepreneurs (table 4.3.2). Thus the results of this study support the view of contingency theory that a change in life (= entrepreneurship) shapes to some extent the characteristics of the entrepreneur, and thus the empirical results support the acceptance of the first hypothesis.

### 3.2 The characteristics of the entrepreneur and the environment

Contingency theory emphasises the importance of the environment in research on entrepreneurship (Gilad and Levine 1986). In the environment the functioning of the entrepreneur takes place in relation to other people (Carsrud and Johnson 1989). By looking at the characteristics of the entrepreneur via changes in the level of co-operation between the firm and the personal interest network of the entrepreneur, it is possible to describe the relation between the success of the entrepreneur's business and other people in a changing environment (table 4.3.3).

TABLE 4.3.3 Differences in achievement motivation and locus of control following changes in the co-operation between firms during the years 1992-96 (means and the significance of t-test)

Dimensions describing Achievement motivation and Locus of control	Mean 1992	Mean 1996	Significance
<i>Decrease in the co-operation (n=13):</i>			
Work ethic	4.214	4.200	
Pursuit of excellence	4.567	4.708	
Mastery	4.247	4.169	
Dominance	3.373	3.279	
Chance	1.994	2.278	
Powerful others	2.778	2.366	**
<i>No changes in the co-operation (n=81):</i>			
Work ethic	4.052	4.063	
Pursuit of excellence	4.548	4.516	
Mastery	4.131	4.320	**
Dominance	3.259	3.291	
Chance	2.112	2.177	
Powerful others	2.746	2.624	
<i>Increase in co-operation (n=16):</i>			
Work ethic	4.383	4.368	
Pursuit of excellence	4.460	4.539	
Mastery	4.290	4.474	
Dominance	3.110	3.097	
Chance	2.614	2.247	
Powerful others	3.146	2.914	
*≤0.05, **≤0.01, ***≤0.002			

The entrepreneur's mastery had increased in cases where the co-operation between firms had remained unchanged during the study period. These results indicate the rejection of the second hypothesis. There were no changes between the two measurements in the personality characteristics of the group of entrepreneurs whose firms had increased their co-operation. Thus, changes in the amount of co-operation made no difference to the entrepreneur's achievement motivation (table 4.3.3).

According to the third hypothesis, the control of powerful others is explained by reference to social relationships (Wong and Sproule 1984). At the same time it was hypothesised that changes in the environment would cause changes in the level of co-operation between firms. The results show that, amongst those whose firms decreased their co-operation, the control of others had also decreased. This implies support for the third hypothesis regarding decreased co-operation. However, at the same time there were no changes in the group 'increase in co-operation'. This could be explained by the entrepreneurs' personal networks, which may have decreased at the same time in this group. Thus the level of control by powerful others had not changed in the group 'increase in co-operation'.

TABLE 4.3.4 Differences in the achievement motivation and locus of control following the changes in the entrepreneur's personal interest networks during years 1992-96

Dimensions describing the achievement motivation and locus of control	Mean 1992	Mean 1996	Significance
<i>Decrease in the entrepreneur's personal interest networks (n=40):</i>			
Work ethic	4.291	4.133	
Pursuit of excellence	4.765	4.540	**
Mastery	4.313	4.250	
Dominance	3.407	3.538	
Chance	2.049	2.250	
Powerful others	2.622	2.452	
<i>No changes in the entrepreneur's personal interest networks (n=44):</i>			
Work ethic	3.824	4.079	**
Pursuit of excellence	4.420	4.506	
Mastery	4.051	4.212	*
Dominance	3.106	3.022	
Chance	2.409	2.088	*
Powerful others	2.843	2.543	**
<i>Increase in the entrepreneur's personal interest networks (n=23):</i>			
Work ethic	4.347	4.200	
Pursuit of excellence	4.408	4.617	**
Mastery	4.068	4.636	***
Dominance	3.300	3.314	
Chance	2.349	2.315	
Powerful others	2.908	3.049	
* $\leq 0.05$ , ** $\leq 0.01$ , *** $\leq 0.002$			

Abundance and versatility in an entrepreneur's personal interest networks increase the resources of entrepreneurship because they fill possible gaps in the entrepreneur's training and experience (Johannisson and Spilling 1986). Mastery had clearly increased in cases where entrepreneurs' personal support networks improved during the study period. Further, differences in the 'pursuit of excellence' points to the effect of the abundance of personal interest networks on the motivation to achieve. According to the fourth hypothesis, an increase in personal interest networks improves the entrepreneur's achievement motivation. The empirical results support this hypothesis, if one presumes that the changes in the group 'no changes in personal interest networks' can be explained by other factors in the environment, and as an effect of the entrepreneurs' learning process.



## 4 CONCLUSIONS

In this study the characteristics of the entrepreneur's personality were measured during different phases of entrepreneurship, and the effects of changes in the entrepreneur's personal relationships on the characteristics of the entrepreneur's personality were studied. The subjects were 123 entrepreneurs, who were interviewed five times during the period 1992-1996. It was noted that the entrepreneur's initial activities during the start-up period, and her/his earliest actions as an entrepreneur were part of the entrepreneurial learning process, which had effects that also extended to the personal characteristics of the entrepreneur. In a changing action environment, changes in the entrepreneur's interrelationships were also seen to affect the entrepreneur's personality characteristics.

To test the first hypothesis, changes in the personality characteristics of the entrepreneur were measured. According to the empirical results, mastery and powerful others increased during the study period. A decrease in the external locus of control can be interpreted according to Rotter (1966) as a result of the entrepreneur's learning and becoming more independent. According to the second hypothesis, an increase in co-operation increases the entrepreneur's achievement motivation. The empirical results did not support this idea, since the group of entrepreneurs who had increased their co-operation showed no differences in their achievement motivation.

To test the third hypothesis, control by powerful others was related to the degree of co-operation between entrepreneurs. According to a study by Wong and Sproule (1984), powerful others are seen as co-operative partners. The empirical results showed that both the number of co-operative partners and control by powerful others had decreased. The results thus support the acceptance of the third hypothesis regarding a decrease in co-operation. However, control by powerful others had not changed in the group 'increase in co-operation', which could be explained by changes in other personal networks in this group.

The fourth hypothesis stated that the versatility and abundance of the entrepreneur's personal interest networks increases the resources of

entrepreneurship because they fill possible gaps in the entrepreneur's training and experience (Johannisson and Spilling 1986). Here the resources of entrepreneurship were related to achievement motivation. According to the empirical results, the mastery of those entrepreneurs whose interrelationships had improved during the study period had also clearly improved.

The hypotheses dealing with social relations can also be interpreted in another way via the importance of causality. It is possible to ask, for example, if a decrease in control by powerful others increased the independence of the entrepreneur and the entrepreneur's wish to decrease the amount of co-operation between firms (Rotter 1966). It is justified to ask questions dealing with social relations because Rotter's (1966) theory is above all a theory focusing on social learning, despite the fact that the locus of control is regarded as independent of social relations. Rotter's (1966) theory does not offer any means of explaining the connection between locus of control and social relations.

However, we need further information on these relationships between the personal networks and personality characteristics of the entrepreneur before we can interpret all of these findings of this study. For example, the work ethic and mastery had increased in the group 'no changes in the entrepreneur's personal interest networks' while chance and powerful others had decreased. It is worth investigating, what kind of environmental factors may have influenced the personal characteristics of the entrepreneurs in this group. Moreover, as the findings of this study show, entrepreneurship and the personal characteristics cannot be studied separately from the features of the environment. In the personal characteristics of the entrepreneur, it was only dominance which showed no changes during the follow-up period.

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## Notes

1. 43 of the firms in the follow-up material have closed down, and 34 firms refused to give interviews during the various follow-up phases. Moreover, the analysis does not include firms in which the entrepreneur has been replaced during the course of the different research phases. The results have been weighted with the weight factors calculated from the basic data set and random samples of the study.

## Appendix 1

## Personality sum variables used in this study

Items of sum variables	Values of variable
<b>Work ethic:</b> 1. Hard work is something I like to avoid 2. I can sit easily for a long time doing nothing 3. I like to work hard 4. I easily get bored if I don't have something to do	5-step scale
<b>Pursuit of excellence:</b> 1. There is satisfaction in a job well done 2. Part of the satisfaction in doing something comes from seeing how good the finished product looks 3. It is no use playing a game when you are playing with someone as good as yourself 4. I find satisfaction in working as well as I can	5-step scale
<b>Mastery:</b> 1. I prefer to work in situations that require a high level of skill 2. I would rather learn easy fun games than difficult thought games 3. I like to be busy all the time 4. I feel like giving up quickly when things go wrong	5-step scale
<b>Dominance:</b> 1. People take notice of what I say 2. I think I am usually a leader in my group 3. I think I would enjoy having authority over other people 4. If given the chance I would make a good leader of people	5-step scale
<b>Chance:</b> 1. I have often found that what is going to happen will happen 2. To a great extent my life is controlled by accidental happenings 3. Often there is no chance of protecting my personal interests from bad luck happenings 4. It's not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune	5-step scale
<b>Internal:</b> 1. I am usually able to protect my personal interests 2. My life is determined by my own actions 3. I can pretty much determine what will happen in my life 4. When I make plans, I am almost to certain to make them work	5-step scale
<b>Powerful others:</b> 1. Getting what I want requires pleasing those people above me 2. My life is chiefly controlled by powerful others 3. In order to have my plans work, I make sure that they fit in with the desires of people who have power over me 4. I feel like what happens in my life is mostly determined by powerful people	5-step scale

## Appendix 2

## Variables of personal interest networks

Variable	Values of variables
Co-operation between firms in 1992 (20 items) ↔ (comparison) Co-operation between firms in 1996 (20 items) → <i>Changes in co-operation during 1992-96</i>	3-step scale 1=no, a little/not much, 3=strongly  1=no, a little/not much, 3=strongly  1=decrease in co-operation 2=no changes in co-operation 3=increase in co-operation
Discussions with personal friends concern- ing the business in 1992 ↔ (comparison) Discussions with personal friends concern- ing the business in 1996 → <i>Changes in personal networks during 1992-96</i>	number of personal friends  number of personal friends  1=decrease in personal networks 2=no changes in personal networks 3=increase in personal networks

## CHAPTER V

### SUMMARY ARTICLE

#### THE BIRTH AND SUCCESS OF NEW FIRMS<sup>1</sup>

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<sup>1</sup> An earlier version of this paper was presented at the 43<sup>rd</sup> World Conference of the International Council for Small Business, Singapore Suntec Center, 8-10 June 1998. The major results of this paper are connected with those of the whole follow-up study.

## **THE BIRTH AND SUCCESS OF NEW FIRMS**

### **Abstract**

New firms do not fully contribute to the creation of employment and innovation unless they remain in business after the critical first few years. This study seeks to clarify which factors are connected with the success of new firms. The research topic was widely investigated from the viewpoint of trait models and contingency theory. The factors influencing the success of the newly established firms which were examined were the characteristics of the entrepreneur, the success of the start-up project, and the characteristics of the firms themselves. The subjects of this study were Finnish metal product manufacturing firms and business-service firms established in 1990. The firms were interviewed for the first time early in 1992. Follow-up data was gathered by means of annual telephone interviews during the period 1993-96 and 1998. The results suggest family firms continued in business more often than firms formed through reorganisation. On the whole it was typical of firms which had closed down in the critical operational phase (1-3 years) that they had carried over problems connected with the start-up situation into the critical first years of their operation. On the other hand know-how and changes in the strategic behaviour of the entrepreneur explained the growth of new firms. Also, characteristics of the firm's environment explained the success of new firm's activities. Between years 4-6, the firms which closed invested very heavily, between years 1-3, in product development, and at the same time expanded their market area. The high specialisation of these firms had led to growing risks, which they had tried to offset through their connections with the outside business world.



# 1 INTRODUCTION

Generally the most important factors in the survival of firms are age, line of business, size and location (Storey and Wyncarczyk 1996). Improving the survival of new firms is an international problem. Approximately 13 % of the new firms established in Europe close down during their first year of business, and only 55 % survive for five years (Statistics Finland 1995). Smallbone (1990) found the discontinuance rate in the first 2.5 years was approximately 37 %. According to a German study, 76 % of new firms continued in business for two years and 62 % for five years after start-up (Bruderl et al. 1992). Several studies have reported average failure rates ranging from a high of 71 % to a low of 31 % in the first five years of a new firm's life (Phillips and Kirchhoff 1989; Baldwin and Gorecki 1991; Williams 1993). In one study it was found that over 90 % of the failed businesses were less than ten years old (Watson and Everett 1996).

Much of the entrepreneurship literature is concerned with explaining why some firms are successful. Some studies have contrasted firms that grow rapidly with those that grow marginally. According to the study by Fisher et al. (1997) the factors involved in very rapid growth may contribute to our understanding of success in general. Moreover, rapid-growth firms are often job creators; hence ensuring that they prosper rather than stumble in a spectacular manner is of considerable economic importance. One notable inquiry on the determinants of high growth versus marginal survival (Cooper et al. 1994) found that the chances of both survival and high growth were positively associated with having a higher level of education, greater industry-specific know-how, and greater initial financial resources. Another recent study that directly compared low-growth with high-growth firms found that the range and intensity of business networks was markedly higher in the firms that grew rapidly (Zhao and Aram 1995).

The purpose of this study was to determine what kind of factors affect the birth of new firms and their success - survival, growth, development, and decline. In the study three different situations related to entrepreneurship were examined: the birth of a firm, the critical operational phase (1-3 years) and the established phase (4-6 years). A firm that survives the first few years can be

described as having passed through the valley of death (Gibb 1990). Rapidly growing firms that survive over the critical operational phase are of great importance both locally and in terms of the national economy, because these firms are the real employers: according to one study they provide up to 16 % of new jobs (Storey and Wyncarczyk 1996).

## **2 AIMS OF THE STUDY**

The study is a follow-up study based on interviews with entrepreneurs. The study approaches the success of new firms, mainly in three phases: the firm's birth, the critical operational phase (1-3 years), and the established phase (4-6 years). The first phase scrutinises various situational factors which affect the birth of a firm. The second phase studies the features and processes which affect the survival of a firm during the critical operational phase. In the third phase attention is focused on the development of activities according to the goals set inside the different firms, and on survival after the critical operational phase. The establishment of a firm is interpreted as a process advancing in phases which ends with a specific business idea, and on the basis of which the firm begins to trade (Lehti 1990). The attached figure presents the framework of the present study.

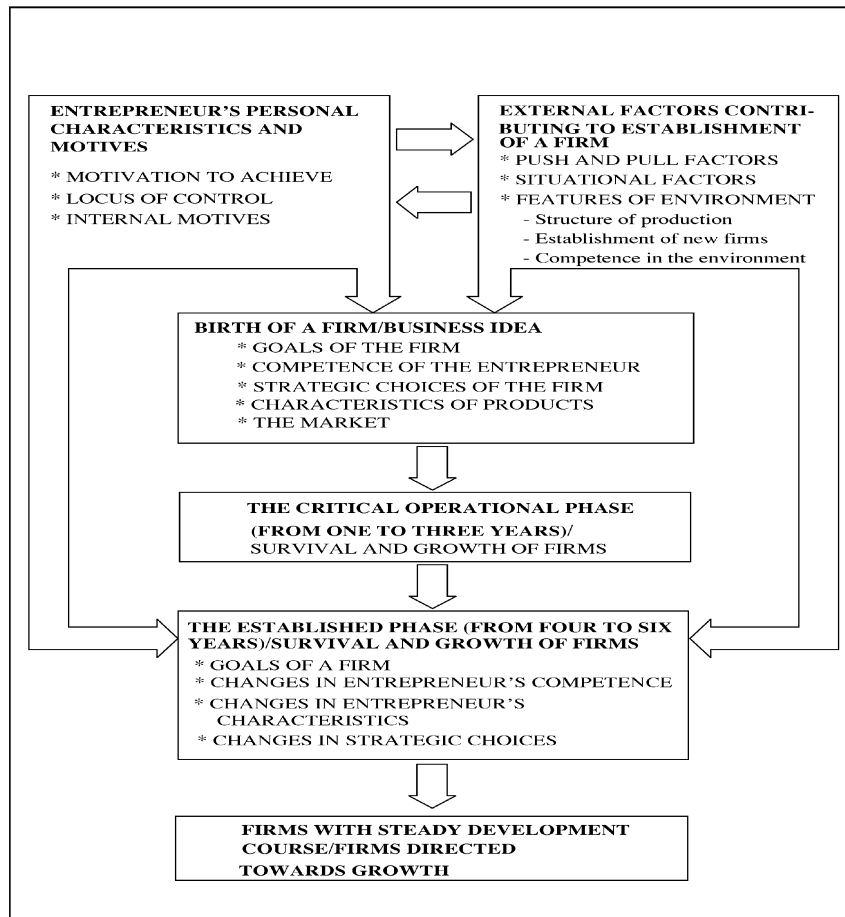


FIGURE 5.1.1 Framework charting factors in the success of new firms

To interpret the establishment of a firm as a process means that in order to be able to predict whether a firm will survive, knowledge of the entrepreneur's personality and degree of motivation are not enough. For this reason the present study incorporates trait models and contingency theory. However, the strategic choices made by firms and their business thinking also has links both to the frame of reference of strategic thinking and, through the interaction of entrepreneurs, to network theory.

The elements of the entrepreneur's personality are measured both through the entrepreneur's achievement motivation and control expectations. The theoretical basis of the study derives from McClelland (1961) and Rotter (1966). Achievement motivation was measured by four different dimensions each consisting of four different items: work ethic, pursuit of excellence, mastery and dominance (Cassidy and Lynn 1989). The locus of control of entrepreneurs was measured by three different dimensions: change attributing, internal attributing and powerful others (Levenson 1982). The characteristics of personality are formed in the interaction between an individual and the environment where the

individual's life situation, experiences and the changes taking place in his life have a central position (Rotter 1975, 1990). The characteristics of the entrepreneur's personality were measured in this study on two occasions: during the start-up phase and in the fourth follow-up phase (Littunen 2000a).

Contingency theory assumes the characteristics required in the personality of an entrepreneur are tied to the action environment and the prevailing situation of the firm (Gilad and Levine 1986). This means firstly, that the personal characteristics of an entrepreneur are not sufficient by themselves to explain continuity in business. The external factors affecting the start-up of a firm link this to the manner in which entrepreneurship is realised. External factors can be divided into two groups: push and pull factors. Examples of push factors related to the environment are unemployment or the threat of it, external spurring on or re-organisation of business activities. Pull factors related to the environment include the opportunities offered by markets or previously created customer contacts.

Contingency theory also connects the birth and success of new firms with factors related to the start-up. Situational factors connect the individual to situations preceding the start-up and to the actual start-up itself. At start-up, various situational factors connect the success of new firms with the knowledge and skills of the entrepreneurs, both of which are crucial to the success of new firms. These situational factors can be interpreted as mainly related to the compatibility requirement between products, customers and the path of action (Norman 1976). The path of action is connected with the strategic choices that firms make.

From the viewpoint of a firm, the aim of different interest networks is ultimately to support its operation. The advantages of production networks lie in the fact that they create closeness, certainty and a belief in the firm's opportunities for action. These networks are needed to transfer information and to create pressure to develop activities. Through personal interest networks a firm is able to create new models of action and find connections with supporting persons and organisations (Johannisson 1985). According to Curran et al. (1993), whose view deviates from that of network theorists, the intensity of co-operational relations tends to vary; thus excessive networking is a threat to the independent position of the entrepreneur. According to this viewpoint, small entrepreneurs have contact with their surroundings, but the importance of these contacts is more limited than network thinking implies (Curran et al. 1993).

### 3 SUBJECT AND DATA

The subjects of this study (n=200) were Finnish metal product manufacturing firms and business-service firms established in 1990. Data on the firms and entrepreneurs was gathered as part of a follow-up study. The firms were interviewed for the first time at the beginning of 1992. Follow-up data was gathered through telephone interviews during the years 1993-96, between three and six years after establishment. The final interviews were conducted in 1998.

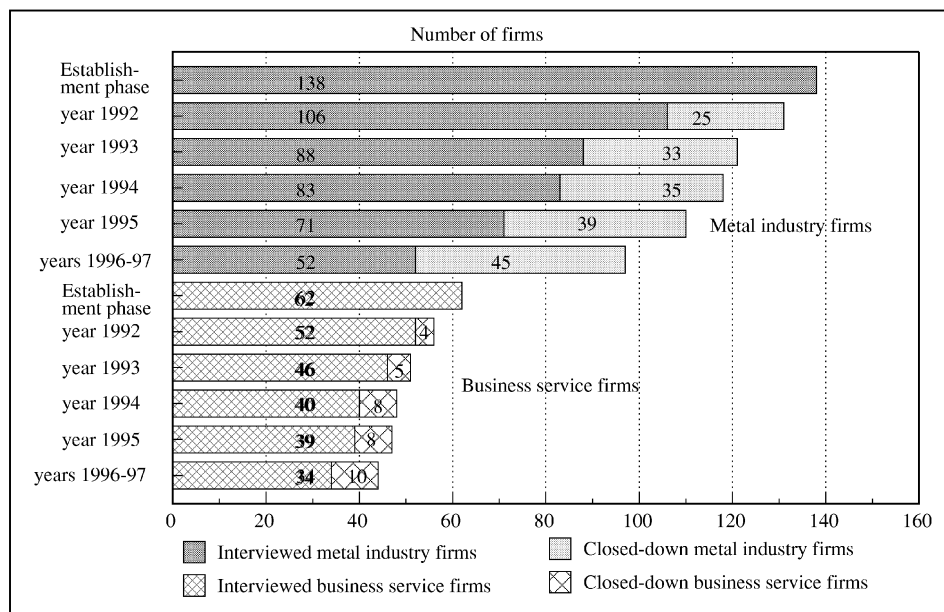


FIGURE 5.1.2 Interviewed and closed-down firms

The firms are mostly small, and dependent on the entrepreneur's own work and on that of his family. The connection between the firm and the entrepreneur is strong. The strategy of the firm is often chosen by the entrepreneur. The goals that the entrepreneur considers worth pursuing in his own life are also clearly reflected in the activities of the firm. About 60% of the firms had less than five employees. Over 45% of the entrepreneurs had not been educated beyond elementary school. Entrepreneurs establishing a metal-industry firm usually had vocational level technical education. The most critical phase for new firms in terms of survival is the two to three years after start-up. Older firms have usually found their own customer groups, and their activities have become well established, and so closure rates are low. Of the firms interviewed in the follow-up study, 76% of the new metal-industry firms and 93% of the business-service firms were still in business three years after start-up. The metal industry had a higher proportion of firms with a short life than business services (figure 5.1.2).

## **4 FINDINGS**

### **4.1 New firms in the start-up phase and in the critical operational phase**

The majority of entrepreneurs come from small and medium-size firms, thus indicating their importance to the process of new firm births. At the same time it can also be seen that the results reflect the opportunities and motives of entrepreneurship. In small and medium-size firms it is easier to form an overall picture of the firm's activities, which offers the opportunity to consider entrepreneurship as a personal alternative.

The development of the business activities of a new firm is strongly tied to its establishment situation. A well-planned business idea realised according to plan is a precondition for the development of business. The success of a firm's start-up increases its chances of survival during its early years. The firms which closed in this phase had been established on the basis of unrealistic expectations, and their profitability had been consistently poor. Unrealistic expectations were linked with a lack of resources or insufficient planning. The timing of basic investments deviated from what had been planned, investments were carried out on a lower technical level, and finance did not materialise in the manner planned. On the other hand, familiar customers and the absence of competition meant that firms which closed had inadequately assessed competition in the market. It was also the case that the share of owners' personal loans in the costs at start-up was nearly twice as high as in firms that survived. Thus the costs of establishing a firm and starting its activities had been underestimated in relation to revenue.

In this phase, family firms employed different, and more successful strategies from those of other firms. The family committed itself to the development of the firm, and sought new channels for its activities to develop its business ideas. On the other hand firms established through reorganisation are more likely to close in the first years of business (Littunen and Hyrsky 2000).



FIRMS CONTINUING IN BUSINESS	FIRMS CLOSING IN THE CRITICAL OPERATIONAL PHASE
THE BIRTH OF A FIRM	
<ul style="list-style-type: none"> <li>*Newly-started firm</li> <li>*Family firm</li> <li>*Threat of unemployment</li> <li>*Internal motives</li> <li>*Market opportunities</li> </ul>	<ul style="list-style-type: none"> <li>*Firm formed through reorganization</li> <li>*Familiar customers</li> <li>*Little competition</li> <li>*Good relationships with financiers</li> <li>*Feasibility of loan financing</li> </ul>
THE START-UP PHASE OF A FIRM	
<ul style="list-style-type: none"> <li>*Start-up well conducted</li> <li>*Good profitability during the first years</li> <li>*Alternative modes of action considered</li> <li>*The financing of start-up in balance</li> </ul>	<ul style="list-style-type: none"> <li>*Unrealistic expectations</li> <li>*Poor profitability during the first years</li> <li>*Only little consideration of alternative modes of action</li> <li>*The financing of start-up unbalanced</li> <li>*The product or range of products similar to those of competitors or too optimistic a view of resources</li> </ul>
ENTREPRENEUR	
<ul style="list-style-type: none"> <li>*Professional education</li> <li>*Work experience obtained as an employee or extremely versatile work experience in several business fields</li> <li>*Methodicalness or flexibility</li> <li>*Strong dominance</li> <li>*Strong mastery</li> </ul>	<ul style="list-style-type: none"> <li>*No professional education</li> <li>*Work experience with emphasis on production</li> <li>*Lack of planning</li> <li>*Strong work ethic</li> <li>*Lack of ability to solve problems</li> </ul>

FIGURE 5.1.3 New firms in the critical operational phase (from one to three years)

The knowledge and skills of the entrepreneur are important in establishing the new firm. The nature of the entrepreneurs' professional education explains the survival of firms in the operational phase of business activities. Entrepreneurs who in the establishment phase had a professional (= technical or commercial) education were more likely to survive the critical operational phase. The

entrepreneur's personality also contributed to survival in this phase. The desire to lead and to solve problems was emphasised among entrepreneurs who had a professional education when the firm was established. Having a professional education therefore strengthens the entrepreneur's aim, and provides opportunities to affect the firm's environment. On the other hand, there was no correlation between external co-operation between firms and continuity in business.

#### **4.2 The survival of new firms in the critical operational phase and the local environment**

The success of a new firm is strongly affected by the local environment (Littunen et al. 1998; Smallbone et al. 1993; Storey 1994; Storey and Wynarczyk 1996). Closure was more usual in the developed service centres than in the less developed regions (industrialised areas and rural areas) or in the capital area - about 48 % of closures were in the service centres. Many of the new firms were started in service centre regions where existing production and vocational structures are varied. Surprisingly, closures were clearly most common in these regions, despite the good opportunities offered by the environment for innovation and differentiation.

The reason for starting a new firm in a developed service centre is often the reorganising of existing business activities. The study indicates that a more developed production structure lowers market entry barriers so that individuals lacking entrepreneurial skills start firms more often in these than in other regions. The training of persons who started firms in these well-developed regions was generally lower than in the other regions. The lack of entrepreneurial skills was apparent in the start-up phase of the firm, being reflected in insufficient planning and development of the firm's functions. Besides a good environment the success of a firm demands special know-how on the part of the entrepreneur. Moreover, severe competition in the local market decreases the opportunities for making allies, and the lack of skills needed in entrepreneurship hinders specialisation (Littunen et al. 1998).

#### **4.3 The growth of new firms in the critical operational phase**

This study examined the effects of the factors involved at start-up and during the early years on the subsequent growth of firms (Littunen 1999b). The measure of growth used here was the percentage growth of turnover during 1991-93. The factors affecting the growth of a new firm were found in the start-up phase, in the characteristics of the entrepreneur and of the firm, and in the firm's environment.

Start-up characteristics do not fully explain variations in firm's growth, although they provide certain prerequisites for growth. Know-how and changes in the strategic behaviour of the entrepreneur explained the growth of new firms (Storey 1994). In these firms the versatility of the entrepreneur's work experience in production, development and marketing tasks explained the increase in production capacity. On the other hand market changes were also reflected in increased production capacity. An increase in production capacity was common in the metal manufacturing industry. Most of these firms had expanded their market area. These changes in strategy affected growth.

The results show that new firm growth rates do not vary significantly with locality. Instead, changes in the firm's competition situation affected the firm's growth and, especially in the developed service centres, the firm's growth was dependent on expanding its market area in the critical operational phase. It is also clear that in a small specialised growth firm the personal relationships of the entrepreneur constitute part of her/his know-how. By developing personal networks, the entrepreneur is able to create new models for action which take into account the persons and organisations supporting his activities. The growth and specialisation of firms is a phase in the development of firms where the intensity of these relationships is at its highest (see Curran et al. 1993).

#### **4.4 New firms in the established phase of a new firm**

The business ideas, goals and action model of a new firm often presuppose changes in the operational phase of business activities. According to the results, controlled changes had been made in firms which had passed the critical operational phase of business activities. The firms continuing in business often specialised in the operational phase of business, but the risks they ran were under control. The firms had a "margin" to deal with unforeseen changes, e.g. in the market situation, and they had been able to resist overestimating demand. Innovation in a firm can be defined as a change in a product, in marketing, or in the system or organisation which promotes the performance of the firm. Innovative firms are often successful and have growth. In active firms the control of customers was often based on key customers, and the innovativeness of the firms on careful product development in the critical operational phase of business.

The impact of the entrepreneur's professional education, work experience and experience as an entrepreneur on business survival were examined. The entrepreneur's education and work experience no longer had a direct connection with the success of his firm during the critical operational phase, whereas the management style of the firms, on other hand, had a clear connection with survival.

These results imply that, most of all, it is the internal networks of firms that bring competitive advantage, innovation and efficiency to their operations. Group management was emphasised in firms which continued in business. In a typical family firm, ownership, management and family are combined into a

single entity (Hoy and Verser 1994; Littunen and Hyrsky 2000). In non-family firms the shareholders can be assumed to be the strategic management (Littunen 2000b)(figure 5.1.4).

FIRMS CONTINUING IN BUSINESS	FIRMS CLOSING AFTER THE CRITICAL OPERATIONAL PHASE
THE BIRTH AND START-UP PHASE OF A FIRM	
<ul style="list-style-type: none"> <li>*Internal motives and opportunities for entrepreneurship</li> <li>*Start-up well conducted</li> <li>*The financing of start-up in balance</li> <li>*Market opportunities</li> </ul>	<ul style="list-style-type: none"> <li>*Strong internal motives</li> <li>*Start-up well conducted</li> <li>*The financing of start-up in balance</li> <li>*Market opportunities</li> </ul>
THE CRITICAL OPERATIONAL PHASE OF A FIRM	
<ul style="list-style-type: none"> <li>*Profitability good during the first years</li> <li>*No growth targets or controlled growth</li> <li>*Careful product development</li> <li>*Development investments</li> <li>*Changes in the market under control</li> <li>*The financing of investments in balance</li> </ul>	<ul style="list-style-type: none"> <li>*Profitability weakened during the first years</li> <li>*Big growth targets and changes in business</li> <li>*Strong specialisation</li> <li>*Not very much development investments/productional investments</li> <li>*Strong expanding of the market area</li> <li>*The financing of investments unbalanced</li> </ul>
ENTREPRENEUR	
<ul style="list-style-type: none"> <li>*The entrepreneur's background, education and work experience have no connection with the success of the firms</li> <li>*Methodicalness or flexibility</li> <li>*Group management - the firm's internal networks</li> </ul>	<ul style="list-style-type: none"> <li>*Methodicalness but plans unrealistic</li> <li>*Loose co-operation networks - co-operation between firms does not compensate for the entrepreneur's competence</li> </ul>

FIGURE 5.1.4 New firms in the established phase (from fourth to six years)

When seeking growth, a new firm will often find that it has to make a re-assessment of its business idea to suit changing conditions. In the firms which closed there had been, especially in the critical operational phase, heavy emphasis on product development, and the market area had been vigorously expanded. These firms made many changes in their operations, with the result that uncontrolled risks had led to business failure. After a successful start-up, such a firm at first grew rapidly on the basis of its business idea, but between the fourth and sixth years of operation the rate of growth imposed pressure on the firm's finances and its management (figure 5.1.4).

According to the results, the entrepreneur's external control (powerful others) had clearly decreased in the fourth follow-up phase compared with start-up phase of the firm. On the other hand, the entrepreneur clearly emphasised solving problems (mastery) more than during start-up (Littunen 2000a).

## 5 CONCLUSIONS

This study examined the success of new firms in three phases, i.e. the birth of a firm, the critical operational phase, and the established phase of business activities. The subjects were 200 metal-industry and business-service firms established in 1990, and the data was collected through interviews with business managers. The study is by nature a follow-up study based on interviews with business managers, where in addition to the basic data, four sets of follow-up data were also collected during the years 1993-96 and 1998.

### **Survival of new firms in the critical operational phase**

The results suggest that a strong work ethic influences both the process of establishing the firm and its survival. The result is contrary to McClelland's (1961) theory, and instead supports Khan's (1986) critique. A strong work ethic may lower the threshold relative to the start-up of a firm, but does not guarantee the preconditions for action if there are shortcomings in the entrepreneur's competence. The dimensions describing the locus of control did not directly explain survival in business but, through the entrepreneur's training, were ultimately related to survival.

According to contingency theory, start-up factors and the personality of the entrepreneur together explain early business survival. The importance of prior work experience was clearly seen in the characteristics of the products. Family entrepreneurs who had experience in many fields and products, which frequently differed from those of the competitors, continued their activities after the start-up phase. Professional education explained early survival. Contingency theory suggests that the personality characteristics required for entrepreneurship are related to the firm's environment. This study supports the contingency-theoretical view that entrepreneurship involves moulding the characteristics of the entrepreneur's personality. During the established phase entrepreneurs emphasised problem-solving noticeably more than during the firm's start-up phase. On the other hand, the external control orientation (powerful others) had clearly been reduced. The emphasis on the entrepreneur's ability to solve problems, and the decrease in external control can, according to

Rotter's (1966) theory, be interpreted as meaning that the experience of the entrepreneurs had developed along with their entrepreneurship.

Small firms have many kinds of relationships with their environment. However the degree of co-operation between firms, and entrepreneurs' other interrelationships, did not appear to influence survival during the critical operational phase. The results suggest that interrelationships do not compensate for gaps in the competence of the entrepreneur. Another interpretation is that gaps in the entrepreneur's competence might be reflected as exploitation of interrelationships in business activities. The results rather supported the view that the network theory of connections was of restricted importance in explaining continuity in business (Curran et al. 1993).

### **The growth of the firms in the critical operational phase**

The factors influencing the growth of a new firm were found in the start-up phase, in the characteristics of the entrepreneur and of the firm, and in the firm's environment. Start-up characteristics do not fully account for a firm's growth, although they provide certain prerequisites. The know-how and changes in the strategic behaviour of the entrepreneur explained much of the growth of new firms. On the other hand the characteristics of the firm's environment explained the development of the new firm's activities. The results showed that new firm growth was not influenced by locality. Instead, changes in the firm's competition situation affected the firm's growth and, especially in the developed service centres, the firm's growth was dependent on expanding its market area in the critical operational phase. The results also suggest that in a small specialised growth firm the personal relationships of the entrepreneur were part of the know-how of the entrepreneur.

### **The survival of new firms in the established phase**

The effects of the entrepreneur's professional education, work experience and experience as an entrepreneur on business survival differed between the operational and established phase. The entrepreneur's education and work experience were no longer directly connected with the success of firms for firms which had passed the critical operational phase; management style, however, had a clear connection with survival. Firms' internal networks bring competitive advantage, innovation and efficiency. Group management was emphasised in the firms which continued in business. In a typical family firm ownership, management and family are combined as one entity (see Hoy and Verser 1994). In group-managed firms the shareholders participate in their strategic management.

The study has implications for policy makers. The current Finnish SME policy is putting much effort into establishing new SME development projects and into extending the scope of services provided by small business service centres. Unfortunately, the special needs of new family firms have not been given adequate attention. In the present study the family firms exhibited lower mortality rates and achieved better performance than the non-family firms. This

implies that the role of newly established family firms should be more central in implementing the SME policies. To improve the efficiency of the policy and to achieve continued small business growth officials need to recognise and cater for family enterprises specific needs.

As far as the development of new firms' activities is concerned, entrepreneurial courses should place more emphasis on the requirements of entrepreneurship and on the content of individual business activity plans, as the entrepreneur cannot necessarily put advice into practice, and would therefore need assistance at the implementation stage. It is recommended that the ProStart business plan programme and the PostStart launch programme of Ministry of Trade and Industry are backed up with a follow-up programme for the critical operational phase of entrepreneurship, which would aim at developing the business plan with an emphasis on the firm's needs.

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## TIIVISTELMÄ

Tämä tutkimus sisältää johdannon lisäksi kymmenen empiiristä työtä, joissa tarkastellaan uusien yritysten syntymiseen, eloonjäämiseen, kasvuun ja taantumiseen vaikuttavia tekijöitä. Johdantoluvussa esitetään tutkimuksen tausta, tavoitteet ja sisältö sekä yhteenvedo ja päätelmät tutkimuksen tuloksista. Lisäksi johdantoluvussa esitetään kolme erilaisiin yritystoiminnan tilanteisiin liittyvää matemaattista mallia, joiden toimivuutta testataan tutkimuksen empiirisessä osassa. Mallien taustalla oleva teoreettinen ajattelu on kontingenssiteoria. Kontingenssiteoria liittyy yrityksen perustamistilanteessa tilannetekijät yrittäjän osaamiseen ja kriittisessä alkuvaiheessa sekä toiminnan vakiintumisvaiheessa tilannetekijöiden muutokset yritysten menestymiseen.

Tutkimuksen toinen luku sisältää kolme empiiristä työtä, joissa tarkastellaan uusien yritysten syntymistä. Ensimmäisessä työssä analysoidaan alueellisesta näkökulmasta yritysten syntymiseen vaikuttavia talouden tilaa ja yritysten lähiympäristöä kuvaavia tekijöitä. Päätuloksena saadaan, että alueen tuotantorakenne vaikuttaa uuden yritystoiminnan syntyyn. Olemassa olevaa yritystoimintaa tai sen osia yhdistelemällä syntyy uutta yritystoimintaa. Lähiympäristön tilannetekijöistä yrittäjän perhe, henkilökohtaiset sidosverkostot, asuminen sekä asiakkaat ja markkinat ovat osa yrityksen strategiakokonaisuutta, kun uusi yritys perustetaan. Toisessa empiirisessä työssä tarkastellaan kahta erilaista yrityksen perustamistilannetta: perheyrittäjiä ja uudelleen organisoinnin kautta syntyneitä yrityksiä. Tulosten mukaan perheyrittäjillä on muita yrittäjiä tyypillisempänä yrityksen perustamismotiivina työttömyys tai sen uhka, kun taas muilla yrittäjillä tyypillisempänä perustamismotiivina ovat positiiviset tilannetekijät. Perheyrittäjillä on alhaisempi koulutustausta kuin muilla yrittäjillä. Alhaisesta koulutustaustasta huolimatta perheyrittäjät arvioivat yrittäjäosaamisensa monipuoliseksi. Kolmannessa empiirisessä työssä yrityksen syntyminen liitetään pakeroon tai vaihtoehdottomuuteen yrittäjyyden taustalla. Yrittäjän halu johtaa on tyypillinen piirre työttömyyttä tai sen uhkaa yhtenä perustamissyynä pitäneille. Havaintona on myös, että pakkoa yrityksen perustamistilanteessa kokeneiden metalliteollisuusyritysten kilpailuympäristö on ahdistava ja muutosherkkä, vaikka pakon elementti ei sinällään merkitse riittämättömiä kehittymisen edellytyksiä.

Tutkimuksen kolmas luku sisältää kolme empiiristä työtä (4, 5 ja 6), joissa tarkastellaan uusien yritysten menestymistä kriittisessä alkuvaiheessa. Tutkimuksen neljännessä empiirisessä työssä tarkastellaan yritysten eloonjäämistä kriittisessä alkuvaiheessa. Päätulos on, että yrittäjän osaaminen - monipuolinen työkokemus ja ammatillinen koulutus - vaikuttavat yritysten eloonjäämiseen kriittisessä alkuvaiheessa. Havaintona on myös, että perheyrittäyksissä on useita jatkuvuutta ylläpitäviä toimintamuotoja. Perheyrittäyksen omistava perhe sitoutuu monella tavalla yrityksen toimintaan. Viidennessä empiirisessä työssä tarkastellaan metalliteollisuusyritysten menestymistä erilaisissa toimintaympäristöissä. Päätuloksena saadaan, että uusien metalliteollisuusyritysten menestymisessä on alueellisia eroja. Yrityksen sijaintialueen monipuolinen tuotantorakenne vähentää markkinoille tulon esteitä ja näillä palvelukeskuseuduilla yrittäjiksi valikoituu muita alueita useammin henkilöitä, joiden yrittäjävalmiudet ovat puutteelliset.

Kuudennessa empiirisessä työssä tarkastellaan uusien yritysten kasvua kriittisessä alkuvaiheessa. Tulosten mukaan yrittäjän osaaminen ja muutokset yrityksen strategisessa käyttäytymisessä selittävät uuden yrityksen toiminnan kehittymistä. Havaintona on myös, että uusilla yrityksillä on samanlaiset mahdollisuudet kasvuun riippumatta yrityksen sijaintialueesta. Kuitenkin kilpailuympäristön muutokset selittävät yritysten kasvua. Erityisesti palvelukeskuseuduilla yrityksen kasvu on riippuvainen markkina-alueen laajentamisesta kriittisessä alkuvaiheessa.

Tutkimuksen neljäs luku sisältää kolme empiiristä työtä (7,8 ja 9), joissa tarkastellaan uusien yritysten kehittymistä toiminnan vakiintumisvaiheessa. Seitsemännessä empiirisessä työssä tarkastellaan eri sidosryhmien vaikutuksia yrityksen eloonjäämiseen. Päätuloksena on, että ennen kaikkea yrityksen sisäiset verkostot tuovat kilpailuetua, innovaatioita ja tehokkuutta yrityksen toimintaan. Ryhmäjohtoisuus korostuu toimintaa jatkavissa yrityksissä. Toisaalta yritysten hallitsemattomat riskit ovat johtaneet toiminnan lopettamiseen, sillä epäonnistuneissa yrityksissä kasvuvauhti on ollut liian nopea sekä yrityksen rahoitukselle että johtamiselle. Kahdeksannessa empiirisessä työssä vertaillaan kontrolliorientaatiota kuvaavia mittareita toisiinsa. Tulosten mukaan strategisen kontrolliorientaation mittari ennustaa paremmin uusien yritysten menestymistä kuin sisäisen attribuoinnin mittari. Strategisen kontrolliorientaation mittarin etuna on se, että mittari ennustaa perustamisprosessin onnistumisen muiden yritystä koskevien strategisten tekijöiden lisäksi. Yhdeksännessä empiirisessä työssä selvitetään yrittäjän persoonallisuuden ominaispiirteiden muutoksia kahdessa eri yrittäjyyden vaiheessa. Päätuloksena on, että yrittäjyys muovaa yrittäjän persoonallisuuden piirteitä. Havaintona on myös, että yrittäjän vuorovaikutussuhteiden kehittyminen vaikuttaa persoonallisuuden piirteisiin, koska yrittäjän halu ratkaista ongelmia lisääntyy samalla kun vuorovaikutussuhteet lisääntyvät.

Tutkimuksen viidennessä luvussa on yhteenveto tuloksista. Yhteenvetoluvussa havainnollistetaan sitä, miten eri tilanteisiin liittyvät liiketoiminnan muutosprosessit vaihtelevat yritysten menestymisen mukaan. Luvussa muodostetaan kokonaiskuva yrittäjyyden eri vaiheissa vaikuttavista tärkeimmistä tilannetekijöistä sekä yrittäjän että yritystoiminnan kannalta.

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