ACTA
WASAENSIA

No. 84
Business Administration 34
Management and Organization

Timo Pihkala

Entrepreneurial Capability and New Venture Formation

A Study on Entrepreneurs' Start-up Practices

UNIVERSITAS WASAENSIS
VAASA 2001

Reviewers

Professor Erkko Autio
Helsinki University of Technology
Institute of Strategy and International Business
P.O. Box 9500
02015 HUT, Espoo, Finland

Professor Bengt Johannisson
University of Växjö
Scandinavian Institute for Research in Entrepreneurship
351 95 Växjö, Sweden

Professor Asko Miettinen
Tampere University of Technology
Industrial Management
P.O. Box 541
33101 Tampere, Finland

"The Guide says there is an art to flying," said Ford "or rather a knack. The knack lies in learning how to throw yourself at the ground and miss."

Douglas Adams: Hitchhikers' Guide to the Galaxy

CONTENTS

LIST OF TABLES 6
LIST OF FIGURES 7
ABSTRACT 8

1. INTRODUCTION 9
1.1. Creating organisational rationality 9
1.2. Entrepreneurial capability and the start-up process 10
1.3. Purpose of the study 15
1.4. Outline of the study 17

2. ALTERNATIVE APPROACHES TO START-UP AND GROWTH 19
2.1. Entrepreneurship research and business start-up 19
2.1.1. Entrepreneur's characteristics in the business start-up 20
2.1.1.1. Desirability of an entrepreneurial career 21
2.1.1.2. Psychological capacity for entrepreneurship 24
2.1.2. Start-up as a decision-making process 29
2.2. Paths to an entrepreneurial career 36
2.3. Patterns in the formation process of new ventures 44
2.3.1. Entry resource allocation 46
2.3.2. Start-up as a co-operative venture 51
2.3.3. Entry strategies 57
2.3.4. Competitive strategy choices 63
2.3.5. Summary of the venture formation research 68
2.4. Social acceptability of the emerging venture 68
2.5. Resource collection of a new venture and emergence of viability 71

3. METHODOLOGICAL APPROACHES AND PILOT STUDIES 82
3.1. Design of the study 82
3.2. Metal and electronics industry 87
3.3. Qualitative pilot studies 90
3.3.1. Case 1 92
3.3.2. Case 2 96
3.3.3. Comparison between the cases 98
3.4. Measuring start-up process 101

3.4.1. Background variables 102
3.4.2. Research variables 103
3.4.3. Pre-testing of the questionnaire 105
3.5. On the credibility of the study 106

4. ACTIVITIES IN NEW VENTURE FORMATION 109
4.1. Descriptive details of the survey ventures 109
4.1.1. Characteristics of the founders and ventures 111
4.1.2. Industry and factor circumstances 118
4.2. Linkages of entrepreneurial capability and start-up process 121
4.2.1. Providing resources for the venture 121
4.2.2. Creating productivity 132
4.2.3. Legitimising the venture 143

5. SYNTHESIS AND DISCUSSION 153
5.1. Overview to the study 153
5.2. Venture formation and entrepreneurship 160
5.3. Limitations of the study 165
5.4. Research implications 166

ACKNOWLEDGEMENTS 171
REFERENCES 172
APPENDICES 187

LIST OF TABLES

Table 1.	Entry wedges (Vesper 1980: 206).	41
Table 2.	Emphasis in the entry strategy of the venture formation process.	78
Table 3.	The research design.	84
Table 4.	The Finnish industrial clusters (KTM 1997).	88
Table 5.	The start-ups within the metal and electronics industry during the 1995–98 (Statistics Finland 1997; 1999).	90
Table 6.	The qualitative analysis – a comparison.	100
Table 7.	Establishing research validity and reliability.	107
Table 8.	The population and the data.	109
Table 9.	Facts about the entrepreneurs.	112
Table 10.	The age of the companies.	113
Table 11.	Facts about the ventures.	113
Table 12.	The type of the operations in the start-up firm.	115
Table 13.	The formation of the final product binary and background characteristics revisited.	116
Table 14.	The cluster membership of respondent firms.	117
Table 15.	The industry conditions.	118
Table 16.	The descriptive statistics of the industry controls.	119
Table 17.	Descriptive statistics and correlation matrix of the resource variables.	123
Table 18.	Partial correlations between the use of external resources and network resources.	125
Table 19.	Factor analysis of the methods of resource collection.	126
Table 20.	The binary variables for the comparison.	128
Table 21.	The use of resource types and the entrepreneur's background variables.	129
Table 22.	Relationship between resource collection and industry variables.	130
Table 23.	Comparison of the resource use in four cluster groups.	130
Table 24.	The descriptive statistics and correlation matrix of the productivity variables.	134
Table 25.	The formation of the resource collection binary.	135
Table 26.	The distribution of the most important ways of creating efficiency.	136
Table 27.	Partial correlations on the methods of efficiency.	138
Table 28.	The descriptive statistics and correlation matrix of the legitimacy variables.	145

Table 29.	The mean values of the most important means of legitimising the venture.	147
Table 30.	The descriptive statistics of the legitimacy sum variables.	148
Table 31.	Correlations between industry controls and legitimising methods.	149
Table 32.	T-test comparisons of legitimacy methods.	150

LIST OF FIGURES

Figure 1.	The levels of entrepreneurial process.	20
Figure 2.	The level of cognitive research on entrepreneurship.	29
Figure 3.	The enactment process (adopted from Weick 1979: 134).	31
Figure 4.	The entrepreneurial process (Tesfaye 1997).	34
Figure 5.	The level of business formation studies.	36
Figure 6.	Paths to business ownership.	44
Figure 7.	The dimensions of new venture formation.	45
Figure 8.	Effects of organisational and environmental conditions on waiting time to first product shipment (Schoonhoven et al. 1990).	60
Figure 9.	The routes of resource collection of the new venture.	75
Figure 10.	The three dimensions of entrepreneurial capability.	81
Figure 11.	The industrial conditions of the ventures.	121
Figure 12.	Venture types and approaches to efficiency.	142

ABSTRACT

Timo Pihkala (2001). Entrepreneurial Capability and New Venture Formation: A Study on Entrepreneurs' Start-up Practices. *Acta Wasaensia* No. 84, 209 p.

The study starts by analysing briefly the entrepreneurial phenomenon, suggesting that entrepreneurial activity is a combination of collecting and combining resources for a new venture. The concept of entrepreneurial capability is defined as representing a person's ability to capitalise emerging opportunities, related to the different aspects of the operating context, by activating these to be used in the emerging project. The purpose of the study is to focus on the role of entrepreneurial capability in the start-up process and on the mechanisms and trajectories of development influencing the process of business emergence. The theoretical framework is developed combining the literature on resources and networking. The theory suggests that new venture formation consists of resource collection for the venture, as well as organising and legitimising it. Furthermore, a number of propositions were set in order to analyse these three elements in the start-up of companies in the metal and electronics industry.

The methodology in the study is threefold: two case examples illustrate the formation process, and a survey analysis of companies operating in the Finnish metal and electronics industry is carried out. Finally, a total of 10 entrepreneurs were contacted in order to validate their responses to the questionnaire. In the analysis, resource collection and the organising and the legitimising of the company are analysed in respect to the background variables of the entrepreneur, the company and the industry.

The overall pattern indicates that the venture formation process forms two main patterns in the resource collection, organising and the legitimising of the venture. On the one hand, the entrepreneurs using relatively few external resources seem to be active in organising efficiency in the venture. This is understandable, as the low number of mainly market-priced resources needs to be harnessed into full use in the venture. On the other hand, the entrepreneurs using actively both external and network resources seem to pay more attention to building credibility for the venture than to internal efficiency. The study concludes by suggesting that understanding these patterns is relevant to an understanding of the conditions of new venture survival and success.

Timo Pihkala, Department of Management and Organization, University of Vaasa, P.O.Box 700, FIN-65101 Vaasa, Finland.

Key words: Entrepreneurship, New venture formation, Metal industry, Survey research.

1. INTRODUCTION

1.1. Creating organisational rationality

The entrepreneurial phenomenon is a factor used to explain the emergence of new organisations in society and of new business organisations in the economy. Schumpeter (1934) reasoned that the creation of a monopoly situation in market competition right from the beginning of the new venture would function as the rationale for a start-up. Innovation, i.e. the introduction of new products, methods of production, technologies or of new ways of organising, is needed to enable a temporary monopoly for the Schumpeterian start-up. The starting up of a new venture, the launching of new product lines, the starting of international trade, or the like can all be considered acts that can be used to describe distinct elements of entrepreneurship.

The importance of entrepreneurship has been highlighted by research on the entrepreneurship-innovation relationship (Schumpeter 1934; Drucker 1985), as well as by studies into the effect of new business ventures on employment (e.g. Birley 1986; Spilling 1995). However, few studies have pointed out the character of entrepreneurship in collecting and combining resources into more or less functioning businesses, thus transforming the bulk of human, social, financial or physical material into resources useful for production processes (e.g. Gartner, Bird & Starr 1992; Klofsten 1998).

In his study on the functions of organisation, Thompson (1974) suggested that in order to survive, a business enterprise has to create both efficiency and effectiveness within its organisation. These two types of productivity derive from distinct bases of rationality. First, there is technological rationality, through which the firm seeks to protect its productive core, i.e. to ensure that the productive flow should continue without disturbances and that the costs per unit should be kept as low as possible. The second kind, open systems rationality, is found when the firm seeks to ensure the input and output of its resources and products. At the same time, the effectiveness of the firm is reflected by the demand for the firm's products and services.

As an activity, entrepreneurship is essentially a pattern of behaviour that seeks to create and build up these two types of productivity. The context where the need for both types of productivity in a business enterprise is most explicit is the start-up of a new business venture. In a start-up, the entrepreneur collects and organises human, financial and

material resources into combinations that have not existed before. Through his entrepreneurial action, the entrepreneur seeks to ensure that the sum of the resources in the new combination is more valuable than if these resources had existed separately. However, failure in the process of collecting and combining of valuable and incompatible resources is far more frequent than success.

Research on the survival and failures of new firms has provided information suggesting that only 40–60 per cent of start-ups survive to the age of five years. Birley even noted that 'of those firms that cease trading, majority do so within the first two years' (1986: 374). Timmons provides data according to which approximately 23 per cent of start-ups will cease trading within the first two years, 51 per cent will have given up by the end of the fourth year, and in six years only 37 per cent of the start-ups will still be in business (Timmons 1994). Thus, combating the 'infant mortality' of new ventures has been seen as one of the most important way to increase general economic welfare. Surprisingly, in a recent Finnish study, Littunen, Storhammar & Nenonen (1998) reported that by the end of the first three years only 18 per cent of studied metal products manufacturers had ceased trading.

Although the percentages of survival vary between different studies and different industries, the number of failures suggests that entrepreneurs' ability to create the conditions of efficiency and effectiveness necessary for the new venture is not that self-evident. Therefore, the carrying out of the entrepreneurial event, i.e. collecting and combining resources to incorporate a new enterprise and creating productivity within the company, could be seen as a task requiring special competencies and capabilities of entrepreneurship. The present study focuses on this undertaking of resource creation, resource acquisition and resource activating in the new venture formation, and the main research subject is the relationship between an entrepreneur's specific capabilities of allocating resources and the requirements of the emerging venture.

1.2. Entrepreneurial capability and the start-up process

Small firm growth and growth-related problems constitute an important field of study within entrepreneurship and small business research. Growth and the subsequent need of a business to employ people, together with an increase in demand and in turnover, are in many cases the single reasons for strong positive attitudes toward small businesses. The

post- start-up development of new ventures and the stages of fast growth have gained the attention they deserve in research on small business management and on strategic management, and the mechanisms of growth are under constant scrutiny. The phases preceding the start-up are, however, have not been studied as exhaustively (Tesfaye 1997: 66-67), probably much due to difficulties in grasping emerging ventures by traditional research methods. Nevertheless, accumulating knowledge of the mechanisms of the start-up is an important task, if we wish to learn more about the reasons for different 'species of organisations' (Morgan 1986), or different levels of survival, growth and performance of new ventures (Cooper 1993; Vesper 1980).

Entrepreneurship and start-up research has been criticised for a number of reasons, mostly relating to the basic arguments suggested by the 'people school' and the 'environmental school' of entrepreneurship (Ronstadt 1984). Perrow (1970) e.g. criticised the reductionist approach to business start-up, claiming that the determinants of start-up are the assumed results of the action and the qualities of a single person, i.e. the entrepreneur. Van de Ven (1993) discussed the entrepreneurial infrastructure as a process leading to successful individual performances. He stressed the importance of the operating context and insisted of seeing entrepreneurship more as a social phenomenon than as an individual one. He claims that in the entrepreneurial event the social, technological, or economic environment has resulted in a situation that only needs someone (a person, a group or an organisation) to collect the benefit and the fame. This actor, then, is called an entrepreneur. The richness of the entrepreneurial infrastructure has also been recognised by Cooper et al. (1994: 373) who pointed out that "the focus upon resources discernible before operations have commenced is an especially severe test of whether or not venture performance can be predicted."

A discussion about the initial resources and new venture performance has prevailed in the entrepreneurship literature for some time (e.g. Kimberly 1979; Cooper & Dunkelberg 1986; Stuart & Abetti 1990; Duchesneau & Gartner 1988; Eisenhardt & Schoonhoven 1990; Schoenecker & Cooper 1998). The underlying hypothesis in the literature suggests that good access to human and financial capital before the start-up supports performance above average in the later phases of firm growth. This reasoning is very convincing; 'wealthy start-ups' may indeed have better possibilities of entering markets which are more lucrative and/or of making good decisions in the start-up process. The initial resources have been identified as technological leadership (such as advantages from the learning curve, experience, patents or R&D) and pre-emption of scarce assets (Lieberman

& Montgomery 1988). In these resources Cooper et al. (1994) also included the similarity of the entered industry, the number of full time partners, as well as managerial know-how (see also Penrose 1959: 38).

Even if an entrepreneurial infrastructure evidently is important for new venture creation, the necessity of the entrepreneurial person is, however, unavoidable. Cooper et al. (1994: 375) point out that should there not be a wealth of initial resources, or 'the benefit of operating history, repositories of "hard" data, well-developed scanning capabilities, or a large management staff', the remaining explanatory factor is the entrepreneur and his characteristics and competencies. Also other writers dealing with entrepreneurship (e.g. Gartner 1985; Schoonhoven et al. 1990) stress the role of the individual in the entrepreneurial process, where the single event of launching the enterprise is only one decision in a long process which has required hard work, prior decisions, investments, contracts, etc. from the entrepreneur. The entrepreneurial process would not only consist of the entrepreneurial event of starting up an enterprise or a product line but of all those actions before and after the launching decision. Chandler & Hanks went still further as they suggested that the resources available are a function of the founders' abilities to gather resources and develop strategies to use them, as well as the overall availability of resources in the environment (1994; see also Grant 1991).

In his study of entrepreneurial visions, Filion (1991) suggests that "successful entrepreneurs look for interstices, or gaps in the market. They first develop the external component, and the internal component then becomes a condition for its realisation; a certain kind of organisation must be set up to allow the enterprise to differentiate in the marketplace" (Filion 1991: 30). Entrepreneurs following this approach seek to close down deals and only then start to develop their products and processes to meet the contracts. From this point of view, the interesting part would not only be the prior accumulation of human and financial capital, but also the special nature of the key person's entrepreneurial capability, which would be independent of the "physical wealth" of the emerging venture.

The concept of entrepreneurial capability requires closer scrutiny. Alike other terminology dealing with human qualities, the concepts of *competence*, *capability*, *managerial competence* and *entrepreneurial capability* have been assigned various connotations, resulting in difficulties in accumulating knowledge about any of these terms. The original context of the terms within organisation theory lays in corporate strategy. Penrose (1959), for example, refers to distinctive competencies. According to her, the

sole existence of 'good resources' does not suffice, but the firm's distinctive competence concerns a better use of those resources (Penrose 1959; Mahoney & Pandian 1992). The terms 'core competence' (Hamel & Prahalad 1989) and 'core capability' (Stalk et al. 1992) have often been used almost interchangeably to refer to those corporate units holding process-specific knowledge and carrying out particular and unique processes.

Applying the resource-based theory to strategic management, Amit & Schoemaker (1993) make a distinction between resources and capabilities. According to them, resources are convertible, externally available and transferable, and owned or controlled by the firm. Capabilities, on the other hand, would mean the information-based organisational processes that are firm specific and that often are intermediate goods. In this meaning, capability comes very close to the original meaning of 'technology' as the 'knowledge of doing' (e.g. Tornatzky & Fleischer 1990; Autio et al. 1989). In order to clarify the discussion, Chandler & Hanks (1994) defined capability as 'the capacity for a coordinated set of resources to perform some task or activity' (p.334), where the notion of capacity reflects the nature of capability as an ability to use skills, competencies and resources in action.

The concept of entrepreneurial capability that the studies have referred to, is more or less blurred, and in some cases even questionable. The notion of entrepreneurial capability has proved to be a particularly difficult issue for researchers seeking quantitatively measurable operationalisations. For example, in their concept of entrepreneurial capability, Cooper et al. (1994) referred to the initial resources as accumulated capital or managerial know-how, which may not have anything to do with the entrepreneur's current ability of venturing. However, even if the concept has been misleadingly operationalised in the earlier studies, entrepreneurial capability, as representing the personal abilities of the person(s) to bring together the elements of a business venture, could be assumed to have a central role in the new venture creation process.

Perhaps the most convincing theory about the route to business start-up building upon the notion of entrepreneurial capabilities concerns the use of social contracting (MacNeil 1980) in the initial phases of the start-up (Gartner, Mitchell & Vesper 1989; Starr & MacMillan 1990; Gartner, Bird & Starr 1992). In this approach, the entrepreneur is seen to interact with his social network, creating commitment and space for the emerging business, and the actual collection of business resources – the internal environment – is expected to serve and adjust to the contracts made with the surrounding actors.

Entrepreneurship, in this setting, is seen as a process of emergence, which specifically concerns the creation of a new organisation. In this process, the actor, an entrepreneur, has to enact those conditions and circumstances that would be necessary for the other participants involved in the process, in order to be able to make contracts and deals for the organisation still not existent. Gartner et al. (1992) referred to this phenomenon as 'acting as if' behaviour. Building up his venture, *the entrepreneur acts as if there were an organisation already* fulfilling the commitments that he is making, while in real terms the organisation is only created by the action of the entrepreneur.

While the social contract approach to the development of the business start-up is convincing, there are also some other conceptions of the start-up process that appear quite different from social contracting. In these perspectives, the accumulation of wealth in terms of financing, machinery, and other tangible assets are seen as the main vehicle for the successful start-up (e.g. Schoenecker & Cooper 1998). Thus, the 'acting as if' approach to venture formation reflects a different kind of entrepreneurial capability from e.g. a start-up based on the development of a technological innovation and its introduction in the market. Furthermore, the entrepreneur's ability to perform entrepreneurial acts is not a stable phenomenon, but depends on various personal and contextual contingencies. Seen in this way, entrepreneurial capability, contrary to personality, social background or other categorising characteristics, is a dynamic quality, which is strongly related to the relationship between the entrepreneur and his operating context. **Entrepreneurial capability is defined as a person's ability to capitalise emerging opportunities, relate to different aspects in the operating context, to activate these parts in the context to be used in the emerging project.** Thus, instead of leaning either on the 'people school' or the 'environment school', the concept of entrepreneurial capability suggests an interactionist approach to the entrepreneurship phenomenon.

This research seeks to study especially those processes, in which the entrepreneur uses his personal capabilities in collecting resources and commitment for the emerging venture. An interesting question arising from this is whether there are different kinds of entrepreneurial capability, and if so, how these relate to the management of emerging new ventures.

1.3. Purpose of the study

The vast majority of the new venture studies focus on the competitive strategies during the early years of the start-up. For example, in their widely quoted article on founding strategy and performance, Feeser & Willard (1990) argue that the most basic business decision is to answer the question 'what market(s) should we enter with what product(s)?' (1990: 96). In this study the phase between opportunity recognition and start-up is in focus. This stage could be characterised as resource collection, technological development, network activation and market contacts. The aim of this study is to focus on the question following that of Feeser & Willard: **'How should we form our venture to make the entry viable?'** While the venture is still in its embryonic form, the main actor in the process has to be the entrepreneur, whose abilities thus largely define the nature of the emerging venture.

The purpose of the study is **to explore and understand the role of entrepreneurial capability in the start-up and the mechanisms and the trajectories of development that influence business emergence.** Thus, the research question that will be explored can be described as **'what are those routes and strategies in which entrepreneurs develop viability for their emerging ventures?'** The main argument in the study is that for creating the credibility and viability of the new venture, the entrepreneur needs to entail special entrepreneurial capabilities of allocating resources and of commitment creation.

The purpose suggests both theoretical as well as empirical objectives. First, a theoretical understanding of the subject has to be developed. The general context of this study is the start-up process of a new venture. For this reason, the concept of start-up should be clarified to frame up the setting.

Although new venture research has been a topic within entrepreneurship studies for a long time, the concept of start-up has not reached a single definition, but could instead be characterised as a slippery subject. However, NUTEK defined the creation of new enterprises as the creation of genuinely new business firms, i.e., that these firms have not previously existed as business entities (1992: 11). This definition is rather common and circular, following the 'new business is a new business' logic. Nevertheless, the definition is useful, as it makes some central aspects explicit. First, start-up concerns the creation of business organisations that have not existed earlier in any form whatsoever. This limitation screens out the transformations of businesses e.g. in corporate contexts or in

cases of changes in the legal form of the business (e.g. from a sole proprietorship to a limited corporation). Second, start-up concerns the creation of business enterprises, with an entrepreneurial and managerial logic of making a profit in the long run. This characteristic suggests that there is an interest in efficiency, profit and survival incorporated in the process. Thus, bearing these objectives in mind, the start-up is likely to be guided to maximise the outcomes of the start-up. This suggests the study the objective of clarifying the character of the outcomes of the venture formation process.

Third, the outcome of the start-up is a new business entity, *a firm.* Penrose (1959) develops the concept of firm into a unit of employing and processing resources:

> *"The activities of the group which we call an industrial firm are further distinguished by their relation to the use of productive resources for the purpose of producing and selling goods and services. Thus, a firm is more than an administrative unit; it is also a collection of productive resources the disposal of which between different uses and over time is determined by administrative decision."(Penrose 1959: 24)*

It is notable that to meet Penrose's definition, the firm does not necessarily need to be a distinct *legal* entity, but must be able to be separate from other business firms – to form a separate *venture.* The concept of venture is defined in *Webster's Encyclopedic Unabridged Dictionary (1989)*, according to which a venture is "a business enterprise or speculation in which loss is risked in the hope of profit; a commercial or other speculation". Schoonhoven et al. (1990) point out that no single theory provides sufficient guidance for the model development of the entrepreneurial event, i.e. new venture creation (1990: 178). This sets the study another objective of clarifying the process of new venture creation. The theory part concerns especially the role of entrepreneurial capability in the creation of the emerging venture. The theoretical perspectives of entrepreneurship, networking and corporate strategy are used for building the theoretical framework of the phenomenon.

In addition to these theoretical treatments, empirical evidence on the entrepreneurs' start-up practices is necessary. For the reason of little guidance from earlier research, this study will necessarily be exploratory. In exploratory studies, the main interest lies in the identification and description of the phenomenon studied. These aims will be best served with a research setting applying a combination of qualitative and quantitative methodologies. The data will relate in particular to the nature of entrepreneurial capability

and to the formation of a new venture. However, since the research object is an activity rather than a 'concrete object', the circumstances of this activity are relevant to consider. Thus, the data concerns the start-up process of companies within the metal and electronics industry. Firms in this industry represent basic business in regard to open competition, high requirements for effectiveness in terms of demand conditions, and high requirements in productive and managerial efficiency. Through this choice, it is attempted to grasp a covering array of formation activities into the research data. Finally, the findings are summarised in order to answer the research question and to fulfil the purpose of this study.

Entrepreneurial behaviour has been studied in various ways, including psychological and cognitive approaches. These approaches relate to the person-related intrinsic processes that do not need to be associated with 'real' behaviour or 'real' action per se, but represent the person's development regarding different attitudes, motivations or perceptions. The present study relates strongly to the action and activities of the entrepreneur during the venture formation process, and therefore it is important to find out what the entrepreneur actually did, instead of looking for the motivational or perceptional reasons why he initiated the process. This approach gives the study its character of a pragmatic research and both the theoretical treatments and empirical evidence follow this line of thinking.

1.4. Outline of the study

As pointed out above, this study is exploratory and thus seeks to identify and describe the relevant aspects of the phenomenon studied. In the first chapter an introduction to the study as well as the purpose are set.

The second chapter comprises a literature review covering most of relevant research concerning start-ups and paths to entrepreneurial career. Its first parts include a review of psychological and cognitive literature on entrepreneurship, in order to provide a wider picture on the explanations of new venture start-ups. These characteristics do not, however, offer much guidance to the understanding of the formation process as such, but bring light to the circumstances in which a person chooses to become self-employed. In the later parts of the section, the elements of new venture formation necessary for building the theoretical understanding of the start-up phenomenon are identified. Finally, in the theoretical framework, the phenomenon studied is defined, and propositions regarding venture formation are developed.

The third chapter presents the methodology of the study, covering the considerations of research design, sample definition, data descriptions and evaluations of the credibility of the data, analysis and findings. In this phase, the pilot studies are described and analysed.

In the fourth chapter, the data analysis is described, and the results and interpretations are discussed.

The fifth chapter comprises a discussion on the key findings. Finally, the conclusions and implications of the study are presented in the sixth chapter.

2. ALTERNATIVE APPROACHES TO START-UP AND GROWTH

A number of approaches have been presented to catch the specific mechanisms of business start-up, most of them providing interesting insights into the logic of entrepreneurship and small business management. Thus, the research on start-up can be divided into two main lines of research: entrepreneurship research and company formation research. In the previous line, start-up is seen as the outcome of the personal entrepreneurial process, where the 'co-incidental' fit between the personal entrepreneurial characteristics and the market opportunities in the entrepreneurial environment results in an entrepreneurial intention, and subsequently, in new business. In this stream of research, the start-up process itself is not normally seen as problematic as the mixture of relevant entrepreneurial characteristics or the perception of opportunities. These studies will be reviewed below, in Chapter 2.1.

While entrepreneurship research focuses on the entrepreneurial person, company formation research is based on the analysis of organisations, and their emerging forms. The theorising around small business suggests various paths to business ownership. These paths will be reviewed in Chapter 2.2. As will be seen, among these paths, however, only one distinctive type describes the creation of a new venture, instead of being bare changes in business ownership. The literature on new venture formation studies will be reviewed in Chapter 2.3. A partly separate line of research has concentrated on the implications of social normative environment. It is suggested that organisation creation is affected by the entrepreneur's need to create social acceptability for the venture. Chapter 2.4 deals with the social aspects associated with the emergence of an organisation and finally, Chapter 2.5 summarises the review and presents the theoretical background of the process of new venture formation.

2.1. Entrepreneurship research and business start-up

In general, the approaches to understanding entrepreneurship and business start-ups can be categorised into three levels of theorising: the psychological, cognitive and action theories (see Figure 1 below). Two of these levels study intrinsic processes in the sense that changes at these levels do not have to result in explicit action. Therefore, the psychological level concentrates on the personal development of the entrepreneur, and the cognitive level focuses on the individual information seeking and decision-making

processes.

On the other hand, the business formation level is merely interested in the actual behaviour of the entrepreneur and of patterns that result in the emergence of a new business.

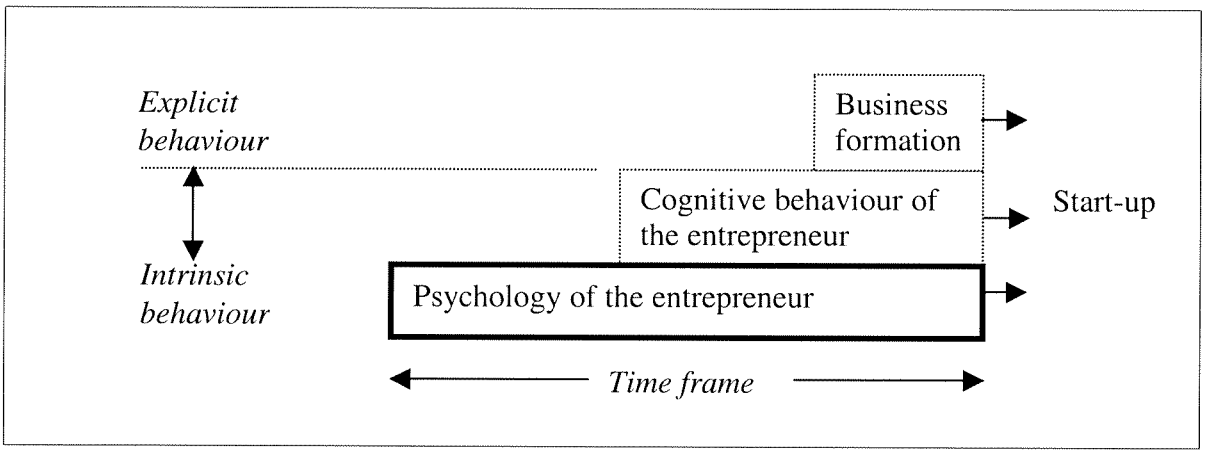


Figure 1. The levels of entrepreneurial process.

The above figure illustrates the fact that a large part of research concerning start-ups actually studies the phenomenon using the entrepreneurial person as the unit of analysis. Other units of analysis, such as the (emerging) venture and the network, are considered only at the 'action level' of research. This section seeks to review relevant entrepreneurship research, focusing mainly on research concerning the entrepreneurial person and the personal entrepreneurial process. Studies on entrepreneurial psychology measure time in years, often starting from the person's childhood and ending at the start-up decision.

2.1.1. Entrepreneur's characteristics in the business start-up

The studying of the psychological factors of entrepreneurship has been very popular during the past few years. Since McClelland (1961), the psychology of the entrepreneur has been seen as an important factor with an impact on new and small firm performance. This line of research builds on two characteristics of entrepreneurial psychology: On the one hand, the research of psychological drivers leans strongly on the theory of motivation, i.e. on the assumption that personal motivations, needs and drives lead a person to act in a

way through which these needs will be satisfied. Therefore, a number of motivational drivers have been associated with entrepreneurship. The personal psychological drivers of entrepreneurship have been characterised e.g. by high needs for achievement and power (McClelland 1961; for a critique see e.g. Kilby 1971), and high needs for autonomy or independence (Hornaday 1990; Carland, Hoy, Boulton & Carland 1984). On the other hand, some characteristics refer more to personal capacity for taking on the entrepreneurial role, such as high aptitude for risk-taking and equivocality (McClelland 1961; Brockhaus 1980; Gartner, Bird & Starr 1992), imagination and vision (Penrose 1959; Filion 1991) as well as high levels of intentionality and self-efficacy (Bird 1988; Boyd & Vozikis 1994).

2.1.1.1. Desirability of an entrepreneurial career

Why do some people desire for an entrepreneurial career? According to some studies on the entrepreneurial traits, the mere existence of the entrepreneurial psyche *is* entrepreneurship per se (e.g. Ettinger 1983; Hull, Bosley & Udell 1980). On the other hand, a number of studies see that the motivational characteristics of the entrepreneurial person are a necessary but not sufficient condition for entrepreneurial behaviour (e.g. Chell 1985).

McClelland (1961) presented one of the earliest theories about the entrepreneurial motivation. He suggested that a person's motivation consists of three factors: need for independence, need for achievement and need for affiliation. McClelland suggested that high scores in the need for achievement and in the need for independence would be associated with entrepreneurial behaviour. Therefore, because of their high need for achievement, entrepreneurs could be seen as risk-seekers looking for possibilities in achieving success in equivocal situations. On the other hand, high scores in the need for affiliation would suggest avoidance of entrepreneurial challenges.

McClelland's theory has been tested, supported and criticised several times. For example Hornaday (1990) and Carland, Hoy, Boulton & Carland (1984) built their definitions of entrepreneurship on the needs for autonomy or independence, Kilby (1971) criticised heavily McClelland's research settings and methodology, and Brockhaus (1980) questioned McClelland's risk-seeking hypothesis. According to Brockhaus' findings, entrepreneurs do not score high nor low in their risk-seeking behaviour, instead they look

for situations with approximately 50-50 odds. Davidsson (1989) studied the growth willingness of entrepreneurs using the need for achievement and the need for independence hypotheses as measures for personal motivation. He found that the effect of entrepreneurs' personal goals, need for achievement and need for independence play a crucial role in motivation for further growth. Davidsson (1989) found further that the expected outcomes of growth are important determinants of growth willingness. Interestingly, Davidsson also reported about a division between some aspects of autonomy. Independence and control seemed to play different roles in the thinking of the entrepreneurs in the sample group. The results indicated that these two aspects of power, which have traditionally been seen as the opposite ends of the same continuum, are not associated with each other so closely. Davidsson concluded that his study gives a pessimistic picture of the possibilities of affecting the growth willingness of entrepreneurs and, consequently, of creating new jobs.

While the entrepreneurial motivation theory by McClelland suggests that the person has an intrinsic 'pull' towards an entrepreneurial career, a contrary theory has also been developed, with strong arguments about entrepreneurial motivation. This social-dynamic or 'social marginality' theory sees the entrepreneurial process as a life-long development of a person. According to the theory, there is a 'pull' towards more attractive roles in society as well as a 'push' to follow the socially perceived and expected roles. In their classic study about the growth of small firms, Stanworth & Curran (1976) based their theory of latent social identities on the phenomenon of social marginality. In the theory, the perceived misfit between a person's attributes and his role in society is used to explain why some people have started a business of their own while others have not.

In another classic study Collins, Moore & Unwalla (1964) focus on the phases of entrepreneurial development, which include the main stages of the entrepreneur's personal life. Collins et al. named the main phases as 'Entrepreneur as a child', 'Formal education', 'The school for entrepreneurs', 'Projects and the projector', and 'Creators and the enterprise'. All of these include a number of sub-stages describing the single entrepreneur's psychological, occupational and social development to the point of operating a successful business. The main message by Collins et al. was that entrepreneurship is a characteristic that can be seen as a personal tragedy with consistent failures in education, working life and start-ups. Similarly, Kets de Vries (1977) saw an "individual often inconsistent and confused about his motives, desires and wishes, a person under a lot of stress, who often upsets us by his seemingly 'irrational', impulsive

activities" (Kets de Vries 1977: 36). This entrepreneurial mode contains a potential danger: because of the entrepreneur's rigid and peculiar nature, his conflicts and his leadership style, the growth of the enterprise may lead to destruction[1].

In some social marginality studies, social class differences are seen as 'objective'; the upper, upper middle, lower middle, and labour classes are separated in their tendencies to support the entrepreneurial process of starting up new enterprises. For example, in his influential study, Smith (1967) compared entrepreneurs with blue-collar and middle-class backgrounds. Smith used his classification of entrepreneurs into craftsman and opportunistic entrepreneurs and noticed that the craftsman entrepreneurs normally come from a blue-collar background, whilst opportunistic entrepreneurs normally have a middle-class background.

Empirical evidence to support the social marginality theory as such is minimal, and Chell (1985) notes that the theory may be applicable to entrepreneurs with a particular background, but not in general. Family and social backgrounds have, however, also other significance for the entrepreneurial process. Cooper & Dunkelberg (1986) reported a survey data according to which 50 per cent of the entrepreneurs came from families in which one or more parents owned a business. Furthermore, Birley & Westhead (1994) found that the different motivational types of new owner-managers showed significant differences in their family backgrounds. In a recent Finnish study, Vesalainen & Pihkala (1998) reported that there are significant differences between the entrepreneurial attitudes of people with different family backgrounds. Therefore, the most positive responses were collected from respondents coming from entrepreneurial or agricultural families, while people brought up by employees of a private or public employer showed lower enthusiasm towards entrepreneurship.

However, the 'push-and-pull' theories have remained in the entrepreneurship research as new explanations for the motivation of the entrepreneur. According to the theory, 'pull' entrepreneurs, as intrinsically motivated, are likely to be more successful than those with 'push' motivation. In general, the early research findings suggest that 'pull' entrepreneurs are in fact more successful than 'push' entrepreneurs (Amit & Muller 1993). The

[1] As such, the theory follows closely the dialectic process model, in which the birth of a thesis already includes the seeds for its destruction. In other words, the entrepreneur is seen to start out because of his social failure, and this quality also leads the entrepreneur to difficulties when the venture has grown older and requires management with higher abilities in social as well as in other regards.

dynamics of the push factor in the motivation process is not, however, as simple as that. For example, Vesalainen & Pihkala (1999a) found that the person's entrepreneurial identity is a crucial factor in determining the effects of the push factor in entrepreneurial intentions. Therefore, people with a farmer identity seem to react strongly in favour of entrepreneurial intentions in the presence of strong push, while the reaction of those with an identity resembling that of a classical entrepreneur was opposite to the 'farmer' group. The more push factors were present in their personal situation, the less 'classical entrepreneurs' seemed to carry entrepreneurial intentions.

There seems to be other intervening variables complicating the relationship between personal motivation and entrepreneurship as well. Studies on entrepreneurial motivation have found that demographic factors like age, gender or social group are associated with entrepreneurial motivation. For example, the likelihood of men to start new ventures has been found reasonably higher than among women (Birley et al. 1994; Vesalainen & Pihkala 1999b).

The main methodological problems in the studies on entrepreneurship motivation have been identified as being related to e.g. imperfect measurement techniques and to biased or inadequate samples (see e.g. Kilby 1971; Shaver & Scott 1991). More importantly, what is missing is the direct relationship between personal 'trait' behaviour and the concrete action of the person. Though there is some dispute about the base reason for psychology to be crucial (see e.g. Chell 1985), practically all scholars seem to agree on its overall role. Entrepreneurial qualities are likely to play an important role in the process of new venture creation, pointing to the necessary entrepreneurial personality and motivational factors. Sandberg (1986) reviewed the relevant literature on research on the entrepreneur's characteristics, and concluded that no solid proof for any factor has been found. Although organisation theory suggests that attitudes and motivation could be used as proxies for action, in real terms neither of these is enough to explain actual behaviour. For example, Herron & Sapienza (1992) point out that personal skills are closer to the opportunity discovery than are entrepreneurial traits. The most usual proxy for personal skills has been the prior personal expertise of the entrepreneur.

2.1.1.2. Psychological capacity for entrepreneurship

The base hypothesis behind the studies of entrepreneurs' psychological capacity has been

that entrepreneurs would differ from the normal population in their ability to concentrate, in their psychological stress or egocentric behaviour. The personal capacity for entrepreneurship has been associated, for example, with a person's high aptitudes for risk-taking and equivocality (McClelland 1961; Brockhaus 1982; Gartner, Bird & Starr 1992), high abilities for imagination and vision (Penrose 1959; Filion 1991) as well as high levels of intentionality and self-efficacy (Bird 1988; Boyd & Vozikis 1994). The study by Begley & Boyd (1987) illustrates well the overall results in the search for successful entrepreneur's characteristics. Begley & Boyd studied the relationship between established entrepreneurs' psychological attributes and the performance of entrepreneurs. They defined entrepreneur as being a founder of a firm [thus excluding inheritors]. The five different psychological attributes studied by them were Need for Achievement, Locus of Control, Risk Taking Propensity, Tolerance of Ambiguity and Type A Behaviour, and they used the EPPS scale, Rotter scale, JPI scale, Budner scale and Framingham scale, respectively, to measure these attributes. The performance of the firms was measured by the ROA, liquidity, revenue and the age of the firm. In their study, Begley & Boyd (1987) found no support to the hypotheses that founders would score higher than non-founders. In addition, Stuart & Abetti (1990) reached similar results.

As discussed earlier, risk-taking has been associated with entrepreneurship. As such, it could be seen as a capacity of a person to tolerate uncertain situations and outcomes. Entrepreneurs' willingness to invest capital in ventures with uncertain outcomes has been interpreted as risk tolerance. However, Brockhaus (1982) found that risk-taking propensities might not differentiate an entrepreneur from the management group. In spite of these findings, personal risk tolerance is used as a determinant of entrepreneurship. For example, Gartner, Bird & Starr (1992) suggested that because of their risk propensity, entrepreneurs tolerate equivocal situations better and that an important characteristic is entrepreneurs' tendency of processing unequivocal structures out of chaotic and equivocal situations. So far, this hypothesis has been unstudied. In a recent study, Das & Teng (1998) suggest that entrepreneurial risk behaviour should be seen in the context of time horizon, i.e. entrepreneurs' risk propensity is different because they have aptitudes for risk combinations of low risk – long time range and high risk – short time, while non-entrepreneurs assume risk combinations of high risk – long time and low risk – short time. Evidently, the truth about entrepreneurs' risk carrying capacity remains unsolved.

Entrepreneurs have also been associated with high abilities of intentional and proactive behaviour. It is assumed that a person capable of designing something totally new reflects

high abilities of proactive behaviour. This term refers to behaviour that does not follow the usual reactive Stimulus–Response pattern; instead, proactive behaviour is self-directed and based on intrinsic rather than extrinsic stimuli. Proactivity is associated with the ability of visionary thinking and 'good' imagination. According to Filion (1991), for example, entrepreneurs continuously process a set of visions where emergent visions develop into primary visions and where secondary visions as rivals constantly question the validity of the primary vision. So far, most of the literature on visions and entrepreneurship has remained at the conceptual and normative level.

Taking another approach to entrepreneurial characteristics, Boyd & Vozikis (1994), among others, argued that entrepreneurs have a high level of self-efficacy. The concept of self-efficacy stems from the motivation theory where it means a person's perceived ability to carry out a task successfully. The theory claims that if a person sees that he is not able to carry out the task in question, he would not be motivated enough to take on the task. Therefore, to choose an entrepreneurial career, such a person would need to have a high level of self-efficacy. Some researchers have suggested that self-efficacy would capture the essence of entrepreneurship more realistically than e.g. need for achievement, because it includes the evaluation of the opportunity against the person's own abilities (e.g. Gartner et al. 1992; Vesalainen & Pihkala 1999b).

Quite recently, networking abilities have been associated with entrepreneurship. Cromie & Birley (1992), for example, studied the differences between female and male entrepreneurs in their tendencies to seek peer assistance and help from their personal networks during the process of business start-up. They found, among other things, that the informal networks in the process of business start-up work as a natural ground for entrepreneurs to build their ventures on and that contrary to the general assumptions, female networks are remarkably similar to those of male entrepreneurs. However, differences were found between female and male participation in networks, as women tend to rely more on male contacts than on female ones, while men in their networks rely almost exclusively on male colleagues.

The latest stream of research on the entrepreneurial person has been focusing on the role of the entrepreneur's personal experiences gained before the start-up. In the literature, the entrepreneur's education and prior work experiences have often been used as indicators of the entrepreneurial capacity of a person. Considering educational expertise, the relationship between education and entrepreneurship has remained inconclusive. In some

studies, a person's high formal education has been seen as a factor that makes the entrepreneurial career choice highly unlikely (e.g. Collins, Moore & Unwalla 1964). These studies are based on the assumption that with a good formal education a person has the opportunity to enter a traditional profession with a stable salary and career prospects, while only those without a good education are compelled to take on the risk of improving their income level through entrepreneurship.

However, once a person has entered the entrepreneurial career, the high education attained does not seem to pay off. Stuart & Abetti (1990) found no relationship between the level of education and business performance. On the other hand, they pointed out that in their sample the overall level of education was reasonably high, and so the differences were even likely to remain marginal. What was interesting, however, was that Stuart & Abetti expected the higher level of education to count for better performance, while also contrary assumptions have been made. Recent results in entrepreneurship research suggest that instead of one typical relationship between education and entrepreneurship, there are in fact several typical combinations, depending on the type of enterprise and the level of education of the founder(s) (e.g. Vesalainen & Pihkala 1999a). Therefore, the founders of high-tech firms or consultancy agencies are likely to have academic degrees, while persons without no higher formal education are more likely to start artisan or vendor businesses, etc.

In addition, the importance of earlier experience has been emphasised. Collins, Moore & Unwalla (1964) based their argument on the accumulation of working experience in the 'school for entrepreneurs', i.e. working in various jobs and positions. The many-sided working experience has been seen as supporting entrepreneurial performance (Cooper et al. 1992). An important aspect of working experience has been e.g. experience gained of industry (Cooper 1993). In their study identifying different types of start-up reasons, Birley & Westhead had eight variables measuring the working experience of an entrepreneur, including factors such as the employment level in the previous job, or the number of different working places (Birley & Westhead 1994). However, they did not manage to differentiate the levels of experience between the identified start-up reasons.

The studies on entrepreneurial experience are relatively similar to working experience research. For example, in their study on the impact of experience on early performance, Stuart & Abetti (1990) operationalised entrepreneurial experience as reflecting the number of previous new ventures and the entrepreneur's role in such ventures. They separated the

measure into four items: 1) involvement in previous ventures, 2) number of ventures started, 3) number of successful ventures, and 4) the entrepreneur's role in such ventures. Stuart & Abetti (1990) found the amount of previous new venture involvement and the level of the management role played in these ventures as the most significant factors explaining performance. This finding could, however, be affected by the fact that Stuart & Abetti focused on new technical ventures, where the significance of industry-specific know-how is of utmost importance for avoiding expensive errors in the setting up of new manufacturing facilities or production lines. Additionally, the nature of the importance of earlier experiences was reflected by the notion that most of the entrepreneurs regarded themselves as insiders in the industry, which gave them a positive stance towards entry barriers in the industry (Stuart & Abetti 1990).

Some studies have dealt with the effect of managerial experience on the start-up performance. Cooper et al. (1994), for example, focused on the general background of the entrepreneur, the availability of management know-how, the availability of industry-specific know-how and the availability of financial capital. Beside Cooper et al., also Atkins & Lowe (1994) studied the availability of management know-how. They hypothesised that the level of stakeholder involvement in the strategy formation process in SMEs would be associated with the managerial education of the entrepreneur. However, their results showed no relationship between managerial qualifications and stakeholder involvement.

A stream of literature has labelled the main source of nascent entrepreneurs' managerial experience as the 'incubator organisation' (Cooper 1982). In an incubator organisation, the entrepreneur can combine his technical experiences with managerial experience to get familiar with the people working within the industry and to build his own networks in the business. (Bruno & Tyebjee 1982) According to Feeser & Willard (1990), the founders' skills, experiences and abilities stemming from earlier business seem to have a strong effect on the firm's performance. Comparing high growth and low growth firms in computer industry, Feeser & Willard (1990) found that relatedness to incubator-firms in respect to technology or strategy was significantly higher in high-growth firms than in low-growth firms. Nevertheless, the influence of managerial characteristics on the start-up performance has proved much weaker than expected, possibly because some of the studies are actually focusing on the actions and strategies after the initial start-up (Cooper et al. 1994).

2.1.2. Start-up as a decision-making process

This section deals with the cognitive processes of entrepreneurship. As a research topic, the focus is still in the intrinsic processes of the individual entrepreneur (see Figure 2). In regard to the time frame, cognitive studies concern the middle ground between psychological studies and business formation studies. Decision-making processes may take several years prior to any explicit action. In effect, mere cognitive processing does not materialise a new venture, but it may lead to an intention to start one.

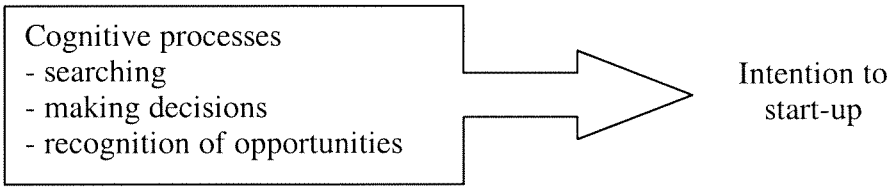


Figure 2. The level of cognitive research on entrepreneurship.

The cognitive action of the entrepreneur has been associated with his start-up behaviour. Studies of cognitive processes during the start-up have often focused on identifying stages or phases of development in the process. The stage models of start-up call the embryonic time of the start-up as e.g., 'the opportunity stage' (Timmons 1994) or 'seriously considering it' and 'planning for it' (Churchill 1983). Basing on 27 qualitative interviews, Bhave (1994) identified three principal stages in the venture creation process: opportunity stage, creation stage and exchange stage. In the opportunity-stage, the recognition of opportunities takes place, set up either by internal or external circumstances. The stage is finalised by the first conceptualisation of the business. The multiplicity of the stages reached its highest level in the model by Swain & Tucker (1973), which comprises three levels and 57 items. Finally, Vesper (1980) questioned the possibility of reaching an absolute definition for start-up, due to the fact that the starting point of the process is often blurred, driven by the growth of personal aspirations, emerging opportunities, and the seizing of these. In general and for the purposes of this literature review, three targets of research can be identified in entrepreneurial cognitive behaviour: opportunity recognition, searching techniques and entrepreneurial decision-making.

Opportunity recognition

Sandberg & Hofer (1986) stated that thanks to economists and the Austrian view of entrepreneurship we can understand the differences in knowledge, perception, ignorance and error that cause similarly motivated people to respond differently to a given situation. The view of what is called Austrian school of entrepreneurship builds on the cognitive capacity of the entrepreneur. In opportunity recognition, the concepts of entrepreneurial alertness (Kirzner 1979) and resource allocation (Casson 1982) become key issues. According to Kirzner (1979), the entrepreneur is an allocator of resources and the entrepreneurial profit arises from alertness over the changes in the market. Therefore, in Kirzner's approach, the entrepreneur simply exploits imperfect knowledge between producers and buyers in the market. The view of Kirzner is extended by Casson (1982) who builds an extensive theory basing on the Austrian view of entrepreneurship as an allocator of resources. He defines entrepreneur as "someone who specialises in taking judgmental decisions about the co-ordination of scarce resources" (Casson 1982: 23).

The views on the continuity of the entrepreneurial process vary somewhat. For Kirzner, all entrepreneurial action is a function of alertness to emerging opportunities, i.e. identifying and exploiting market imperfections in the market place. Therefore, according to Kirzner, entrepreneurship resembles a way to continuously look for anomalies in the business environment, and the process of start-up does not have a starting point in real terms. Unlike Kirzner, Vesper (1993) draws a picture of the process as starting from the seizing of opportunities and ending in doing paperwork. Timmons (1994) sees that the venture formation process starts from the moment of opportunity recognition. The main difference between these approaches is the concept of entrepreneurship, i.e. whether it could comprise other activities than the formation of new ventures[2].

Some researchers have suggested that entrepreneurship could be characterised as a special type of human sense making. Defining their concept of opportunity perception, Guth et al. (1991) referred to Weick's (1979) concept of enactment. According to Weick, enactment is organisational [human] sense making. In Weick's model, human action consists of an innumerable number of items and events, and therefore represents the requisite variety. The decision-maker (entrepreneur) then enacts (pre-interprets) his task-

[2] Both Vesper (1993) and Timmons (1994) can also be associated with the normative approach to entrepreneurship. Along with other 'cookbooks' (e.g. Scarborough & Zimmerer 1999), their views to business formation are closely related to the 'American' business culture and legislation.

domain, and selects his previous actions and the results of the actions taken (retention). Consequently, the process of enactment concerns pinpointing and sorting experiences into a manageable system that can then be ignored as separate pieces. The new-created system as such gives the feeling and the assurance of order. (1979: 148–149)

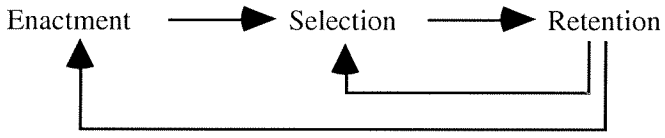


Figure 3. The enactment process (adopted from Weick 1979: 134).

Guth, Kumaraswamy & McErlean (1991) studied the enactment process by using a single case study of an entrepreneur through a new product development process. They divided the entrepreneur's new venture creation process into two subprocesses: enactment and learning. In their process model of entrepreneurial cognition, enactment and learning, they present the cognitive bias between the 'real environment' and the 'perceived environment' as the main problem that a process of trial-and-error seeks to correct. In action, the perceived environment was enacted and the process of learning followed the experiences gained.

Searching techniques

Beside the phase of opportunity recognition, the methods of searching solutions can also be regarded as entrepreneurial cognitive behaviour. Lant & Mezias (1990) related their study to research on corporate entrepreneurship. They adopted the 'entrepreneurship as a search process' metaphor, introduced by Mintzberg (1973), and studied entrepreneurial strategies by using a simulation model. They defined the concept of entrepreneurial behaviour as a search strategy, and strategies vary in their levels of innovativeness or in their potential of recognising new combinations (1990: 150). Lant & Mezias constructed three operational entrepreneurial strategies, the fixed, adaptive and imitative strategy. Following a fixed strategy, the firm is set 'on course' and it neglects the eventual signals from the environment. The pattern is reflected as non-innovative and no change is assumed to take place. The emphasis is clearly on the maintenance of system stability within the firm. Following this pattern, the venture formation process would be utmost rigid, looking for a priori defined indications of a business opportunity. Consequently, the

start-up process would be unlikely to start, or would be started only in case of a perfect fit.

The adaptive strategy is characterised by a search for improved performance. (Lant & Mezias 1990) The performance improvement is pursued through adaptive operations and observing the relationship between organisational characteristics. This mode enables the adoption of structures and operations that support discovery and innovative activities. In fact, the adaptive mode assumes both a high level of rationality in the search process and a high level of capability to change the organisational texture (cf. Bouwen & Steyaert 1990). In this sense, the adaptive strategy has a close relative in the typology of Miles & Snow (1978). In addition, the adaptor/ analyser firm (Miles & Snow 1978) functions in a very rational way, scanning the fit between organisational sub-functions and the environmental circumstances. Following this pattern, the venture formation would be an iterative process, including cognitive adjustments to the opportunity and a viable entry strategy.

Finally, the firm following an imitative strategy is assumed to monitor the market leader and adopt those modes of behaviour that seem useful. Lant & Mezias (1990) point out that this mode enables the best possibilities of learning from others' mistakes. This mode resembles closely the concept of 'creative imitation', discussed by Drucker (1985), or parallel competition as the entry wedge, suggested by Vesper (1980).

Entrepreneurial decision-making

Beside opportunity recognition and different searching techniques, entrepreneurial decision-making forms another important dimension of the personal entrepreneurship process. The cognitive approach to business start-up stresses the perceptual development of the nascent entrepreneur. Some researchers argue that the sole opportunity recognition is not enough, but there should also be psychological aspects involved in the process. For example, the model by Huuskonen (1989) builds on the general background of the entrepreneur, his personal characteristics and the contingency factors perceived by the entrepreneur. These together result in subjective interpretations of the entrepreneur's personal objectives, possibilities and means, which lead to the weighting of alternatives, the creation of entrepreneurial intention and commitment. In a more recent study, Bhave (1994) ended up in similar results, suggesting that the creation stage starts by personal commitment to venture creation. In his approach, the emerged commitment to an entrepreneurial career is seen as a decision to start an enterprise.

Beside commitment, the personal vision on the aspired business has an effect on the entrepreneurial process, too. For example, Filion (1991) studied the role of visions and concluded that the more the internal (personal) component of the vision allows an organisation to take a form that translates the external component's innovativeness, the more the entrepreneur will succeed. (Filion 1991: 30). In essence, this means that the fit between the entrepreneur's vision and the organisation's ability to carry out the vision results in good performance. This seems plausible, even if the link to performance is exaggerated. The point Filion is making relates to the fact that the entrepreneur's wishes and the organisation's abilities are not automatically in alignment with each other, and that the organisation may be difficult to attune to follow the entrepreneur's internal visions. Bouwen & Steyaert (1990) call this internal vision 'opportunistic logic'. In their study, they developed a grounded theory-based view to the processes of a young entrepreneurial firm. They discovered two co-existing and interacting processes that characterised the development of the young firm. The discovered processes were emerging from the social network in which action took place, and from the task domain that described the common assumptions of objectives held by the organisation. According to Bouwen & Steyaert (1990), the opportunistic logic on which the firm worked in the beginning was the reason for success. In the early phase of the firm's development, there were no restrictions in the organisational culture that would have prohibited certain ways of making profit.

Tesfaye (1997) developed an insight into the cognitive side of the entrepreneurial process. He suggested the entrepreneurial decision to be preceded by the evaluations of perceived desirability, perceived feasibility and perceived opportunity. For Tesfaye, the decision-making process concerns especially the processing of desirability, feasibility and opportunity, which result in the entrepreneurial decision. Once the decision has been made, the desirability, feasibility and opportunity evaluated and analysed affect the gestation process of the new venture.

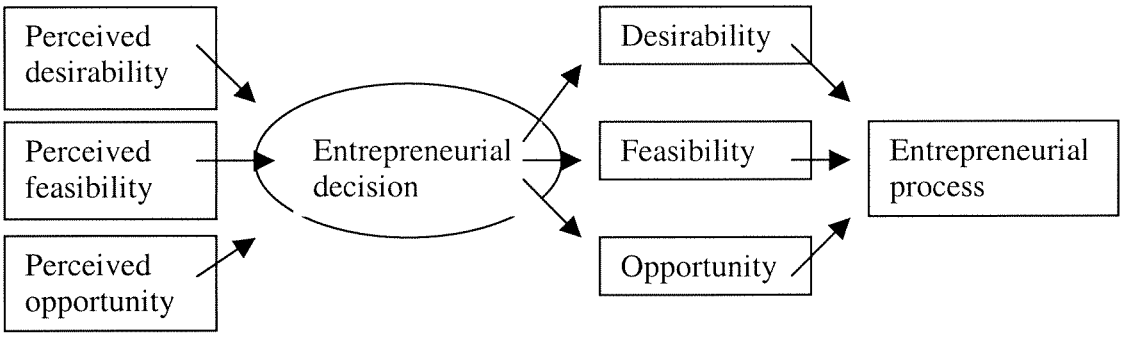


Figure 4. The entrepreneurial process (Tesfaye 1997).

As shown above, in studies focusing on the cognitive processes associated with entrepreneurship, the stage model remains the dominant method to highlight the development process. In a more general way, the stages could be named as opportunity recognition, carrying out of search processes, evaluation of alternatives and developing of business plans (e.g. Timmons 1994; Vesper 1993).

Applying entrepreneurship research to practice

Nevertheless, the characteristics studies and cognitive studies differ in their approaches and focus on the entrepreneurial phenomenon, but some integrative efforts have been done. For example, Chell (1985) presented a three level model of entrepreneurial 'theory' to conceptualise systematically those environmental factors that have an effect on the behaviour of the established entrepreneur and, consequently, on the growth of his business. At the first behavioural level, the variables depending on the entrepreneur's personality are central. Competencies, encoding strategies and personal constructs, expectancies, subjective values, self-regulatory systems and plans represent the distinctive behaviour patterns each person generates. All of them may affect the way the entrepreneur generates distinctive behaviour patterns. The second level deals with the transition of the personal variables into concrete variables of entrepreneurial behaviour: what skills are needed in business?; how does the business person perceive his environment?; what are his expectations of the viability or the growth of the business?; what outcomes does he value and what are his goals and objectives? This is the level of the operationalisation of personal aspects, at which the essential aspects can be recognised in a decision-making situation. The third level takes the model further to the roles and

functions of the entrepreneur. Chell uses three key roles originally presented by Kets De Vries (1977). These roles – innovator, risk-taker and of manager co-ordinator – are the results of the process which can also be observed, but which is based on entrepreneurs' differing psychological constructs.

The study of the cognitive processes of entrepreneurship is focusing on the increasing of knowledge of the *personal* process; i.e. how could we teach entrepreneurship, or how could we raise the level of perception in the entrepreneurial decision-making process so that more highly qualified people would decide in favour of an entrepreneurial career? An important mechanism that has been suggested by many is the analytic approach to business start-up, which usually results in a business plan (e.g. Rich & Gumpert 1991). The concept of business plan has been established as a coherent collection of the business idea, entry strategies, financing and cash flow programmes. As such, it is seen as reflecting the maturity of the emerging business as a concept to be introduced in the market place. However, the analytical business plan tool has come to occupy the start-up education and consulting, so that for some scholars, only start-ups with viable business plans are to be expected to grow in the future, and should therefore be used to denote entrepreneurial start-ups. This development has met a great deal of criticism from the point of view of entrepreneurship theorists who have stressed that the analytical and managerial approaches into the phenomenon of entrepreneurship are a contradiction in terms and should therefore be treated as separate phenomena (e.g. Atherton & Hannon 1995).

To summarise the literature review on the entrepreneurial characteristics and entrepreneurial cognition, personal drivers to entrepreneurship (need for an entrepreneurial career, personal ambitions, etc.) play an important role in the entrepreneurial decision-making process. This making of decisions is not, however, a discrete situation but forms an iterative cycle of deepening commitment and aspirations. Along with the personal needs, the subjective considerations of feasibility are important. This includes a personal weighing of the match between the accumulated experiences of the nascent entrepreneur and the characteristics of the emergent venture. Finally, the opportunity itself is included in the process.

As pointed out in the beginning of this section, the present research review section is divided into two parts: The first part of the section concentrates on personal entrepreneurship research and the latter part focuses on the theory of new venture formation. These two streams of research differ from each other in their focus on the

process, the first one pinpointing the central person, and the latter one the emerging organisation. Furthermore, in entrepreneurship literature, the people school sees the entrepreneur's role as central in his creating his operating context himself. The stream of research sees the person creating the opportunities, and the performance of the new venture is largely seen as dependent on the quality of the business concept rather than on the industrial circumstances or environmental selection processes. In the next section, the review considers new venture formation literature that focuses on the person and on his firm adapting to the environment, and therefore the choices made in the positioning of the new venture in the industry are of key importance for the success of the new venture. The theory on the process of business formation has developed into two main lines of thought: the first one focuses on the activities taking place prior the entry in the market while the latter one discusses viable entry/competitive strategies for new firms.

2. 2. Paths to an entrepreneurial career

This section starts the review on the business formation studies that relate mainly to the entrepreneur's explicit behaviour, networks, and other participants in the new venture creation process. While both the psychological and cognitive levels relate to a long time frame, business formation studies are mostly concerned with the relatively short time period during which business formation takes place (see Figure 5).

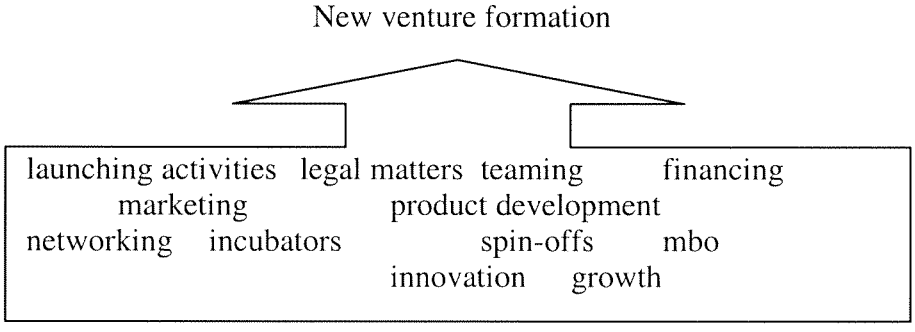


Figure 5. The level of business formation studies.

In the discussion on entrepreneurship, different opinions on the true contents of entrepreneurship have been offered (e.g. Timmons et al. 1987; Bailey 1986; Carland, Hoy, Boulton & Carland 1984). Carland et al. (1984) focus on the motivation of the

entrepreneur and see that entrepreneurs are those with aspirations for growth and success, while Bailey (1986) argues that the entrepreneurs' learning style differs from the non-entrepreneurs and Timmons et al. (1987) suggest that the key to entrepreneurship is in opportunity recognition. Some researchers have suggested that the search for a unanimous conception of entrepreneurial phenomenon is futile and that the importance of entrepreneurship has been exaggerated. Hornaday (1990), for instance, has insisted that entrepreneurship is but one element of small business ownership and the mere studying of entrepreneurship is bound to direct research to focus on wrong questions. The argument is supported by the findings that only a few of new venture start-ups actually are very innovative, and thus entrepreneurial, while most new businesses are started upon imitation, craftsmanship or by continuing on-going ventures (Vesper 1980). For this reason, the level of entrepreneurship of new business start-ups has become a new target for research. Here, the main focus of interest is the identification of distinct routes to business, which results in taxonomy of businesses. For instance, Bhave (1994) suggests that without taxonomies, the generalisability of conclusions into the SME sector is suspect and questions of validity may arise.

In their seminal study on paths to business ownership, Cooper & Dunkelberg (1986) argued that entrepreneurship should not be considered as a one-dimensional phenomenon, but that there are different levels of entrepreneurship associated with different types of starting business ownership. In their typology, the three basic paths to business ownership are initial start-up, buying a firm and inheritance. These types reflect different levels of entrepreneurship associated with the entrepreneur and the business idea. Therefore, starting one's own business from a scratch would be more entrepreneurial than buying one, which still reflects a considerable amount of risk-taking and initiative. On the other hand, inheriting and being brought into an enterprise represents the lowest level of entrepreneurship, even though it may include requirements for a large reorganisation or turnaround in the business. A number of studies have based their hypotheses on the framework by Cooper & Dunkelberg (1986). For instance, Chaganti & Schneer (1994) studied the impact of the owner's mode of entry on performance and found that different modes of entry lead to different management patterns, which, again, were associated with the different levels of ROA. Interestingly, however, this pattern did not hold for the logarithm of annual sales. Instead, both owner-started and family firms seemed to produce greater sales than the buy-outs. The reason why buy-outs should show inferior performance compared to initial start-ups or family firms remains unclear.

Buy-outs have been studied only marginally, and the main focus has been on management buy-outs, while buy-ins or employee buy-outs have received almost no attention at all. Entering business ownership through buy-out has been characterised as a moderately entrepreneurial route, requiring some risk and innovation in the take-over (Cooper & Dunkelberg 1986). In a buy-out, the whole ownership is transferred through acquisition, and the new owner receives an existing firm, often including e.g. the products, technologies, personnel and inventories. Instead of extreme entrepreneurship, a buy-out is more closely related to the managerial expertise, careful financial planning and post-buyout trimming of the organisation. Ennew, Robbie & Wright (1992) distinguished further between buy-outs and buy-ins, and defined a management buy-in (MBI) as a situation where a team of outside managers/entrepreneurs, usually with the assistance of venture capitalists, purchase the equity of a company for which they were not previously working. In this sense, MBI corresponds to the plain purchase of a business firm. Ennew et al. studied management buy-ins as a new ownership form and identified three types of MBI, the first representing the motivational basis of perceived redundancy and personal ambition, the second reflecting the need for independence, while downplaying the importance of monetary factors, and the third cluster representing the largest group with high levels of personal and commercial ambition. Although the typology developed by Ennew et al. seems logical, it did not succeed in differentiating between different levels of performance or financial structures of firms (Ennew et al. 1992).

The object of inheritance, i.e. a family firm with the dynamics of two-generation businesses, is one particular topic of small business research (Hart & Stevenson 1993; Goffee 1996; Fox, Nilakant & Hamilton 1997). A family business is generally characterised by a special balance between the business and family dynamics where the entrepreneur has to consider both demanding stakeholders. Churchill & Hatten (1987) sketched out a research agenda for studying family businesses and emphasised foremost situations where transfers of power take place. In a succession of a family business, the ownership and control of the firm are transferred to the next generation on a non-market basis. However, becoming a business owner by inheritance is a complex process including various conflicts between the family system and the business system, and the need to manage the balance between the one who is succeeded and the successor (Brunåker 1996). A central issue in the process of succession is the politics of the family and of the business, rather than the successor's perceived level of entrepreneurship. The expected outcome of the succession process is a credible transfer of the ownership of the business within the family, without damaging the fragile systems of family and business.

The need to manage the process and ascertain the continuation of the business post-succession makes it very analytical. Therefore, as a path to business ownership, inheritance is closer to buy-out than to owner-started businesses (Chaganti & Schneer 1994). The process of becoming a business owner through inheritance seems to be the least entrepreneurial way; instead, it could be characterised as a process of political and social negotiation.

Since the seminal paper of Cooper & Dunkelberg (1986), other paths to business ownership have been recognised, too. Scott & Rosa (1996) launched the notion of 'portfolio entrepreneurship', referring to the logic of managing several enterprises at the same time and of creating new businesses either within old firms or in new ones. In portfolio entrepreneurship, new businesses are often founded close to the older ones owned by the same entrepreneur, and they are linked tightly to the same 'portfolios' of businesses to be grown. Here, the logic of growth does not refer, contrary to a common assumption, to the growth of single firms but to growth in the number of businesses. Basing on their findings on the portfolio entrepreneurs, Scott & Rosa argue that the firm level of analysis should be, if not totally abandoned, at least severely reconsidered. This pattern of entrepreneurship has been followed e.g. by Carter (1998), Carter & Rosa (1998) and Johannisson & Robertson (1997). Interestingly, this form of entrepreneurship seems to be characteristic of rural business contexts. For example, Carter (1998) studied portfolio entrepreneurship in the farm sector and argued that within farming, the additional business activities should be seen as a continuum from the diversification of existing assets to the ownership of a portfolio of businesses.

The diversification activities have also been studied before the publication of the article of Scott & Rosa (1996). For example, Roberts & Berry (1985) argue that the familiarity of the market and applied technology form the main criteria for the venture success. They suggest that when entering new businesses, firms should choose those businesses that are close to the firm's original competencies. Brunåker (1993) studied the diversification practices of farms and concluded that complexity within the specific context guided the development of strategy on the farms, and that, on the other hand, the limits to growth are only set by the managerial capacity of the farming family (lending support to Penrose's argument on the logic of a firm's growth, 1959). These findings suggest that portfolio entrepreneurship is closer to the strategic management of small businesses than to the problems of new venture start-ups. Entering new businesses follow the logic of product/market strategies, reflecting thus managerial capabilities rather than

entrepreneurship in the firms.

Vesper (1980) presented his typology of entrepreneurial strategies and argued that the main four 'wedges' to entry are the creation of a new product or service, the starting up of parallel competition, starting through a franchise or a licence, or buying an on-going business (see Table 1). Along with these main wedges, there are also some other ones (partial momentum, customer sponsorship, parent company sponsorship or governmental sponsorship), which co-incide with the main wedges. These other wedges mainly refer to the source of the entrepreneurial opportunity, and Vesper sees opportunities being created by external environmental contingencies rather than by the entrepreneur himself.

The entry wedges approach suggests that to be able to identify opportunities, the entrepreneur must already be 'in' the field. Ronstadt (1984) has labelled this phenomenon as the 'corridor principle', referring to the need to get into the 'business corridor' before one can perceive the vast opportunities within business. However, most entrepreneurial opportunities are not objective in the sense that they could be perceived as opportunities by anyone, but, instead, subjective perception is important for the process. The study by Cooper & Dunkelberg (1986) supports this view and leaning on prior research, they hypothesised, among other things, that founders usually start new businesses in regions where they are already living and working because this allows them to use their already existing personal contacts and market knowledge, to eventually start on a part-time basis while keeping their existing jobs and to avoid the disorder in their family lives (Cooper & Dunkelberg 1986: 61). In later research, this hypothesised pattern has been associated in particular with academic entrepreneurs (e.g. Tesfaye 1997; Aaltonen 1998)[3].

Table 1 below shows that the most important entry path is associated with parallel competition, where the gaining of competitive positions or advantage is crucial for the new venture. Therefore, in most cases new ventures are facing various liabilities of newness, such as difficulties in activating resources or limited knowledge about the industry the ventures have entered (Stinchcombe 1965; Chaganti & Schneer 1994).

---

[3] This pattern is also associated with incubator organisations, see Section 2.1.1. On the other hand, academic entrepreneurship has often been related to the high-tech firms. To this group of high-tech ventures, the high education of the leading entrepreneur (or a team) is of central value. However, the literature suggests that even if highly educated, the entrepreneur needs to have collected a wide experience of the line of industry before the start-up.

Table 1. Entry wedges (Vesper 1980: 206).

	Main entry wedges			
Other entry wedges	New product or service	Parallel competition	Franchising	Acquisition of going concern
Exploiting partial momentum				
Geographical transfer			X	
Supply shortage		X		
Tapping unutilised resources		X		
Customer sponsorship				
Customer contract		X		
Becoming a second source		X		
Parent company sponsorship				
Joint ventures	X			
Licensing			X	
Market relinquishment		X		
Sell-off of division				X
Governmental sponsorship				
Favoured purchasing		X		
Rule changes		X		
Combinations				

Liabilities of newness

Studies on entrepreneurship and small firm growth have been trying for years to go around the main problem of small business, i.e. the fact that the small firms are small both in size and, in most cases, also in their influence in the market place. This fundamental characteristic is inevitable and has led to the development of a large amount of small firm specific theorising, thus separating small firm sector research from large company domains. According to the small business theorists, the small size of the business results in several specific circumstances that have an effect on the managerial practices, and therefore the management theories developed for large companies should not be applied to small size businesses. For example, Dandridge (1979) called for a new management theory for small businesses, because 'children are not little grown-ups.' In other instances, the perspective of newness has been adopted. Here, entrepreneurship is conceived as starting up new businesses, and therefore the problem of a new business is the newness itself. The theory suggests that since new firms are young, they do not possess the qualities needed for successful performance in competition (Storey 1985).

The liabilities of smallness and newness form a challenge for young and small businesses as well as for researchers of entrepreneurship and small business (Stinchcombe 1965).

Suffering from the liabilities of newness and smallness, the start-up venture "does not enjoy the benefits of well-established routines and administrative procedures, clearly defined institutional identity, market momentum, or credibility with customers and suppliers" (Cooper et al. 1994: 372; Stinchcombe 1965) or suffers from shortages of demand, supply shortages, high labour turnover, high wage costs, skill shortages and industrial disputes (Storey 1985). These conditions have theoretical bearing especially on the competitiveness of the new venture, and therefore research concerning young firms' competitive strategies has sought out ways in which the new venture competitive strategy could help the firm avoid the liabilities of newness. Williams, Tsai & Day (1991), for example, showed that low-image firms entering new markets might be better off by improving image rather than promoting their product. They suggested that in case of new venture start-ups, entrants would search for joint ventures with high image companies already present in the industry, thereby lowering their liabilities of newness.

In addition, some other problems have been presented, related to the liabilities of newness and smallness, such as the lack of industry-specific know-how (Cooper et al. 1994) or of established relationships in industry networks. Aldrich & Fiol (1994) have discussed these problems as the lack of legitimacy in the industry or networks. Within networks, the small size of the participating firms means flexibility, responsiveness and better opportunities to build trustful personal relationships. On the other hand, the lack of long-lasting relationships with the other industry actors sets strong barriers to the gaining of a foothold in the market. One mechanism to solve the problem of venture legitimacy is the use of personal networks (Johannisson 1988). From this point of view, the entrepreneurial context is seen as enacted, and the entrepreneur creates the context through which he can develop the different subprocesses of the emerging venture. However, all the liabilities of smallness and newness have not been solved through networking, and the remaining challenge is strengthened by the assumption that by finding mechanisms to use the smallness and newness as useful resources, the survival rate of SMEs could be increased.

Some researchers have brought out their ideas about a honeymoon period for new businesses in the industry (e.g. Fichman & Levinthal 1991; Preisendörfer & Voss 1990), after which ventures would face the liabilities of adolescence instead of those of newness. This rival theory has gained some support, and Carter et al. (1994) pointed out that most of the liabilities of newness are directly derived from the level of competition, and thus competitors are likely to pay attention to young firms only when these have grown big enough to be taken seriously. Carter et al. suggested that only firms lacking a cohesive

strategy and operating on moderate resources would be more susceptible to the liabilities of newness. In another study, using birth and death data collected by the German Chambers of Commerce, Preisendörfer & Voss (1990) did not find support for the liability-of-newness hypothesis that the youngest firms would exhibit the highest mortality rates.

To summarise, the four distinct paths to business ownership reflect relatively different levels of entrepreneurship, entry processes as well as views to post-entry development (see Figure 6). In this way, inheritance and portfolio entrepreneurship could be viewed as similar in their seeking of wealth and stability, while start-ups and buy-outs are looking for growth. On the other hand, the prospects of success should be guaranteed during the pre-entry phase, which in family firms is a non-market based political process between the successor and the one to be succeeded, simultaneously balancing with the other close family relatives. In buy-outs, later success is ensured through a careful market- based negotiation process where the pros and cons of the business are evaluated and the objectives of the acquisition are chosen. In portfolio entrepreneurship, the logic of diversification and transaction costs in and outside the organisation play a central role in making decisions on the number of independent businesses. Finally, the logic of the entrepreneur's path to an initial start-up, i.e. the process from opportunity recognition to the entry, is largely uncovered. The literature on entrepreneurial characteristics and entrepreneurial decision-making reviewed above makes no clear suggestions as to what happens after the entrepreneurial decision has taken place. In fact, these psychological and cognitive processes could be assumed to take place in any of these entrepreneurial paths, even if with different emphases. In any case, the initial start-up is the only setting where the entrepreneur has to create the whole venture, without possibilities of buying it, inheriting it or dividing older companies into new ventures. It is likely that the logic in this process is remarkably different from the other paths to entry.

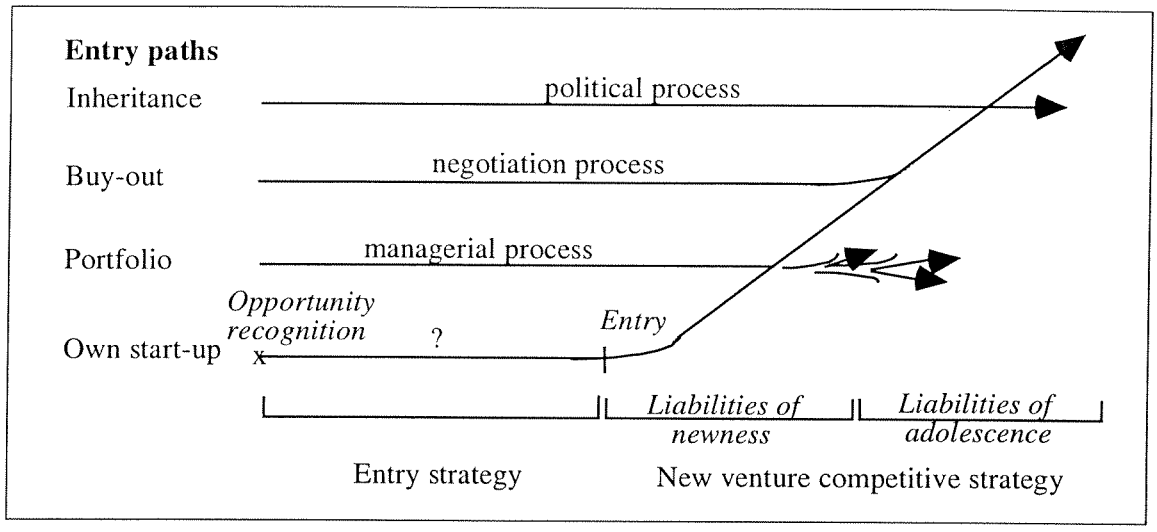


Figure 6. Paths to business ownership.

In the above Figure 6, the entrepreneur's own start-up is characterised as a process starting from opportunity recognition and ending in market entry. It should be recognised that these points in the process can be found in the inheritance, buy-out and portfolio processes as well. However, this study only focuses on the operations during the entrepreneur's own start-up (i.e. between opportunity recognition and entry).

An interesting point in the studies of paths to entrepreneurship reviewed above is that the level of analysis in these studies was a combination of the entrepreneur and the venture. The next chapter will focus more closely on this combination by reviewing the research stream of new venture formation.

2.3. Patterns in the formation process of new ventures

This chapter deals with the literature concerning the formation of the emerging venture. As an activity, it can be characterised as organising resources into a new combination. These resource-based and resource-collection processes of new venture formation are currently subjects of wide interest. Gartner (1985) discussed the four basic dimensions of new venture formation: individual(s), process, environment and organisation. Each of these categories contains a large subset of factors important to the venture creation process and outcomes. Gartner's categories are useful in pointing out the complex relationships

between the different elements of start-up, each having its distinct characteristics. The four elements are general in the sense that building a model or a framework of start-up would not work without considering each of these parts in theorising about new venture formation.

Seeking for the sensible sequences of the start-up process, Katz & Gartner (1988) took an institutional perspective to the problem of new ventures. They reviewed the literature on organisation theory and entrepreneurship, and suggested four properties of emerging organisations to give research more distinct hints for identifying the forming-up gestalts. According to Katz & Gartner (1988), intentionality, resources, boundary, and exchange are all necessary conditions to organisations, even if they are in an emergent form. Katz & Gartner stress that these properties they suggest do not have to emerge simultaneously, and therefore methodological tools for identifying emergent organisations remain sparse. The four properties by Katz & Gartner are useful in pointing out four important factors in the venture formation process: First, the process should be intentional, which is a strategic characteristic. As such, the strategic nature of the process would suggest that the overall process would be systemic and in alignment with the industrial conditions. Furthermore, the strategy needs to be guided by one or more people. Thirdly, the process most of all concerns the collection and activation of resources. The providing of resources for the emergent venture may either be done by buying resources or using networked resources. This exchange of resources creates a new boundary in the business structures, thus demarcating the new emerging venture with regard to other organisations. Networks need to be identified as a distinct element due to the fact that networks may be both resources as well as intermediaries for resources. Therefore, we can picture the four dimensions of new venture formation (see Figure 7).

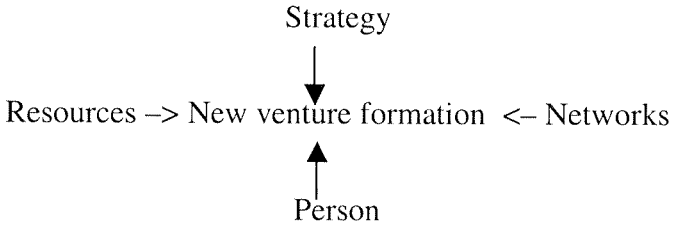


Figure 7. The dimensions of new venture formation.

The end of the venture formation process is difficult to determine. The most important outcome expected of the start-up is the survival and viability of the business. This

viability could be interpreted as the market share gained within a certain time limit (e.g. Shan 1990), which would suggest that the venture has been able to occupy terrain in competition and has been recognised as a viable participant in the industry. Carter, Gartner & Reynolds (1996) argued that the process of organisation formation is analogous to Weick's process of enactment – the generation of specific patterns of interlocked behaviours among individuals (p. 154). Another way to see the need for viability is not externally defined but more interested in the venture's ability to spur internal financing, organisational development and interorganisational relationships for the early phases of the development, i.e. reaching the balanced stability of the venture. Klofsten uses the concept of 'business platform' to describe the situation where the new venture has been able to secure its flow of resources and is able to utilise those resources in the business process (Klofsten 1998). Thus, the start-up phase would end when the resource flows have been secured. In the start-up process, the considerations of timing, strategy, competencies, networks and financial as well as of physical resources are important, due to the need of the new venture to gain viability as soon as possible.

2.3.1. Entry resource allocation

Within the industrial, technological and social context, new venture formation is a set of parallel processes, producing distinct outcomes, which result in a new enterprise. Interestingly, even if the generation and acquisition of resources is often seen as inseparable from the start-up process itself (Johannisson 1998; Shrader & Simon 1997), studies focusing on the resource attainment of the start-up are sparse. Instead, the relationship between resources and new venture competitive strategies has been covered extensively (Williams, Tsai & Day 1991; Chandler & Hanks 1994; Shrader & Simon 1997; Cooper et al. 1994). Only recently, some attempts to combine venture formation research and the resource-based view of the firm have been done (Lieberman & Montgomery 1998).

Business resources are generally considered as factors of production owned or controlled by the company (Wernerfelt 1984). In other words, resources are anything useful in the companies' operations. However, many of the resources can be used to different business purposes. In her analysis on the growth of the firm, Penrose (1959) suggested that a resource receives its usefulness only in the presence of a specific industrial context. In new venture formation, the entrepreneur faces the critical task of identifying, activating

and collecting the resources needed for the venture.

The resources needed in a venture are manifold, including finance, employees, technology, machinery, facilities, contracts, know-how and experience, to name but a few (Penrose 1959; Timmons 1994; Chatterjee & Wernerfelt 1991; Hall 1992; Lieberman & Montgomery 1998). The resources have been grouped into different classes, depending on e.g. their material characteristics, heterogeneity, availability or their inherent capacity of resource generation. For example, Chatterjee & Wernerfelt (1991) distinguished between physical, intangible and financial resources, while Schoenecker & Cooper (1998) focused on the two latter ones, labelling them as technological, marketing and financial resources. Hall (1992) analysed the characteristics of intangible resources from the point of view of firm strategy. He identified four classes of intangible resources: assets within a legal context, such as contracts or licenses; assets without a legal context, such as reputation or networks; competencies based on know-how, such as employee or supplier know-how; and competencies based on organisational culture, such as perceptions of quality or abilities to change. Further, resources have been distinguished with the terms of 'stock' and 'flow', where 'stock' refers to resources calculable and transferable, whereas 'flow' is used with respect to resources emerging from the on-going processes, and which as such are not independently existent, transferable or imitable (e.g. Lieberman & Montgomery 1998; Grant 1991; Ylinenpää 1997). These two types of resources are in hierarchical order, affecting the existence and the use of each other. Amit & Schoemaker (1993), for example, suggest that the capabilities, i.e., 'flow', concern particularly the efficient use of the stock (also Penrose 1959).

The role of resources may become blurred because of the various classifications and typologies. However, things can be identified as belonging to the group of resources following Penrose, who argues "it is never resources themselves that are the 'inputs' in the production process, but only the services that the resources can render." (Penrose 1959: 25) A resource is a resource only if it can bring added value to the productive process.

It is not necessary to own all the resources required for the new venture. In general, there are three main ways of acquiring resources: acquisition, networking and internal development (Ylinenpää 1997; Robert & Berry 1985). These routes of resource collection are affected by three main conditions: the resource conditions of the industrial environment (Peteraf 1993; Lieberman & Montgomery 1988), the personal resources and capabilities of the entrepreneur (Cooper et al. 1994) and the liabilities of newness (see

chapter 2.2.). Due to the nature of a start-up as being a process of forming a new venture, its abilities to generate resources internally are limited, although not non-existent. In general, it is assumed that the ability of generating resources internally in the early phases of a venture supports the venture's viability and performance (Schoonhoven et al. 1990; Burgelman & Sayles 1986). In some cases, however, the early generation of internal resources may in fact lead to longer waiting times, and doing so eventually weaken the viability of the venture. For example, Schoonhoven et al. (1990) found support to their hypothesis that the greater the new knowledge – or the synthesis of old knowledge – created during the product development process, the longer it will take for the firm to introduce the product in the market. In other words, the level of innovativeness in the start-up process may be negatively related to the viability of the firm.

In her analysis on the characteristics of resources, Peteraf (1993) identified four general conditions that also have an effect on the resource allocation of the firm. Problems of heterogeneity, ex post limits to competition, imperfect mobility and ex ante limits to competition affect the resource allocation process through different mechanisms. Because of heterogeneity, the resources have 'intrinsically differential levels of efficiency' (Peteraf 1993: 180), i.e. they vary in their applicability in the business processes. This makes resource choices uncertain and the later resource positions difficult to evaluate. The ex post limits to competition include the problems of imperfect substitutability, i.e. the resources needed are difficult to substitute with more easily available resources. Further, the condition of imperfect mobility prevails in certain types of resources. Most tangible resources are mobile and imitable, while the intangible and idiosyncratic resources, such as property rights, activity-based capabilities or experience are imperfectly mobile and therefore difficult or impossible to acquire through acquisition. The imperfect mobility of resources also applies in contrary examples: built-in resources are imperfectly mobile and the venture may grow rigid in its resource position (Leonard-Barton 1992). Finally, the ex ante limits to competition refer to the level of competition for the resources needed in the venture in the input market. Should these resources be scarce, the high price of the resource may lead to the deterioration of the opportunity.

Consequently, resource conditions set the limits to the resource collection of the entrepreneur. Peteraf points out that due to resource conditions, firms are seen to adopt strategies that their resources can support (1993: 189). For example, Lévesque & MacCrimmon (1997) suggest that in the start-up process, a small amount of capital available may make entrepreneurs postpone their leaving their earlier occupation, and

make them hold two positions at the same time instead. While the position in the previous job brings additional cash flow into the venture, the efficient allocation of time is driven by the entrepreneur's work tolerance and the returns follow the time allocation pattern. This may result in slowing down the intensity of the entry and the venture may appear as an incremental start-up.

However, success in receiving one type of resource may help in finding other resources. For example, the reception of early cash flow has been seen as a positive indicator of the viability of the venture (Ruhnka & Young 1987; Bruno & Tyebjee 1985). Ruhnka & Young (1987) studied the venture capitalists' conceptions of the start-up process and identified five stages of venture formation. According to them, the seed stage of the venture consists of the idea or a concept, and the majority of venture capitalists insisted that the development of a working prototype should be going on. Bruno & Tyebjee (1985) ended up with similar results as they studied the question of the entrepreneur's search for capital. They observed the times needed to find financing, the amounts of capital acquired and the number of shares given to investors. An additional aspect in this problem is what happens to the firms which did not manage to get financing at the first attempt and if this failure causes stigmatic effects in later attempts. The study points to venture capitalists' reluctance to finance firms in their start-up phase, but according to Bruno & Tyebjee (1985), managing to obtain venture capital at the beginning of the venture multiplies the possibilities of future financing. This has naturally strong effects on the performance of the venture and confirms that earlier success may lead to iterative process of following success.

In the case of technological resources, the nature of resources as stock and flow can be seen most clearly. The acquisition of technology as stock is possible, even if it consists partly (or mainly) of intangible flows of knowledge. Only seldom could stock or flow be acquired independently, i.e. the target of purchase being 'only knowledge of doing' or just machines and equipment. Instead, the acquisition of the flow of technology takes place through different intermediating factors, such as employees, machines and facilities which carry 'tacit' technological knowledge. This makes technology a rigid resource for a new venture start-up.

In addition to the nature of technology itself, the effect of the chosen industry, too, may have implications for the technology of the new venture. Grant (1991) presented his typology of industries in three groups, according to the rate at which the central strategic

resources flow in industries. Therefore, there can be industries with slow-cycle, standard-cycle and fast-cycle resources. Grant argues that the rate of the resource cycle in the industry makes a difference in the viable strategies for growth. A special case in this sense are high-tech start-ups. These venture formations, usually being technologically initiated (Burgelman & Sayles 1986), differ from the 'normal' start-ups in regard to the length, price, internal orientation, etc. of the formation process. On the other hand, core technology cycles as well as product cycles in high-tech industries are often extremely fast (Grant 1991). For an emerging venture, the fast-cycle resource conditions may mean that the available low-price technology is not likely to be current for the business and the entrepreneur needs to invest heavily in the newest and most expensive technology. The availability of the resource base of the entrepreneur is therefore likely to affect the entry strategy.

Organising resources

The organising of the collected resources remains an interesting question, too. In respect of the survival and success of the new venture, the creation of efficiency and flexibility seem the most important organisational factors. The trade-off between flexibility and cost-effectiveness is, however, puzzling, and European and American companies have traditionally opted for the efficiency criteria with the 'economies of scale' logic. The creation of efficiency follows the technological imperative suggested by Thompson (1974). To ensure the internal efficiency of the emerging venture, technology is in a leading role. This sets the entrepreneur in a difficult situation when deciding about the acquisition of technology, because independently of the route of acquiring technology for the venture, technology is susceptible to learning curve effects. In other words, only the operating and refining of the routines of production can improve the efficiency of the organisation or increase its level of know-how. Technology needs to be involved in the incremental learning required for efficient operation, resulting in organisational know-how. Know-how is therefore a combination of technological, organisational and personal skills (Ylinenpää 1997). On the other hand, should previously developed technology be available as an inside resource in the emerging venture (e.g. in the form of innovations or inventions and patents), the venture may have been able to avoid some liabilities of newness. For the efficiency to accumulate, the technological core of the organisation needs to be secured stable flows of input and output, and variations in the resource conditions are likely to weaken the efficiency of the core process and thereby the whole organisation.

On the other hand, the creation of flexibility within the organisation has been suggested to emanate from the small size of the organisation (Fiegenbaum & Karnani 1991), flexible manufacturing techniques (de Meyer et al. 1989), the application of networking agreements (Johannisson 1988) or the organisation structure characteristics (Powell 1992). In their study on the output flexibility of small firms, Fiegenbaum & Karnani (1991) suggest that small firms may gain a competitive advantage from their internal alignment skills, i.e. they are able to create cost-flexible and volume-flexible technology that can be adjusted to market conditions. Though the implications of this finding remain unstudied, it is reasonable to assume that the routes of resource collection affect the organisational flexibility of the new venture. On the other hand, following Peteraf's (1993) reasoning on the inherent efficiencies of resources, the available resources are likely to contain differential levels of flexibility, which result in the new venture's technological and organisational ability to survive.

2.3.2. Start-up as a co-operative venture

Networking has been offered as an explanation for business creation and at the same time as a way to achieve success (Johannisson 1986; Håkansson & Johanson 1994). As a resource and a way of resource allocation, networking is dependent on the entrepreneur's ability to connect to other people and organisations, and to turn these personal relationships into useful business connections. Easton (1994) has promoted the understanding of the nature and the essence of networks by presenting four different perspectives: networks as relationships, structures, positions and processes. These perspectives result in several assumptions about networks, such as the seeking of long-term relationships, clear-cut structures often guaranteed by contracts, interdependent resource positions in the networks, and the slow trust seeking processes of network development.

In the traditional approaches to networking, the Uppsala school of thought and the personal networks approach have both offered valuable insights to dynamism within networks. The Uppsala school of thought suggests that an industry could be characterised as a mechanism of overlapping networks. This overlap takes its form through three elements: the actors, resources and activities (Håkansson & Johanson 1994; Håkansson & Snehota 1995). In business processes, the participating actors create relationships, transfer resources and carry out different activities. As such, people, groups or organisations are

related to each other in terms of mutual resources, resource exchange and activities. On the other hand, activities and resources form their own industrial networks, too: resources relate to other resources and activities build on other activities.

The fact that there indeed are actors, resources and activities related to different fields of operation in multiple ways brings in the dynamism of business networks. Instead of remaining independent, these networks form a covering industrial network that can be characterised by institutional forces. These forces include interdependence, power, knowledge and intertemporal dependence. (Håkansson & Johanson 1994) From the venture formation point of view, this approach suggests the creation of a new organisation within the industrial network to be a major task for an entrepreneur. The task of creating a new actor into the networks would require changes in the resource balances within the industry as well as changes in carrying out industrial activities.

The personal networks approach emphasises the role of the entrepreneur as the main actor bridging the different actors, resources and institutions together (Johannisson 1988). The entrepreneur's personal network functions as his main resource that he both enacts and uses in business venturing (Johannisson 1986; Larson 1991). For example, Birley (1985) showed that the informal networks in the process of business start-up work as the natural ground for entrepreneurs to build their ventures on, while Larson's (1991) findings on partner networks suggest that entrepreneurial firms' ability to identify, cultivate, and to manage a network partnership is an essential condition for survival and success. The personal networks approach leans strongly on the fact that most entrepreneurs and networks only function locally and collect their business opportunities and resources for the ventures locally.

A usual hypothesis has been that the quality and quantity of entrepreneur's network relationships have a positive effect on the performance of the new firm. For example, the base assumption in Birley's study (1985) was that help and guidance from the network members, both formal and informal, effect substantially on the nature of the firm. Birley (1985) focused on start-up processes and the extent to which the entrepreneur interacts with his networks in his local environment during the start-up. Interestingly, however, she found no significant difference between growth and no-growth firms, and informal links in networks seemed to play a more important role in the process than formal network links.

In spite of Birley's rather disappointing results, differences in network creation, as well as in the accessibility and in the quality or diversity of networks are believed to be important factors leading to performance. In their study of social networks' role in business founding, Aldrich, Rosen & Woodward (1987) reported support on the hypotheses that network accessibility to resources outside the start-up organisation is related to business formation. On the other hand, their results did not support similar hypotheses on network size and business formation nor network diversity and business formation.

Network resources

To go deeper into the logic of networking as a route for resource allocation, the nature of network as offering different types of resources needs to be discussed. Foss (1993) studied the resource collection of Norwegian start-ups in cod farming and constructed her explanatory resource model on the social networks theory. According to her, social networks can provide three types of resources for the start-up process: affective, informational and material. An affective resource refers mostly to the social support and constructive feedback that have a motivational effect on the nascent entrepreneur. Informational resources relate to the knowledge of the 'infrastructural' requirements, i.e. the necessary bureaucracy and the knowledge of the production processes and financing. Material resources were identified by Foss as financial capital, labour, customers [sic] and machines, and the author noted that even though these resources can be acquired directly from the input market, all of these are also available in social networks. Foss found that when material resources are controlled, the affective and informational resources do not increase the probability of start-up (1993).

Foss's (1993) typology of network resources is useful as it shows the dualistic nature of networks as a resource source: as a resource and as an intermediary of resources. Following Foss (1993), the network serves as a resource itself as a supporting network, consisting of allies or customers. However, the use of network as an intermediary in resource collection requires offering the entrepreneur benefits compared to the 'normal' acquisition of resources. This would mean that the control of resources could be attained at no or a lower price than in the market approach, that the usage of network would be a necessary element of the anticipated later phases of the business, or that the resources could not be acquired without the help of the network. In case of scarcity of material, tangible resources, the entrepreneur may develop the intermediating conditions that can make the required resources available in the network. Such intermediary conditions may

concern the development of intangible, inter-personal or inter-organisational resources such as e.g. contracts, customership or co-operative agreements. Further intermediate resources activated through networking may be e.g. experience, employees and financing. In many cases, the activation of experience and employees takes place by building up an internal network, a founding team (Timmons 1994).

The effect of teams has been a strong indicator of the viability of the venture. For example, Feeser & Willard (1990) found a strong support to the hypothesis that high-growth firms have larger start-up teams than low-growth firms. Management teams may also have an influence on the longevity of the venture. According to Keeley & Roure (1990), 'better' management teams have a sizeable influence on performance via initial planning choices and via ongoing implementation. Team management has close links to planning, as the team is seen to be a more efficient way to bring together professionalism and expertise from different fields of knowledge. Subsequently, a strong management team has also been used by venture capitalists to identify promising firms.

In terms of financing, the interest centres around the question if the entrepreneur is capable of alluring external capital to the venture. The main process of managing in collecting funds into the venture has been approached from the point of view of venture capitalists and their risk-avoidance, i.e. whether venture capitalists can 'pick the winners'. In the process of 'picking the winners', venture capitalists look for some specific indicators suggesting different types of risk associated with the venture, including management risk, investment risk, competitive risk, leadership risk, bailout risk, and implementation risk. (MacMillan, Zemann & Subbanarasimha 1987; Feeser & Willard 1990; McDougall et al. 1994) MacMillan et al. (1987) asked the conceptions of 57 venture capitalists of their success criteria for new ventures and found that there are above all two major criteria predicting the venture success, the extent to which the venture is initially insulated by the market competition, and the degree to which the market acceptance of the product is demonstrated. Even if the network as such has not been used directly as a sign of exceptional performance expectations, the use of management teams has been associated with 'success stories'. For example, Bruno & Tyebjee (1985) reported that of the firms that had received venture capital financing, 66 per cent had been founded by more than one person.

Social contracting

In this process of showing the credibility of the venture, the quality and the breadth of the network has the ability to increase the overall viability or legitimacy of the venture. Mønsted (1998) focused on the way small high-tech firms seek for legitimacy and credibility in the market by networking. She stressed that networking is not only a strategy but also an outcome of the management process, seeking to generate resources and creating legitimacy for the firm. High-tech environment is characterised by innovation and emerging opportunities, and therefore a high degree of general uncertainty is a constant condition in industry and in small firms. Mønsted points to the nature of strategic alliances and networks as social contracts, suggesting commitment to the business and partners and thereby controlling the level of uncertainty. Legitimacy could then be acquired through people, networks and trust. The social contracts 'earned' by the new venture work as assuring other stakeholders of the credibility of the new firm.

The networking theory still needs further elaboration on how it is possible that the network participants are willing to commit their resources to an emergent, uncertain project. MacNeil (1980) suggests that the mechanism in which networking works as a source for resources is social contracting. In social contracting, relationships are seen as promissory connections, consisting of implicit contracts. MacNeil defined contract as 'the relations among parties to the process of projecting exchange into the future' (1980: 4). This definition is based on important root assumptions of the specialisation of labour, the conscious awareness of future and on the availability of choice. The specialisation of labour is the general condition of social organising, which leads to the necessity of social contracting, which means that even those specialising in other than e.g. food production, know that their products of labour can be exchanged into food. On the other hand, conscious awareness of future is needed to make sure that the one giving something has something to expect, and that the one getting something is aware of being committed to paying back in the future. In this respect, the social contract theory makes a strong assumption of personal (free) choice. MacNeil argues that social contract includes an important idea of a promise, i.e. 'an affirmation of the power of the human will to affect the future', and which is done to someone, limiting the future choices otherwise available to the one who makes the promise (1980: 6). Therefore, the preconditions of promise in exchange are 1) the will of the one who makes the promise, 2) the will of the one who receives the promise, 3) present action to limit future choice [i.e. the contents of the promise], 4) communication, and 5) measured reciprocity.

MacNeil's approach seems like as if it included all human behaviour, but it does not. Customs, habits, status, hierarchical structures, dynamics of any status quo (e.g. markets) and other institutions or internalised structures do not include all the elements of a promise. Nevertheless, they do work as future exchange projectors. Therefore, MacNeil points out that while non-promising exchange projectors do not need to be accompanied by promises, promissory contracts are always accompanied by non-promissory projectors (1980: 8–10). This means that promissory contracts, such as employee exchange agreements, become effective only in cases where also non-promissory circumstances are present, such as customary good relationships between companies. And vice versa, a contract does not lead to commitment in case there are no structural conditions supporting the behaviour.

Summary

To sum up, there are three routes for the resource attainment of a new venture: internal development, networking and acquisition. In terms of acquisition, facilities, machines, at least some of the financing and the work force need to be acquired to the venture. As resources, these are mainly tangible, which makes it possible to transfer them and, therefore, to acquire them by employing, renting, buying and loaning.

Networking, on the other hand, is useful as an intangible resource itself and as an intermediary delivering both tangible and intangible resources to the venture. While the use of network in collecting resources may offer the new venture resources that are difficult or impossible to reach, the sole usage of networking in the start-up process may strengthen the venture's viability. As routes of resource collection, all the resources that could be acquired by acquisition could also be collected from the network, while most network-specific resources, such as cooperation agreements or affective resources, cannot be acquired through normal market-based transactions.

Concerning financing, the entrepreneur has two main choices, external and internal financing. As internal financing, the entrepreneur brings in savings and other capital. The generation of internal funds in the start-ups is possible through the speeding of early products into market (Schoonhoven et al. 1990). Finally, the entrepreneur may be able to apply the earlier experiences gained within the industry, start-ups and managerial positions as important know-how in the venture formation process.

2.3.3. Entry strategies

In the new venture formation literature, the role of the context is central: the qualities of the industry and networks should be known in order to gain a fit between the new venture characteristics and the industry the entrepreneur has entered. In addition, the macro-factors of the environment should be of significance. Storey (1985) studied the problems facing new firms. He found that the problems new firms met were less serious than, and different from, those of older firms. Shortages of demand, supply and skills, as well as high wage costs formed the most important problems new small firms encountered. Storey concluded that because these problems were due to aggregate circumstances in economy, the results do not support the further development of new firm assistance programmes. The study of Storey gives us two important lessons; first of all, the macro-effects may deserve more attention than it is emphasised today, and secondly, the belief in a great need for nurturing strategies for new firms may be totally wrong; instead the focus should be directed towards the prevailing regulations in overall economy, according to which the small business lives or dies. However, macro-economic factors like economic fluctuations, interest rates, unemployment, etc. have mostly been left aside in studies of new venture formation because they have been seen as affecting all the firms equally, while industry- specific effects have played a strong role in constructing models of venture performance.

Entry strategy and barriers to entry

Industry effects have been seen as one of the most important set of factors affecting the performance of firms, and, in particular, that of new firms. The Structure-Conduct-Performance strategy paradigm stressing the importance of the industry structure framework may be the most influential theory of the effects of industry on firm performance. In this S-C-P framework, the main idea is that the structural characteristics of the industry determine the methods of conduct of firms, and the firms that succeed in finding a fit between industry structure and firm strategy are the most likely to succeed. The theory suggests that the main element in the defining of firm strategy is positioning, i.e. aligning the firm's strategy in such a way that the firm would be in an advantageous position to compete in the industry. This adaptation in industry circumstances, presented by Porter (1980), suggests that the most powerful firms pursue the most prominent positions, and the niche strategies are the most viable alternatives for small firms. The barriers of entry control the possibilities of entering profitable markets, and the efficiency

of scale, high-end differentiation strategies, as well as need for extensive planning weaken the chances of growth and survival of new and small firms. However, Porter's (1980) theory remains rather static in its approach to competition, and the processual sources of competitive advantage as well as benefits from co-operation strategies may result in opportunities of aggressive competition for new firms.

Theories of market entry deal with the problems of gaining a position in an industry where barriers of entry exist and the main task is to identify the optimal entry strategy for a new venture. For instance, McDougall & Robinson (1988) found strong support for the hypothesis that industry and strategy should 'fit', and that this fit would contribute to eventual success. A main issue in this literature is that it is not likely that the different strategies of market entry (or of new ventures) should be similar in all settings, and independent of the contingent and contextual factors. Therefore, in this stream of literature, discussion about the content of strategy is dominating. Hills & Narayana (1989), for example, studied 63 highly successful firms by identifying the elements the successful firms paid most of their attention to. They found the firms emphasising high-quality products/services, good customer reputation, response to customer desires, hard work and devotion to business, high employee devotion and good management/ employee relations were most likely to perform well. The results are by no means surprising, as this success profile corresponds with the differentiation strategy suggested by Porter (1980). Some studies have been exploring the consistency of the strategy content. For example, Feeser & Willard (1990) studied the role of stability of the firm's product/market focus. They found a significant difference between high and low-growth firms, indicating that high-growth firms have been able to keep their product/market focus more stable than low-growth firms. However, they note that there is probably no direct relationship between the stability of product/market focus and performance, but rather between the 'correctness' of the focus and performance[4].

Paying more attention to processual factors, Romanelli (1989) discussed the strategy of slow starters vis-à-vis aggressive starters. She hypothesised that aggressive starters seek to acquire and control as many resources as possible and as quickly as possible, which poses a substantial risk to the firm in regard to the expenditure of resources. On the other hand,

---

[4] Feeser and Willard tested their hypotheses with survey data and secondary data of 42 independent, publicly traded, at least 5 years old firms with sales revenues between $100,000 and $25 million. Thus their study cannot be seen as a pure start-up study, since the firms were seemingly old and even gone through their Initial Public Offering.

slow starters seek to gain a word-of-mouth-legitimacy in the market place, and therefore pursue efficiency in the utilisation of resources, risking the possibility of entering the market too slowly, or even, too late. Romanelli found that in general, specialist strategies are likely to produce higher probabilities of survival, but in case of industry sales increase, generalist strategies are more effective in promoting early organisational survival than specialist strategies. She concluded that in any case, young firms are better off when the industry sales are increasing (Romanelli 1989).

Entry timing

The industry an enterprise has entered has also been characterised according to its stage of development. In this line of research, the main discussion has dwelled around the theme of first mover advantages in explaining early performance (e.g. Lieberman & Montgomery 1988; Covin & Slevin 1988; Duchesneau & Gartner 1988; Schoenecker & Cooper 1998). For example, Williams, Tsai & Day (1991) categorised entry as 1) the first one to enter the market, 2) one of the first pioneers, 3) an early follower and 4) a late entrant. Also Low & Abrahamson (1997) distinguished between emerging, growing and mature industries and studied the fit between industry evolution and organisational configurations. They found that there are three logical configurations: 'movements, bandwagons and clones' fitting together with emerging, growing and mature industries, respectively. Therefore, ventures entering into industries that are only emerging need to resemble ideological movements, characterised by strong leadership, shared visions and organic task division. On the other hand, companies entering industries in high growth need to resemble bandwagons which are capable of coping in unstable business environment, with systems already designed to carry out productive operations within the industry. Finally, a careful analysis of the successful companies already present in the industry will provide a good model for cloning the recipe of success for ventures entering mature industries.

The discussion has dwelled on the 'right' timing of entry. In this discussion, two different lines of argumentation have emerged: according to one of them, being the first in the market allows the firm to price skimming and, consequently, to be able to improve its profit margin, while the other view holds that compared to the group of 'one of the first', the pioneer entry assumes high risk associated with the development of the market and pioneers need to invest heavily in R&D. These two 'entry strategies' have been labelled as aggressive entry and incremental or 'soft' entry, respectively (cf. Tesfaye 1997; McDougall & Robinson 1990).

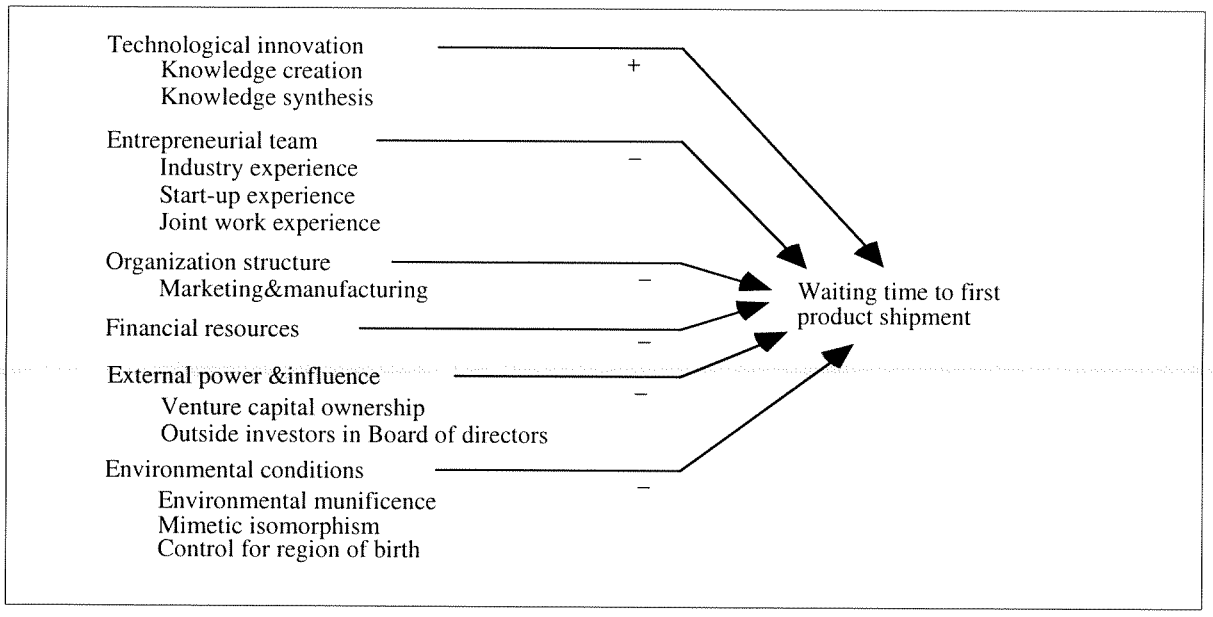


Figure 9. Effects of organisational and environmental conditions on waiting time to first product shipment (Schoonhoven et al. 1990).

In the models, the development of the new venture is described as a long process, often lasting for several months, if not years. During this time, the venture does not exist in business, and may end up not showing there at all, at least in the form originally intended. Therefore, for the public introduction of the new venture, the first contacts of the enterprise with the output market would represent the start-up. For some researchers, the entry has also defined the point of time when the new enterprise is formed (Schoonhoven et al. 1990). Contacts in the input side, the attainment of resources, is not sufficient for the venture to be characterised as starting up, since the mere collecting of resources does not necessarily mean preparations for a start-up. Concentrating on recently started companies, Schoonhoven, Eisenhardt & Lyman (1990) studied the role of the wait time before the first product introduction in new firms. They noted that the importance of early cash flow, external visibility and legitimacy, as well as early market share might have been overlooked in previous studies. Furthermore, Schoonhoven et al. (1990) found support to their hypothesis that the greater the monthly expenditures during the development period, the shorter the wait time before the first product shipment. Their study pointed out that supporting the process of organisational emergence until the introduction of the first product can be characterised as an entrepreneurial action, and it

may play a central role in the post-entry performance[5] of the enterprise. Figure 8 shows the relationships Schoonhoven et al. made about the timing for the output market connections.

Activities in the entry process

Even if Schoonhoven et al.'s (1990) study on the relationship between various organisational factors and the wait time before the first product seems to highlight the activities necessary in the venture formation process, a more thorough look is needed. Carter, Gartner & Reynolds (1996) focused on the nature, number and the timing of start-up activities by studying the activities of nascent entrepreneurs. Their results showed that the average total number of precursor activities by those who really started their businesses is significantly higher than the number initiated by those who gave up or who are still trying to start their business. Interestingly, they found no industry effect among the three groups of nascent entrepreneurs. The results by Carter et al. show further that those not successful in the starting operations were less aggressive in their activities than those who had their businesses started. Therefore, aggressive entries reflecting a more entrepreneurial posture and proactive behaviour seem to be associated with favourable and measurable organisational outcomes. However, while Carter et al. did not find an industry effect in their study, Aldrich & Fiol (1994) suggest that industry evolution should be associated with entry strategy. Considering the effects of accumulated experience, the resource conditions and the uncertainties of an emergent industry, the timing of entry seems important, even if research so far is inconclusive if early or late entry relative to the industry life cycle is beneficial to the entrant's performance. Only a fraction of entrepreneurship or organisation research has concentrated on this point, apart a few attempts to research the process of speeding products to market (Schoonhoven et al. 1990), or the numerous studies focusing especially on the relationship between timing and performance (e.g. Bhave 1994; Williams et al. 1991; Low & Abrahamson 1997).

Aldrich & Fiol (1994) questioned the entry strategy of radically innovative firms in emerging industries and argued that radical firms need to downplay their newness in order to gain credibility in the operational context. The suggestion by Aldrich & Fiol is supported by the studies on social contracting and resource co-optation. For example,

---

[5] Their focus was, however, on newly founded organisations, not on pre-organisational events (Schoonhoven et al. 1990: 191) and they defined entry as the introduction of the product in the market, which distinguishes their study from the perspectives of Gartner et al. (1992).

Starr & MacMillan proposed that resource acquisition behaviour falls along a spectrum ranging from 'strictly administrative' to 'strictly social transaction oriented' (1990: 82). This variation concerns especially the activation of external credibility in legitimising an emerging venture. The routes of creating credibility may be multiple, including the co-optation of legitimacy or the co-opting of under-utilised goods, and realised e.g. as borrowing reputation, sales facilities or a delivery van from friends, associates or partners. Through this strategy, the new venture may appear more credible than if it used other routes of action. Gartner, Bird & Starr (1992) suggested this to be a special strategy of entry, characterised by a particular mode of behaviour, 'acting as if'. By this, Gartner et al. mean the entrepreneur's way of building the new venture setting as if the venture had already been there for a long time, and by this strategy to earn credibility, legitimacy and viability for his venture.

The findings by Carter et al. (1996) support the 'acting as if' hypothesis. They found that those who started a business undertook activities that made their businesses 'tangible' to others. On the other hand, those still trying to start-up their businesses focused more on the internal processes of their venture. This finding suggests that the explicitness of the start-up is an important factor in supporting the progress of the start-up process and in creating commitment and legitimacy vis-à-vis the nascent entrepreneur in the eyes of the public. Carter et al. interpreted this supporting the 'enactment theory' (cf. Weick 1979; see section 2.1.2), i.e. the entrepreneur's own action should create a beneficial environment for venture creation, and this would best take place by starting from the tangible components of the venture start-up process.

Gartner, Mitchell & Vesper (1989) studied the existence of different compositions of entrepreneurial types and entry strategies. Using factor analysis and clustering techniques they separated eight distinct types of entrepreneurs, each representing a special composition of entrepreneurial personality, entry strategy, the structure of the industry the entrepreneur has entered and the process of the start-up. They labelled the clusters as 1) Escaping to something new, 2) Putting the deal together, 3) Roll over skills / contacts, 4) Purchasing a firm, 5) Leveraging expertise, 6) Aggressive service, 7) Pursuing the unique idea, and 8) Methodical organising. Here, the first type equals to the start-up suggested by the push-theory where the nascent entrepreneur's current circumstances drive him to start up his own business. On the other hand, the second type resembles closely the 'acting as if' strategy suggested by Gartner, Bird & Starr (1992). Contrary to the previous one, the last type of start-up represents an analytical approach to entrepreneurship, entering the

business after a careful information gathering and analysis, and by planning the entry as well as the early phases of the operations. The taxonomy was found to include similarities with some earlier results, as with the craftsman-opportunistic-typology by Smith (1967). In the descriptions of the clusters, Gartner et al. (1989) combined quantitative methodology with qualitative data gathered through seven in-person interviews and 133 telephone interviews. However, only a fraction of this data was visible in the study. While they recognise problems in their data and methodology, Gartner et al. point out that research is needed to find out more about the mechanisms that influence variation in the new business ventures.

2.3.4. Competitive strategy choices

Most of the new ventures literature concentrates on identifying viable competitive strategies. The main difference between entry strategy and competitive strategy is that entry strategy concerns mainly the ways of collecting and connecting to the resources needed for the emerging venture, while competitive strategy deals with the ways how a young venture survives in competition with older and more experienced companies. The study of the competitive strategies of young firms focuses on the post-entry years of new ventures. Most USA-based studies define new venture in this context as being 8 years old or less (e.g. Biggadike 1979; McDougall & Robinson 1990; McGee, Dowling & Megginson 1995), though other definitions can be found, too (four years: Williams, Tsai & Day 1991; six years: Brush 1992). These studies are mainly interested in *competition* rather than start-up, and, for this reason, some studies restrict the definition even more. For example, Carter, Stearns, Reynolds & Miller (1994) focused on firms between *one* and six years of age.

While in the literature on entry strategies the liabilities of newness or adolescence are left aside from discussions, the viability of the competitive strategy is usually evaluated against the liabilities of newness and adolescence (see Section 2.2). This means that competitive strategy is regarded as influential if it can be shown to minimise the effects arising from the liabilities of newness or adolescence. In the start-up process, these two phenomena, entry strategy and competitive strategy, may, and probably do take place at the same time, but they still are distinct activities in the start-up process.

Competitive strategy and industry structure

The textbook version of the optional routes for realising entrepreneurial or even strategic intentions starts from Porter's generic strategies and ends with Ansoff's matrix of product/market strategies (Porter 1980; Ansoff 1965; Johnson & Scholes 1988). Ansoff (1965) presented the product/market matrix, in which he shows the basic alternatives for a firm to develop its operations and strategic position. The do-nothing, market development, product development and diversification work as the main dimensions of strategic decisions in the firm. Vesalainen (1995: 141), among others, named these alternatives as entrepreneurial strategy choices. These choices do, indeed, have a great deal to do with entrepreneurship, because they include the idea of starting new operations in the firm's production or market domains. The practical action plan of the operations in the product domain would often include such things as product development or buying patents for new products. On the other hand, the development in the market domain would include action like market penetration or the identification of new segments in the market.

Porter's generic strategies, differentiation, cost leadership and focus, suggest that there are three basic alternatives on which a firm can build its competitive advantage (Porter 1980). Differentiation is based on the increased value added of products and sacrificing volume for high margins, while cost leadership leans on low production costs per unit. Cost leadership secures the firm a safe position in competition, independent of the price level in the market, due to the lowest production costs among the competitors. Focus strategy, then, is a scaled-down version of either of these two opposites, with the assumption that the competitive efforts have been directed towards carefully chosen segments, areas (Porter 1980). For a new venture, the focus strategy in targeting the market is almost self-evident, and the choice between the 'total markets' and 'a segment' cannot really be counted as a key question for new small ventures. Considering these alternatives straightforward, the cost leadership strategy would be the least appropriate for a young and small firm; instead, the differentiation and focus strategies would suit an SME better, considering its the scarce resources and experience (Hills & Narayana 1989).

A great deal of empirical work has been conducted in order to identify distinct characteristics that would give us further tools to distinguish between prominent and less prominent new venture strategies. One of the first studies to touch upon the question considering especially SMEs was conducted by Sandberg & Hofer (1986), who focused on

the effects of strategy and industry structure on new venture performance. In their attempt to start a new 'paradigm' of new venture strategy research, Sandberg & Hofer were largely leaning on the work by Vesper (1980) and Porter (1980) on business strategies and on Porter (1980) on industry structural variables. The model they proposed included three wide determinants of new venture performance: the entrepreneur, industry structure and strategy (as an equation NVP=f (E, IS, S)). (Sandberg & Hofer 1986)

Sandberg & Hofer interviewed venture capitalists in order to corroborate their exploratory model on the determinants of new venture performance, and found that fragmented, growing industries, as well as positioning in a niche or segment were preferred by the interviewees. In regard to the relationship between business strategy and performance, no statistically significant proof was found. On the other hand, they gained support to their hypotheses on the relationship between industry structure and performance, suggesting that entry in heterogeneous, differentiated, or growing industries was likely to occur more successfully than in homogeneous, undifferentiated or stagnated industries. These findings were in no way surprising. Finally, Sandberg & Hofer tested the relationship between an entrepreneur's characteristics and venture performance and found no support to the hypothesis on the significance of entrepreneurial and/or start-up experience on venture success. Although Sandberg & Hofer did some hypothesis testing, their sample of ventures was so small (n=17) that their study should be regarded as highly exploratory, instead of being explanatory. As implications, however, they noted that the classification systems for new venture strategies were unable to catch the characteristics of the mechanics of entry[6].

Entrepreneurial strategy making

The literature on entrepreneurial strategy making (Mintzberg 1973; Hart & Banbury 1994; Covin & Slevin 1988; Dess, Lumpkin & Covin 1997) has shown the importance of the entrepreneur's way of conduct to the venture. Mintzberg (1973) presented three modes of strategy making, the planning mode, the adaptive mode and the entrepreneurial mode. The entrepreneurial mode of strategy making is characterised as an active search for new opportunities. The entrepreneurial mode of business is described as making bold decisions, taking risks and exploiting opportunities. In Mintzberg's description, entrepreneurial managers are opportunistic and seek for success, and, subsequently, the

[6] As already explained, a number of studies on competitive strategies of new businesses consider the period of eight years to cover the 'entry' phase.

dominant goal of the organisation is growth (Mintzberg 1973; Mintzberg & Waters 1982). According to Mintzberg, strategy making takes place at a very personal level, the entrepreneurial firm is guided by a vision that is often a result of a single person. Furthermore, organisational power is centralised in the hands of the entrepreneur, and inclined to follow his instincts and visions, the entrepreneur is unwilling to delegate. Consequently, the behaviour of an entrepreneurial firm is described as unstable, or unpredictable. The pattern of strategy making is characterised by strategic leaps forward, initiated by the entrepreneur himself. As a strategy, Mintzberg classifies the entrepreneurial mode as deliberate, though he does not exclude the possibility of emergence (Mintzberg 1973).

Mintzberg has done surprisingly little to validate his theories by empirical studies. As an exception, the grounded study by Mintzberg & Waters (1982) focused on the growth patterns of an entrepreneurial firm. In this context, they defined strategy as "a pattern in a stream of decisions". They noticed that the concept of strategy in this context is vague and, subsequently, used both quantitative and symbolic measures for their interpretation (1982: 468). Miller (1983) continued from the typology of Mintzberg and studied the strategy making types empirically. He differentiated between three types of firms: simple, planning and organic, where the simple firm closely resembles the entrepreneurial mode by Mintzberg (1973). Miller based his characterisation of the entrepreneurial firm largely on the 'simple' structure proposed by Mintzberg (1979). In Miller's study, entrepreneurial firms are described as operating with high locus of control and carrying a positive correlation with centralisation, as well as a positive correlation between scanning and entrepreneurship.

In analysing the way of strategic behaviour, Miller (1983) suggests that in entrepreneurial firms the acts of entrepreneurship and innovation tend to be simple. Miller noticed that in case of entrepreneurial firms, conditions or changes in environment do not seem to matter. Nevertheless, he found that entrepreneurship is integrally related to the variables of environment, structure, strategy and leader personality. Miller concludes that entrepreneurship can best be stimulated by explicit entrepreneurial product-market strategies (1983: 789). Finally, he tested this assumption of entrepreneurial strategies being simple and unsophisticated in an empirical study of competitive repertoires (with Chen 1996). They found that poor prior experiences and performance are linked with less simple repertoires. Therefore, also a 'bad' track record may function as a resource for an entrepreneurial firm. The researchers suggest that a solution to this paradox is the

enhanced organisational learning (Miller & Chen 1996).

The typologies on entrepreneurs' and new ventures' mode of conduct build on the starter's entrepreneurial resources, such as proactiveness, entrepreneurship and visions. McDougall & Robinson (1990), for example, confirmed the sharp division between niche strategies and aggressive strategies in the early phases of competition. They found support to Biggadike's (1979) suggestion that in many cases of mediocre or below average success of a new venture, the entrepreneurs have only been conducting self-fulfilling prophecies. The choice of contenting oneself with a small market share and incremental development in the venture leads to a new venture strategy following these goals, while new ventures with aggressive goals of gaining large market shares in the early phases of development also show abilities for more aggressive growth. In any case, the entrepreneur's skills and way of conduct play a central role in determining the venture's early performance.

In his doctorate dissertation on entrepreneurial strategies among north-west Tanzanian businessmen, Per Trulsson (1997) identified the resource acquisition methods of entrepreneurs using a classification of resources into infrastructure, finance, material, technology, workforce and markets. He noted that the evident lack of basic infrastructure or some other resources does not necessarily hinder the carrying out of entrepreneurial ventures. Instead, it leads entrepreneurs to ensure their business by integrating various activities, supplementing from different sources or letting the buyers carry the costs related to the undeveloped infrastructure. In a similar way, concerning financial resources, businessmen use integration and supplements beside the third method: reliance on other businessmen as sources of finance. In material procurement, the integration of sourcing into the business (à la Williamson) as well as direct operations and linkage creation are followed.

Regarding technology, Trulsson identified three approaches: product orientation, opportunity seizure and imitation. On the other hand, in acquiring trusted labour, the strategies of internal training, personal contacts, formal qualifications and employing job seekers were followed. Finally, in finding the markets, the entrepreneurs searched for niches, expanded gradually, exported or ignored the market conditions (Trulsson 1997). The last strategy is particularly interesting, since it suggests that some entrepreneurs are totally nonchalant about the circumstances of the target market, simply assuming there is unsatisfied demand for them to fill. Therefore, they save in marketing costs but also assume high risks because of their ignorance. Trulsson found that the entrepreneurial

strategies followed in Tanzania resemble the 'muddling through' strategies discussed by Lindblom (1959). Trulsson noted that strategies could be collapsed into three types of 'muddling through': muddling through integrating resources, avoiding dependency and establishing relations of trust. Trulsson's focus on the resource acquisition seems plausible but due to the unconventional context of the study and the sample consisting of long-established entrepreneurs, the strategies identified come closer to strategies of adaptation and survival, rather than strategies for the first business entry.

2.3.5. Summary of the venture formation research

In the process of venture formation, the collection and activation of resources is of key importance. This topic has, however, been studied only sporadically, and most of the research on the collection of resources stems from the studies on the resource-based view of the firm and networking theory. The acquisition of resources seems to play only a marginal part in the resource allocation process; instead, the networking and internal generation of resources may be more important for the emerging firm. Further, the topic of organising the emerging venture lacks research, with the exception of research on the 'acting as if' hypothesis. In contrast to the resource allocation and organising research, the topic of new venture competitive strategies has been well studied, and at least the importance of Porter's generic strategies, as well as the strategic posture of the entering firm has been emphasised.

An interesting point can be made on the basis on several studies reviewed in this section. The findings of Bruno & Tyebjee (1985), Foss (1993), Feeser & Willard (1990), Mønsted (1998), Romanelli (1989), Schoonhoven et al. (1990) and Aldrich & Fiol (1994) suggest that legitimacy may be an important factor in the venture formation process and that the behaviour of the entrepreneur as well as the character of the new venture may have a strong influence on the legitimising process.

2.4. Social acceptability of the emerging venture

Even though the previous chapters have discussed the entry strategies and competitive strategies as being subject of the entrepreneur's free choice, new venture choices and practices by entrepreneurs have been hypothesised to face pressures from the institutional

environment (Schoonhoven et al. 1990). These pressures stem from the liability of newness, i.e. it is easy for an organisation to prove its capability to satisfy certain needs if it has a track record of having done so previously (Thompson 1974). Lacking this track record, entrepreneurs have been suggested to follow certain strategies to increase their credibility, e.g. by imitating established companies in the industry. This phenomenon ('institutional isomorphism') has been seen as restricting entrepreneurs' choices for viable strategies.

Isomorphism is thought to make entrepreneurs direct their ventures to optimise the legitimacy of the organisation. Oliver (1997), for example, found that the pressure towards isomorphism has an effect on the exploitation of market imperfections. Oliver suggests this has a particular impact on new venture strategies, limiting the variety of strategic recipes in the industry. This finding is particularly interesting since researchers such as Vesper or Porter have presented a large variety of optional strategies for entry. Vesper (1980), for example, identified several "market entry strategies" or "entry wedges" for new ventures to start business and eventually grow further (see Section 2.2.). Even if a number of different entry strategies were identified, the use of all those strategies within a certain industrial context may not be plausible because the suppliers, financiers, buyers, etc. would not consider the venture feasible.

In spite of the importance of the subject, the emphasis on studying the dispersion of the use of these strategies has been reasonably lame. Lant & Mezias (1990) simulated on different entrepreneurial strategies and found that the imitation of large organisations seems to have corresponding results in organisational strategies and that this has significance for performance.

Furthermore, Preisendörfer & Voss (1990) discussed the organisational mortality rates of small firms and the effects of entrepreneurial age and human capital. They brought the theory of human capital into discussion and suggested that contrary to the assumption of the homosocial characteristics of the managers of large organisations, i.e. managers and leaders in large organisations tend to closely resemble each other in terms of personal characteristics such as age, social background, education, skills and career, the situation in small organisations differs substantially. This natural difference would result from the entrepreneurial process itself: the founding entrepreneurs have started their firms for a variety of reasons and basic heterogeneity in the group is therefore obvious. Therefore, there are firms that have been started to be grown into small dynasties, firms that are

started to be sold when competitors wish to occupy more market shares, firms with the sole task of providing a living for the entrepreneur, etc. Due to the simple structure of the small firms, the entrepreneur is likely to have a substantial influence on the organisational activities and routines, which, then, affect the efficiency and effectiveness of the organisation. Consequently, entrepreneurial human capital plays a central role in the Preisendörfer & Voss's (1990) argumentation. However, they point out that the methodology they use to compare between different levels of human capital presents some problems: first, they use the age of the founder as one indicator of accumulated human capital, though assuming that at older age, close to retirement, individual skills are secularised and, therefore, human capital is at its highest level in the middle-aged group. This, of course, does not necessarily depend on human capital, but it could also be a sign of the overall vitality or changing risk preferences of people, as they grow older. Secondly, they assume that within manufacturing, founders must have higher levels of industry-specific knowledge compared to the service-sector industries, and compare the mortality rates between six industries to illustrate the role of human capital.

Through isomorphic behaviour, entrepreneurs seek to earn legitimacy for their ventures. Oliver (1997) compared between the resource-based approach and the institutional theory their explanations for gaining a sustainable advantage. She pointed out that whilst the resource-based approach assumes economic rationality, resource selection based on their strategic value and exploitation of market imperfections, the institutional determinants function as counterforces hindering the calculative managerial work. According to Oliver, because of the institutional factors, 1) firms can be captives of their own history and make inappropriate resource decisions (see also Leonard-Barton 1992), 2) sunk costs can be cognitive rather than economic and lead to sub-optimal resource choices, 3) cultural support for resource investments may be an important determinant of their success, 4) firms may be unwilling rather than unable to imitate resources and capabilities, especially when these resources lack legitimacy or social approval, and 5) social influences exerted on firms reduce the potential for firm heterogeneity (Oliver 1997: 700). Legitimacy may find its most important basis from the resource base of the emerging venture, i.e. the money invested brings in appreciation and credibility: a credible investment makes other parties believe in the sensibility of the venture.

Search for organisational legitimacy can also be analysed from the point of view of the acting-as-if strategy. Aldrich & Fiol (1994) studied the constraints of cognitive and socio-political legitimacy facing entrepreneurs in emerging industries. By cognitive legitimacy,

they meant the extent to which a new form [or organisation] is taken for granted, and by socio-political legitimacy they meant the extent to which a new firm conforms to recognised principles or accepted rules and standards (1994: 645–646). Aldrich & Fiol argue that in creating organisational legitimacy, "founders who can behave 'as if' the activity were a reality – producing and directing great theatre, as it were – may convince others of the tangible reality of the new activity" (1994: 651). They suggest, "if entrepreneurs frame their innovation broadly enough to encompass existing knowledge, they will appear more credible" (1994: 651). Consequently, regarding socio-political legitimacy, entrepreneurs should be able to show the new activities to be consistent with the previous knowledge, and downplay the radical characteristics. According to Aldrich & Fiol, "an established reputation facilitates the co-optation of institutional actors, ultimately leading to legitimacy" (1994: 663). Another approach is to construct the venture with the interested parties, which means that through co-optation the context is taken into the project and so it becomes interested in the success and legitimacy of the new venture.

Finally, the latest point at which the entry phase must have ended is the gaining of the status of an established firm. Kao (1989) suggested that the concept of 'established company' refers to the large size and the long duration of the company. The emergent elements of the business have an impact on the level of integration of the company in the surrounding society, and therefore a business being 'established' would mean 'having a history' in the social consciousness. This characteristic may, however, be difficult to identify, because the time needed for gaining the position of an established firm may vary between different industries, and depending on the maturity of the industry (Aldrich & Fiol 1994; Low & Abrahamson 1997).

2.5. Resource collection of a new venture and emergence of viability

As the literature review showed, research has centred more on the topics of entrepreneurial psychology and young ventures' competitive strategies, instead of pinpointing the role of the nascent entrepreneur's capability in carrying out the start-up process and in shaping the emerging venture towards the form of an established firm. To summarise the discussion, in entrepreneurship research, personal desire and capacity for an entrepreneurial career, as well as the cognitive abilities to construct the venture are emphasised. Concerning start-up operations, entrepreneurship literature suggests that success in the start-up depends

largely on the level of entrepreneurship, commitment, innovativeness and of the cognitive abilities of the key person, and that in other respects the implementation of the venture idea would not be problematic. On the other hand, considering the entry strategies, the resource-based approach to the firm and networking research have contributed considerably to the implementation issue, but covering summaries on the process are sparse. Contrary to the research on entry strategies, the literature on competitive strategies of start-ups is flourishing, testing especially Porter's theory of generic competitive strategies, and the characteristics and differences between the aggressive and incremental approaches to competition. Finally, the research stream of venture legitimacy has pointed out the social dimension in venture strategies. Early results from these studies suggest that the isomorphic and other social pressures may be important factors in the new venture formation, too.

The research interests of entrepreneurship researchers have been changing to emphasise the importance of start-up operations. For example, Van de Ven (1993) suggested that further research would be needed to focus on how and when different functional competencies are created to develop and to market the first proprietary product. This study is interested in particular in the entrepreneur's functional capability of new venture formation, i.e. a person's ability to activate and collect those resources into an operationally efficient and socially legitimate combination. In this section, the theoretical insights to business formation are summarised and, on the basis of the summaries, a number of propositions are developed to guide the empirical analysis.

Entrepreneurial capability as the triggering factor in entrepreneurial decisions

In the process of venture formation, the commitment of participants to modify their behaviour for the benefit of the new organisation is increased. This concerns also the entrepreneur. Therefore, contrary to the traditional approach to entrepreneurship, the entrepreneurial decision can be considered to be a long lasting, step-by-step evaluation of the feasibility, desirability and the opportunity of the new venture which define together how deeply the entrepreneur is willing to commit himself. In this evaluation, the personal drivers, such as the desirability of the entrepreneurial career, the desirability of the emerging venture with its forecasted characteristics and the desirability of dependence with the stakeholders associated with the business are important factors. On the other hand, the cognitive abilities of the entrepreneur to identify opportunities, to categorise skills as well as his capabilities to evaluate the feasibility of the venture are important.

However, these psychological and cognitive factors only precede the start-up procedures, i.e. the main factor at the action level of start-up process is the entrepreneur's capability to produce activities necessary for the venture formation process.

It is of key importance to focus on the entrepreneur's action and capability to perform in the venture formation process, because without individual action there would be no start-up process; instead, the financial and technological resources would not be identified and activated as available, the networks would not be enacted and activated to participate in the social and business processes, and the market gaps would not be enacted, identified and pursued. The new venture formation process consists of activity seeking to secure the successful establishment of a new business venture. Here, this pattern of activities is called entry strategy. A basic claim here is that the way in which the entrepreneur carries out this process largely determines the configuration of the emerging business, affecting its possibilities of survival[7].

The survival of the new venture is dependent on the emerging viability of the venture. This viability may originate from various factors, such as the credibility of the entry strategy, the amount and quality of resources, the demonstrated effectiveness of the new organisation and its demonstrated social acceptability, as well as the perceived expertise of the entrepreneur or the demonstrated market position. Therefore, new venture start-up can be seen as a process of maximising the viability of the project. In this process, the entrepreneur faces three tasks: (1) the task of activating and collecting relevant resources for the new venture; (2) the task of combining the resources into an operational organisation with a satisfying level of technology to ensure the efficiency of the business, and (3) the task of creating, managing and increasing the face value of the emerging venture in the eyes of the financiers, resource-providers, and customers, i.e. of convincing the entrepreneurial environment of the effectiveness of the new venture in meeting specific needs.

Activating and collecting relevant resources for the new venture

The process of enterprise formation is necessarily characterised by the interaction of the entrepreneur and the entrepreneurial environment. The resource-based aspects of the

[7] This pattern resembles the Structure-Conduct-Performance paradigm, which is understandable. The resource-based view of the firm could be characterised as a R-C-P paradigm, i.e. the resources available for the firm determine the optimal conduct for the firm and thus affect the performance of the company.

process can be seen at three levels: personal (internal), networking (intermediate level), and the external environment level. At the personal level, the central actor of the process – the entrepreneur, facing the scarcity of finance, time and other resources – is constrained by his personal hands-on capacity to perform in the process. As resources, he can offer personal time, knowledge, savings and connections (a network), on which the venture can be built. In effect, beside the entrepreneur himself, the entrepreneurial environment is the only possible source of resources for the venture. Purely tangible resources, such as facilities, machines, employees and financing can be acquired from the external environment either directly, by acquisition, or indirectly, through networks. Networks are an intermediary context for collecting resources, where the activation of certain resources may be easier or less costly than without network connections. Beside this, networks are resources in the sense that they consist of friends, customers, allies, business contracts between different parties in co-operation, partners and of people available to be employed. Some of these intangible resources (such as expertise) are essentially susceptible to learning curve effects when generated internally, while others (such as customers, allies and contracts) are created in interaction between the entrepreneur and different interested parties, and therefore networking is the only route of acquiring these resources. For this reason, to activate these resources, different routes of resource procurement a new venture can be identified (see Figure 9).

If the entrepreneur is seen as maximising the viability of the venture, the chosen route of resource collection for the start-up is likely to reflect the entrepreneur's personal pre-emption of resources and his entrepreneurial capability in acting within specific resource contexts. On the other hand, the routes of resource collection – the entrepreneur's own initial resources, network resources and purchased resources – compensate for each other. This results in distinct patterns of resource collection, reflecting the entrepreneurial capability of the central person. Therefore, if the entrepreneur feels confident in e.g. creating networks and operating in them, he is likely to utilise as many resources originating in networks as possible.

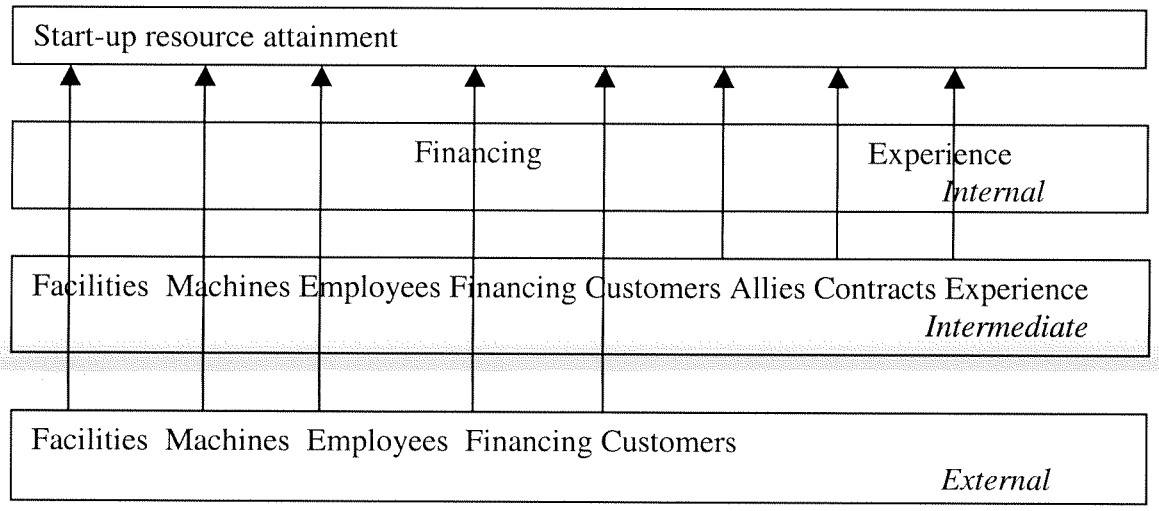


Figure 9. The routes of resource collection of the new venture.

On the other hand, the entrepreneur's background is likely to affect the resource allocation process by providing entrepreneurs with strong experience and good initial resource bases with better possibilities of start-up than those facing resource scarcity. Directly associated with this, the resource and structural conditions within the industry are likely to affect the resource allocation practices.

To sum up, the following propositions[8] are set on the resource attainment:
P1: There can be identified different types or patterns of resource attainment in a start-up.
P2: The patterns of resource collection are linked with the entrepreneur's background.
P3: The patterns of resource collection are associated with the prevailing industry conditions.

Combining the resources into an operational organisation

The process of building the organisation for the start-up is essential for the efficiency of the new firm. Should the resource be incompatible or the organisation unable to learn quickly the useful routines and the important industry recipes, the venture may fail because of the 'natural' ecological process. In the long run, the organisation's ability to

[8] According to *Webster's Encyclopedic Unabridged Dictionary (1989),* a proposition is a statement in which something is affirmed or denied, so that it can be significantly characterised as either true or false. In this study, the propositions are developed merely as an introduction to the methodological choices in the empirical analysis.

create value determines its survival. In the process of building the organisation, the entrepreneur faces a trade-off between cost-effectiveness and flexibility.

In regard to efficiency, the timely accumulation of tangible and intangible resources forms the basis for long-lasting competitive advantages, which also directs the main focus of strategy to the internal development of organisational processes. The resource-based theory stresses that since the internal environment is hard to construct and change, it has to be formed gradually and before the action taken with regard to the external environment. The organisations following this venture formation pattern seek to develop their factual core processes and products to a level where they can start looking for contracts for the ready-built organisational capacity. In this case, the early receiving of financing and the building and testing of the production technology and organisation may be imperative for the venture formation process to gain efficiency. The main idea is here to secure the production, which guides the development work and start-up. It is also very likely that in the following venture, the emphasis will be on the production processes. Beside ensuring efficiency, in the eyes of the public these entrepreneurs also take on high risks in investing in processes without having concrete information about the effectiveness of the firm, i.e. if the firm will find demand for its product and will be able to close down deals and gain turnover.

On the other hand, the creation of flexibility in the technological processes would require lean structures and technological choices, which then would allow the venture to change its market and technological focus within a short time. Starting up the firm basing on networks and resources controlled by other companies has been suggested as a route for creating a venture with flexibility. This choice for flexibility would mean sacrificing cost savings and eventual credibility as a manufacturing venture.

Therefore, facing the problem of productivity, the entrepreneur has to choose between making the organisation flexible, but sacrificing the maximum efficiency, or building a high level of efficiency in the venture and sacrificing the flexibility of the business. This trade-off is likely to produce different approaches to organising a new venture.

Moreover, the practices of creating productivity in the venture are likely to be closely related to the way the entrepreneur has acquired the resources for the venture. This argument follows Peteraf (1993), according to whom the resources are heterogeneous and uniquely applicable to business processes. Therefore, the characteristics of the available

resources set the limits for the development of internal processes. Furthermore, the practices of creating efficiency are likely to reflect the background of the entrepreneur in terms of experience and education. In sum, the following propositions will be studied in the empirical setting:

P4: There can be identified different approaches to creating efficiency in a new venture.

P5: The presence of different approaches to efficiency creation is associated with the background of the entrepreneur and the competitive circumstances within the industry he has entered.

P6: The presence of different approaches to efficiency creation is associated with the resource collection practices of entrepreneurs.

Creating face value for the venture

As Thompson (1974) suggested, the lack of track record in the industry may constitute a serious liability. Therefore, newness as such results in problems for the start-up. First, the investors, competitors, customers, etc. evaluate the operations of the new venture, and in this context, the complexity of the venture may form an important liability. On the other hand, if the venture seems too complex and incomprehensible, its viability may be seriously questioned and the formation of stakeholder commitment will not take place. Thirdly, the economic viability of the venture may be questioned in particular in those cases that require extensive investments in the early phases of the start-up, when opportunities for plough-back financing and positive cash flow are still in the unforeseen future. To sum up, the acceptability of the venture is questioned due to three main factors, the newness, the complexity and the economic viability of the venture. The entrepreneur needs to be capable of managing these problems.

In this process of creating legitimacy for the new venture, the entrepreneur may use several routes. First, the choice of entry strategy may affect extensively the legitimacy of the firm. The newness of the venture is possible to cover by the 'acting as if' strategy, where the appearance of the venture is built to give an impression of a well-established company. On the other hand, the complexity of the new venture is possible to play down by imitating competitors' strategic postures or organisational structures.

Second, the generation of early outcomes in the process is important for the start-up, because business outcomes already emerge during the on-going process, increasing or decreasing the economic credibility of the new venture. In this respect, three main

objectives (outputs) are emphasised. These outcomes are the technological efficiency of the venture, the early or forecast cash flow of the venture, and the received or accessible financing for the venture. There are, however, differences in the way different firms need these outcomes in the start-up phase.

The final, and a related factor affecting the credibility of the start-up is the perceived viability of the resource attainment process, i.e. that the stakeholders of the venture process see the formation process reflecting the characteristics associated with survival/success patterns. Receiving early stage finance is important especially for technologically sophisticated new ventures, and one of the main problems associated with the development of new technological firms is the lack of seed capital. These ventures are often based on the exploitation of some technological innovation or an opportunity to enter an emerging market with a technological focus. For these ventures, the entrepreneur's central task is to gain early solidity for the venture so that the venture can reach face validity, and the process of technological and product development can be continued steadily. In these ventures, the last objective seems to be the cash flow from the market. In some cases, the time from the starting of the start-up operations to the first sales may be years. In technological start-up, the venture formation process takes, among other things, time, effort, machines, and facilities. The timeliness and resource allocation need of the venture make the start-up financially difficult. Therefore financing is likely to play a key role in this context.

Table 2. Emphasis of the entry strategy on the venture formation process.

	Emphasis on the formation process (1= most important, 3= less important)		
Entry strategy	Efficiency	Cash flow	Credibility
Technological	1	3	2
Market	3	2	1

Thus, the gaining of legitimacy of the firm is a social process, even though in many cases it is built up by accumulating financing, or other resources. It is likely that the options available for entrepreneurs result in different patterns of methods of legitimising. For example, if the entrepreneur lacks initial resources or relevant network connections of his own, and therefore faces a scarcity of resources, he may have to do an 'expensive start-up', and ensure the control of the key domains of the emerging venture by acquisition. On the other hand, there are other types of ventures that can be started through an early cash

flow that precedes or parallels the start-up of the technological processes. In some start-ups, the gaining of early cash flow is imperative for the success of the new venture. This gives the venture stakeholders an additional confirmation of the viability of the venture, and their commitment is increased. In these ventures, gaining technological efficiency is the least important thing because attaining internal financing is enough to assure the stakeholders of the viability of the venture.

In some cases, the market for the venture is a network that needs to be activated to 'loan' those resources needed for the start-up, even if the emerging venture has no proven 'solid' validity/track record to offer to the network participants. In this process, the gaining of early cash flow increases the network partners' commitment to the venture, and the wait time for the efficiency of the venture may be long. From the point of view of the legitimacy of the emerging firm, we can identify two main strategies for enterprise formation. In the first one, the entrepreneur shapes the venture to reflect his personal strengths and through this seeks to show early outcomes arising from the process. The outcomes are used for increasing the credibility of the venture, and external resources become more easily available for the venture. In other words, the entrepreneur utilises his strengths as far as possible for the emerging venture, and has to build on external expertise and resources in case of tasks exceeding the entrepreneur's abilities. Following this reasoning, e.g. a skilful marketing person would start a strong marketing office by relying on his personal know-how. This entry strategy seeks to gain early cash flow and credibility through fast entry in the market.

The other alternative is the extreme opposite of the first one: the entrepreneur trusts in his ability to operate on his own domain of expertise quickly and skilfully, and feels confident to commit his time and effort to those areas of start-up in which his level of intrinsic know-how is lower. Therefore, e.g. a marketing person would stress the issues of production or other things unfamiliar to him, leaving the marketing issues as matters of routine. In this entry strategy, the solidity of the venture needs to be secured in order to allow the entrepreneur time for learning by doing.

Similarly to the previous elements of entrepreneurial capability, the background of the entrepreneur and the overall circumstances of the venture are likely to affect the legitimacy of the venture. On the one hand, in case of favourable industry conditions, more alternatives are available, and in difficult competitive circumstances, viable ways of legitimising the new venture may be sparse. On the other hand, the entrepreneur himself

and the eventual team are likely to have a sizeable effect on the legitimising as decision-makers, but also from the point of view of personal reputation and of track record. Finally, the ways in which the venture has been built is likely to affect the emerging viability of the new venture: as suggested earlier, the practices of resource allocation determine the emerging configuration of the venture and result in different ventures in terms of trustworthy and economically viable business.

In sum, the following propositions will be studied more closely in the empirical setting:
P7: It is possible to identify different routes of legitimising the new venture.
P8: The routes of legitimising are associated with the entrepreneur's background and the circumstances of the industry he has entered.
P9: The ways of legitimising the venture are associated with the methods of resource attainment.

Entry strategies and entrepreneurial capability

The setting described above would not build up a process without the entrepreneurial capability of the central entrepreneur who has the ability to connect between ideas, resources, partners and markets, and, on the other hand, is able to produce socially expected outcomes from the process in order to keep the activities legitimate. Therefore, three elements of entrepreneurial capability were identified. The most typical one is the entrepreneurial capability in locating resources, i.e. the entrepreneur is able to identify 'raw' resources that are possible to use in the venture, and is capable of finding the resources to commit to the emerging venture. Whether this capability is enough in order to ensure the overall viability of the venture, is likely to depend on the nature of the business itself. Within industries of rare, expensive raw materials, the sole access to a source of raw material may indicate success.

The second element of entrepreneurial capability is the capability of organising the resources into a functional and productive organisation. This capability comes close to the Schumpeterian concept of entrepreneurship as the building of resources into new combinations. As such, the entrepreneurship literature has assumed this capability to suffice to ensure the viability of the venture.

The third type is the entrepreneurial capability of reaching and convincing markets. This capability differs from the two previous elements in an elementary fashion, as it concerns

an activity associated with imagery processes rather than the 'tangible' organising of resources. Whether this capability alone is enough to build the viability of the new business, is still under dispute.

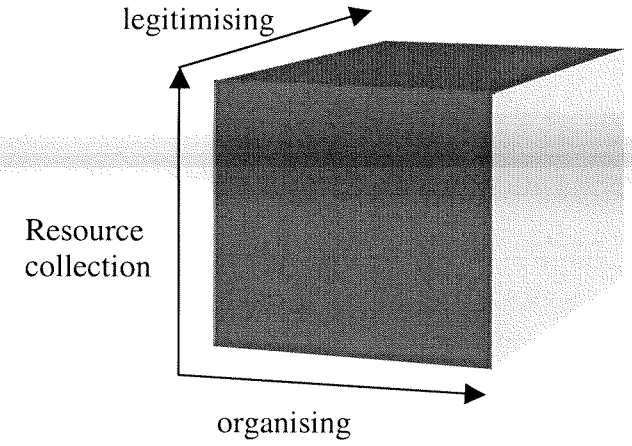


Figure 10. The three dimensions of entrepreneurial capability.

In sum, entrepreneurial capability comprises three elements, each reflecting a special kind of ability to act in regard to different tasks in the venture formation process. Therefore, the main driver in new venture formation is the entrepreneur's capability to carry out a specific start-up process, covering the resource, industry, organisation and stakeholder-related contexts.

3. METHODOLOGICAL APPROACHES AND PILOT STUDIES

The purpose of the empirical part of the study is to explore the start-up experiences of entrepreneurs in order to compare them with the constructed theoretical types and to identify some key venture characteristics needed in the subsequent analyses. In this chapter, the research design, data collection, research methodology, and the pilot studies are developed and discussed.

3.1. Design of the study

The present study focuses on entrepreneurial capability in new venture start-up. The purpose of the study is to obtain more information about the ways in which entrepreneurs seek to secure the start-up of their ventures. As stated earlier in Chapter 1.3, the research problem is: 'What are the routes and strategies in which entrepreneurs develop viability for their emerging ventures?' Therefore, this necessarily means that the unit of analysis should primarily be the emerging venture. However, a major problem in the research of emerging organisations is that their emergent forms make the identification of the research object difficult, if not impossible (Sudman, Sirken & Cowan 1988). Gartner (1985) discussed the research of emerging organisations and defined new venture creation as "the organising (in the weickian sense) of new organisations". He clarified his concept of organising by citing Weick, according to whom "to organise is to assemble ongoing interdependent actions into sensible sequences that generate sensible outcomes" (1979: 3). This definition has some important implications: firstly, the sensible sequences of action should be identified and their contents analysed. Secondly, the outcomes of the process after and during the process should be identified. Thirdly, only the sets of action that serve the processing of sensible outcomes need to be studied. For these reasons, the approach to the phenomenon needs to be explorative and retrospective.

On the character of venture formation process

In this study, the new venture formation process forms the context of the phenomenon studied. Van de Ven (1992) has suggested that the character of the process needs to be analysed explicitly. Van de Ven highlights the character of process by identifying various ways of using the term 'process'. According to Van de Ven, there are three general 'models' presented as 'processes'. The first, the input-process-outcome model treats the

actual process as a black box. The second, the most frequent model, consists of concepts (variables) that form categories representing respective stages in a line of development. The third way, seeing process as "a sequence of events or activities that describes how things change over time, or that represents an underlying pattern of cognitive transitions by an entity in dealing with an issue" is the least understood view on process (Van de Ven 1992: 170). In this study, the concept of process refers to the third model in Van de Ven's typology, consisting of a series of activities which together result in a new business organisation. As suggested, venture formation may take different routes that have implications for the possibilities of studying it in the course of the process.

Since the different approaches to start-up may result in different patterns in the gestation of the start-up, the identification of these emergent ventures is easily biased[9]. The present study takes on a retrospective approach to the research object, and therefore the source of information should consist of the participants in the process, describing the emergence of an enterprise. The main source of information is therefore the main actor within the process, the entrepreneur.

Exploratory study

The nature of this study is exploratory. In exploratory research, the quest lies within identifying the phenomenon studied (Emory 1985; Yin 1988). It is used when there is doubt whether a covering picture of the phenomenon in general could be gained from previous knowledge, or in order to find out if the subject is worth studying at all. In the present study, both of these research interests apply.

According to Yin, a survey, an experiment or a case study apply equally well to exploratory studies (1988: 17). A useful approach to exploratory research is to follow triangulation methodologies. In triangulation, multiple methodologies and sources of data are applied to focus on the same phenomenon, so that a more thorough understanding of the studied object could be derived (Jick 1979; Eisenhardt 1989). Yin (1988) points out that triangulation also increases construct validity, i.e. the quality of the measures used can

[9] For example, should the entrepreneur decide to start up his venture with heavy investments before the market launch, the venture would be visible from its very early phases. On the other hand, in case of incremental start-ups, the identified ventures may have been developing for years before they are recognised (or demarcated) as independent businesses. The researcher's choice of concentrating on emergent businesses would therefore easily be biased towards the ventures with a high profile from early on.

be evaluated against each other.

The empirical probing for this study takes place in three phases (see Table 3). The first phase explores the research field, and relevant topics (if any) for further studies are identified. In exploration, the interview method provides excellent possibilities of grasping the interviewees' world, it is flexible within interview situations and therefore provides good possibilities also for findings other than the expected ones in the data. Easterby-Smith, Thorpe and Lowe (1991) mention the interview method as the most fundamental of all the qualitative methods, though even this method has several fallacies that need to be taken into account. The unstructured and uncontrollable nature of the method puts high demands on the researcher, and the interviews become easily superficial, concentrating on irrelevant opinions, and reflecting the researcher's own wishes and theories. However, the opportunity to get close to individual thinking and to understand the basis of the constructs is best secured by using the interview method. The aims of the first phase are met even better if the case firms are familiar to the researcher from his earlier experiences. Therefore, the qualitative cases were selected to meet this criterion.

Table 3. The research design.

	Interviews	*Survey*	*Interviews*
Source	Entrepreneur	Entrepreneur	Entrepreneur
Number of cases	2	67	10
Method	Interview	Survey	Tel.interview
Form	Semi-structured	Structured	Unstructured
Main focus	Exploration, Identification	Exploration, Description	Descriptive, Response control

The nature of the study in the first phase is semi-structured, using qualitative face-to-face in-depth interviews as the main source of data. Concerning the qualitative data, the purpose is to observe the venture formation process through a semi-structured guide of themes (see Appendix 1). The themes concern the start-up process in general, and in the interview, the aim is to cover the themes and gain a rich description of the start-up process in the case venture. The qualitative data is subjected to a content analysis (Yin 1988), and in this analysis, specific attention is paid to the identification of distinct themes for further analysis, if any. The case setting allows for exploration and a tentative work hypothesis that can be studied further in the quantitative part of the study.

The second phase covers a wider range of cases, exploring the general nature of the phenomenon. As in the interviews, also this phase concerns the entrepreneur as the main informant. The data collection method, a survey, seeks to include a wider range of cases in structured data, and therefore discussion on an adequate number of cases is necessary. Due to the character of exploratory studies as seeking to identify new phenomena or new aspects of the phenomenon studied, the concerns of the informative data sources, insights stimulation and data validity have been emphasised at the expense of the number of cases. For example, in Sandberg & Hofer's exploratory study (1986), the sample included 17 respondents. Ylinenpää (1997), on the other hand, surveyed 52 enterprises in his study on competence development. In his study, the quality of the survey measure as well as control over the responses were far more important than a large number of cases.

As pointed out in the beginning of this section, the research object of this study is emergent, and as such difficult to identify for research purposes. Furthermore, this study is exploratory by nature, and therefore the number of cases covered is likely to remain small. The survey included in this study seeks to cover the responses of about 70 entrepreneurs. The sample definition used in the study does not reflect the real population, rather it is intentionally selected, and the sample design does not allow generalisation of the results to the population. Response quality control is secured through careful selecting of the respondents, using the records and expert help of the local KTM[10] business services, and complementing the list with a panel of other experts in the field. This purposeful sample approach to data collection follows the principles of qualitative research (Patton 1990; Miles & Huberman 1994).

In addition to the control of sample definition, the third phase of the empirical data collection seeks to gain control over the answers. The phase consists of unstructured discussions with the respondents to the survey. To verify the survey data, 10 respondents were called back and asked further details about their answers. The selection of the interviewees followed the control of the response to the questionnaire, i.e. the entrepreneurs who provided unclear or seemingly contradictory views of their start-up were contacted. Even if the number of the discussions was low enough to allow the organising of the interviews face-to-face, the option of contacting the respondent as soon as possible after the reception of the filled-in questionnaire was preferred. Furthermore, this method was chosen in order to secure that the respondents belonged to the targeted

[10] Finnish Ministry of Trade and Industry

group of founders and that the respondents had understood correctly the questions in the questionnaire. Additionally, the method allows for additional questions to the respondents and discussions on the research themes. Through these data control interviews, the overall validity and reliability of the study is increased (see Appendix 6).

Sample characteristics

The research sample could be designed according to various dimensions, each describing a well-hypothesised difference in the population studied. For example, Eisenhardt (1989) suggested different ways of creating typologies for comparison, including theoretical sampling and random sampling. The theoretical sampling may imply comparisons between 'polar types' (Eisenhardt 1989) or the collection of data from theoretically similar cases. Further, Patton (1990) identifies several types of sampling for similar cases, such as homogeneous sampling, criterion sampling, or operational construct sampling. The common characteristic in these strategies of sampling is the minimising of variance in predetermined criteria, and therefore the allowing of logical generalisation of information in regard to the phenomenon.

This study follows the purposive sample approach, seeking to systematise the sample in two important respects: 1) In order to be valuable informants for the study, the entrepreneurs need to have started at least one manufacturing firm. The entrepreneurs need to be 'real' starters, i.e. they have started the firm from a 'scratch', instead of e.g. buying or inheriting it. The reasons for this limitation are obvious: should the central elements of the venture 'be there' already, the data would not be able to capture the venture formation process. 2) The theoretical framework of this study has pointed out three tasks of the entrepreneur in the start-up process: resource collection, organisation building and the creation of face value for the venture. It is likely that the entrepreneur's most concrete task is to secure the efficiency of the new venture, and therefore resource allocation and the introduction of technology in the emerging organisation are crucial sources of variance. The firms studied should thus reflect a pattern with a technological core. If the industry variance within the sample is too high, e.g. if both service and production firms were included in this setting, the relative importance of these tasks could vary too decisively, and the analysis on the start-up process would be seriously disturbed. Therefore, for the explorative purposes of this study, it is necessary to minimise all industry-based variance and, on the other hand, to make sure that the entrepreneur's three tasks of are similarly important in the firms.

In this study, the focus is on entrepreneurs active in the metal and electronics industry. The firms in this industry represent basic business in regard to open competition, high requirements for effectiveness in terms of demand conditions, as well as high requirements in productive and managerial efficiency.

3.2. Metal and electronics industry

The firms within the metal and electronics industry do not form a coherent and unitary group that could be defined in simple terms. In general, the industry can be divided into three main categories: electronics industry, machine and metal products industry, and metal producing industry. The machine and metal products industry accounts for the largest number of firms within the sector and the branch creates more than half of the productive value of the whole metal industry (FIMET 1998).

Concerning growth and dynamism, the machine and metal products industry is characterised by recent changes in the production technologies. The current trend within the branch is to increase networking in order to create more intensive co-operation in production, and through this, the firms are able to increase their competitive advantage over the competition. Traditional subcontracting is transforming into co-operation, and product development work takes increasingly place in co-operation with customers. The industry has met substantial growth after the economic recession of 1989–92, with an average of 20 per cent during the years 1992–96. (Korhonen 1997; Osuuspankkikeskus 1997.)

Similarly, the electronic industry is characterised by its fast rate of growth and dynamism within the industry, raw materials, demand conditions and technology (Rönkkö 1998). The fast changes in the business environment require the firms to be alert for investing in core technologies and core competencies, and research and development is a prerequisite for success. The branch has doubled its turnover during the last ten years.

The metal producing industry is characterised by a small number of large businesses concentrating on refining metals, and therefore this category will be left out from the analysis. Thus, the industry in target consists of firms manufacturing metal products, machines, equipment, electronic and optical equipment and vehicles (Industry codes 28110–35500)(Statistics Finland 1999).

Even if the metal industry and electronics industry are still separated in the official records, they are more and more aligned to each other, and in many cases, the identification of a firm exclusively in either one of these branches would be difficult. This character can also be seen in the industry value chains, where the companies are organising their operations into vertical networks, co-operating in terms of product development, product design, external logistics, etc (KTM 1997). The firms operating within the metal and electronics industry are productive enterprises, basing their value-adding processes on the combining of the traditional production inputs, such as machines, materials, know-how, human labour and financing. The production is normally organised either in projects, lot production or in long to short series production. An increasing number of firms have been changing their production logic to Just In Time production, where the lot sizes and the lengths of series depend on the immediate needs of the customer. Regarding their products, the firms within the metal and electronics industry vary strongly. Their products may include components, parts, systems or final products, each of which may be standardised or tailored specifically for the customer (KTM 1997).

Table 4. The Finnish industrial clusters (KTM 1997).

Cluster	*Future development*	*Role of metal &electronics*
Metals	steadily growing	
Forest	steadily growing	production & transport technology, components supply
Construction	steadily growing	production & transport technology, components supply
Energy	fast growing	production & transport technology, components supply
Telecommun.	fast growing	production & transport technology, components supply
Transportation	uncertain prospects	production technology, components supply
Food	uncertain prospects	production technology
Bio	fast growing	measurement & production devices
Chemical	good prospects	measurement & production devices

The organising of the firms within the metal and electronics industry can also be analysed from the perspective of industrial clusters (see Table 4). In broad terms, the Finnish industrial activities are centred in a few clusters with their distinctive technological development trajectories and success factors. Characteristic of these clusters is that they consist of a large number of companies interdependently operating in the sector, and supporting each other's operations by their products and services. The largest clusters are

the forest, metals, telecommunication, and energy clusters. The metal and electronics industry is a key factor in the operation of most of these clusters. For single firms, the clusters have produced another new characteristic in the business environment that can be used in the strategic positioning of the firm.

Even if the success criteria of the firms within the metal and electronics industry largely depend on the economic climate of the cluster the particular firm relates to, there is a lack of more precise information on the start-ups in these clusters. Instead, the statistics follow the traditional guidelines of industry branches. This leads to a situation where the understanding of venture formation is related to one classification, while the statistics describing earlier venture formation follows another type of classification. In the following, the number of start-ups within the metal and electronics industry is reviewed.

Start-ups within the metal and electronics industry

The information collected by Statistics Finland shows that in 1998 a total of 375 new enterprises were registered in the metal and electronics industry. However, this figure is likely to exaggerate the number of 'real new ventures' (see Section 1.3). For example, Littunen (1994) argued that a number of companies registered in the official statistics have never started any actual operations. In Littunen's study, of those 485 companies that had seized their operations after three years, 13 per cent had never been active businesses. Therefore, it is likely that of the companies registered in the statistics, a substantial share never started their business operations.

Furthermore, table 5 shows that by 1998 the number of new start-ups within the metal and electronics industry had come down from 630 to only 375 in four years. The decline in the number of start-ups can be partly explained by the above-average rate of start-ups in 1995, following the recovery from the Finnish economic recession of 1990–1994. However, the decline was rather systematic.

Table 5. The start-ups within the metal and electronics industry during 1995–98 (Statistics Finland 1997; 1999)[11].

Start-ups	*1995*	*1996*	*1997*	*1998*	*Change total*
Machine production	373	295	237	192	-48.5%
Electronics	163	156	108	108	-33.7%
Vehicles	95	96	87	75	-21.1%
Total	631	547	432	375	-40.6%

The number of start-ups shown above includes all the officially started companies within the metal and electronics industry. Therefore, the numbers are likely to include changes in legal forms, MBO's[12] and mergers. However, the number of these changes in the statistics is likely to be small. In his study on the business closings of the Finnish metal and electronics industry, Littunen (1994) points out that of the companies studied, approximately three per cent had changed their legal status, which in the statistics[13]is reported as a business closing In other regards, information on the start-ups within the metal and electronics industry is sparse. In sum, it seems that the statistics do not provide an adequate starting point for identifying the companies for a research sample.

3.3. Qualitative pilot studies

The purpose of qualitative piloting is exploration and identifying the essential elements and dimensions of the phenomenon studied. In this phase, the interview themes are held as open as possible, in order to enable widespread discussions and thereby a covering picture of the start-up process. The main themes in this phase are 'the circumstances for the start-up', 'the start-up' and 'the outcomes of start-up process' (see Appendix 1).

The firm and the entrepreneur – contents analysis

For analysing texts, various techniques have been introduced. Among them, contents

[11] The statistics are useful for yearly comparison only from the year 1996, because of the introduction of the value-added tax and that of new criteria for registering new ventures in 1994.
[12] Management Buy-Out, see also Section 2.2.
[13] The change in the legal form of the business is reported in the statistics as a closing and as a start-up. For example, a company changing its legal status from a limited company to a public company seizes to exist as a limited company and starts up as a public company.

analysis, critical incidents analysis (Yin 1988), analytic induction (Hofer and Bygrave 1992) and constant comparative analysis (Hofer and Bygrave 1992) share the same view of the observable world. The cases are seen as objective, distinct and, as such, comparable. The descriptions are treated as if they bore information of the world 'out there', i.e. of something concrete. The contents analysis (Yin 1988) is meant to provide descriptions of the context against which the interpretations of other analyses can be tested. The contents analysis resembles the 'within-case analysis', which is aimed at gaining familiarity with data (Eisenhardt 1989). In this sense, the contents analysis is not a *real* analysis per se, but rather a technique for summarising situations described. In this study, the contents analysis consists of the descriptions of the entrepreneur and his firm, the start-up and outcomes of the process. The results of the contents analysis are presented as case/ data descriptions.

Cross-analyses

Cross-data analyses are done in order to search for general 'patterns' by using divergent techniques (Eisenhardt 1989). Case studies can build on multiple levels of analysis (Yin 1988). As the data in this phase of the study is text from the interviews, the comparison needs to relate to those aspects that can be identified in the text. According to Sommerlund and Christensen (1988), four basic elements repeat themselves in concrete text analysis, i.e. patterns, themes, metaphors and clusters.

a) Patterns may appear in holistic analyses where the pattern is documented by connections between variables or in atomistic analyses, where elements of a phenomenon are selected and analysed at the "sentence level".

b) Themes appear in case-orientated reading where especially subjects of particular interest are selected.

c) Metaphors can be used in the paraphrasing of the interview text and can therefore explain the story at a different level.

d) Clusters appear by combining variables, which are bound up as regards meaning or resemble each other.

In this study, cross-analysis concerns the identifying of patterns and the weighing of differences between the two cases.

3.3.1. Case 1[14]

Case 1 is an industrial automation firm that the entrepreneur started together with his friend, trusting in the competitiveness of the combination of their competencies. The company combines the electronics and metals competencies in the automation solutions for the process industry. The company operates globally, even if its main customers are Finnish, Scandinavian and European.

The circumstances for the start-up

The entrepreneur has a technical education and had operated in production planning prior to the start-up. The idea for the start-up came out during an informal discussion with his friend who told him he would become unemployed in a short time.

> - ...when you have the know-how there is no ending in this job, you know... and we were making that kitchen floor and ... I said that there we had huge know-how that only needed to be refined and ... then we could develop these processes and these work routines so that we could make the start very profitable... and we did assume that economic cycles change but that even the recession, it turned out to be only growth for us, we started so small...
>
> - so there was no real business opportunity in question, I mean a sort of business gap...?
>
> - no, it came from thinking of what we could do and what was our know-how... that this automation, it was my strong field of expertise, I mean I knew how to do it with a one-handed robot, but I didn't know the exact mechanics associated with it, and this other guy, he knew all about electricity and control...

The idea based on the combination of two related competencies, and targeting it to any company interested in automation. Prior to the start-up, the entrepreneur used a few months to survey the market, mapped out the demand conditions and the potential customers, and looked for an adequate name for the company. However, within a year the target market had changed to consider mainly process industry where the need for further automation of production processes was high. The business can be characterised as unique solution-based projects with short notices and sharp deadlines, and as the main focus in the start-up, the entrepreneur chose a strong emphasis on high quality in all the operations of the company.

---

[14] The researcher has studied this case company previously, too. The first contact was made for the licentiate study (Pihkala 1997) and further discussions have focused in particular on entrepreneurship and networking, associated with a research project on virtual organizations (e.g., Pihkala, Varamäki & Vesalainen 1999).

> ... we have always had this that we'll do only this one job and one bill and to get this sort of Mercedes-type of thinking to the customers... that when they see our name they'll know what they're getting...

The start-up

The start-up was incremental, resembling a snowball effect, where the first deal was essential for the process to begin. At the time of start-up, Finnish economy struggled with the worst recession since the 30's, and the company's first potential customer was found in Sweden.

> and there we started and in -93 it started with our first job in Sweden, a kind of automation project in a yeast factory... I travelled to Stockholm and from there further to Sollertuna and went right in through that door to those guys and because we needed the project, I thought that the Swedes wouldn't do this kind of automation but we would... and so we did it... and there we got a project from a Danish company, a sort of industry automation thing, you know, and they were doing something for one company in Finland at the same time and we gained a good partner from it and had access to one major company in Finland...

The snowball effect is evident in the company: the first project gave the birth to the next one, etc. In the on-going business, reputation and a good track-record work as the main sales-makers, but the remaining question in this phase is: how is it possible to gain the first sales? The entrepreneur's answer supports the suggestion by Gartner et al. (1992) on the 'acting as if'-method in the start-up. The entrepreneur showed the customer that he was able to plan the solutions immediately, and through this, he was able to convince the customer of his venture skills.

> - when they bought it... you hadn't been doing it before...?
>
> - no we hadn't... industrial automation, even if we knew the process exactly... so that we didn't have to know anything else than... I mean we didn't have to know how to put certain chemicals into a certain system, they just wanted to have it that way that they could put water in here and heating here and to move it from there to here and add those control systems in there, and I made the plans in there at the table and we made a sort of preliminary plan... that sort of scheme where we analysed the process flows and the electric controls and the size of the components and system we needed to do it...
>
> ... luckily it wasn't a project with an especially tight schedule, so that it really started like that so that we did first one department where they had not more than eight motors but the quality of the work seemed to please the customer and finishing was better so...

At the time of the first sales, the venture consisted of the two founding members, and the project they took was substantially larger than these two men were able to handle. In this phase, as well as in the other cases of the allocating of resources, the entrepreneur had his

partner and friends whose competencies he was counting on when he sold new larger projects.

> ...of course I had checked that out what sort of resources we had there to use so that what we were selling were good people and solid know-how...
>
> - so you actually counted on those people already...?
>
> - well that's how it goes that first you lay the fishing net in empty water and then you catch what you catch... I knew where to get the net when I needed it, even if hadn't the work load for them yet, before I knew what I could fish with it...
>
> - how important was this thing, could you have started without or with a smaller group...?
>
> - ...well it starts with people... this business is so work-intensive, it is different with those businesses concentrating on arbitrage... if I hadn't known these people I couldn't have had the guts to go on selling six people's work load without them...

The two men started together the business operations, and only when the workload exceeded their capacity, they started to employ new people. The employees were old acquaintances to the entrepreneur, but, nevertheless, when employing people, the entrepreneur emphasised employee motivation and competencies.

> ... two and three men... so that we employed the first man after one month and then we employed the second one and the third and then we were five and there it started we employed those men we knew had the skills...
>
> - these employees... you knew them from before...?
>
> - Yes, I mean they were old acquaintances and from hobbies and school and through friends... of course I interviewed them and checked what kind of jobs they had been doing and first of all what sort of motivation they had... that's the most important thing... and it has worked...

As well as the employees, also many of the business opportunities for projects were identified through the personal network. The target industry seemed to share information on the development projects, ongoing search for contractors and other useful information. Once that the company had managed to enter into the industry, it was possible to use the informal information in this network, too.

> ... the first two years my own role was to find new projects and in the evenings I did those jobs for this firm... and when it started to take that much time we had about 20 people in here, the administrative things occupied the space...

The search for customers occupied a large share of the entrepreneur's time, but nevertheless, he thinks the most difficult tasks in the start-up are the creating of a credible

appearance among important customers, as well as doing the routines and the learning to manage the economy of the company. The business is financially difficult to manage because 10–15% of the project budget is retained in the project for securing the guarantee repairs for two years after finishing the project. Nevertheless, the start-up of the business was mainly financed through plough-back financing and efficient cash-flow management. An important point in the start-up was the entrepreneur's strong self-confidence and ability to convince others. This characteristic became most valuable in situations where the entrepreneur was selling new projects to large multinational companies, when the other parties were often represented by distinguished senior managers and CEOs.

The outcomes of the start-up

The firm was established in 1993 and has grown to employ 46 people by the end of 1998. The company is financially strong and has been able to build a strong reputation within the industry and among the customers. As an important reason for this, the entrepreneur mentions the efficient and lean structure of the company.

> .. we have been under a lucky star because we have had this know-how all the way, we have no loose ends here, and we have controlled our sector and sold... you know, this is a problem for large companies that the salesman doesn't know what to sell, the designer doesn't know what to design and the buyer doesn't know what to buy and the assembly man doesn't know what to do... and this didn't happen to us when we sold it ourselves we knew and that efficiency and customer satisfaction came from there, they got always what they were promised and we never sold them anything useless...

The entrepreneur has set the company goals for further growth within the market domain through interfirm co-operation, mergers and acquisitions. Even though the entrepreneur started his company incrementally and with plough-back financing, he considers strong financial backing as the best way to create a new venture in the industry.

> ...one million each... that would be a good start... because one man's work and the equipment and machines, and the materials he needs to the work with, it is a lot of money for a long time... we would have had it easy too if we'd had, say, 500 000 FIM of extra money... when you circled it round and round and all the time tried to make it... you see, when there was a large project, about 10–15 % remains there for a project collateral for the next two years, that equals the profit margins of many projects in the start...

3.3.2. Case 2[15]

Case 2 can be characterised as an electronic components firm that was established when an unemployed person with a technical and economic education, added with work experience as an engineer and a teacher, heard of a business opportunity. The entrepreneur had been active in searching for opportunities, and he heard about the opportunity from an old business colleague within the metal industry.

The circumstances for the start-up

Before the start-up, the entrepreneur's main concern was the feasibility of founding the firm and he discussed the topic with some friends. As early as this phase, the entrepreneur's personal network (or team) brought in their industry experience and know-how about the technical requirements for the business. The team consisted of two men; the entrepreneur's own brother, who had experience in the industry, and an older retired man, who was familiar with the type of production the business idea related to. The team was crucial for the start-up since it brought in the expertise the entrepreneur did not have. He stated he knew nothing about the actual production process before the start-up.

> ... I heard of a need that there could possibly be an opportunity for parts manufacturing... and I started to collect information about it and calculating how would it turn out and ... with relatively little information and unrealistic expectations and ... resources we started... and did not have any external financing... at all and with very little capital we started... used second hand equipment but luckily that much that I had the guts to rent the facilities and start the operations... the customers received small test samples and there it began...

The start-up

In the supply of parts, the gaining of the first sales may prove to be decisive for the company's future. The entrepreneur contacted the potential customer and presented some early ideas and sketches about the production and products, and managed to get a positive answer.

> - did you know that it would work when you started?
>
> - not at all... no... only then – this started in the autumn, in September – at Christmas we

[15] The researcher has studied this company also previously, focusing on the entrepreneurship and visionary management of a manufacturing company. The final results have been reported in a project report by Vesalainen (1999).

> got the first larger projects... that sort of special type of motors when we manufactured about one hundred of those a little better-priced machines and then I knew that it would... that it looked better and I already could invest a little... got some resources there and skills and it began to feel like it was starting to work out...

The entrepreneur emphasises the role of cash flow for the success in the start-up. This is understandable, since the company started with very little capital, and the first sales played a central role in financing. The initial capital invested in the company was extremely small (18,000 FIM) and the entrepreneur declined to take external capital in the early phases of the start-up.

> ... we used only... collected here in the neighbourhood of Vaasa... everything was second-hand stuff, nothing was new... in second-hand stores and old factories and... in our customer's warehouse we found some useful tools and we collected all old things together and this is what we've got...
>
> - everything was your own...?
>
> - yes, always everything... in no way could anyone rent anything ... in no way...
>
> - did you try borrowing or ...?
>
> - well, it was actually our starting point ... since it was after all rather cheap equipment that we would buy everything we needed ... but I have to emphasise that these sums, the capital invested in this company was 18 thousand FIM... which is extremely little... and then we tried to make it through plough-back financing...

In the start-up company operating with second-hand machines and very little cash, the key tasks for the entrepreneur in the start-up were the general organising of things, people and process so that efficiency could be improved. The entrepreneur found his basic technical knowledge extremely useful, even if he did not originally know anything about the product or the production technique. He also emphasises the role of strong self-confidence and the ability of convincing others.

The entrepreneur chose punctuality in deliveries as the main focus in the early phases of the start-up, in order to support the firm's emergent image as a trustworthy and competent company.

> ... something that we wanted to keep no matter what was the time of delivery... if we had promised something, we often had to do it through the night... and this may be one of those things... that affected the ... that we received deals also in later phases... but it was really so that we had delivery once a week, every Friday and in a way the whole week's work was... then and we made those parts as agreed and for a long time we didn't miss one shipment... in a way it crystallised all the know-how and skills... that we have this in control...

In subcontracting, the quality of the company is measured by the punctuality of deliveries. The entrepreneur realised that in order to build an image for the company the company needed to meet the delivery standards, and thereby to reflect the efficiency and effectiveness of the company.

The outcomes of the start-up

In the beginning, the business idea was to be a subcontractor for one large multinational company, and even if the customer base of the firm has changed decisively since then, the business remains subcontracting. In the early phases, the entrepreneur also sought out some other directions for growth, including products of his own. For this idea, he even employed two engineers to carry out the designing and planning, but soon realised that the project had to be stopped. The line of business has affected the entrepreneur's way of thinking about success in the industry.

> ... if we think about this type of contract subcontractor there are, in my mind, two central points that you have to find: one dominant customer to grow with... that secures the operations and then you have to find a good partner... because without the big customer you run out of money and doing so you'll lose your credibility... and then, it's often the case that you'll just look for a partner ...firms like us in the growth phase with little resources... but if you can combine these things... combine the resources and combine those customers... it will affect the financiers' trust ... then it will work...

The company was originally established in 1993 and it has grown to employ 25 people. The entrepreneur has managed to increase the credibility of the company and to expand the focus of the business. After the first few years, the entrepreneur has bought two more companies relating to the original business. The entrepreneur seeks actively new routes for company growth.

3.3.3. Comparison between the cases

The purpose of the first phase was to bring out important topics for structuring the survey questions. Table 6 (below) presents an overall comparison between the two cases.

Concerning the circumstances for start-up, the entrepreneur's motivation as well as the focus before start-up differed in these two cases. The entrepreneur in case 1 was interested in trying the combining of different skills, while the other entrepreneur was motivated to find a job in general. The entrepreneurs also differed in their approaches to certainty/risk

in the business. The first entrepreneur considered the opportunity to be riskless, something that would always be needed in the industry, while the second entrepreneur regarded the first phase as extremely risky.

In the start-up process itself, the main differences related to the use of the network in the start-up and the conceptions of the entrepreneur's critical tasks in the start-up. While the entrepreneur 1 emphasised his need for learning the economic control of the firm and for assuming a credible appearance, the other entrepreneur stressed the need to organise things and learn the technical process. In this respect, these entrepreneurs differed extensively, as the entrepreneur 1 was already an expert in the trade when starting up, whilst the second one stated he had known absolutely nothing about the production process of the intended business. Both entrepreneurs used a team and a network in the start-up, even though they used them for different purposes.

In addition, the main focus during the start-up differed which in case 1 was quality emphasis in all operations and in case 2 the emphasis was on the punctuality of deliveries. However, even if the cases differ in this topic, they were both following these targeting points because they were interested in providing an image of a trustworthy and high-quality company. Interestingly, although the cases differ in their approaches to the business and in their nature of industry and production, both of the entrepreneurs chose plough-back as the main method of financing the firm. Finally, as the outcomes of the process, the first entrepreneur stressed the earning of references which can be used for gaining credibility for the venture when negotiating for new projects, while the other entrepreneur pointed out the importance of early cash-flow and secured financial positions to support the firm's credibility.

Table 6. The qualitative analysis – a comparison.

	Case 1	*Case 2*
Motivation	Combining competencies, opportunity	Unemployment, market information, opportunity
Focus before the start	Market information, market survey	Discussions about the feasibility and implementation
Type of business	Industrial automation	Electronic components
Business characteristics	Long projects, unique solutions, financially difficult project securities	Subcontracting to a large multinational company, the business concept totally new
Perceived certainty	Strong trust in one's own competencies	Uncertainty about the real market needs
Network	Partner and friends to be employed and counted on when selling projects	Team for bringing technical know-how into the venture
Attention in employing people	Motivation and competencies	Competencies
Financing strategy	Plough-back, cash-flow	Plough-back, cash-flow
Main focus during the start-up	Perfect quality in all operations to support the image of efficiency and customer satisfaction	Punctuality in deliveries to support the image of company, competencies and control
Important and difficult tasks	Economic control, routines Credible appearance Self-confidence and ability to convince others	Organising Technical abilities Self-confidence and ability to convince others
The main outcome during the process	Customer references to create credibility	Cash-flow and secure financing to create credibility
Perceived key factors in the start-up in the branch	Competencies and learning, good image and strong financial backing	Financing, people and competencies
Other findings	Name of the company crucial for the image	Name not emphasised, but retrospectively its importance recognised

Therefore, although the entrepreneurs' emphases differed somewhat in the start-up, they sought for the same outcome: to maximise the credibility of the business. The three elements of entrepreneurial activity are clearly visible: the building of reputation was the clearest of the activities that concerned special approaches to the operations and the quality of the company. The building of the organisation was a difficult task for both entrepreneurs, even if they differed in their emphases on its implementation. Therefore, the first entrepreneur was interested in adopting the control systems, while the second one was more interested in coping with the few resources and the limited amount of capital available. Finally, the collecting of resources was extremely important especially for the second entrepreneur, who used second-hand machines and equipment in the start-up of the operations.

The qualitative cases have a number of implications for the construction of the survey instrument. First of all, it became evident that by using a survey questionnaire it is also possible to collect respondents' views on issues other than 'hot attitudes' (McKennell 1974). In case interviews, the discussions tend to focus on the most interesting or the most difficult issues, leaving many seemingly uninteresting topics aside. Second, the opinions expressed on several themes, such as the relevance of the company name, the use of unofficial start-up teams, the views on the competitiveness of the market and the incremental approach to starting up the business, brought important information about the way the survey measure should be constructed.

3.4. Measuring start-up process

As pointed out in Section 3.1, the main part of the empirical study is concerned with a survey analysis. A survey is a practical method to collect structured data on a specific subject from people from a wide geographic area. In retrospective studies, a survey serves as a method to bring the respondent back to the time in question (Emory 1985). In quantitative research, the construction of the research measure is in a central role: the theory is translated into measurable questions, and the accuracy of the operationalisation and the clarity of the questions largely determine the overall validity of the findings and of the study. In this section, the questionnaire for the survey study is discussed more in detail.

When the survey was constructed, special attention was paid to the formulation of the

questions in order to capture the venture formation process. The questionnaire was composed to include a set of background questions, and two sets of research questions.

3.4.1. Background variables

The study controls sample variance by using several background variables. The background variables related to the characteristics of both the entrepreneur and the venture.

The entrepreneur

Considering the entrepreneur himself, age was included as a continuous variable. Entrepreneurial capacity is reflected by a number of measures, covering education, experience, and networking activity. In regard to education, the technical, commercial and other types of education were measured. The items were kept separate in order to allow answering in different combinations. Instead of collecting bare facts on these items, their relative level was measured using the Likert type of questions. This way, the entrepreneur's own estimate is taken as the measure, instead of accepting a formal degree or a number of years to represent the level of education.

In a similar way, in order to control the role of prior accumulated knowledge, the entrepreneur's level of experience was measured by four variables: the entrepreneur's experiences at the level of industry, start-up, management, and inter-firm cooperation. In this context, the entrepreneur's usage of different information sources, connections in the business, or other intangible assets, such as patents, was measured as well. (Gimeno et al. 1997; Cooper et al. 1994; Mitchell 1989; Schoonhoven et al. 1990)

Finally, the overall level of the entrepreneur's contact network could be seen as reflecting his ability to start up new businesses. Cromie & Birley (1992) suggested that the entrepreneur's networking abilities could be measured by mapping out his level of activity in hobbies, societies, contacts, etc. The entrepreneur's level of networking activity was measured by six variables, following Cromie and Birley (1992).

The venture

In regard to the venture, its year of establishment, as well as its branch within the industry were controlled. Furthermore, the positioning of the business in an eventual business cluster was measured by a classifying question. The clusters were predefined following the classification by KTM (1997) (see discussion in Section 3.2.).

Moreover, a further classifying variable needed to be included in the background setting. As discussed earlier, in Section 2.3.3., the industry and the strategy should 'fit'. Carter, Stearns, Reynolds & Miller (1994) distinguished between firms operating at the beginning/middle/end of the supply chain, and developed a typology of four basic configurations of firms operating in the different phases of the supply chain. They argue that firms need to follow different strategies depending on the phase of the supply chain they are located in. The main dimensions of their typology concerned the scope of segmentation (narrow-broad) and the focus of operations (product-marketing). Therefore, while technological sophistication and the variance of customer types separate between product-marketing foci, firms operating at the end of the supply chain need to choose a narrow scope of segmentation, and the firms at the beginning/middle of the chain need to choose a broad scope of segmentation. In order to control the market-originating variance, a classifying measure is necessary. The industry reports by KTM (Ministry of Trade and Industry) suggest that a firm operating within the metal and electronic industry could be identified as producing projects, components, systems, parts, or final products (KTM 1997), and the questionnaire measured this dimension by six variables.

3.4.2. Research variables

Contrary to most earlier studies on new venture formation, in the present study entrepreneurial capability is not measured as such; instead, it is assumed that as a concept it comprises several elements fitted together to form a coherent pattern resulting in the entrepreneur's route of realising his business venture. However, since new venture formation is likely to be sensitive to the cultural and industrial contexts, in this study on Finnish new ventures the eventual measures developed for earlier (mostly American) studies were only of informative help, instead of providing tested and re-tested questionnaires. For this reason, new measures were necessary for studying the collection of resources, the organising of resources and the legitimising practices of the ventures.

Resource allocation

To gain an understanding on the complexity of the venture formation process, the use of different routes of resource attainment were necessary to measure. Therefore, the use of the enterprise's own resources, network resources, and of acquired resources was measured by several variables each, covering the facilities, machines, raw materials, financing, employees, external expertise, customers and business relationships, and patents, contracts and other types of agreements. As to the scale, the values range from 0 to 4, zero indicating the resource in question had not been used at all, and four indicating it had been used to an extreme extent.

The importance of teams was pointed out by the theoretical framework, as well as by the pilot study. In this study, the entrepreneurial team is taken into account by measuring the size of the entrepreneurial team (Cooper et al. 1994). The variable of team size was defined as the number of team members in the venture formation, including the entrepreneur himself. Therefore, the minimum size of the team was one.

Efficiency

The creation of internal efficiency was measured by mapping out the key routes used for ensuring the functionality of the organisation. Here, a total of nine items were predefined, including quick purchase of the machinery, hurrying of the first sales, writing a business plan, or the creation of the start-up team. Additionally, a further question was added to classify the three most important factors of efficiency. The measure was a Likert-type of set, ranging from 1 to 7.

Legitimacy

The legitimacy of the venture was measured by three sets of questions: managing the problems arising because of the newness of the operations (5 items), managing the problems arising because of the complexity (5 items), and managing the problems arising because of the business credibility (5 items). However, the items were included in the same Likert-type of question set, in order to cover the overall legitimising of the venture. Similarly to the efficiency variables, the interviewees were asked about the three most important factors for legitimacy.

Competitive environment

As suggested in the literature review, the competitive environment is likely to affect the new venture formation activities in terms of the availability of resources, the intensity of competition and of the dynamism within the industry. In particular, the research on competitive strategies has paid attention to the industrial circumstances (e.g. Chandler & Hanks 1994; Mitchell 1989; McDougall et al. 1994; Gimeno et al. 1997), including the measures of industry life cycle, the intensity of competition, and the demand conditions. In regard to the resource availability of the different types of resources, general availability, price and applicability were measured using a 7-point Likert scale.

Concerning the competitive environment in the industry, the competitiveness of the industry as well as its industry dynamism were measured. As mentioned in the literature review, in earlier studies, competitiveness has been reflected by dynamism, heterogeneity, hostility/munificence and complexity. (Hart & Banbury 1994; Miller & Friesen 1978) In this study, competitiveness was reflected by measures on e.g. the rivals, competitive products, and by the level of integration within the industry. The aspects of dynamism were measured by e.g. the rate of growth within the industry, the number of new entrants in the industry and the rate of change in the methods of competition within the industry.

3.4.3. Pre-testing of the questionnaire

The questionnaire was constructed using an iterative process. Firstly, the relevant measures used in the earlier research were analysed (see above Sections 3.4.1 and 3.4.2.). Secondly, the questionnaire was commented by a number of research colleagues who concentrated on the concepts used in it and its readability. After each commentary, the questionnaire was refined and sent to the next colleague. Finally, the revised questionnaire was sent to two entrepreneurs. Both of them were asked to answer all the questions and to comment on the topic, concepts, problems and the readability of the questionnaire. The entrepreneurs sent the questionnaires back added with their comments, and the comments were discussed on the telephone.

> Pilot 1[16]. "...a rather heavy set of questions, had to concentrate really hard. The start-up of the business is a wide concept, especially in terms of time. It might be a good idea to

[16] The quotations were translated from Finnish.

> define the time frames more precisely, e.g. prior to the start-up, during the first year, and later. In other respects, a rather interesting 'trip' back to the early steps of the business. A number of successes and mistakes came back to me while answering."
>
> Pilot 2. "...the questions are in the right direction, but for me it was difficult to focus on the time period exactly, because the start-up takes years and years, and the situations change as a function of time. You could define the questions to cover the first two years."

This phase resulted in the final refinements to the questionnaire. The questions were rephrased to concern the first two years of activity, and some of them were reorganised to ease up answering. After the final revision, a survey questionnaire was sent to a non-probability sample of entrepreneurs in charge of metal and electronics producing companies. The questionnaire received a number of comments from the respondents.

> Respondent A: "Quite ok!"
>
> Respondent B: "I find your questions logical, and I doubt that I can reflect the same logic, too. To be an entrepreneur is hard fighting in the constantly growing competition, but I wouldn't change a day."
>
> Respondent C: "Attention! It took me more than 30 minutes to answer!"
>
> Respondent D: "When you choose your sample for studies, please pay attention to the fact that entrepreneurs like me with inadequate occupational school vocabulary may not recognise the concept of cluster."

On the basis of the respondents' reactions, the questionnaire seemed to match fairly well with the overall concept of start-up. The survey measure remained long, however, and the time to fill in the questions may have caused some entrepreneurs not to participate in the survey.

3.5. On the credibility of the study

This study seeks to create new knowledge of new venture formation and entrepreneurship. As pointed out earlier, in exploratory studies, the main purpose is not the research of certain explanatory cause-effect-relationships, but the uncovering of new possibilities. In this process, the sole use of earlier determined research strategies and survey measures is not likely to enhance the possibility of new openings. While an exploratory study gains in the possibility of surprise, it sacrifices the simple routes for projecting research reliability and validity. On the contrary, the establishment of research quality in exploratory studies is a matter of constructing consistency and insight. In this study, the measures of establishing research quality is a complex network of relationships.

However, to weigh the value of this study, some considerations on the validity, reliability and generalisability of the study findings are needed[17]. Brinberg & McGrath (1985: 10) suggest that validity is a matter of logical possibilities as well as of empirical outcomes. The validity of the study concerns both the carrying out of the research and the quality of the information used. Overall, this refers to the quality and the correspondence of the concepts, frameworks, measures and the strategies of analysis used.

In her treatment of the construction of measuring instruments in the social sciences, McKennell (1974) suggests three aspects, *contents, structure* and *context*, to be recognised in measurement (see Table 7). Contents refer to the theoretical and conceptual clarity of measurement. This results in the concern whether the research instrument measures what it is supposed to measure, or, in more general terms, whether the researcher is studying what he thinks he is studying. In this study, the ways of controlling the quality of the survey data were manifold: the constructing of the survey measure with the assistance of qualitative pilot interviews, the pilot testing of the questionnaire with colleagues and entrepreneurs, and the post-survey of the entrepreneurs interviewed. Through these measures, the researcher attempted to increase the possibility that the measures used would also apply to the phenomenon he intended to study. As such, they concern the conceptual validity of the study.

Table 7. Establishing research validity and reliability.

Element	Meaning	Part of research	Location
Content	Content validity	Theoretical treatments	Ch. 1-3
	Concept validity	Qualitative pilot studies	Ch.3.3.
Structure	Construct validity	Survey questionnaire construction	Ch.3.4.
	Reliability	Operationalisation	Appendices 1-3.
		Scale reliability evaluations	Appendix 5.
		Main variable intercorrelations	Ch. 4.
Context	External validity	Sample definition	Ch.3.1.& 4.2. &Appendix 4
		Post-survey telephone checks	Appendix 6
	Construct validity	Main analysis	Ch. 4.
		Results evaluation	Ch. 4&5.

According to McKennell (1974), the analysis of the structural aspects of data is the traditional view on the research quality. Structure is convenient to use for the operational definition of the concept, for what results from investigating the covariance among the indicators, and combining them into scores in order to represent the dimensions studied.

[17] Generalisability of the study results will be considered in the section 5.3.

In this study, its operationalisation, along with the process of survey questionnaire construction, fall into this aspect, as well as the study of variable inter-correlations and the reliability analyses of the measures.

Finally, the term 'context' refers to the development of a meaningful relationship between the different measurements by contrasting them against other variables. (McKennell 1974) In exploratory studies, the context is particularly relevant due to the research interest of finding empirically promising phenomena. One way to develop the external validity of the study is the careful definition of the sample. This study concerns a non-probability sample, and therefore methodological validity is largely determined by the accuracy of the sample, while the external validity of the sample cannot be estimated using traditional statistical measures (Foreman 1991). Thus, steps were taken to make sure that the sample met the predefined criteria: only entrepreneurs who had actually started a firm were included in the study; only firms not having been subject to an MBO deal, inheritance or acquisition were included in it. Furthermore, because industry-based variance is likely to blur the research results, the minimising of variance originating from the industry was necessary.

To increase the control over the response, i.e. to gain an understanding of the respondents' knowledge and meaning when answering to the survey questions, a number of the respondents were contacted after the survey response to control the meaning of the selected answers by the respondents and, in some cases, ending with informative discussions about the start-up of a business (See Appendix 6). This method also met the qualitative criteria of the researcher's access to knowledge and meaning of the informants (Easterby-Smith et al. 1991). The responses were discussed in post-survey telephone interviews with the survey respondents to provide information on the external validity of the study.

The major part of the construct validity is only evaluated in the main research analysis. In this phase, the measurements are analysed in their relevant context, i.e. against each other and the background variables. In this study, the main analysis is in fact focusing on the explored variables in their immediate contexts.

4. ACTIVITIES IN NEW VENTURE FORMATION

This chapter presents the analysis of the empirical survey data. The analysis is twofold: In the first section, the entrepreneurs surveyed and their ventures, as well as the industry circumstances of the ventures are described. This is necessary in order to build the analysis and the phenomenon studied in its right context.

In the second section, the survey analysis focuses on three sets of variables: the resource variables, the methods of efficiency variables and the methods of legitimacy variables. These variables are dealt with in order to identify differences in the entrepreneurs' approaches to new venture start-up. In addition to these, a number of background variables are used to highlight the characteristics of the phenomenon studied, viz. entrepreneurial capability in new venture formation.

4.1. Descriptive details of the survey ventures

This section deals with the analysis of the entrepreneurs' backgrounds and the key characteristics of the ventures. In the analysis, the characteristics of the sample are considered, and some key factors are developed for further use in the main analysis.

According to the official statistics, there were 11,310 companies operating within the metal and electronics industry in Finland at the end of 1998 (Statistics Finland 1999). The SME Institute in Turku mapped out the SMEs in Finland, and identified approximately 1,100 firms operating in the metal and electronics industry in four different regions of Ostrobothnia. The companies operating in the metal and electronics industry in Ostrobothnia were targeted in the survey (see Table 8; see also Appendix 4).

Table 8. The population and the data.

	total	sample	response	%
Southern Ostrobothnia	578	37	16	43.2
Vaasa Region	410	60	25	41.7
Middle Ostrobothnia	155	45	13	28.9
Oulu Technology Center	24	24	9	37.5
Unidentified			4	
	appr. 1100	166	67	40.4

The total number of firms identified by the SME Institute still included inherited, purchased or bankrupt companies, for which reason a screening process was necessary. Basing on the listings of the KTM business services, "Ylivieskan Metalli- ja konepajateollisuuden kehittämisprojekti[18]" and Oulu Technology Center a total of 286 identified companies were considered in the sample. This list was then complemented, refined and screened using help from local experts and professionals working in the field as consultants, professors, financiers or as otherwise interested parties. Of these companies, 48 proved to have no contact addresses or the contact information was out of date. These firms were therefore assumed to be out of business. Of the rest of 238 companies, a total of 80 were found not to belong to the sample because they belonged to a larger concern, had been subject of an MBO deal, were inherited companies or did not produce anything concrete. These companies were mainly identified by the expert panel, and some recent changes in the ownership/ management of the companies in question were only reported by the companies themselves when contacted. After these exclusions, the final sample comprised 166 firms, of which 67 managed to respond, making the response rate rise to 40.4 per cent (See Appendix 4 for the detailed sample and response characteristics).

Even if the response rate is fairly good, the total number of responses is relatively small. On the other hand, comparing to the absolute number of firms operating in the field, the sample covers about 5 per cent of the metal and electronics companies. In addition, considering that the focus in this study is on privately held companies started by the entrepreneur, who is still running it, the total number of companies belonging to the sample intended falls dramatically from the original one. For example, of the 286 companies considered, only 58 per cent were identified as belonging to the sample.

It is likely that the response does not reflect a balanced view of the metal and electronics industry. This means that the companies studied do not represent the typical Finnish metal and electronics company, nor are likely to represent the typical Ostrobothnian metal and electronics company. Reasons for this arise from multiple sources that include the nature of the sample, and regional differences in the industry.

The study focuses on companies in Ostrobothnia, which can be characterised as region with small business clusters. I.e. there are several geographic areas where the companies

[18] Development project for metal and machines industry in the Ylivieska area.

are focusing on a special line of industry, which makes the receipt of balanced response in the area studied practically impossible. For example, furniture manufacturing, carpet manufacturing, boat manufacturing and vegetable farming are characteristically situated in small and relatively dense clusters. In the region of Härmänmaa, there is a concentration of companies producing machines and equipment for agriculture, and that of Suupohja, and especially the municipality of Kauhajoki, has the largest concentration of companies operating in the logistics industry in Finland. On the other hand, together with Oulu, the region of Middle Ostrobothnia has seen a rise in electronics and information technology companies. As Table 8 shows, the response rate of the firms in Middle Ostrobothnia remained somewhat lower than in the other areas in target. This may be due to various reasons. For example, the local metal and electronics companies may 'feel exhaustion' regarding new survey studies due to the recent development projects in the area.

Another reason for the low representativeness stems from the sampling procedure. As pointed out earlier, this study concerns a non-probability sample that seeks to explore new venture practises within the metal and electronics industry. In the sampling procedures, the main interest was in minimising the variance in the sample according to certain characteristics, rather than creating a statistically representative sample of the Ostrobothnian metal and electronic companies.

4.1.1. Characteristics of the founders and ventures

The entrepreneurs included in the sample are described in the following Table 9. The Table shows that the distributions in regard to the entrepreneurs' age and level of education, as well as at the level of experience, vary fairly evenly. The ages of the founders when they started up their companies ranged from 20 to 49, with an average of 35 years, which corresponds relatively well with the overall picture of the new venture creators. Liles, for example, suggests that the period of free choice for the nascent entrepreneur is between 26 and 36 years (Liles 1974; also Churchill and Hatten 1987; Scarborough and Zimmerer 1999). The level of education was measured by three items: the technical, commercial, and other type of education, and these three items were included in a sum measure representing the entrepreneur's overall level of education. The sum level of the entrepreneurs' education ranges from zero to nine with the mean of 4.1, and the sum of experience ranges from zero to 15 with a mean of 6.6. There is no correspondent data or results available to compare if the entrepreneurs' educational

profiles in the sample match with the normal sample, but the figures suggest that the sample includes a reasonable share of entrepreneurs with a low, mediocre and high level of education. The mean, on the other hand, suggests that an average entrepreneur either has a very high education in the subject or a mediocre level of education in at least two major types of subjects. This is in line with Krueger (1993), who found some support to the assumption that the breadth of education would be associated with entrepreneurial intentions and propensity to act in case of opportunity (see Appendix 5 for reliability considerations).

The entrepreneur's experience was also measured in terms of four items. The experience measure represents a sum measure of four types of experience: the extent of experience within the industry, the extent of experience of starting up an enterprise, the extent of experience of management, and the extent of experience of cooperation. The main experience the entrepreneurs reported was industry-related. The experience in co-operation received the second highest value, while only a few had any experience in start-ups[19]. On the range of 0–15, with the mean of 8.3 and standard deviation of 3.3, the entrepreneurs' groups seem to vary substantively in their experiences. The descriptive data suggests that the founders in the sample represent a rather normal picture of new venture starters (Appendix 5).

Table 9. Facts about the entrepreneurs.

	range	mean	sd.
average age of founding	20 – 49	35.5	8.2
level of education	0 – 9	4.1	2.3
-technical	0 – 4	2.1	1.6
-other	0 – 4	1.2	1.1
-commercial	0 – 4	0.8	1.2
level of experience	0 – 15	8.3	3.3
-industry	0 – 4	2.8	1.2
-co-operation	0 – 4	2.6	1.1
-management	0 – 4	2.0	1.3
-start-up	0 – 4	1.0	1.1

[19] This was expected since the sample was chosen to exclude other ventures than 'first start-ups'. However, some entrepreneurs reported to have experience of business formation. Stuart & Abetti point out that the best way to learn about making a company is to work in it (1990:151), and the experience may stem from being employed in a start-up venture, or belonging to an unofficial start-up team, supporting and participating in the early phases of the venture formation process.

The ventures studied are described in the following. Since the study focuses on firms that are managed by the initial entrepreneurs, the firms' theoretical age is limited to the entrepreneur's active working age (see Table 10). Churchill & Hatten (1987) suggest that in family businesses the 'normal' operative time for a generation is 25 years, starting from the age of 35 and ending in the transfer of ownership at the age of 60. However, only a few of the companies stay in the hands of the initial entrepreneur for the whole time period. In cases where there are no second generation descendants aspiring to take over the management of the company, the company is likely to be sold or dissolved. In the sample, the ages of the companies range from 2 to 37 years with a mean of 10.9 years. Therefore, overall, these companies can be regarded as survivors in the sense that they had managed to stay alive for the first ten years, and had not yet been subject of ownership transfer.

Table 10. The age of the companies.

years	n	%
2 – 5	19	28.4
6 – 10	21	31.3
11 – 16	12	17.9
17 –	15	22.4
	67	100.0

An interesting characteristic regarding the ventures is the use of a founding team in the start-up. Table 11 shows that the average size of the founding team, including the entrepreneur himself, was 2.5 people, and in fact only about 30% of the ventures were started by one entrepreneur, while the other 70% of the ventures were built up by a team of two or more. This finding is well on a par with Cooper's report on venture formation. Cooper found that the median number of firms started by more than one founder was 70 per cent (Cooper 1986). It seems that the use of teams has been recognised rather generally as important for start-up viability.

Table 11. Facts about the ventures.

	range	mean	sd.
age	2 – 37	10.9	7.3
team size	1 – 6	2.5	1.2
establ.time	0 – 27	6.6	5.6
initial investment (1000 FIM)	5 – 4000	594.5	993.9

The time the firm takes to establish itself in the market varies, and the fast rate of establishment has been used as an indicator of capability of survival (Katz & Gartner 1988). This variable is related to the discussion on the liabilities of newness of young ventures. Klofsten (1998) suggests that the development of the 'business platform', i.e. working and stable relationships in the venture's context, takes approximately three years, after which the pace of development slows down significantly. On the other hand, a number of scholars suggest the venture is in the start-up phase for the first eight years (see the discussion in Section 2.3.3). In the sample, more than 50% of the entrepreneurs estimated that the time for the firm's establishment in the market has taken more than 5 years, with the mean time of 6.6 years. This indicates that the sample consists of fairly 'normal' ventures, with only a few exceptions.

As discussed in the review section of the study, the size of the initial investment has been seen as an indicator of the overall survivability of the venture. In the sample, the size of the initial investment in the ventures varies between 5,000 and 4,000,000 FIM, with an average of about 600,000 FIM. Therefore, the sample includes ventures that have been started practically without any capital investment. On the other hand, ventures started with a high capital investment are also included. As such, the large variance in the amount of initial capital indicates that the ventures have been started using different investment strategies, and that this may have implications on the entry strategies followed, as well. This concerns in particular ventures with low amount of initial capital. On the other hand, as pointed out earlier, this study is biased towards the survivors in the sense that only those surviving to the date are included in the sample. For this reason, also the ventures that were started with seemingly low amount of initial capital have made it into the group of successes. The use of investment measurement is suspect, however, because of the ages of the ventures studied. During the time period from the oldest company included (37 years) to the youngest company (two years), the value of money has changed so dramatically that direct comparisons are likely to produce incorrect results.

As suggested in the theoretical part of the study, the type of business operations may suggest a distinct mode of start-up procedures. The venture may start its manufacturing processes by focusing on one type of production only, or it may seek any sort of orders to gain a foothold in the market and to secure the early cash-flow. The breadth of market strategies is, however, restricted by resource scarcity, and the entrepreneurs adopt a focus strategy automatically. However, in the description of the target industry, it was suggested that within the metal and electronics sector there are ventures with different market

choices. That is, a growing number of companies make specific choices on the intended customers before they start the business formation process. Therefore, the venture may produce final products, be a project supplier, system subcontractor, component subcontractor, parts supplier or a planning company in the initial phases of business. Naturally, the composition of the venture may build on one or several types of operations simultaneously, and due to this characteristic, the venture's type of production is not necessarily a discrete phenomenon. In the following Table 12, the types of operation of the firms are shown. It can be noticed that about a half of the companies, i.e. 49 per cent, started with their own product. The most popular route to the industry was by starting parts manufacturing, with roughly 60 per cent of the companies. On the other hand, only 16 per cent of the companies started with their own planning operations.

Table 12. The type of the operations in the start-up firm.

How well do the following statements describe your firm in the start-up phase? 1= not at all ... 7= extremely well							
	1 – 3	5 –7	kendall tau-b correlations				
	%	%	1	2	3	4	5
1.. producer of final products	44.8	49.3					
2.. project supplier	43.3	43.3	.15				
3.. system subcontractor	58.2	28.2	.08	.44***			
4.. component subcontractor	47.8	34.3	-.28***	-.07	.14		
5.. parts supplier	29.1	58.2	-.35***	-.15	-.11	.50***	
6.. planning company	71.7	16.4	-.06	.26**	.36***	.15	.01

*** p< 0.01; ** p<0.05

The above correlation table provides interesting insights into the compatibility of the different types of production in start-up. The final products type of operations seems to require all the attention of the organisation, and other types of commercialising the ventures production are not present. Being a component supplier or a parts supplier is even negatively associated with the manufacturing of final products at a significant level. This finding suggests that those starting to produce their own final products differ substantively from those delivering to industrial value chains. On the other hand, among those starting with projects, the operations seem to include systems subcontracting and planning operations as well. Finally, the component subcontractors seem to be involved in parts supply.

Overall, the correlation analysis provides a picture of the types of production as a system where those capable of delivering projects are also capable of manufacturing systems, and on the way to parts manufacturing, the level of sophistication decreases and opportunities

to deliver more complicated systems or projects become fewer. The nature of product planning operations in the venture seems to be associated with project supplies and the manufacturing of systems. On the other hand, product planning has little to do with the manufacturing of final products, components and parts. This finding is on a par with the overall picture of the nature of operations in the new ventures. Companies starting with e.g. subcontracting of parts have to follow the customers' orders, instead of planning the products to be delivered themselves. On the other hand, companies producing their own final product either use external planning expertise or the products are early prototypes and the practices of product development take place in the middle of the shop floor during the production. To allow for the further analyses on the effect of the venture's type of production, it is necessary to form a binary variable of manufacturing (see Table 13).

Table 13. The formation of the final product binary and background characteristics revisited.

	all (66)		group no (34)			group yes (33)			t-test
	range	mean (sd)	range	mean	(sd)	range	mean	(sd)	sign.
final product	1–7	3.94 (2.57)	1–4	1.59	(1.0)	5–7	6.36	(0.7)	***
entrep.age				37.41	(8.6)		33.88	(7.5)	*
education				4.26	(0.4)		4.00	(0.4)	ns.
experience				8.79	(0.6)		7.85	(0.6)	ns.
comp.age				9.76	(1.3)		2.09	(1.2)	ns.
team size				2.74	(0.2)		2.33	(0.2)	ns.
establ.time				6.92	(1.1)		6.38	(1.1)	ns.

t-test statistic *** p< 0.01; * p<0.1

The new variable is a dichotomic measure that distinguishes between the ventures producing their own final products and those producing other than final products, i.e. systems, components and parts. In the comparison between the venture types, the characteristics of the entrepreneurs and the ventures seem fairly similar, with the exception of the entrepreneurs' ages at the time of founding. It seems that those starting to produce their own products seem to be slightly younger than those starting to operate within the industrial value chains.

As pointed out in the description of the target industry, the ventures' positioning in specific industrial clusters may have a key impact on the configuration and the survival of the start-up. The sample represents the different clusters of metal and electronics industry as follows (see Table 14). Roughly 44 per cent of the companies regard themselves as relating most strongly to the basic metals industry, while about 21 per cent of the firms relate to the electronics cluster. A total of 11 companies identified themselves belonging

to smaller clusters, such as forest, energy or traffic. Interestingly, 12 companies, i.e. 18 per cent, are not able to identify themselves relating to any particular cluster. This could indicate that the cluster classification is not relevant for start-ups, as some of the entrepreneurs cannot identify their belonging to such organisations. However, it seems that the identification of the industrial cluster is relevant mainly to the companies involved in industrial value chains. As can be seen in Table 14, most of the companies that do not belong to a specific cluster manufacture their own final product, and the demand conditions of the company are therefore not directly affected by its positioning into an industrial cluster. For the rest of the ventures identifying themselves in specific clusters, either the demand or supply side of the operations relate their company to the success criteria of larger groups of firms.

Table 14. The cluster membership of respondent firms.

		n	%	final products%
Metal		30	44.8	40.0
Electronics		14	20.9	42.9
Others		11	16.4	45.5
-Forest	3			
-Energy	3			
-Traffic	2			
-Health	1			
-Plastic	1			
-Telecomm.	1			
No clear cluster		12	17.9	83.3
		67	100.0	

To summarise, the entrepreneurs and their ventures seem to correspond to the average population of start-ups. In the sample analysis, the entrepreneurs included seem to represent the average Finnish small businessman, and their companies seem to be average companies operating in the metal and electronics industry. On the other hand, the analysis of the venture characteristics brought out information that seems likely to affect the venture formation process. The ventures can be classified into two groups of special interest, i.e. companies producing their own products and those supplying the industrial value chains with projects, systems, components, and parts. A further interesting finding is that in addition to cluster membership defining the venture's type of production, the identified membership in an industrial cluster may in some cases depend on the type of the production of the company.

4.1.2. Industry and factor circumstances

The entrepreneurs were asked about their industry and resource conditions during the period of start-up. Table 15 shows comparisons between four cluster groups of firms. The table shows that the industrial conditions in regard to hostility do not differ statistically, with the sole exception of the fragmentation of the industries. The Duncan multiple range test shows that the mean difference between the metal products group and the unclear cluster group is statistically significant at the confidence level of 95 per cent. This result is understandable since in the group of the unclear cluster, the presence of strong leaders of the trade is unlikely, and the industry may seem fragmented[20]. On the other hand, within the metal products group the industrial conditions with long traditions and strong leaders provide the entrepreneurs with a clear view over the industry structure.

Table 15. The industry conditions.

	mean (sd)	cl1	cl2	cl3	cl4	F-value
industry hostility						
.. only few established firms	4.84 (1.63)	5.29	4.47	5.00	5.08	1.00
.. firms very different in the industry	4.81 (1.72)	5.00	4.37	5.27	5.25	1.27
.. plenty of unsatisfied demand	4.42 (1.76)	4.79	4.20	4.36	4.58	0.39
.. a few equally competing firms	4.28 (1.70)	4.28	3.80	4.91	4.92	1.93
.. the products rather equal	4.28 (1.57)	4.14	4.27	4.55	4.25	0.14
.. the industry was fragmented	3.96 (1.66)	4.36	3.60+	3.45	4.83+	2.30*
industry dynamism						
.. the demand in high growth	4.58 (1.78)	5.14	4.40	4.18	4.75	0.78
.. no growth in number of compet.	4.25 (1.72)	4.00	4.53	3.91	4.17	0.51
.. the industry still in the early phases	4.10 (2.05)	3.57	4.03	3.91	5.08	1.30
.. constant change of operation	3.97 (1.69)	3.64+	3.63+	4.00	5.17+	2.80**
.. lots of new competitors	3.28 (1.81)	2.93	2.93	3.45	4.42	2.29
.. fewer methods of competition	3.12 (1.57)	3.50	2.93	2.45	3.75	1.77
the availability of						
...raw materials	5.63 (1.28)	5.00+	5.90+	5.36	5.92	2.03
...facilities	5.60 (1.31)	5.79	5.50	5.82	5.42	0.23
...production technology	4.85 (1.41)	5.21	4.50	5.00	5.17	1.19
...work force	4.84 (1.72)	4.36	4.93	5.18	4.83	0.53
...financing	3.93 (2.10)	4.00	3.83	3.18	4.75	1.11
...distribution channels	3.90 (1.79)	3.71	3.83	3.82	4.33	0.30
range 1–7	cl1= electronics cluster (n 14)		cl2=metal products cluster (n 30)			
	cl3=others (n 11)		cl4=cluster unclear (n 12)			
	** p<0.05; * p<0.10		+ Duncan multiple range test p<0.05			

[20] In some sense, it can be questioned whether there is an industrial context for the companies per se, should the fragmentation be extremely high. In cases of producers of final products, the manufacturing company is related to the industrial context only in regard to input markets, and if the transactions take place through direct market operations instead of e.g. networking, the company could be characterised as being 'alone'.

In regard to dynamism, the industrial circumstances only differ in the rate of change. Here, the Duncan multiple range test shows that the mean differences between the electronics firms and the unclear cluster, and the metal products firms and the unclear cluster, respectively, are statistically significant at the confidence level of 95 per cent. This finding suggests that the environmental conditions are more stable within industrial clusters than outside them. In other respects, the industry conditions seem rather similar to the firms in different clusters.

As suggested in the theoretical framework of the study, the availability of production factors may have an impact on the entry strategy. Table 15 shows that, overall, the availability of raw materials was regarded as the easiest, while financing and access to distribution channels were regarded as the most difficult production factors to acquire. The Duncan multiple range test shows that the mean difference between the electronics firms and the metal products firms in access to raw materials is statistically significant at the confidence level of 95 per cent. This finding may reflect the difference in the production processes of these two branches of industry: in the electronics industry, the raw materials are likely to be of higher sophistication or of special quality, and the sources of the raw material may not be located in the proximity of the venture. In other respects, the clusters seem to enjoy rather similar resource conditions in the period of start-up.

In the following analyses, the industry effects are controlled with two measures: the industry structure and industry demand (see Table 16). These composite measures were built basing on a correlation analysis and alpha scaling (see Appendix 5 for reliability considerations). The structure measure comprises the measures of 'only a few established firms in the industry', 'the products rather equal' and 'few equally competing firms'. In the sum measure, the values reflect the level of industry integration, i.e. low values reflect a fragmented industry structure and, correspondingly, high values represent the situation within an integrated industry.

Table 16. The descriptive statistics of the industry controls.

	mean	sd.	range	alpha
structure	13.40	3.91	4 – 21	.72
demand	13.10	4.73	3 – 21	.80

On the other hand, the demand variable was formed by summing up the variables 'the

demand in high growth', 'the industry still in its early phases' and 'plenty of unsatisfied demand'. Correspondingly, the demand measure reflects the growth rate of industry demand. Therefore, low values reflect a tight competitive condition within the industry due to low growth in demand and high values reflect favourable demand conditions in the industry. In this phase, the availability of resources in the industry is left out of the analysis, as the resource collection process is measured directly in the following phases of the study.

In sum, the background characteristics and the industrial circumstances provide interesting insights to the sample. First of all, an important distinguishing factor in regard to the ventures seems to be the type of the production. This distinction has an effect on the way the ventures relate to the industrial circumstances. In terms of industrial clusters, the ventures belonging to the industrial value chains seemed to identify themselves with a cluster more easily than those with final products. This gives a reason to suggest that the industrial environment for the producers of final products is looser than for those within industrial value chains. Second, the industry conditions in terms of industry concentration and industry demand seemed rather similar in terms of industry hostility, dynamism and the availability of raw materials. The findings on dynamism and hostility suggest, however, that the ventures relating to specific industrial clusters seem more likely to enjoy stable conditions than the ventures targeting end users for their products. In terms of change, the companies outside clear industrial clusters seemed to rate the fragmentation of the industry as well as change of operations significantly higher than those within clusters.

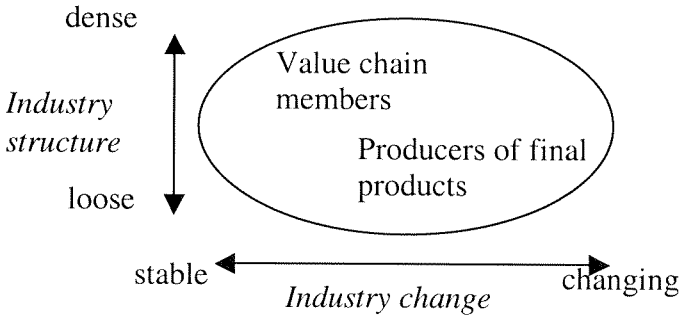


Figure 12. The industrial conditions of the ventures.

The above tentative figure describes the ventures' industry circumstances according to the type of the production the company is involved in. It is suggested that for the companies

within value chains, the industry structure is dense and, correspondingly, the industry change rather stable. On the other hand, for producers of final products, the rate of industrial change in terms of demand is high, while the industry structure is loose. Considering new venture formation, the nature of the context seems relevant, and may have an effect on the entrepreneurs' start-up practices.

4.2. Linkages of entrepreneurial capability and start-up process

This study seeks to develop new information on the role of entrepreneurial capability in the new venture formation process. In this chapter, the three dimensions of entrepreneurial capability identified in the theoretical part of the study are analysed. The analysis follows the logic of the propositions set in Chapter 2.5. The first section concerns the resource collection practices of the entrepreneur.

4.2.1. Providing resources for the venture

This section seeks to identify the relevant linkages between the patterns of resource collection and the venture characteristics. The corresponding propositions suggested that:

P1: Different types or patterns of resource attainment can be identified in a start-up.
P2: The patterns of resource collection are linked with the entrepreneur's background.
P3: The patterns of resource collection are associated with the prevailing industry conditions.

The resource variables measure the extent the entrepreneurs estimated they had used distinct types of resources from various sources. In this measurement, three sources were identified: the entrepreneur's own resources, the resources collected from/through the network, and the resources collected from purely external sources. On the other hand, in each source, a number of resource types were identified: in regard to the entrepreneur's own resources, the financial and physical resources were measured. The physical resources measure represents the sum of the use of facilities and machinery (see Appendix 5). In the network category, financing, employees, physical resources, as well as the interactional resources were measured. Even though the employees' category could have been included in the category of physical resources, it was kept separate from the sum

measure due to its informational value. On the other hand, the interactional resources included the resources that emerge only as a result of interaction between participants, such as contracts and customers through networks. In the category of the use of external resources, the finance, physical resources, employees, and external expertise were measured (compilations of the measures in Appendix 3). In the questionnaire, the distinction between network sources and external sources was explained to be in the use of market mechanism in the transactions. Consequently, acquiring resources directly from the external sources, the entrepreneur is likely to pay the market price – while through networks the price might be lower but there would be other expectations involved in the exchange. In the cases of all the sum measures, the formation of the measures was based on correlation analysis as well on alpha-scaling (the descriptive statistics in Table 17, reliability considerations in Appendix 5).

Correlation matrix

The correlation matrix of the resource variables is presented in Table 17[21]. From the table, it can be noticed that the entrepreneurs' usage of own financial (EFIN) and physical resources (EFYS) are strongly correlated with each other, which is not surprising. The entrepreneur's initial wealth is reflected both by financial and physical capital. Should the entrepreneur possess good financial resources for the start-up, he is likely to be able to invest in physical resources, as well. On the other hand, if the entrepreneur has a limited number of financial resources of his own, he is likely to have only a few physical resources. However, it is interesting to see the negative correlations between the entrepreneurs' own resources as well as external financing (OFIN) and external physical resources (OFYS). It seems that in the presence of the entrepreneur's own resources, the use of external resources is not required. Respectively, in case there are no previously acquired resources, the start-up needs to be equipped from external sources.

[21] For the analysis, Kendall tau-b correlations were calculated. Kendall tau-b correlation is a nonparametric measure of correlation for ordinal or ranked variables, and therefore suitable for analysing scales such as Likert.

Table 17. Descriptive statistics and correlation matrix of the resource variables.

	alpha	mean	sd.	TNUM	EFYS	EFIN	NFYS	NFIN	NEMP	NRELA	OFIN	OEMP	OEXP
TNUM	na	2.54	1.2	.									
EFYS	0.72	3.12	3.04	-.19*	.								
EFIN	na	1.99	1.7	-.14	.34***	.							
NFYS	0.53	.82	1.6	.28***	.12	.09	.						
NFIN	na	.62	1.2	.32***	.00	-.04	.50***	.					
NEMP	na	.79	1.4	.40***	-.09	.01	.41***	.45***	.				
NRELA	0.55	1.30	2.0	.31***	-.04	-.01	.39***	.26***	.34***	.			
OFIN	na	1.05	1.5	.27**	-.31***	-.34***	.04	-.08	.12	.25***	.		
OEMP	na	2.12	1.8	.06	-.20*	-.01	-.16	-.01	-.35***	-.07	.11	.	
OEXP	na	1.09	1.3	.20	-.12	-.02	.21**	.15	.22**	.30***	.37***	.14	.
OFYS	0.72	4.03	3.14	.17*	-.68***	-.25***	-.10	.01	-.03	.03	.41***	.37***	.25**

Significance: *0.1; **0.05; ***0.01 Kendall tau-b, listwise exclusion of missing values (N=66).

Another interesting finding is that the entrepreneurs' use of their own resources correlates negatively with the size of the team (TNUM). This can be interpreted in two ways: first of all, lacking their own resources, entrepreneurs seek to involve a start-up team in the venture formation process in order to compensate the need for internal resources. Another – and more likely – interpretation is that in case an entrepreneur has high abilities in networking, he does not need to make heavy personal investments, but he can use the resource base the team and the related network is able to offer. This latter interpretation is supported by the finding that the entrepreneurs' use of network resources (NFIN, NFYS, NEMP, NRELA) correlates strongly with the size of the team.

A further set of findings relates to the sparse associations between the use of network resources and of external resources. While the use of external resources seems to be negatively associated with the number of the entrepreneurs' own resources, the relation to the networking resources seems vague. However, the relationship between the use of network employees (NEMP) and external employees (OEMP) seems negative at a significant level. This suggests that the employing of friends, colleagues and other members of personal network compensates the use of external channels of recruitment. On the other hand, if the entrepreneur chooses to seek for employees from external markets, it is unlikely that he will employ people from a network.

Table 17 shows further that the use of network employees (NEMP) and the use of external expertise (OEXP) are positively associated. This reflects the entrepreneur's tendency to relate to other people's help. This means that should the entrepreneur use his network for resource attainment, he may be active in acquiring expert help from various sources, including previously unknown people. Finally, the use of network interactional resources (NRELA) and external financing (OFIN) seem to be positively associated.

Overall, the findings in the correlation analysis could suggest that resource collection from the network and from external sources compensate rather than complement each other. However, this is not the case. Table 18 (below) shows that the use of network resources is positively correlated with the overall number of the resources of the ventures. This association would suggest that the use of network resources is directly related to the use of external resources. However, when the sample is divided into two according to the number of external resources used, the relationship between network resources and external resources alters drastically. The relationship between the two types of resources is strong only in the presence of few resources in general. Therefore, in the presence of

few external resources, also the number of network resources seems low, but in case of a high number of external resources, the use of network resources seems independent of collecting resources from external sources.

Table 18. Partial correlations of the use of external resources and network resources[22].

	external resources		
	overall	low	high
	(66)	(33)	(33)
	.21***	.41**	-.04

sign. ** p<.05; *** p<.01 Pearson correlation, listwise exclusion of missing values.

The above analysis gives a reason to suggest that the use of network resources and external resources form separate patterns of resource acquisition in the new venture formation process. Therefore, the relationship between the use of network resources and external resources seems to be complicated. Of particular interest is the case where the level of external resources is high. Why should the use of network resources be independent of the use of external resources? Is it a matter of individual preferences or can other reasons be found to highlight the mechanism? To find out more about the relationships between the methods of resource attainment, the variables included in the correlation analysis were analysed further using an exploratory factor analysis.

Principal components analysis

The principal component analysis[23] with free extraction of factors produced four factors with an eigenvalue of over 1.00. The three-factor model is presented in Table 19. The model explains a total of 72.1 per cent of the variance, and the communalities of each variable seem fairly high, with the lowest value in the variable networking relationships (NRELA). The analysis shows that the resource types group together as expected in the correlation analysis.

[22] See Appendix 5 for the reliability considerations.

[23] Kim & Mueller (1978: 19–20) point out "that factor analysis represents the covariance structure in terms of a hypothetical causal model, whereas components analysis summarises the data by means of a linear combination of the observed data." The principal components analysis was chosen to provide an efficient representation of the cases in terms of resource use.

Table 19. Factor analysis of the methods of resource collection.

	Factor				
Variables	**1**	**2**	**3**	**4**	**Communality**
NFIN	*.835*	-.001	-.284	.207	.820
NEMP	*.737*	-.009	.184	-.413	.756
NFYS	*.675*	.229	.352	-.201	.672
TNUM	*.596*	-.301	.326	.006	.556
EFIN	.005	*.807*	.003	.148	.678
EFYS	-.148	*.803*	-.126	-.260	.750
OFYS	.006	*-.660*	.265	*.567*	.831
OFIN	-.007	*-.500*	*.730*	-.000	.787
OEXP	.152	.002	*.775*	.251	.686
NRELA	*.481*	.000	*.541*	-.111	.537
OEMP	-.121	-.002	.009	*.910*	.855
Eigenvalue	3.17	2.45	1.17	1.13	
% variance explained	28.8	22.3	10.7	10.3	
Cumulative value	28.8	51.1	61.8	72.1	

Principal components analysis – Varimax rotation. Loadings are abbreviated to a three-digit level.
KMO measure of sampling adequacy .640 (results exceeding .50 acceptable).

Factor 1: This first factor accounts for 28.8 per cent of the total variation, with five main loadings. The variables called 'team size' (TNUM), 'physical network resources' (NFYS), 'financial network resources' (NFIN), 'employees from network' (NEMP) and 'networking relationships' (NRELA) all represent resource collection through networking, which suggests that this factor could be labelled as the *resource collection through networking* factor. This factor seems rather clear and understandable.

Factor 2: The second factor captured a total of 22.3 per cent of the variance, with four main loadings. The variables 'entrepreneur's own physical resources' (EFYS) and 'entrepreneur's own financing' (EFIN) have high positive loadings, while the variables 'external physical resources' (OFYS) and 'external financing' (OFIN) have high negative loadings. The setting suggests that the factor is associated with a high amount of private capital held by the entrepreneur and, as the outcome, the start-up is characterised by previously accumulated resources. Therefore, the factor represents in particular the tendency of using internal sources for finance and machines. This factor could be labelled as the *internal resources* factor.

Factor 3: This factor accounted for 10.7 per cent of the total variation, and it includes only three main loadings. The variables 'external financing', 'external expertise' and 'network relations' receive high loadings, and suggest the factor is associated with a pattern characterised by external acquisition. The pattern is complemented by the use of network

resources that would be difficult to purchase. Therefore, the factor could be labelled as the *external acquisition* factor.

Factor 4: The variables 'external employees' (OEMP) and 'external physical resources' (OFYS) dominate the fourth factor. These variables represent the allocating of employees and physical production factors through external sources. The factor reflects the tendency of seeking work force for the operations directly from the market. The negative loading on the variable 'network employees' (NEMP) supports this interpretation. For this reason, the factor could be labelled as the *external workers* factor.

While the use of networking resources seems to form a fairly clear factor of its own, resource collection from external sources is divided into two factors. These factors – the external acquisition factor and the external labour factor – represent the different approaches to equip the venture in the start-up process. Consequently, in the case of a low level of external resources, the use of networking resources is correspondingly low. However, in the case of a high number of external resources, the need for networking resources in these two approaches is likely to be different. Even though the use of external resources is twofold, for the following analyses they are still kept together in order to represent the orientation to directly external sources, contrasting it with the networking approach.

Resource collection practises and the entrepreneur

Proposition 2 suggested that the eventual patterns of resource attainment would be related to the entrepreneurs' background. For analysing the role of the entrepreneur's background in the use of resources, three binary variables were formed. The three dichotomic variables – entrepreneur's technical education, the entrepreneur's experience and networking activity – were formed by dividing the entrepreneurs' group into two according to the range of the variable (see Table 20). The reason for including the dichotomic measure in the technical education follows the research setting. In the design of the empirical study, the sample was systematised to include only the firms with a productive core, i.e. for the entrepreneurs, the creation of productivity would be needed. The measure in technical education works therefore for analysing if the entrepreneur's technical knowledge plays a role in the venture formation process.

The measure on the entrepreneur's experience is a sum measure reflecting the different

types of eventual experience (see Appendix 5). Furthermore, the entrepreneur's networking activity is included in the analysis. The measure is formed of a sum measure of five items representing different ways of creating and developing social networks (see Appendix 5). As such, the sum measure reflects the entrepreneur's overall activity in networking.

Table 20. The binary variables for the comparison.

	all		group Low		group High		t-test
	range	mean (sd)	range	mean (sd)	range	mean (sd)	sign.
technical education	0–4	2.12 (1.6)	0–2	.77 (0.9)	3–4	3.59 (0.5)	***
entrepreneurial exper.	0–15	8.33 (3.3)	0–8	5.24 (2.1)	9–15	10.68 (1.8)	***
networking activity	12–28	20.55 (4.2)	12–20	16.74 (2.5)	21–28	23.83 (1.7)	***

sign. *** p<.01

In the following table, comparisons are made between the groups of entrepreneurs according to their level of technical education, entrepreneurial experience and networking activity. From the table we can notice that the overall collection of resources among the entrepreneurs with a higher level of technical education is systematically more extensive than among those with a lower level of technical education. For example, the technically educated entrepreneurs seem to use more physical resources from external sources (OFYS), as well as their use of financing coming from a network (NFIN) seems to be significantly more extensive than among those with a lower level of technical education. The statistically significant differences suggest that the technically educated entrepreneurs do collect more external resources, but that also the level of resource collection in regard to networking seems higher among the technical entrepreneurs. On the other hand, even if not statistically significant, the only method where the entrepreneurs with a lower level of technical education received higher averages is the use of the entrepreneur's own physical resources (EFYS).

From the Table 21, we can further see that the role of the entrepreneur's prior experience in regard to the use of different sources of resources seems modest. The entrepreneurs with a higher level of experience seem to use more physical resources from the network (NFYS), as well as the interactional network resources (NRELA). However, none of the comparisons received a statistically significant difference. This is particularly interesting, because the earlier studies have suggested that the entrepreneur's personal experience would be associated with the performance of the new venture. These findings suggest that experience is not – at least directly – associated with the use of distinct sources of

resources in new venture formation.

Table 21. The use of resource types and the entrepreneur's background variables.

	Technical education			Entrepren. experience			Networking activity		
	Low (34) mean	High (32) mean	sign.	Low (28) mean	High (38) mean	sign.	Low (34) mean	High (32) mean	sign.
EFYS	5.09	3.41	.106	4.46	4.13	.754	4.74	3.86	.399
EFIN	1.91	2.06	.719	2.04	1.95	.839	1.97	2.00	.939
NFYS	.74	.91	.665	.54	1.03	.183	.77	.86	.834
NFIN	.38	.88	.095*	.57	.66	.772	.77	.49	.328
NEMP	.47	1.13	.063*	.57	.95	.291	.55	1.00	.194
NRELA	1.20	1.40	.684	1.07	1.47	.407	.80	1.74	.047**
OFYS	4.38	7.16	.008***	5.43	5.95	.635	5.32	6.09	.480
OFIN	.76	1.34	.112	.93	1.13	.584	.77	1.29	.161
OEMP	1.94	2.31	.393	2.21	2.05	.714	1.97	2.26	.507
OEXP	.85	1.34	.142	.92	1.21	.404	.87	1.29	.208

t-test sign. * p<0.10; ** p<0.05; *** p<0.01

In regard to the role of the entrepreneur's networking activity in the use of different sources of resources, only the use of interactional network resources (NRELA) received a statistically significant difference in the comparison. As expected, the highly active entrepreneurs used interactional resources roughly twice as much as the comparison group. In other regards, even if not statistically significant, the entrepreneurs with a higher level of networking activity seem to use more network originating employees (NEMP), while the entrepreneurs showing low activity in networking receive a higher mean in the use of own physical resources (EFYS). These findings suggest that the entrepreneur's level of activity in networking is related to the way they choose to collect interactional resources for the venture. This means that the use of contracts, co-operation and customership seem more important to the actively networking entrepreneurs.

Resource collection and the industry conditions

The proposition 3 suggested that the use of resources would be associated with industry conditions. In Table 22, correlations between industry controls and resource attainment are depicted (see Appendix 5). The table shows that the sum of the external resources used is not correlated with industry structure or demand conditions. This finding suggests that the direct purchasing of resources from the factor markets seems independent of the

industry conditions: the suppliers are naturally willing to offer resources at normal market prices independently of the level of industry concentration or of the changes in market demand.

Table 22. Relationship between resource collection and industry variables.

	sum of nw.res.	sum of ext.res.
structure	.21**	-.08
demand	.10	-.01
sign. ** p< 0.05	Kendall tau-b, listwise exclusion of missing values.	

On the other hand, the sum of network resources is strongly associated with the industry structure. Therefore, the positive correlation would indicate that in the case of fragmented industry, network-originated resources are used to a lesser degree, and in the case of a more integrated industry, network resources are found more useful. On the other hand, the relationship between industry demand and resource collection from the network seems vague. This suggests that the use of networking when collecting resources is not related to the dynamism within the industry.

Table 23. Comparison of resource use in four cluster groups.

	cl1	cl2	cl3	cl4	F-value	sign.
sum of nw.res.	8.00	4.67	8.09	7.91	2.54	.06
sum of ext.res.	11.14	9.67	9.73	9.64	.16	.92
cl1= electronics cluster (n 14)		cl2=metal products cluster (n 30)				
cl3=others (n 11)		cl4=cluster unclear (n 12)				

The use of resources could be related to the membership of the company in a cluster. Table 23 shows the mean comparison of resource use between four cluster groups. The table shows that in terms of cluster membership, the use of external resources does not seem to differ. This finding supports the earlier suggestion, that the use of external resources is the 'normal' way: the entrepreneurs need to acquire at least some resources directly from the external sources, and, as such, the use of external sources of resources does not imply a tendency, 'choice' or a 'strategy'. Therefore, the use of external resources also appears similar in each context. On the other hand, the use of networking resources differs between the cluster groups. In particular, the cluster group of metal products seems to use relatively few networking resources, compared to the other groups. While the use of external resource collection does not differ from the other groups in any way, the little use of networking resources may suggest that in the start-up of a metal

products producing business, the networking relationships are less utilised than in the other sectors of metal and electronics industry.

In summary, the analysis provides interesting findings on the resource attainment of the ventures. The findings indicate that the use of network resources or external resources compensate for the lack of the entrepreneur's own initial resources. On the other hand, the use of networking resources and external resources seem independent in the cases where the overall number of resources is large. The finding on the negative relation between entrepreneur's own resources and the team size suggests that the entrepreneurs' capabilities in networking are associated with the way they seek resources for their ventures. Finally, the findings suggest that the entrepreneurs' approaches to resource acquisition seem to cluster into two main types: the use of external resource collection and the use of both network-originated resources and external resources. The use of networking resources seems to form a method of its own, giving the start-up process a special character. On the other hand, regarding the use of external resources, the analysis revealed two distinct patterns, the first reflecting the direct acquisition method, and the second referring more to the use of externally acquired working force in the start-up. The results give reason to support the first proposition that there are distinct ways of resource attainment for the start-up.

The second proposition suggested linkages between resource collection and the entrepreneur's background. The analysis showed that the entrepreneurs with a high level of technical education seemed to use more external physical resources, and the use of network-related employees and network-related financing seemed to characterise the technical entrepreneurs as well. In regard to resource attainment, the role of prior entrepreneurial experience did not seem to differentiate between the resource collection approaches. Finally, the entrepreneur's level of networking activity showed significant differences only in the use of interactional resources, but in other respects the differences were modest. Overall, the background of the entrepreneur seemed to have little effect on his approach to resource attainment. These findings are interesting, because they suggest that the approach to the resource collection of the new venture is in many respects independent of the entrepreneur's earlier accumulated human capital. Basing on these considerations, the proposition 2 can be only partially supported.

The association of industry structure and routes of acquiring resources suggested in

proposition 3 was analysed by comparing the industry variables and resource collection. The findings showed that the use of resources in start-up is independent of the industry conditions in all but one case: the use of networking resources was strongly associated with the industry structure. It seems that the use of external resources is conceived as the normal route of resource attainment and it is followed independently of the industry conditions. On the other hand, the resource activation through networks seems to grow in importance in the industrial conditions where the structural integration increases, i.e. the industry is mature and there are few main players in the competition. The comparison between the cluster groups showed that the entrepreneurs within the metal products sector seem to make less use of networking resources than within the other sectors.

4.2.2. Creating productivity

The aim of this section is to highlight the methods of creating productivity in start-up ventures, and to seek answers to propositions P4, P5, and P6, according to which:
P4: Different approaches to creating efficiency in a new venture can be identified.
P5: The presence of different approaches to efficiency creation is associated with the entrepreneur's background and the competitive circumstances within the entered industry.
P6: The presence of different approaches to efficiency creation is associated with entrepreneurs' resource collection practices.

The efficiency variables concern the methods in which entrepreneurs seek to create productivity in the emerging organisation. The measure comprises 10 variables. In the analysis, each variable is studied as an independent method. The descriptive statistics are shown in Table 24 below.

As the literature suggests, in the formation process of the venture, the entrepreneur faces a trade-off between flexibility and cost-effectiveness. Table 24 below shows that, overall, the quick purchase of machinery receives the highest mean as a method of organisational efficiency. This is understandable for new ventures entering the manufacturing sector – the machinery needs to be acquired quickly to enable the start-up of production and organisational learning processes. The need to start up production quickly is also reflected by the high mean of hurrying the first sales. The results do not, however, refer to the building of flexibility in the venture, but rather that the ventures are built to allow the creation of efficiency in them.

The methods gaining a mean below 4.00, on the other hand, seem surprising. The entrepreneurs do not seem to value the accumulation of knowledge in the early phases of the venture. For example, the earlier finding on the role of earlier experience seems to be repeated in this analysis. On the whole, the entrepreneurs do not regard educating oneself before the start-up as of key importance for the emerging efficiency of the venture. Similarly, quick employing does not seem to represent organisational efficiency in a start-up firm. The respondents do not seem to think that the growing number of people in the early phases of the venture would be associated with the creation of efficiency. Furthermore, the entrepreneurs do not regard the use of external expertise as essential for the creation of efficiency in the venture. This is interesting in the sense that especially in the cases where the entrepreneur is starting up a venture in an industry unfamiliar to him, the use of external expertise could help him avoid unnecessary mistakes in the organising process.

Correlation matrix

The correlation matrix in Table 24 shows a line of interesting relationships between the efficiency variables. The writing of a business plan seems to be a rather different approach to organising than the hurrying of the first sales or the acquiring of the machines quickly. Also in other cases, the difference between a quick start-up and a careful one seems clear: For example, getting education before the start-up and the quick purchase of machinery are practically uncorrelated with each other, and the hurrying of the first sales correlates only with team creation, the quick employing and the use of expertise. On the other hand, the use of a start-up team is highly correlated with most of the methods of efficiency. This suggests that team building could be advantageous in either approach to organising the venture. In sum, the correlation table suggests that the variables behave as expected.

Table 24. The descriptive statistics and correlation matrix of the productivity variables.

				Kendall tau-b correlations									Final prod.	
The variable	range	mean	sd.	1	2	3	4	5	6	7	8	9	no	yes
quick purchase of the machinery	1–7	4.9	1.9	.									5.1	4.7
hurrying the first sales	1–7	4.6	2.1	.18*	.								4.8	4.5
writing a business plan	1–7	4.6	2.0	.14	.14	.							4.9	4.2
creation of the start-up team	1–7	4.6	2.2	.25***	.25***	.24**	.						5.0	4.1
careful building of the prod. process	1–7	4.5	1.9	.27***	.13	.28***	.19**	.					4.6	4.4
quick devel. of the control systems	1–7	4.1	1.9	.28***	.17*	.32***	.20**	.45***	.				4.6	3.6**
careful building of the int. logistics	1–7	4.0	1.6	.36***	.07	.20**	.11	.55***	.47***	.			4.5	3.6**
educating oneself before the start-up	1–7	3.4	1.8	.06	.17*	.36***	.25***	.19**	.09	.08	.		3.4	3.4
quick employing of people	1–7	3.3	2.0	.31***	.42***	.20**	.26***	.15	.25***	.22**	.09	.	3.5	3.0
use of external expertise	1–7	3.3	1.9	.18*	.21**	.42***	.30***	.39***	.29***	.33***	.41***	.29***	3.3	3.2

sign. * p<0.1,** p<0.05, *** p<0.01 Kendall tau-b, listwise exclusion of missing values. (N=66).

Table 24 also includes a mean comparison between the firms manufacturing final products and the firms supplying to the industry value chains. The t-test comparisons show that there are only two significant differences between the final products and subcontracting companies: the internal control systems and logistics seem more important to subcontractors than to final product manufacturers. This finding could suggest that for subcontractors the development of internal efficiency may be more important than for the companies with their own final products. Furthermore, the entrepreneurs starting up a subcontracting company seem to value the use of a start-up team more than those with final product firms. However, the difference is not statistically significant. In other respects, the two groups seem fairly similar.

Efficiency and resource collection

To identify the role of the resource collection approaches in the methods of efficiency, it was necessary to construct a binary variable of the methods of resource attainment. The variable was built by splitting the sum variable of the use of different networking resources. In Table 25 below, the measures in both networking resources and external resources are depicted to highlight the nature of resource attainment more deeply. The binary variable (groups Ext. and Nw.) is formed according to the network resources, and the means of external resources in the Ext. and Nw. groups are compared with each other to find out whether this dichotomic variable is capable of distinguishing between different levels of external resources.

Table 25. The formation of the resource collection binary.

	all (66)		group Ext. (35)		group Nw. (31)		t-test
	range	mean (sd)	range	mean (sd)	range	mean (sd)	sign.
network resources	1–22	6.48 (5.05)	0–5	2.74 (1.5)	6–22	10.71 (4.3)	***
external resources	0–24	9.98 (6.83)		8.91 (7.1)		11.19 (6.4)	ns.

t-test statistics *** $p<0.01$

Table 25 indicates that those using network resources are also using external resources to a greater extent. However, the difference is not statistically significant. Nevertheless, the table shows that the distinction between the network resources group and the external resources group differs between those using only external resources and those using both network resources and external resources. In the analysis, the latter group will still be

called 'users of network resources' to make the distinction clear.

In the questionnaire, the entrepreneurs were asked to choose the three most important factors in regard to their venture's efficiency from the efficiency variables. The overall picture of the methods of creating efficiency is shown in Table 26. The methods of efficiency seem to vary somewhat, five of the methods receiving a percentage of roughly 30% or more. The most popular way of creating efficiency in the new venture, writing a business plan, suggests that the early considerations about the new venture configurations and operations are of key importance for the emergence of efficiency. The next methods, quick purchase of machinery, hurrying the first sales, creation of the start-up team and the careful building of the production process, provide a different view on the start-up: they concern the actual operations for building the internal processes for the venture. On the other hand, only nine per cent of the firms reported the use of external expertise and the careful building of the internal logistics to be among the three most important methods for creating efficiency. It seems that the overall picture offers insights into a variety of new venture building, some with analytical, careful approaches to the operations of the firm, while others seek to create the operations as soon as possible, trusting in their ability to adjust the procedures afterwards.

Table 26. The distribution of the most important ways of creating efficiency.

the variable	n	% of firms	%ext.	%nw.
writing a business plan	27	40.3	41.4	40.5
quick purchasing of the machinery	25	37.3	44.8	32.4
hurrying the first sales	24	35.8	44.8	29.7
creating of the start-up team	24	35.8	31.0	40.5*
careful building of the production process	19	28.4	41.4	18.9
quick developing of the control systems	13	19.4	20.7	18.9
getting education before the start-up	9	13.4	20.7	5.4
quick employing of people	8	11.9	20.7	5.4
careful building of the internal logistics	6	9.0	10.3	8.1
use of external expertise	6	9.0	3.4	13.5*

chi-square statistic * $p < 0.10$

The above table also presents a comparison between those using network resources and those using only external resources. All in all, it can be noticed that with the exception of two methods, the creation of the start-up team and the use of external expertise, the group using only external resources relies systematically more on the variety of different methods. This finding could suggest that the building of internal efficiency plays a more important role for this group. On the other hand, those using network resources receive a

higher score in only two items, both of which are significant in the chi-square statistics. In the cases of statistical differences, the users of network resources seem to pay more attention both to assembling a start-up team and to using external expertise. These differences are consistent with the resource attainment patterns.

The parallel use of the different efficiency methods can be analysed with a correlation analysis. Table 27 below shows that the firms following the network resources approach seem to pay parallel attention to fewer internal processes of the venture than the firms following the external resources path. For example, those using only external resources seem to associate quick employing (empl) with a number of other methods. On the other hand, for the group using network resources, quick employing seems to be rather independent of other methods of efficiency. An interesting finding is that while the external resources group pays parallel attention to the employing of people and the forming of the start-up team (empl&team), for the network resources group these operations seem to contradict each other – i.e. the negative correlation suggests that the activities around teaming mean less activity regarding employing. Furthermore, regarding the role of the first sales (sale) in the venture creation process, the methods of efficiency seem to differ between the two groups. While those in the external resources group have a high positive correlation between the first sales and the use of external technological expertise (sale&exper), for those using networking resources, the correlation is negative. On the other hand, the early first sales relate strongly to the formation of the start-up team (sale&team) among the network resources group, whilst those using external resources present only a modest correlation here.

The analysis suggests that the routes in which the entrepreneurs seek to create efficiency in their new organisations seem to vary dramatically according to their mode of collecting resources for the venture. As suggested earlier, the external resources group leans heavily on a large mix of different methods for creating efficiency. The correlation analysis gives a reason to suggest that those methods are also highly interdependent. On the other hand, the few correlations of the network resources group suggest that the building of internal processes may not be the highest priority for this group of entrepreneurs.

Table 27. Partial correlations on the methods of efficiency.

		resource acq.		technical education		end products	
	overall (67)	ex.(35)	nw.(31)	lo (35)	hi (32)	no (34)	ye (33)
empl&mach	.31***	.42**	.16	.26*	.36**	.27**	.35**
empl&exper	.29***	.37***	.14	.23*	.38***	.35***	.24*
empl&team	.26***	.38**	-.09	.22	.23	.30**	.26*
empl&accou	.25**	.36***	.08	.24*	.21	.00	.43***
empl&logis	.22**	.28**	.07	.26*	.18	.03	.36**
empl&bplan	.20**	.30**	-.01	.24*	.10	.14	.23*
empl&proce	.15	.28**	-.10	.04	.16	.07	.21
sale&exper	.21**	.43***	-.08	.19	.14	.36***	.04
sale&mach	.18*	.26*	.07	.16	.25*	.20	.15
sale&educ	.17*	.27**	.07	.28**	-.05	.35***	-.03
sale&accou	.17*	.23*	.04	.14	.11	.19	.15
sale&proce	.13	.24*	-.15	-.01	.22	.24*	.04
accou&exper	.29***	.43***	.02	.29**	.22	.20	.43***
accou&mach	.28***	.39***	.15	.36***	.18	.24*	.32**
team&bplan	.24**	.27**	-.00	.29**	.17	.16	.27**
team&sale	.25***	.15	.30**	.25*	.17	.33**	.28**
educ&proce	.19**	.02	.34**	.21	.15	.23*	.15
educ&logis	.08	-.04	.29*	.16	-.05	.27*	-.09

sign. * p< 0.10; ** p< 0.05; *** p<0.01 Kendall tau-b, listwise exclusion of missing values.

Efficiency and entrepreneur

The partial correlation analysis in Table 27 shows further differences between the ventures. An interesting finding is that, overall, the correlations of the group of high technical education seem modest. This is peculiar, as particularly the entrepreneurs with a high level of technical knowledge could be expected to manage the building of sophisticated production systems, and, thereby, to create productivity in the new venture. The technical entrepreneurs seem to associate with the use and the acquisition of machines (empl&mach), as well as with employing and the use of expertise (empl&exper). Furthermore, for the technical entrepreneurs, the first sales and the quick purchase of machines seem to be associated significantly (sale&mach).

On the other hand, the entrepreneurs with a lower level of technical education seem to associate between a wider range of methods for building efficiency into the venture. Therefore, the correlation between the building of control systems and the purchase of machines received a significant level (accou&mach). The building of control systems seems relevant for this group of entrepreneurs in other regards, too. They associate with the building of control systems and the first sales (accou&sale), the control systems and

the use of expertise (accoun&exper), as well as with the control systems and employing (accou&empl).

In comparison between the two groups of entrepreneurs, differences can be seen in the relationship between the prior education for the start-up and the first sales (sale&educ). The entrepreneurs with a lower level of technical education seem to connect these methods, while for the entrepreneurs with a higher level of technical education, the use of these two methods seems independent of each other. On the other hand, the entrepreneurs with low technical education seem to associate the use of external experts and the first sales (exper&sale), the prior education and the first sales (educ&sale), and in the prior education and the creation of internal logistics (educ&logis).

As a whole, the technical entrepreneurs seem to concentrate on few factors, such as employees, machines and expertise, while the entrepreneurs with a lower level of technical education seem to associate efficiency with a larger number of factors. Subsequently, the analysis suggests that the level of technical education results in different patterns of creating efficiency in the new venture.

Efficiency and type of production

As shown earlier, the sample can be divided into two groups according to the type of production: the venture manufactures either final products of its own, or it supplies the industry with projects, systems, components, or parts. It is reasonable to expect that the type of the new ventures' production is likely to affect the methods used in creating organisational efficiency.

Table 27 shows that in the building of efficiency, the gaining of the first sales (sale) seems important for the subcontracting firms. For example, the subcontracting companies relate between the prior education and the gaining of the sales (sale&educ), and the use of technical expertise and the first sales (exper&sale). Furthermore, the relationship between the first sales and the start-up team seems strong (sale&team). The prior education is also associated with the building of the production process (educ&proce) and the building of internal logistics in the venture (educ&logis). As a whole, this pattern suggests that the subcontractors value the use of accumulated knowledge in building efficiency in the venture.

In other respects, employing seems to be an important factor for the subcontractors. They seem to associate employing and the purchase of machines (empl&mach), the external expertise (empl&exper) and the formation of team (empl&team), respectively.

The producers of final products group reflects a different pattern. The building of control systems seems to relate to a number of methods, such as employing (accou&empl), the use of external expertise (accou&exper), and the purchase of machines (accou&mach). Employing (accou&empl) plays a central role, too. With the exception of the building of the production process (proce), all the other factors seem to be significantly associated with employees (empl). Therefore, the purchase of machines (mach), the building of control systems (accou) and the building of internal logistics (logis) seem to relate strongly to quick employing (empl). Moreover, the formation of the start-up team (team) is associated with the employing of people (empl), the writing of a business plan (bplan) and the gaining of the first sales (sale). On the whole, the pattern seems to emphasise the organising of the work force and the creation of control systems as of paramount importance for efficiency.

In the comparison between the ventures producing final products and the subcontractors, the approaches to efficiency seem to differ significantly (see Table 27). The high correlation between quick employing and the creation of the accounting systems among those producing final products suggests quite a different approach to organising than in the group of subcontractors, where the correlation is missing (empl&accou). The same setting applies to the relationship between quick employing and the creation of internal logistics: the final product manufacturers associate these two factors, while for the subcontractors, they are independent of each other (empl&logis). Consequently, should the manufacturers of final products have had little interest in employing, they would have had no need to develop internal control systems or internal logistics, either. On the contrary, within the subcontractors' group, the development of control systems and logistics seem independent of employing (accou&empl). This finding makes sense as the subcontractors' customers are likely to be demanding in regard to the processes of their suppliers.

In summary, the analysis of the methods of creating productivity in terms of effectiveness and efficiency provided a number of findings that need to be discussed. In overall, the quick start-up in operations seems to support the creation of efficiency, as well as the preparation of a business plan. This included the quick purchase of machines and

hurrying the first sales. On the other hand, the quick employing of people and the use of external experts are not regarded as useful methods for creating efficiency. These findings suggest that the entrepreneurs seem to emphasise the inflow and outflow of resources in their ventures. To have machines is to be able to produce, and quick sales provide early cash flow. In terms of organisational learning, these findings are interesting. First of all, the need to start the operations quickly could suggest that the organisational learning processes would start, but in the presence of low emphasis on employing and on the use of experts, the learning would consider mostly the entrepreneurial team's learning.

Proposition 6 suggested that the presence of eventual approaches to productivity is associated with entrepreneurs' resource attainment practices. The findings show that entrepreneurs using solely resources from external sources seem to use a wider range of methods for creating efficiency than those using both network and external resources. The latter group seemed to find the start-up teams and external expertise more useful for efficiency than the external resources group. In essence, the analysis indicated that there could be a difference between the external resources group and the network resources group in their emphases on the building of the organisational efficiency in general. That is, those using only external resources are more interested in acquiring the resources to their own possession, and, thereby, in building the processes inside the company, whereas those using also network resources may be more inclined to build business processes that do not necessarily relate to the internal environment of the venture, but are strongly associated with the networking context of the entrepreneur.

According to proposition 5, the presence of different approaches to efficiency is associated with the entrepreneur's background and the competition circumstances within the industry he has entered. The most likely personal background factor to have an effect on organising efficiency in a venture is the entrepreneur's technical education. The analysis brought out findings that suggest that the technical entrepreneurs concentrate on only a few methods simultaneously, while the entrepreneurs with a lower level of technical education used a wider range of methods for efficiency building. A further finding that differentiated the entrepreneurs regarding their education was that the entrepreneurs with a lower level of technical education seemed to associate their prior education with their first sales. In other words, for this group, the low level of education equals with a long time for the first sales to take place, and, respectively, a high level of prior education means implementing the first sales quickly. On the other hand, for the entrepreneurs with a high level of technical education, the first sales and prior education seemed independent. It

seems that the entrepreneurs with a lower level of education seem to assume prior education to offer better possibilities of creating favourable circumstances for quick success in venturing. Whether their assumption is true, cannot be confirmed here.

The analysis brought out interesting findings on the difference of ventures manufacturing their own final products and those doing subcontracting for the industry. It seemed that for the subcontractors, the accumulated knowledge available in the start-up is strongly associated with the building of efficiency. Also, quick employing was visible in many of the significant findings. On the other hand, the producers of final products seemed to associate the building of control systems with a number of other efficiency methods. In general, these findings suggest that entrepreneurs are sensitive to the type of production in their use when organising methods.

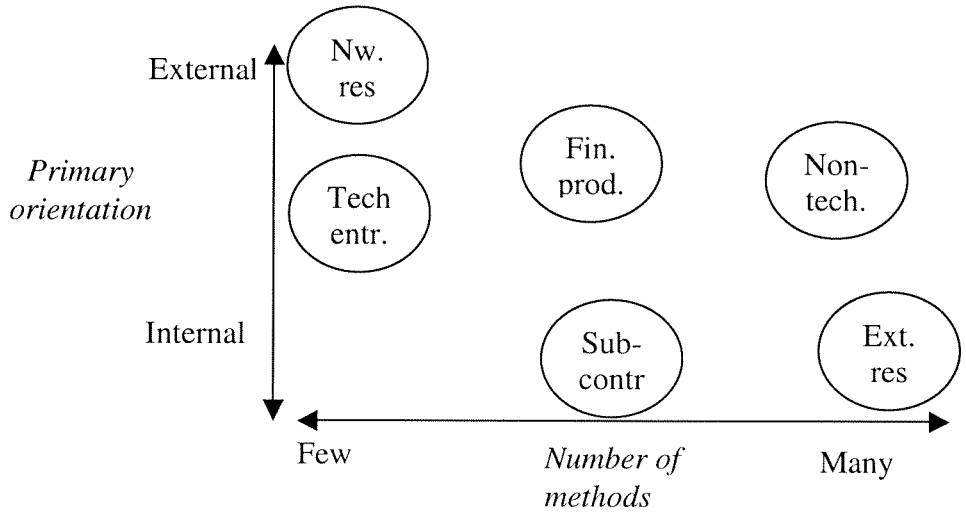


Figure 12. Venture types and approaches to efficiency.

Figure 12 above depicts the most important findings on the differences between the venture types and entrepreneurs. Consequently, those using network resources were dominantly externally oriented and seemed to use only a few methods in creating efficiency, while those using external resources used many methods simultaneously, with an orientation towards the internal processes of the venture. A similar pattern was apparent between the technical entrepreneurs and the non-technical entrepreneurs. In this case, the entrepreneurs with a low level of technical education seemed to pay more attention to efficiency than the entrepreneurs with a high-level of technical education. On the other hand, in regard to external orientation, the two groups seem rather similar. Finally, the analysis differentiated between subcontractors and final product entrepreneurs.

Therefore, those producing final products seemed to pay more attention to the external processes, while the entrepreneurs seeking to create subcontracting businesses were predominantly interested in internal processes. These findings lend support to proposition 4, which suggested that it could be possible to identify different approaches to creating efficiency in a new venture.

4.2.3. Legitimising the venture

This section serves as presenting the corresponding analyses to propositions P7, P8, and P9, according to which...
P7: Different routes of legitimising the new venture can be identified.
P8: The routes of legitimising are associated with the entrepreneur's background and the circumstances of the entered industry.
P9: The ways of legitimising the venture are associated with the methods of resource attainment.

The legitimacy variables concern the ways in which an entrepreneur could seek to gain external approval for his venture. In this study, there were a total of 17 questions measuring the legitimising process (see Appendices 2 and 3). Table 28 below presents the descriptive statistics of the variables.

The descriptive statistics bring out some interesting findings. For example, the entrepreneur's reputation and good business partners were generally considered the most important methods of gaining credibility for the venture. Both of these aspects can be characterised as image rather than operational reasons for legitimacy. Furthermore, of the seven methods gaining a mean above 5.00, only proven quality and operations, as well as the first sale gained relate directly to the operative functioning of the new venture, while the rest of the methods suggest the image, reputation and the power of good friends are important for the process. As such, this finding suggests that the external image of the company is important. It is therefore likely that the ways in which a venture can gain a favourable image differ as an activity from the entrepreneur's other tasks.

In other respects, the table shows that the imitation hypotheses suggested by Aldrich & Fiol (1994) could be rejected, at least at the overall level of the data. The imitation of other firms was generally regarded as unimportant when seeking to create venture

credibility. On the other hand, the findings support Preisendörfer and Voss's (1990) suggestion that isomorphism does not apply directly to entrepreneurs due to their individual backgrounds. Further interesting findings are the low scores in the use of external expertise and the importance of the written business plan for the legitimacy of the start-up. This finding should be considered together with the earlier finding on the importance of business plans for the efficiency of the venture. Consequently, while business plans were considered important for efficiency, they are regarded as trivial for legitimacy. This finding could be understood as an indication of the sporadic use of venture capital in the Finnish business start-ups. Therefore, for the entrepreneurs, pre-planning in terms of a business plan is more useful in real practices than in alluring risk capital to the venture. Finally, building the operations to appear conservative, familiar and understandable does not seem to play any major role in legitimising the venture.

Correlation matrix

The correlation matrix in Table 28 brings out a line of interesting findings. The entrepreneur's reputation seems to be positively correlated with most of the legitimising methods, with the exception of the possibility of starting with small investments, received financing and the first sale gained. This is as expected, the good reputation is likely to have much importance in the start-up. Only in the approaches where the venture is able to limit its dependence on its environment, e.g. by securing its cash flow, a good reputation is of minor importance. The financing obtained correlates highly with some of the methods. For example, the written business plan, the use of external expertise, the imitation of others, functioning production and good business partners receive high loadings. These relationships suggest that the data behaves in a similar way as in most of the research on venture capital. On the other hand, the financing obtained correlates negatively with the possibility of starting with small investments, which suggests that the variables behave consistently. The name of the company brings out interesting, although expected relationships: the variable seems to be highly correlated with the image of the company, the juridical form of the company, the start-up team, as well as the entrepreneur's reputation. All these relationships seem to relate to the external credibility of the company, and they suggest that the variable behaves consistently. This is supported by the finding that the name of the company neither correlates with the first sale gained, nor the possibility of starting with small investments.

Table 28. The descriptive statistics and correlation matrix of the legitimacy variables.

The variable	range	mean	sd.	1	2	3	4	5	6	7	8	9	10
1. the reputation of the entrepreneur	1 – 7	5.91	1.37	.									
2. good business partners/co-operation	1 – 7	5.75	1.43	.34***	.								
3. proved quality of the operations	1 – 7	5.64	1.48	.36***	.25**	.							
4. the first sale gained	1 – 7	5.43	1.76	.16	.17*	-.14	.						
5. proved functioning of the production	1 – 7	5.34	1.57	.28***	.27***	.57***	-.17*	.					
6. the set up/expertise/reputation of the team	1 – 7	5.18	1.81	.32***	.37***	.35***	.22**	.27***	.				
7. the image of the company	1 – 7	5.09	1.81	.48***	.35***	.35***	.06	.20**	.34***	.			
8. possibility to start with small investments	1 – 7	4.87	1.81	.04	.11	-.03	.25***	-.15	.04	.01	.		
9. proved cost efficiency	1 – 7	4.73	1.67	.21**	.17*	.31***	-.03	.38***	.12	.19**	.05	.	
10. received financing	1 – 7	4.31	2.09	.09	.26***	.06	.06	.25***	.15	.13	-.17*	.22**	.
11. name of the company	1 – 7	3.99	1.84	.32***	.31***	.27***	.00	.19*	.35***	.59***	-.03	.12	.10
12. purchase deal of raw materials	1 – 7	3.69	1.84	.26***	.28***	.10	.19**	.13	.09	.19**	.18*	.28***	.09
13. a written business plan	1 – 7	3.63	1.87	.25**	.18*	.15	.13	.19*	.26***	.20**	-.11	.23**	.31***
14. the juridical form of the company	1 – 7	3.55	1.84	.25**	.26***	.28***	-.11	.29***	.26***	.33***	-.05	.27***	.20**
15. the conservativeness of the operations	1 – 7	3.22	1.67	.22**	.16	.21**	-.05	.24**	.04	.26***	.05	.31***	.18*
16. the use of external expertise	1 – 7	3.19	1.49	.38***	.39***	.18*	.24**	.16*	.27***	.35***	.08	.11	.31***
17. imitating others in the start-up process	1 – 7	2.43	1.42	.25**	.23**	.13	.12	.08	.10	.20**	.06	.23**	.27***

The variable				11	12	13	14	15	16
11. name of the company	1 – 7	3.99	1.84	.					
12. purchase deal of raw materials	1 – 7	3.69	1.84	.20**	.				
13. a written business plan	1 – 7	3.63	1.87	.12	.17*	.			
14. the juridical form of the company	1 – 7	3.55	1.84	.49***	.12	.39***	.		
15. the conservativeness of the operations	1 – 7	3.22	1.67	.33***	.31***	.16*	.41***	.	
16. the use of external expertise	1 – 7	3.19	1.49	.35***	.28***	.43***	.30***	.12	.
17. imitating others in the start-up process	1 – 7	2.43	1.42	.30***	.30***	.24**	.35***	.37***	.42***

sign. * p<0.1,** p<0.05, *** p<0.01 Kendall tau-b, listwise exclusion of missing values. (N=66).

The negative correlations reveal some interesting relationships in the data. The first sale gained correlates negatively with the proven functioning of the production. Even if not statistically significant, the first sale gained and the proven quality of operations seem to correlate negatively. These findings are logical, as the first sale refers to the hurrying the start-up, while the emphasis on functioning production or quality issues suggest that the start-up is more careful. On the other hand, the first sale correlates substantially with the start-up team, the possibility of starting with small investments, the purchase deal of raw materials and the use of external expertise.

Legitimacy and resource collection

Even if the first glance over legitimacy variables suggest that the creation of face validity in the venture would stem mainly from the building of an external image rather than doing the right things within the company, the relationship between the approaches to resource collecting activities and legitimacy needs to be studied. Table 29 below shows the comparison between the external resources group and the network resources group in regard to their methods of legitimising the new venture.

For the external resources group, the entrepreneur's reputation seems the most important factor, together with good business partners, the proven quality of the operations and the first sale gained. On the other hand, those using only external resources did not regard the imitation of others or the use of external expertise as something that would create legitimacy for their ventures. Moreover, the conservativeness of the operations and the written business plan seemed rather meaningless for these entrepreneurs as methods for legitimacy.

For those using network resources, the quality of the operations, team, business partners and the entrepreneur's reputation seemed to be the main factors of legitimacy. As such, the patterns seem similar to the external resources group. However, as a whole, it can be said that for those using network resources, the methods of legitimacy play a more crucial role: with the exception of the 'possibility of starting with small investments', the network resources group gains a higher mean than the external resources group. The most evident difference can be seen in the three highest scoring variables. Those using network resources seem to value the methods 'proven quality', the 'set up/expertise/reputation of the team', and the 'good business partners' significantly more than those using external resources. It seems that one of the teams' major tasks is to make the venture appear

credible. The differences also bring out the finding that the network resources group does not only value the external image but also the role of internal processes, as 'the proven functioning of the operations' played a more important role for those using network resources, as did 'a written business plan', too.

Table 29. The mean values of the most important means of legitimising the venture.

variable	ext.res. mean sd.	netw.res. mean sd.	t-test sign.
proven quality of the operations	5.26 (1.74)	6.10 (1.01)	.018
set up/expertise/reputation of the team	4.34 (1.86)	6.06 (1.24)	.000
good business partners/co-operation	5.46 (1.62)	6.06 (1.12)	.085
entrepreneur's reputation	5.77 (1.44)	6.03 (1.30)	ns.
first sale gained	5.09 (1.85)	5.77 (1.06)	ns.
proven functioning of the production	4.94 (1.77)	5.74 (1.21)	.038
image of the company	4.74 (1.96)	5.42 (1.57)	ns.
financing obtained	3.77 (2.11)	4.90 (1.83)	.028
proven cost efficiency	4.69 (1.73)	4.74 (1.63)	ns.
possibility of starting with small investments	5.00 (1.77)	4.68 (1.89)	ns.
name of the company	3.71 (2.01)	4.23 (1.61)	ns.
written business plan	3.14 (1.80)	4.06 (1.79)	.041
purchase deal of raw materials	3.51 (1.82)	3.77 (1.80)	ns.
juridical form of the company	3.49 (1.90)	3.55 (1.79)	ns.
use of external expertise	2.89 (1.43)	3.48 (1.50)	ns
conservativeness of the operations	3.14 (1.79)	3.26 (1.55)	ns.
imitating others in the start-up process	2.17 (1.36)	2.65 (1.40)	ns.

Interestingly, even if the concern for the external image of the venture seems to differ between the groups of companies, the measures such as 'the image of the company' or 'the entrepreneur's reputation' did not reach a significant level of difference. Both of these measures were considered equally important by the companies. Finally, the rather neutral score of the 'financing obtained' is surprising. Although the literature suggests that the financing obtained increases the overall credibility of a venture, the entrepreneurs did not seem to regard it as important. However, the network resources group did receive a significantly higher mean than the external resources group regarding the role of financing.

Interaction of legitimacy methods

To allow for further analyses, the legitimising methods were reorganised into five sum variables: high profile approach, operative approach, incremental approach, safe play approach and high external image approach. To create the sum variables, factor analysis,

correlation analysis and alpha scaling were used (see Appendix 5). The high profile measure includes the use of external expertise, business plan, and financing obtained. These methods reflect the professionalism of the venture, as an aspiration of designing the venture to be a success from the very early phases.

The operative approach measure comprises three items, the proven functioning of the operations, the proven quality of the operations, and proven cost efficiency. As such, the measure reflects a production-oriented method of legitimising the venture in the market.

The high image approach comprises six items: the image, name, and the juridical form of the company, good business partners, the entrepreneur's reputation, and the team. Together, these items reflect the venture's profile as a trustworthy start-up with a recognisable name and well-known people building it.

The safe play approach consists of three items: the conservativeness of the operations, purchase deal of raw materials and imitating of other in the start-up.

Finally, the incremental approach is built of two items: the first sale gained and the possibility of starting with small investments. This measure reflects the entrepreneur's nature as preferring positive cash flows through the venture, and showing that the start-up does not assume high risks due to heavy investments. The sum variables are depicted in the following Table 30.

Table 30. The descriptive statistics of the legitimacy sum variables.

				Pearson correlations			
	mean	sd.	range	1	2	3	4
1. image	29.5	7.4	6–41	.			
2. operat	15.7	4.0	3–21	.486***	.		
3. high profil	11.1	4.3	3–19	.509***	.381***	.	
4. inkrem	10.3	2.9	3–17	.127	-.085	.064	.
5. safe play	9.3	3.7	2–14	.496***	.362**	.424***	.202

*p<0.1; **p<0.05; *** p< 0.01

Table 30 includes also the correlations between the legitimising methods. As the table shows, the measures are highly correlated with each other, with one exception, viz. incrementalism. The close associations between the measures suggest that they are not exclusive but can be followed simultaneously. However, the weak association between

the incremental approach and the other legitimising approaches indicate that these strategies may be difficult to combine in practice.

Legitimacy and environmental conditions

The theory suggested that entrepreneurs are likely to use the entry strategies that support the viability of their venture. Viability may be attained using different routes in different types of contexts. Therefore, the industry circumstances may have an effect on the need to use specific strategies of legitimising the new venture. To identify the relationship between legitimising methods and industry, the following Table 31 depicts a correlation analysis of the relationships between the industry controls and legitimacy methods.

Table 31. Correlations between industry controls and legitimising methods.

	Image	Operat.	High pr.	Safe pl.	Inkrem
Structure	.13	.27***	.06	.11	.03
Demand	.02	-.03	.10	-.02	-.03

sign. *** p< 0.01 Kendall tau-b, listwise exclusion of missing values (N=66).

Table 31 shows that, as a whole, the entrepreneurs use different legitimising methods rather independently of the industry conditions. The growth rate of industry demand seems to present no significant relationship with the use of legitimising methods. The same applies to the effect of industry structure on most of the legitimising methods. For example, the use of the incremental approach seems to be relatively independent of the industry structure. This is somewhat unexpected, since incremental strategy could support the start-up in case of well-integrated industries, where the liabilities of adolescence, due to competition, are more likely than the liabilities of newness. However, the finding suggests that the use of incremental strategy may stem from the entrepreneur's personal reasons, rather than from adjusting to the environmental conditions.

On the other hand, the attention to the operationality of the production processes seems to have a strong association with the industry structure. In this case, the relationship is positive, which would suggest that in the case of fragmented industries, the entrepreneurs need to pay less attention to the proven operationality of the production, and in the case of high industry density, production functionality increases in importance. However, this may also indicate that within fragmented industries, in the start-up phase the companies do not need to control the liabilities of newness, whereas in the integrated industries the start-

up company may face the competition in full scale earlier, and is thereby likely to suffer from the liabilities of newness. By paying more attention to the proven operationality within integrated industries, the new ventures may in essence seek to secure their viability in the market place.

Legitimising and venture configurations

Finally, the use of different legitimising approaches needs to be compared within the different groups of the sample. In the following Table 32, the mean differences as well as the statistical differences between the groups are depicted.

Table 32. T-test comparisons of legitimacy methods.

	eexp lo vs. hi	final product no vs. yes	netact lo vs.hi	nwres. ext. vs. nw.
image	.13	-1.93	-3.53**	-3.84**
operat	-.23	.52	.05	-1.69*
high profil	.13	.92	-1.99*	-2.65**
safe	.00	.14	-.28	-.85
inkrem	1.91***	-.79	-.00	-.37

t-test sign. * p<.10; ** p<.05

Table 32 above shows that, in general, the strategies for legitimising the new venture do not differ statistically in regard to the type of production (parts production vs. end products), or in regard to the entrepreneur's level of experience. In regard to the entrepreneur's experience, the finding is consistent: the experience factor does not seem to be associated with the way entrepreneurs choose between different methods of starting up their ventures, with one exception. The entrepreneurs with a lower level of experience seem to follow the incremental approach significantly more than those with a higher level of experience. This would suggest that the incremental approach gives the entrepreneur more time to learn the business practices while growing the venture step-by-step, instead of starting in a larger scale. On the other hand, the finding that the type of production in the venture does not seem to differ in regard to the legitimising strategies is interesting. The legitimising approaches seem to be equally important – or trivial – both to the ventures producing final products and to the ventures supplying the industry with projects, systems, components, or parts. However, the producers of final products do seem to follow the image approach more than the subcontractors. The use of this approach is likely to be possible only for the companies that relate directly to the end user, since the

customers of subcontractors may want to inspect the whole operations of the subcontracting firm before closing a deal, but the end users rather seldom have this situation.

Furthermore, both the image and high profile strategies were used significantly more by those highly active in networking and those using networking resources in the start-up. Among the entrepreneurs with high networking activity, the attention in venture formation seems to be directed to the creation of external image. Consequently, the entrepreneurs who are active in their networking practices are also willing to build their ventures to reflect as much sophistication and trustworthiness as possible, while those less active in networking seem to value the impact of external image significantly less. On the other hand, in terms of the operationality of the production processes and of the incremental approach, both of the groups received a similar score. The entrepreneur's networking activity does not seem to differ in regard to the building of production processes in the venture.

Finally, the distinction between the groups of those using only external resources in start-up and those using network resources provided the clearest findings. In general, it can be noticed that the network resources group uses the legitimising approaches systematically more than the external resources group. In regard to statistical differences, those using both network resources and external resources also used significantly more the methods of high profile, operations and image, than those using only external resources. The pattern of legitimising is seemingly similar with the comparison of the entrepreneurs' networking activity, but the picture strengthens somewhat in the measures of high profile and image, while the importance of operationality seems to gain quite a different weight. Even if not statistically significant, also the use of the safe play approach seems to characterise the network resources group better than those using only external resources in the venture formation process.

In summary, in the process of building the new venture, the entrepreneur's reputation and business partners seem the most important factors for creating credibility for the start-up. Furthermore, it seemed that the external image of the venture is more important than the quality of the venture's internal operations. On the other hand, neither the imitation of other companies in the industry nor the writing of a business plan seemed to be important factors of credibility.

Proposition 8 suggested that the use of methods of legitimising the start-up is associated with the background of the entrepreneur and with the circumstances of the industry he has entered. Contrary to expectations, the use of legitimising methods is largely independent of the industry circumstances or of the type of production carried out by the company. However, the operationality approach was associated with the industry structure measure, which suggested that in mature industries the operative arguments are found useful in creating credibility, and – respectively – in fragmented industries there is little use for the operative approach for legitimising the start-up. In the light of these findings, it could be expected that legitimising would be more closely related to the entrepreneurs' personal reasons or preferences.

Even if personal experiences could be assumed to affect the entrepreneur's choices regarding the configurations of the new venture, the entrepreneurs' level of experience did seem not to affect the use of legitimising methods. On the other hand, the entrepreneurs' networking activity was strongly associated with the use of legitimising in regard to high profile and image.

As regards the association between the methods of collecting resources and the methods of legitimising the venture, those using network resources seemed to use legitimacy measures systematically more than those using mainly external resources. The most obvious differences were found to relate to the reputation of the team, among other things. Furthermore, the entrepreneurs' approach to the procurement of resources for the venture was closely associated with the ways they seek to make their ventures credible. These findings lend support to proposition 9, according to which the approach of legitimising the venture is associated with the methods of resource attainment.

An interesting observation regarding the legitimising strategies is that the use of one method does not seem to exclude the use of other approaches. However, the incremental approach may differ from the other methods in applicability. Proposition 7 suggested that there could be possible to identify different routes of legitimising the new venture. On the basis of the evidence discussed above, the propositions seem to hold.

5. SYNTHESIS AND DISCUSSION

The present synthesis and discussion chapter of the study is divided into four sections. First, the study and the key results are reviewed, and a synthesis on the results is developed. Second, the wider topics of the study, considering the entrepreneurial task, are discussed. Third, the limitations of the study are discussed. Finally, the fourth section includes a presentation of the research implications.

5.1. Overview to the study

This study started with a brief analysis of the entrepreneurial phenomenon, in which it was suggested that entrepreneurial activity is a combination of collecting and combining resources for a new venture. The study was positioned in the interactionist approach to entrepreneurship, where the phenomenon is seen from the point of view of both the key person and his operating context. Next, the concept of entrepreneurial capability was defined to represent a person's ability to capitalise emerging opportunities, and relate to different aspects in the operating context, activating these parts in the context to be used in the emerging project. With reference to this definition, the purpose of the study was set to focus on the role of entrepreneurial capability in the start-up process and on the mechanisms and trajectories of development that influence the process of business emergence.

The second chapter of the study included a literature review. Because the subject of the research was the entrepreneur's activities in the start-up, it was necessary to focus both on the entrepreneur personally and on the venture start-up. Therefore, the review concerned two distinct levels of analysis: entrepreneurship research and venture formation research. Entrepreneurship research is characterised by a dominant focus on the entrepreneurial person and uses two main approaches: the psychological approach seeks to identify the factors related to the needs and to the capacity of the focal person to undertake an entrepreneurial career. On the other hand, the cognitive approach concerns mainly the nascent entrepreneur's intrinsic, personal decision-making process, describing the personal process leading to entrepreneurial intentions and eventual action. The second level of the literature review dealt with the emergence of the new venture. In that stage, a number of paths to an entrepreneurial career were identified. These paths could be equally preceded by psychological and cognitive processes, but which could not all fit into the research

interest of this study. For this reason, the paths of inheritance, buy-out, portfolio entrepreneurship as well as the entrepreneur's own initial start-up were briefly analysed and discussed. Of these four paths, only the one representing the entrepreneur's own initial start-up was identified as fitting in the research purposes of the present study.

Next, the literature on business formation was reviewed. Since the research in this field has so far been rather sporadic, it was necessary to include some insights into networking research as well as into the resource-based theory of the firm. In the review on business formation, it became obvious that the social pressures affecting the start-up process needed to be taken into account. Therefore, a section on the legitimising processes was included in the review chapter.

As a summary, the theoretical framework was developed in the final section of the second part. The main theme of this study concerns entrepreneurs' start-up practices, and, consequently, the theory deals with those elements that form and contribute to the new venture formation process. In this study, it is suggested that the new venture formation comprises three elements, viz. resource collection, organising and legitimising of the venture. Furthermore, a number of propositions were set in order to analyse these elements in the start-up of companies in the metal and electronics industry. The propositions suggested that instead of the venture formation process being simple, there are different approaches to resource collection, organisation and legitimacy creation to the venture.

Resource collection of the start-up

The results of the data analysis brought out two different types or patterns of resource attainment in a start-up. The two patterns seemed to differentiate between the entrepreneurs using resources from external sources – i.e. buying or renting the necessary equipment, facilities or machines – and the entrepreneurs who use both external resources and network resources. Furthermore, the entrepreneurs using only external resources used seemingly less resources than those using both network and external resources. Here, a finding of particular interest was that instead of seeking to compensate their lack of resources, the entrepreneurs using network resources rather complemented the resource collection by using two routes of resource collection simultaneously. This finding brings in more knowledge on the collection and the use of resources in the start-up process. The earlier studies, such as Grant (1991) and Ylinenpää (1997), pointed to the hierarchical

relationship between the resources, but did not focus on the start-up process. They suggested the division of resources into 'stock' and 'flow' and that these two types of resources affect the existence and the use of each other. On the other hand, the findings build on the results by Foss (1993), who found that of the affective, informational and material resources that the entrepreneur's network could offer, only material resources could make a difference. The results of this study suggest that also the intangible types of network resources are closely associated with the possibility of gaining material resources, and that these opportunities are used in the start-up ventures.

The study suggested further that there would be different approaches to creating efficiency in a new venture. The results showed that this is the case indeed, even if there is some agreement on some general methods of creating an efficient organisation. Therefore, as a whole, the preplanning of the venture, the quick acquiring of the machines and the hurrying of the sales were considered as valid ways to make the new organisation work and produce viability for the venture. However, there were two different patterns associated with the methods of organising efficiency within the venture. The first type concerned a many-sided use of many simultaneous methods, while the second type used only a few but carefully chosen methods. The difference is particularly interesting as there are few studies that have indicated variance in the number of precursor activities in the start-up. The earlier studies by Carter, Gartner & Reynolds (1996) suggested that the average total number of precursor activities by those who really started their businesses is significantly higher than the number initiated by those who gave up or who are still trying to start their business. Further, they found that those not successful in the starting operations were less aggressive in their activities than those who had their businesses started. The distinction between the methods of efficiency, found in this study, is particularly interesting because it was associated with the ways the entrepreneurs follow different ways of resource collection for the venture. Therefore, the entrepreneus using only external resources were paying a great deal of attention to efficiency problems, while those using both external resources and networking resources seemed not to be troubled by the issue in other respects than the creation of the start-up team and the use of external expertise.

Finally, the study suggested that there are different approaches to creating legitimacy for the new venture. In the analysis, the results showed rather wide unanimity on the importance of company image, and the reputation of both the entrepreneur and the team. Furthermore, the entrepreneurs valued the roles of quality and good business partners in

the effort of creating a credible image for the venture. On the other hand, the results suggested that the seeking of trustworthy image through imitating other companies is not considered a viable strategy for legitimising the venture. This finding contrasts clearly with the results by Lant and Mezias (1990), who found that imitation of large organisations would result in patterns of certain organisational strategies. Consequently, it seems that as a context, the venture formation process does not invoke the entrepreneurs to imitation. However, in spite of this unanimity, there was also a pattern that suggested two different approaches to legitimising the new venture, i.e. there was a group of entrepreneurs paying only little attention to the legitimising process, and a group paying considerable attention to it. A further interesting finding here was that the entrepreneurs following the external resource collection pattern paid only little attention to the legitimising efforts for the venture, while those using both external resources and network resources seemed to concentrate heavily on the legitimacy problems of the company. This finding can be directly related to Oliver's (1997) suggestions. She pointed out that cultural support for resource investments may be an important determinant of their success, and that firms may be unwilling, rather than unable, to imitate resources and capabilities, especially when these resources lack legitimacy or social approval. The results of this study widen Oliver's findings to cover the context of venture formation, and the entrepreneur's central role can therefore be seen as even more strategic for the emerging venture than before.

Consequently, the overall pattern indicates that the venture formation process follows two main patterns in resource collection, i.e. the organising and the legitimising of the venture. On the one hand, the entrepreneurs using relatively few external resources seem to be active in organising efficiency within the venture. This is understandable, as the low number of mainly market-priced resources needs to be harnessed into full use in the venture. On the other hand, the entrepreneurs using actively both external and network resources seem to pay more attention to building credibility for the venture than to focusing on internal efficiency. These patterns come close to the earlier findings in the literature (e.g. Aldrich and Fiol 1994; Gartner et al. 1989). However, so far, the literature on new venture formation has not been explicit on the possibility that there would be consistent relationships between the activities in the venture formation process, and that these relationships result in the identifiable patterns of start-up. On the other hand, most of the studies have concentrated on the relationship between certain entry choices and venture performance. In this study, the internal structures of venture formation were studied, and these form the main contribution of the study.

Venture formation and industry characteristics

The identifying of the new venture formation patterns is interesting as such, but understanding the underlying conditions associated with the patterns is necessary in order to evaluate the applicability of the findings. In earlier literature, a number of scholars have suggested that there would be a relationship between entry strategy and industry conditions. For this reason, in this study there were three propositions suggesting that resource attainment, organising and legitimising would be associated with the industry conditions.

The analysis brought out results indicating that resource collection indeed is associated with industry conditions, although the relationship is not straightforward. Therefore, the results suggested that the use of external resources would be independent of the industry conditions, but the use of networking resources, on the other hand, is affected by the industry structure. The finding could be interpreted as indicating that the use of external resources is a 'normal state of affairs', and as such it should not be affected by any industrial conditions, as far as resource availability is at a reasonable level. The use of networking, however, suggests that certain industrial circumstances may support the many-sided use of different sources of resources. The results of this study point especially to the conditions of industrial structure. Therefore, within the industries with fairly integrated structure, the use of network resources may support the start-up process, while in fragmented industries the use of network resources is not considered an important route of resource collection. This is an interesting addition to networking research, where networking has been suggested as a way of creating ways to overcome resource scarcity or to bridging between actors in the market. These results suggest that the use of networking could be affected by the industry conditions in quite an opposite way.

Considering the methods of organising, the effect of industry conditions was evaluated on the basis of the type of production of the venture. The analysis brought out some interesting findings on the approaches in creating efficiency. Therefore, the entrepreneurs targeting their ventures to industrial value chains as project manufacturers, subcontractors or parts suppliers seemed to associate the quick purchase of physical resources, the quick first sales and the role of knowledge with the creation of efficiency. On the other hand, the entrepreneurs with their own final product were mainly operating with the physical resources and the building of internal control systems in the venture. The findings indicate that the type of the targeted industry either as industrial customers or as final

product customers may indeed have a significant effect on the organising of the new venture.

Finally, the role of the industry for venture legitimacy was studied. The earlier literature suggested that the credibility of the business would be important for the viability of the venture and therefore the analysis concerned the methods of building venture legitimacy. The analysis showed that the use of different methods of legitimising is associated with industry conditions, but only partially. Overall, the methods are independent of the industry conditions, i.e. the entrepreneurs' use of various routes for making their ventures appear as credible and trustworthy businesses is not associated with the industrial circumstances. However, in mature and integrated industries, the venture's ability to appear as a functional business capable of high quality, functional production and a competitive level of expenses seems to be important. This finding could be interpreted as reflecting industrial realism and the liabilities of newness faced by the new ventures within old industries, and, as such, follows closely the argumentation of Oliver (1997). Should the entrepreneur be unable to build a functioning venture, the legitimacy of the venture would remain low and result in difficulties in the market entry. However, in case the entrepreneur is able to build the venture to meet the industry standards of quality, production and costs, it would be allowed more easily in the industry value chains.

Venture formation and the entrepreneur

The study also concerned the relationship between the entrepreneurial person and the venture formation activities. The earlier research has focused on this relationship extensively, and various factors such as the initial resources of the entrepreneur, social capital, the level of experience or entrepreneurial competencies have been offered to explain the major parts of the venture formation practices. In this study, the focus was set in particular on the entrepreneur's capability, and therefore the aspects reflecting the entrepreneurs' activities were studied. Consequently, in this study it was suggested that resource collection, organising and legitimising would be associated with the entrepreneur's personal abilities, experience, or level of networking activity.

The analysis suggested that the relationship between the resource collection practices and the entrepreneurial person is not straightforward: on the one hand, the use of external and/or network resources seemed to compensate for the lack of the entrepreneur's own resources. Therefore, the initial wealth of the entrepreneur seemed to have an impact on

the way the entrepreneur chose to form the venture. This finding supported the approach suggested by Cooper et al (1994), regarding the importance of initial wealth on venture viability. On the other hand, the entrepreneur's ability to operate within networks seemed to relate to his use of both external and network resources. Interestingly, the role of the entrepreneur's prior accumulated experience seemed to have little effect on the resource collection practices. The earlier literature has been rather unanimous on the importance of earlier experience in new venture formation. The results of this study are, however, suggesting that at least the overall level of experience is not associated with the ways the entrepreneurs choose to collect resources for their ventures.

Regarding the organising of the new venture, the analysis suggested that the level of entrepreneurs' technical education is associated with the way they use different methods of organising. Therefore, the entrepreneurs with a high level of technical education seemed to use fewer methods of efficiency building than those with a lower level of education. This finding is surprising, as the entrepreneurs with a higher level of education could have been expected to be able to utilise a more sophisticated and wider range of organising methods. The results of this study contrast with the results by Carter et al. (1996) but at the same time seem analogous, however, to an earlier study on other issues. The finding parallels the study by Miller and Chen (1996), who suggested that instead of using a complex set of different tools for strategy making, simplicity in business strategy is beneficial for the overall business outcomes. It also seems that in the building of new ventures it is possible to identify simple and complex approaches, and that the entrepreneurs with large personal know-how are able to operate with a few simple methods, without the need to use a range of different, possibly contradicting tools in order to secure the formation of the efficiency in the venture. Therefore, it seems that the entrepreneur's earlier accumulated knowledge on the subject area is associated with the different patterns of start-up.

Finally, one of the new aspects this study brought together with more traditional elements of start-up, were the actitivities associated with legitimising the emerging venture. For example, Preisendörfer and Voss (1990) suggested the entrepreneur has a sizable effect on the organisational activities and routines, and this study also concentrated on the relationship between the use of legitimising methods and the entrepreneur. The results indicated that similarly to the resource collection activities, the entrepreneurs' level of experience did not seem to associate with the legitimising activities. However, the entrepreneurs' level of networking activity was clearly related to the use of various

methods for building credibility. Therefore, the entrepreneurs active in networking paid significantly more attention to the external image of the new venture, and sought out the methods that supported the gaining of a high profile for the emerging business. Gartner, Bird and Starr (1992) suggested that research should explore the ways how entrepreneurs go about discovering and satisfying each stakeholder's array of needs. It is a process of motivating significant others. While this finding brings out the difference between the entrepreneur's earlier accumulated knowledge and his current ability to act, it certainly underlines the role of networking capability in the start-up process.

5.2. Venture formation and entrepreneurship

At the beginning of the study, it was suggested that the low survival rate of new ventures is one of the most interesting problems in the research on entrepreneurship and small businesses. The earlier literature has formed concepts to characterise the difficulties of new ventures that they need to overcome in order to survive and flourish. Therefore, the liabilities of smallness and newness cover those aspects arising from the lack of track record in business and the lack of influence on the competitive circumstances in the industry. In this study the most problematic situation, the emerging new venture, is in focus. I.e., in excess to the liabilities of smallness and newness, the forming up of a new venture faces a number of liabilities that arise from the start-up process itself.

In other words, in an emerging venture the main source of the liabilities is the very fact that the organisation is still under construction, the first attempts to make the products are still ahead and the resources for a functioning business are still to be collected. For these reasons, the main theme of this study needs to relate to the ways in which entrepreneurs and their emerging ventures seek to avoid or meet the liabilities of start-up.

This study has concerned the role of entrepreneurial capabilities in the process of new venture formation. As a whole, the study suggests that in the process of new venture formation, the entrepreneur faces three different tasks – resource collection, organising and legitimising – and that these tasks seem to gain different emphases among different entrepreneurs and within different venture contexts. However, the question remains whether entrepreneurial capability plays a role in the venture formation process, or whether it is a result of natural selection processes, a function of initial wealth and social capital.

To begin with, some theories suggest that in order to secure the viability of the new venture, the entrepreneur needs to adjust the business to the industrial and environmental circumstances. On the other hand, there are alternative views that suggest that the inherent capabilities and the qualities of the controlled resources bring in the possibility of neglecting the environmental conditions. The results of the study suggest that entrepreneurial capability counts, and that it concerns in particular the managing of environmental conditions and the collection and use of available resources.

One way to identify the adjustment process is to analyse the importance of efficiency within certain industrial contexts. The present study chose Thompson's (1974) argument on the necessity of technological efficiencies as the point of departure for creating an understanding of the new venture formation process. The technological imperative results in the entrepreneur's need to create the production process to be as efficient as possible. In this regard, the analysis brought out interesting findings on the difference between the ventures manufacturing their own final products and those doing subcontracting to the industry. It seemed that for the subcontractors, the development of internal processes is more important than for those producing final products. The results indicate that the presence of different approaches to efficiency is associated with the competition circumstances within the industry the entrepreneur has entered. In other words, depending on the target market, the venture needs to be adjusted to fit in and to meet the market standards.

It is understandable that the type of the venture's relevant environment adds some special characteristics to the start-up strategy. The adjustment process in new venture formation is reflected by e.g. the creation of control systems in the firms seeking to start subcontracting in the industrial value chains. Therefore, the companies producing their own final products seem to operate within a more open environment than those targeting the industrial customers. This result is parallel to the earlier literature which suggests that the characteristics of the industry play a central role in start-up. The findings suggest that entrepreneurs are sensitive to the type of production in their use when organising methods, and subsequently venture formation could be seen as a result of adjusting to environmental circumstances.

However, the adaptation requirement is also necessary for understanding the prerequisites of the entry strategy followed by the entrepreneur. As suggested in this study, the entrepreneur's main goal is to develop viability in his venture, so that the outcome of the

venture formation process would be a company with adequate resources, well-developed organisation and a foothold within the industry. Within dense industrial conditions, the building of organisational viability seems to require two kinds of strategies: first of all, the entrepreneur needs to be able to show requisite control over efficiency for gaining legitimacy for the venture. Second, the entrepreneur needs to create efficiency in the venture in order to be considered as an optional source of supply. In this regard, within the open market setting, the entrepreneur has considerably more degrees of freedom than those operating in industrial value chains. For companies targeting the open markets with their own products, the only requirement set by the target market is to appear credible. In other words, the customers are unlikely to control the efficiency of the venture in real terms; instead, they have to be aware of the fact that the venture is offering a product to the market.

Therefore, within tight industrial settings, the entrepreneur faces the task of creating both efficiency and effectiveness in the venture. In terms of efficiency, the customers within the value chains are demanding, and should the entrepreneur fail to introduce efficiency into the venture, the new enterprise will be subject to the liabilities of newness. On the other hand, within the industrial value chains, the entrepreneur needs to seek control for legitimacy, i.e. the entrepreneur needs to introduce to the venture also those control systems and standards that the venture itself would not require but that the customers expect to find in credible subcontractors. This activity represents the creation of effectiveness for the ventures targeting the industry value chains.

It seems that the process of new venture formation is one of adjusting and creating new practices in alignment with the context. As such, it requires entrepreneurial capabilities such as balancing between contextual necessities and personal preferences. Even if being flexible could be regarded a virtue in the start-up, the results of this study suggest that the entrepreneur is subject to a number of path dependencies – or more likely, natural combinations – which result, among other things, from the route of resource attainment of chosen by the venture. That is, the choices made in the start-up also determine a number of other characteristics in the venture. The steps taken in the earliest phases of the start-up process have an important impact on the subsequent process in terms of emphasis on the different tasks.

Since this study is exploratory by nature, the character of the natural combinations identified could not be studied more thouroughly, nor the flexibility requirements related

to these eventual paths could be analysed. However, the effect of initial resources was analysed. In terms of flexibility, some initial resources are flexible while most of them are results of long accumulation processes, and therefore not very prone to change. Beside the importance of the industry for the venture formation process, the initial resources seemed to affect the process substantially. As pointed out, a wide array of earlier research on new venture formation has centred on the questions on the role of initial resources for the success of the business. The earlier research has pointed to good education, excess resources, as well as to industry and start-up related experience as the initial conditions that would support the beneficial start-up process. However, the venture formation processes did not seem to be affected by high or low levels of prior experience. On the other hand, in regard to education, the analysis showed that the entrepreneurs with a high level of technical education seemed to use more external physical resources, and the use of network-related employees and network-related financing seemed to characterise the technical entrepreneurs, as well. Therefore, the initial conditions did have an effect on the start-up process, even if the character of the prior resources was not of expected nature.

Why earlier experience would appear irrelevant for venture formation, can naturally be due to many reasons. The first explanation would be that each start-up project could be unique in the sense that earlier experiences do not provide much help in the resource attainment, organising and legitimising of the venture. The second reason would be that, as a whole, the level of earlier accumulated experience among the entrepreneurs does not reflect their current ability to carry out the tasks of venture formation. In any case, the relationship between earlier experience and the venture formation process seems intriguing.

The literature on social capital for entrepreneurship continues the discussion on the role of personal networking in the start-up process. The theory suggests that the entrepreneurs with a high amount of social capital would be more capable of starting businesses with real possibilities of survival. This is based on the use of prior accumulated social relations which are activated in the start-up process. To which extent the use of network resources can be interpreted as prior accumulated social capital, or to which extent the entrepreneurial capability of activating the unofficial routes of resource use supports venture formation, is still another issue. However, it is important to see the distinction between 'having' social capital and 'using' it. From the point of view of using networking resources, starting a business without having friends, acquaintances and other relationships is not so different from starting one with all these connections, but choosing not to use

them or being unable to convince these connections to provide the entrepreneur with resources.

In this study, the basic argument was that instead of prior wealth, the main driver of new venture formation is entrepreneurial capability, i.e. the focal person's ability to carry out the formation process. As such, capability would therefore be a more dynamic characteristic than prior accumulated wealth or personal education. In the process of carrying out the entrepreneurial tasks, the entrepreneurial choices or, to follow Penrose (1959), 'preferences' increase in importance and emerge from the background of the venture formation process. These preferences relate to the routes of choosing and combining between resources. Therefore, if the start-up were dominantly guided by preferences, this should be reflected as different tendencies to use the resources that are already in the entrepreneur's control. The findings of this study on e.g. the negative relationship between entrepreneurs' own resources and team size suggests that entrepreneurs' capabilities in networking are related with the way they seek resources for their ventures. On the other hand, the entrepreneurs' level of networking activity was positively associated with the venture formation activities, which suggests that active social capital supports the start-up process. However, the main aspect in the social capital dimension was the role of resource attainment. The entrepreneurs were identified to use various sources in their resource collection, and a distinction was drawn between those using only purchased or rented resources and those also using resources collected from the network.

The literature on venture formation has so far been studying the effects of environmental conditions and of initial resources on the viability of new ventures, without taking an explicit stance on the problem of who is able to manage the complex process and carry out the tasks of resource collection, organising and legitimising. As pointed out in the study, teams start a large share of new ventures. This arrangement is practical in the sense that a team can together carry the risks associated with the start-up as well as the various tasks associated with the formation process. In other words, the formation of a team equals with the use of the network; the team represents important resources and works as convincing evidence for the stakeholders on the credibility of the venture.

5.3. Limitations of the study

In the final comments of the study, the reliability and generalisability of the results are discussed. The discussion on the validity issues of data collection and measurement instruments took already place in Section 3.4. From the point of view of quantitative studies, the reliability problem concerns the quality of the findings and the overall quality of the study. (Brinberg and McGrath 1985) In quantitative studies, reliability relates to the question if the measure is stable, i.e. if it yields the same results on different occasions. In organisation research, and in particular in studies of entrepreneurship, the stability of the research target is suspect, and therefore the stability of the measures would be difficult to evaluate. However, the quality of the measures can be assessed against the consistency and credibility of the findings and the observed variances across the different groups in the sample (Emory 1985). As such, the analysis produced fairly consistent and interpretable results, which can be related to that sparse knowledge gained from the earlier research. However, as most organisational studies, the present study can only suggest new possibilities rather that close down old questions.

In a sense, reliability is strongly related to the assumption of generalisability of the findings. The generalisability of the study findings is an important characteristic determining the overall quality of the study. In quantitative studies, generalisability concerns most of all the question what is the probability that the patterns observed in the sample will also be present in the wider population from which the sample is drawn. (Emory 1985) In this study, the sample consists of a purposeful selection of Ostrobothnian ventures in the metal and electronics industry, including only new start-ups with their original entrepreneurs managing the ventures. In spite of the importance of the metal industry, the knowledge base on the Finnish metal and electronics industry, let alone the Ostrobothnian ventures, is surprisingly small. Generalising the results to cover the target industry as a whole would not be recommended. This limitation arises from the nature of the purposeful sample, where the findings cannot be generalised in regard to population, but in regard to theory, as in qualitative research. In other words, instead of pointing to the metal and electronics industry, we should point to the theory of new venture formation, and ask if the results of this study should be taken into account in the building of an understanding on the start-up and its contingencies. Therefore, further studies are needed before overall generalisability can be discussed.

This study refrained from making a direct link to performance, even if the large majority

of the studies in the field focus on this point. This limitation means that the results cannot be translated into recipes of success or demise, but should rather be considered insights into the patterns of entrepreneurial activity. The implicit message of the study is naturally pointing to the importance of the entrepreneurial capabilities for performance, but in this phase, the sole exploration of the phenomenon itself suffices.

A final and important limitation is the time perspective of the study. By nature, the present study is cross-sectional and retrospective. Therefore, it is difficult to estimate whether the activity observed is intentional, or whether it solely bases on rules of thumb. However, the findings on the use of business planning in the creation of efficiency in the venture suggest that a great deal of the entrepreneurs are in fact operating with intentional premises, and that the configurations of the new ventures are results of intentional action.

5.4. Research implications

New venture formation relates to a process that seeks to optimise the establishment of a viable business. This process is subject to, among other things, entrepreneurial preferences, resource constraints, the capability impediments of the main actors, and path-dependencies. However, even though the factors affecting new venture formation are multiple, the process is not random, unpredictable or unsearchable.

One theme in this study has been the character of entrepreneurship as an activity. To date, the entrepreneurial phenomenon has been regarded mostly as a cognitive or a psychological issue, and the activity side of the story has been mostly forgotten. The start-up of new businesses is traditionally conceived as the stereotypical case of entrepreneurship. In this study, three activities, i.e. resource attainment, organising and legitimising, are suggested as the key elements that constitute new venture formation. In the start-up, the entrepreneur carries out his task as an innovator and introduces new ideas to the market. The questions remains whether venture formation analysed here could be seen as entrepreneurial behaviour, i.e. not only as action *of entrepreneurs* but also as *entrepreneurial in its form* of activity.

Both of these qualifications are met: the first by the very fact that new venture formation is a pattern carried out by entrepreneurs, and in order to meet the latter characteristic, the activities need to result in new patterns of activity and business. This study has pointed

out two divergent paths of new venture formation. The first one relates to the entrepreneur's strong orientation towards networking, reflected in the collection of resources both from networks and from the market, in a modest interest in the internal efficiency of the venture, and as a strong emphasis on legitimising the company within the industry. As such, this pattern reflects a special type of entrepreneurial capability, the building of the venture formation process by securing the inflow and outflow of resources and support, instead of concentrating on the development of the internal processes of the venture. On the other hand, the other type of entrepreneurial capability reflects the emphasis on the development of the internal processes of the venture, while the use of resources is more straightforward and market-oriented than with those using networking resources. In addition, this pattern is associated with low emphasis on the building of external trustworthiness for the venture.

These results lead to following implications: First of all, the two patterns of venture formation identified in this study reflect different entrepreneurial capabilities which result in different requirements of attention in terms of entrepreneurship promotion and support. Therefore, should venture formation activities relate to the concept of entrepreneurship, the allocation of resources, including the allocation of the entrepreneurial resource, needs to gain more attention. The two venture formation patterns identified in this study suggest that entrepreneurship promoters are likely to find two contrasting approaches to new venture resource collection, and that these approaches have a deep impact on the following development of the venture. The different approaches to venture start-up are likely to produce needs for knowledge, support and mentoring, and the difficulties faced by the entrepreneurs following their pattern of new venture formation may have little to do with the difficulties incurred in other types of business start-ups. To be able to support the start-up process, one needs to see the interdependencies between the target market, the start-up activities, and the entrepreneur's personal preferences.

Secondly, an increase in the sophistication of the start-up process does not equal with an increase in the complexity of the process. However, in terms of the key actor, the entrepreneur, the role of teams and networking need to be included in the analysis. Venture formation is necessarily changing from the traditional conceptions of entrepreneurship of single initiators to the modern concept of entrepreneurship as activating groups to undertake a venture together. This point has implications on the support and promotion of business start-ups: activities enabling the formation of 'natural' teams and networks are likely to create ground for high quality start-ups. The promoters

of entrepreneurship should therefore seek new ways of creating platforms for teams and networks. On the other hand, the researchers of entrepreneurship should seek methodological approaches convenient for studying the operation of start-up teams and networks.

Finally, the idea of entrepreneurship as innovating and creating new combinations should be taken down to 'carrying out new combinations' instead of studying the few huge successes that are often called innovations. Entrepreneurs starting and building up their ventures are many-sided businessmen, and the psychological as well as cognitive aspects associated with them receive their most important implications in the process of new venture creations. Creativity and initiative play important roles in the creation of new combinations. In the venture formation process, the entrepreneur creates new combinations even by combining different sources of raw material and new customer groups, and this takes place in the effort of securing the inflow and outflow of resources in the new venture. Making those linkages and bringing in machines, work force, know-how as well as active networks of suppliers, customers and partners, the entrepreneur carries out the innovative role.

Suggested implications for further research

This study combined between different aspects of organisation formation, and labelled them as the resource collection, organising and legitimising for the organisation. As organisational behaviour, the venture formation phenomenon remains largely an unstudied field. Furthermore, research is needed to focus on entrepreneurial capability. It seems that the role of entrepreneurial capability for the formation of the emerging venture is essential. Research on the distinct aspects of capability is needed as well as research on the relationships between entrepreneurial capability and the various outcomes of the following business. A further aspect associated with venture formation are the eventual path-dependencies associated with the process. More research is needed to study the paths and their relationship to the entrepreneurial capabilities.

In terms of outcomes, this study did not deal with performance in its approach to new venture formation. Because of this, the results do not suggest particular patterns to be associated with above-average performance or increased likelihood of failure. However, it is obvious that the link between entrepreneurial capability and performance should be studied in more detail. It could be hypothesised that the entrepreneurial capabilities

identified are likely to result in differential levels of performance, both in terms of growth in employment and growth in turnover.

In general, entrepreneurship research and venture formation research seek to identify mechanisms affecting the emergence of new businesses with a view to enhance the possibilities of supporting the birth of new business. Therefore, one remaining question in this study is whether new venture formation should be supported governmentally or by some other institution. On the one hand, the results of the study give support to Storey (1985) who suggested that the economic support of new ventures would be futile, and that instead of supporting, the government should focus on the overall circumstances of the economy that affect the emergence of demand, the availability of resources, the development of highly-skilled people to be employed, etc. In case the overall circumstances are in balance, entrepreneurs are able to carry out their task of combining the resources together and create productivity in the new organisations without any governmental interventions. In effect, new venture creation is more dependent on the key actor's entrepreneurial capability of collecting and organising resources, and of creating legitimacy for the venture, than on governmental incentives. On the other hand, a number of new ventures are in drastic need for governmental support, i.e. money. This concerns especially the ventures with high investment needs in the early phases of start-up, such as high-tech ventures. Further research is needed to highlight the relationship between the amount of initial capital and the need for further financing, and, in particular, comparisons between ventures with contrasting financing strategies are likely to be of great interest.

Furthermore, a number of studies point to the necessity of adjusting the competitive strategies to the industry conditions. The competitive environment seemed to result in a need to adjust in the cases where the customer proved to be demanding. On the other hand, those targeting fragmented markets did not reflect a need for adjustment processes, and were therefore relatively free to make their own choices. However, at the same time as the entrepreneur gains more degrees of freedom by choosing a fragmented industry, he sacrifices the benefits that dense industries could offer, including the growth expectations along with the industry. In regard to new venture formation, studies considering the distinction between open market and business-to-business environment have been lacking.

Finally, in terms of fostering entrepreneurship, the university approach has been the teaching of business planning. The use of business plans in the configuring of new ventures has been assumed as essential first of all for the credibility of the venture in the

eyes of the financiers, and also for the configuring of the production and the organisation of the venture. The results of this study suggest that business plans have only been used in certain contexts, and the general hypothesis on the use of business planning to create company credibility did not seem to hold. In this study, it was suggested that this would stem from the little use of venture capital in the Finnish start-ups. However, further studies are needed to highlight the business planning practices in Finnish companies.

ACKNOWLEDGEMENTS

Doing research is a lonely process: concentration, consideration, developing and analysing something prefers solitude. However, in between the phases of silence the ideas need to be tested, discussed and argued. Professor Henrik Gahmberg played an important role in the early phases of my post-graduate studies through supporting and guiding me into the field of organizational research. During the research process I have been fortunate to have Professor Jukka Vesalainen and Doctor Petri Ahokangas to share the same topics of interest and discuss various issues in my research. As further supporters and discussants Professors Bengt Johannisson and Asko Miettinen deserve my warmest thanks, and Professor Erkko Autio (Helsinki University of Technology) made important and helpful comments. In our department of management and organisation, Professor Vesa Routamaa, Professor Riitta Viitala, Kari Ristimäki, Vesa Puhakka, and many others have been creating the positive research 'climate' with shared interests and mutual support. FM Ella Muikku and FL Ilpo Kempas made substantial efforts in minimizing my abuse of English language.

To do research about entrepreneurship one has to meet entrepreneurs. Among the entrepreneurs especially Petri Autio (Tampereen Automaatiosähkö Oy), Unto Leinola (Leinolat Oy), Pauli Ojala (Nordautomation Oy), and Markus Parkkali (Capinc Oy) have provided me with interesting practitioners' insights, problems, examples and data, which all have been of utmost relevance to me. Naturally, I express my gratitude to all those entrepreneurs who committed their time to my research.

In the course of my studies I have received support in both informational as well as in financial terms. In the very start of my post-graduate studies the Finnish Academy granted me a scholarship of one year. The opportunity to read and concentrate to the research field during that year has had a large impact to my research activities. In later phases Vaasan yliopistosäätiö provided me another one-year's scholarship, during which most of the 'physical' work for the thesis was undertaken. The KTM business services provided me with important information to mapping out of the research population, and deserves my sincere thanks. Finally, both Vaasan yliopistoseura and Pienyrityskeskuksen tukisäätiö supported my research activities in an important fashion.

I have grown up in an entrepreneurial family, in which the joys, sorrows and complexities of everyday living, values, business, traditions and responsibility for each other play an important role. Without this hilarious family this study would not have been possible. I owe a thanks also to Marja for her practical and understanding approach to my research endeavours. This thesis is however dedicated to my dear late great-grandfather Rurik, who has been my great inspirer by showing that it is possible to combine academic research and real life.

Vaasa, January 2001

Timo Pihkala

REFERENCES

Aaltonen, Mika (1998). *Academic Entrepreneurship, Technology Transfer and Spin-offs Companies in Different European Regions – Comparisons and Best Practices.* Turku School of Economics, A1/1998.

Aldrich, Howard E. & C. Marlene Fiol (1994). Fools rush in? The institutional context of industry creation. *Academy of Management Review* 19: 4, 645–670.

Aldrich, Howard, Ben Rosen & William Woodward (1987). The impact of social networks on business foundings and profit: A longitudinal study. In *Frontiers of Entrepreneurship Research.* Eds Neil C. Churchill, John A. Hornaday, Bruce A. Kirchoff, O.J.Krasner & Karl H. Vesper. Wellesley, MA: Babson College.

Amit, Raphael & Eitan Muller (1993). "Push" and "pull" entrepreneurship. In *Frontiers of Entrepreneurship Research.* Wellesley, MA: Babson College.

Amit, Raphael & Paul J. H. Schoemaker (1993). Strategic assets and organizational rent. *Strategic Management Journal* 14, 33–46.

Ansoff, H. I. (1965). *Corporate Strategy: An Analytical Approach to Business Policy for Growth and Expansion.* New York: McGraw-Hill.

Atherton, Andrew & Paul Hannon (1995). The business plan – a 21st century dinosaur? Paper presented at the *IntEnt95-conference*, June, Bunbury. Australia.

Atkins, Martin & Julian Lowe (1994). Stakeholders and the strategy formation process in small and medium enterprises. *International Small Business Journal* 12: 3, 12–24.

Autio, Erkko, Martti M. Kaila, Reima Kanerva & Ilkka Kauranen (1989). *Uudet teknologiayritykset.* Nro 101. Helsinki: Sitra.

Bailey, John E. (1986). Learning styles of successful entrepreneurs. In *Frontiers of Entrepreneurship Research.* Eds. Robert Ronstadt, John A. Hornaday, Rein Peterson & Karl H. Vesper. Wellesley, MA: Babson College.

Begley, Thomas M. & David P. Boyd (1987). Psychological characteristics associated with performance in entrepreneurial firms and smaller businesses. *Journal of Business Venturing* 2, 79–93.

Bhave, Mahesh P. (1994). A process of entrepreneurial venture creation. *Journal of Business Venturing* 9, 223–242.

Biggadike, E. R. (1979). *Corporate Diversification: Entry, Strategy, and Performance.* Boston, MA: Division of Research, Graduate School of Business, Harvard University.

Bird, Barbara (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of Management Review* 13: 3, 442–453.

Birley, Sue (1985). The role of networks in the entrepreneurial process. *Journal of Business Venturing* 1, 107–117.

Birley, Sue (1986). The role of new firms: births, deaths and job generation. *Strategic Management Journal* 7, 361–376.

Birley, Sue & Paul Westhead (1994). A taxonomy of business start-up reasons and their impact on firm growth and size. *Journal of Business Venturing* 9, 7–31.

Bouwen, Rene & Chris Steyaert (1990). Construing organizational texture in young entrepreneurial firms. *Journal of Management Studies* 27: 6 (November), 637–649.

Boyd, Nancy G. & George S. Vozikis (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship Theory and Practice* 19: Spring, 63–77.

Brinberg, David & Joseph E. McGrath (1985). *Validity and the Research Process.* Newbury Park, CA: Sage Publications, Inc.

Brockhaus, Robert H. Sr. (1980). Risk taking propensity of entrepreneurs. *Academy of Management Journal* 23: 3, 509–520.

Brockhaus, Robert H Sr. (1982). The psychology of the entrepreneur. In *Encyclopedia of Entrepreneurship*. Eds. C. A. Kent, D. L. Sexton & K. H. Vesper. Englewood Cliffs, NJ.: Prentice-Hall, Inc.

Bruno, Albert V. & Tyzoon T. Tyebjee (1982). The environment for entrepreneurship. In *Encyclopedia of Entrepreneurship.* Eds. C. A. Kent, D. L. Sexton & K. H. Vesper. Englewood Cliffs, NJ.: Prentice-Hall, Inc.

Bruno, Albert V. & Tyzoon T. Tyebjee (1985). The entrepreneur's search for capital. *Journal of Business Venturing* 1, 61–74.

Brunåker, Svante (1993). *Farm Diversification – New Enterprises on Competitive Markets*. Licentiate Dissertation. Avhandlingar 7. Uppsala: Swedish University of Agricultural Studies.

Brunåker, Svante (1996). *Introducing second generation family members into the family operated business – a constructionist approach.* Doctorate dissertation. Avhandlingar 25. Uppsala: Swedish University of Agricultural Studies.

Brush, Candida G. (1992). Marketplace information scanning activities of new manufacturing ventures. *Journal of Small Business Management*, October, 41–53.

Burgelman, R.A. & I. R. Sayles (1986). *Inside Corporate Innovation: Strategy, Structure and Managerial Skills*. New York: Free Press.

Carland, James W., Frank Hoy, William R. Boulton & Jo Ann C. Carland (1984). Differentiating entrepreneurs from small business owners: a conceptualization. *Academy of Management Review* 9: 2, 354–359.

Carter, Nancy M., Timothy M. Stearns, Paul D. Reynolds & Brenda A. Miller (1994). New venture strategies: theory development with an empirical base. *Strategic Management Journal* 15, 21–41.

Carter, Nancy M., William B. Gartner & Paul D. Reynolds, (1996). Exploring start-up event sequences. *Journal of Business Venturing* 11, 151–166.

Carter, Sara (1998). Portfolio entrepreneurship in the farm sector: indigeneous growth in rural areas? *Entrepreneurship & Regional Development* 10, 17–32.

Carter, Sara & Peter Rosa (1998). Indigeneous rural firms: farm enterprises in the UK. *International Small Business Journal* 16: 4, 15–27.

Casson, Mark (1982). *The Entrepreneur: An Economic Theory*. Oxford: Martin Robertson.

Chaganti, Radha & Joy A. Schneer (1994). A study of the impact of owner's mode of entry on venture performance and management patterns. *Journal of Business Venturing* 9, 243–260.

Chandler, Gaylen N. & Steven H. Hanks (1994) Market attractiveness, resource-based capabilities, venture strategies and venture performance. *Journal of Business Venturing* 9, 331–349.

Chatterjee, Sayan & Birger Wernerfelt (1991). The link between resources and type of diversification: theory and evidence. *Strategic Management Journal* 12, 33–48.

Chell, Elizabeth (1985). The entrepreneurial personality: a few ghosts laid to rest? *International Small Business Journal* 3: 3, 43–54.

Churchill, Neil C. (1983). Entrepreneurs and their enterprises: a stage model. In *Frontiers of Entrepreneurship Research*. Eds. John A. Hornaday, Jeffry A. Timmons & Karl H. Vesper. Wellesley, MA: Babson College.

Churchill, Neil C. & Kenneth J. Hatten (1987). Non-market-based transfers of wealth and power: a research framework for family businesses. *American Journal of Small Business*, Winter, 51–64.

Collins, Orvis F., Moore, David G. & Darab B. Unwalla (1964). *The Enterprising Man.* Bureau of Business and Economic Research. East Lansing: Michigan State University.

Cooper, Arnold C. (1982). The entrepreneurship – small business interface. In *Encyclopedia of Entrepreneurship.* Eds Kent, Calvin A., Donald L. Sexton & Karl H. Vesper. Englewood-Cliffs, NJ: Prentice-Hall, Inc.

Cooper, Arnold C. (1986). Entrepreneurship and high technology. In *The art and science of Entrepreneurship.* Eds. Sexton, D.L. & R.W. Smilor. Cambridge: Ballinger.

Cooper, Arnold C. & William C. Dunkelberg (1986). Entrepreneurship and paths to business ownership. *Strategic Management Journal*, 7, 53–68.

Cooper, Arnold C. & F. Javier Gimeno Gascon (1992). Entrepreneurs, processes of founding, and new-firm performance. In *The State of the Art of Entrepreneurship.* Eds Sexton, Donald L. & John D. Kasarda. Boston: PWS–Kent Publishing Company.

Cooper, Arnold C. (1993). Challenges in predicting new firm performance. *Journal of Business Venturing* 8, 241–253.

Cooper, Arnold C., F. Javier Gimeno-Gascon & Carolyn Y. Woo (1994). Initial human and financial capital as predictors of new venture performance. *Journal of Business Venturing* 9, 371–395.

Covin, Jeffrey G. & Dennis P. Slevin (1988). New venture competitive strategy: an industrial life cycle analysis. In *Frontiers of Entrepreneurship Research.* Wellesley, MA: Babson College.

Cromie, Stan & Sue Birley (1992). Networking by female business owners in Northern Ireland. *Journal of Business Venturing* 7, 237–251.

Dandridge, Thomas (1979). Children are not "little grown-ups": Small business needs its own organizational theory. *Journal of Small Business Management*, April, 53–57.

Das, T. K. & Bing-Sheng Teng (1997). Time and entrepreneurial risk behavior. *Entrepreneurship Theory and Practice*, Winter, 69–88.

Davidsson, Per (1989). *Continued Entrepreneurship and Small Firm Growth.* Doctoral dissertation. Stockholm School of Economics.

Dess, Gregory G., G.T. Lumpkin & J.G. Covin (1997). Entrepreneurial strategy making and firm performance: tests of contingency and configurational models. *Strategic Management Journal* 18: 9, 667–695.

Drucker, Peter F. (1985). Entrepreneurial strategies. *California Management Review* XXVII: 2 (Winter), 9–25.

Duchesneau, Donald A. & William B. Gartner (1988). A profile of new venture success and failure in an emerging industry. In *Frontiers of Entrepreneurship Research.* Wellesley, MA: Babson College.

Easton, G. (1994). Industrial networks: a review. In Axelsson, B & G. Easton (eds.), *Industrial Networks – A New View of Reality.* London: Routledge.

Easterby-Smith, M., R. Thorpe & A. Lowe (1991). *Management Research: An Introduction.* London: Sage Publications, Inc.

Eisenhardt, Kathleen M. (1989). Building theories from case study research. *Academy of Management Review* 14: 4, 532–550.

Eisenhardt, Kathleen M. & Claudia Bird Schoonhoven (1990). Organizational growth: linking founding team, strategy, environment and growth among U.S. semiconductor ventures (1978 – 1988). *Administrative Science Quarterly* 35, 504–529.

Emory, C. William (1985). *Business Research Methods.* Homewood, Ill.: Irwin.

Ennew, Chris, Ken Robbie & Mike Wright (1992). Management buy-ins as a new ownership form: entrepreneurial characteristics and performance. In *Frontiers of Entrepreneurship Research.* Babson Park, MA: Babson College.

Ettinger, Jean-Claude (1983). Some Belgian evidence on entrepreneurial personality. *European Small Business Journal* 1: 2, 48–56.

Feeser, Henry R. & Gary E. Willard (1990). Founding strategy and performance: a comparison of high and low growth high tech firms. *Strategic Management Journal* 11, 87–98.

Fichman, Mark & Daniel A. Levinthal (1991). Honeymoons and the liability of adolescence: a new perspective on duration dependence in social and organizational relationships. *Academy of Management Review* 16: 2, 442–468.

Fiegenbaum, Avi & Aneel Karnani (1991). Output flexibility – a competitive advantage for small firms. *Strategic Management Journal* 12, 101–114.

Filion, Louis Jacques (1991). Vision and relations: elements for an entrepreneurial metamodel. *International Small Business Journal* 9: 2, 26–40.

FIMET (1998). *Metals, Engineering and Electronics Industry. Yearbook 1997.* Helsinki: Federation of Finnish metal, engineering and electronics industry.

Foreman, E. K. (1991). *Survey Sampling Principles*. New York, NY.: Marcel Dekker, Inc.

Foss, Lene (1993). Resources, networks and entrepreneurship: a survey of 153 starters and 84 non-starters in the cod farming industry in Norway. In *Frontiers of Entrepreneurship Research*, Babson Park, MA: Babson College.

Fox, Stephen, V. Nilakant & R.T. Hamilton (1997). Managing succession in family-owned businesses. *International Small Business Journal* 15: 1, 15–25.

Gartner, William B., Barbara J. Bird & Jennifer A. Starr (1992). Acting as if: differentiating entrepreneurial behavior from organizational behavior. *Entrepreneurship Theory and Practice* 17: Spring, 13–31.

Gartner, William B., Terence R. Mitchell & Karl H. Vesper (1989). A taxonomy of new business ventures. *Journal of Business Venturing* 4, 169–186.

Gartner, William B. (1985). A conceptual framework for describing the phenomenon of new venture creation. *Academy of Management Review* 10: 4, 696–706.

Gimeno, Javier, Timothy B. Folta, Arnold C. Cooper & Carolyn Y. Woo (1997). Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms. *Administrative Science Quarterly* 42, 750–783.

Goffee, Rob (1996). Understanding family businesses: issues for further research. *International Journal of Entrepreneurial Behavior & Research* 2: 1, 36–48.

Grant, Robert M. (1991). The resource-based theory of competitive advantage: implications for strategy formulation. *California Management Review* 33: 3, 114–135.

Guth, William D., Arun Kumaraswamy & Matthew McErlean (1991). Cognition, enactment and learning in the entrepreneurial process. In *Frontiers of Entrepreneurship Research*. Babson Park, MA: Babson College.

Hall, Richard (1992). The strategic analysis of intangible resources. *Strategic Management Journal* 13: 135–144.

Hamel, Gary & C.K. Prahalad (1989). Strategic intent. *Harvard Business Review*, May-June, 63–76.

Hart, Myra M. & Howard H. Stevenson (1993). Entrepreneurs and the next generation: management advantages and challenges in a family business. In *Frontiers of Entrepreneurship Research*. Babson Park, MA: Babson College.

Hart, Stuart & Catherine Banbury (1994). How strategy-making processes can make a difference. *Strategic Management Journal* 15, 251–269.

Herron, Lanny & Harry J. Sapienza (1992). The entrepreneur and the initiation of new venture activities. *Entrepreneurship Theory and Practice*, Fall, 49–55.

Hills, Gerald E. & Chem L. Narayana (1989). Profile characteristics, success factors and marketing in highly successful firms. In *Frontiers of Entrepreneurship Research.* Wellesley, MA: Babson College.

Hornaday, Robert W. (1990). Dropping the e-words from small business research: an alternative typology. *Journal of Small Business Management* 28: 4, 22–33.

Hull, David L., John J. Bosley & Gerald G. Udell (1980). Reviewing the hunt for the heffalump: identifying potential entrepreneurs by personality characteristics. *Journal of Small Business Management* 18, 11–18.

Huuskonen, Visa (1989). *Yrittäjäksi ryhtyminen motivoitumis- ja päätöksentekoprosessina.* Turun kauppakorkeakoulun julkaisuja D–1: 1989.

Håkansson, H. & J. Johanson (1994). A model of industrial networks. In *Industrial Networks – A New View of Reality.* Eds. Axelsson, B. & G. Easton. London: Routledge.

Håkansson, H. & I. Snehota (1995). *Developing Relationships in Business Networks.* London: Routledge.

Jick, T. (1979). Mixing qualitative and quantitative methods: triangulation in action. *Administrative Science Quarterly* 24, 602–611.

Johannisson, Bengt (1986). Network strategies: management technology for entrepreneurship and change. *International Small Business Journal* 1, 19–30.

Johannisson, Bengt (1988). Business formation – a network approach. *Scandinavian Journal of Management* 4: 3/4, 83–99.

Johannisson, Bengt & Erik Robertson (1997). Enacting the entrepreneurial career – organising casual encounters and random events through personal networking. Paper presented at the *RENT XI*, November 27–28, Mannheim.

Johannisson, Bengt (1998). Personal networks in emerging knowledge-based firms: spatial and functional patterns. *Entrepreneurship & Regional Development* 10, 297–312.

Johnson, Gerry & Kevan Scholes (1988). *Exploring Corporate Strategy.* Cambridge: Prentice Hall International.

Kao, John J. (1989). *Entrepreneurship, Creativity and Organization.* Englewood Cliffs, NJ.: Prentice Hall.

Katz, Jerome & William B. Gartner (1988). Properties of emerging organizations. *Academy of Management Review* 13: 3, 429–441.

Keeley, Robert H. & Juan B. Roure (1990). Management, strategy, and industry structure as influences on the success of new firms: a structural model. *Management Science* 36: 10, 1256–1267.

Kets de Vries, M.F.R. (1977). The entrepreneurial personality: a person at the crossroads. *Journal of Management Studies* 14, 34–57.

Kilby, Peter (1971).(Ed.) *Entrepreneurship and Economic Development.* New York: Free Press.

Kilby, Peter (1971). Hunting the heffalump. In *Entrepreneurship and Economic Development.* Ed. Peter Kilby. New York: Free Press.

Kim, Jae-On & Charles W. Mueller (1978). *Factor Analysis: Statistical Methods and Practical Issues.* Beverly Hills, CA: Sage Publications.

Kimberly, John R. (1979). Issues in the creation of organizations: initiation, innovation and institutionalization. *Academy of Management Journal* 22, 437–457.

Kirzner, Israel (1979). *Perception, Opportunity and Profit.* Chicago: University of Chicago Press.

Klofsten, Magnus (1998). *The Business Platform – Entrepreneurship & Management in The Early Stages of a Firm's Development.* Luxembourg: TII asbl Luxembourg,

Korhonen, Jorma (1997). *Metallituotteiden valmistus.* KTM yrityspalvelun toimialaraportti 1997. KTM-toimialainfomedia. Kauppa- ja teollisuusministeriö.

KTM (1997). *Tiellä teknologiavisioon. Suomen teknologian tarpeita ja mahdollisuuksia.* Kauppa- ja teollisuusministeriön työryhmä- ja toimikuntaraportteja 12/97. Helsinki: Oy Edita Ab.

Krueger, Norris (1993). The impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability. *Entrepreneurship Theory & Practice*, Fall, 5–21.

Lant, Theresa K. & Stephen J. Mezias (1990). Managing discontinuous change: a simulation study of organizational learning and entrepreneurship. *Strategic Management Journal* 11, 147–179.

Larson, A. (1991). Partner networks: Leveraging external ties to improve entrepreneurial performance. *Journal of Business Venturing* 6, 173–188.

Leonard-Barton, Dorothy (1992). Core capabilities and core rigidities: a paradox in managing new product development. *Strategic Management Journal* 13, 111–125.

Lévesque, Moren & Kenneth R. MacCrimmon (1997). On the interaction of time and money invested in new ventures. *Entrepreneurship Theory and Practice*, Winter, 89–110.

Lieberman, Marvin B. & David B. Montgomery (1988). First-mover advantages. *Strategic Management Journal* 9: 41–58.

Lieberman, Marvin B. & David B. Montgomery (1998). First-mover (dis)advantages: retrospective and link with the resource-based view. *Strategic Management Journal* 19, 1111–1125.

Liles, Patrick R. (1974). Who are the entrepreneurs? *MSU Business Topics* 22, 5–14.

Lindblom, C.E. (1959). The science of 'muddling through'. *Public Administration Review* 19, 79–88.

Littunen, Hannu (1994). *Uusien yritysten menestyminen – yritystoiminnan kriittiset alkuvuodet.* Julkaisuja 130. Jyväskylän yliopisto, Keski-Suomen taloudellinen tutkimuskeskus.

Littunen, Hannu, Esa Storhammar & Tuomo Nenonen (1998). The survival of firms over the critical first 3 years and the local environment. *Entrepreneurship & Regional Development* 10, 189–202.

Low, Murray B. & Eric Abrahamson (1997). Movements, bandwagons and clones: industry evolution and the entrepreneurial process. *Journal of Business Venturing* 12, 435–457.

MacMillan, Ian C., Lauriann Zemann & P. N. Subbanarasimha (1987). Criteria distinguishing successful from unsuccessful ventures in the venture screening process. *Journal of Business Venturing* 2, 123–137.

MacNeil, Ian R. (1980). *The New Social Contract: An Inquiry into Modern Contractual Relations.* New Haven and London: Yale University Press.

Mahoney, Joseph T. & J. Rajendran Pandian (1992). The resource-based view within the conversation of strategic management. *Strategic Management Journal* 13, 363–380.

McClelland, David C. (1961). *The Achieving Society.* New York: Irvington Publishers, Inc.

McClelland, David C. (1971). The achievement motive in economic growth. In *Entrepreneurship and Economic Development*. Ed. Kilby, Peter. New York: Free Press.

McDougall, Patricia & Richard B. Robinson (1988). New venture performance: patterns of strategic behavior in different industries. In *Frontiers of Entrepreneurship Research*. Babson Park, MA: Babson College.

McDougall, Patricia & Richard B. Robinson, Jr. (1990). New venture strategies: an empirical identification of eight archetypes of competitive strategies for entry. *Strategic Management Journal* 11, 447–467.

McDougall, Patricia Phillips, Jeffrey G. Covin, Richard B. Robinson Jr. & Lanny Herron (1994). The effects of industry growth and strategic breadth on new venture performance and strategy content. *Strategic Management Journal* 15, 537–554.

McGee, Jeffrey E. & Michael J. Dowling (1994). Using R&D cooperative arrangements to leverage managerial experience: a study of technology-intensive new ventures. *Journal of Business Venturing* 9, 33–48.

McGee, Jeffrey E., Michael J. Dowling & William L. Megginson (1995). Cooperative strategy and new venture performance: the role of business strategy and management experience. *Strategic Management Journal* 16, 565–580.

McKennell, Aubrey C. (1974). *Surveying Attitude Structures – A Discussion of Principles and Procedures*. Amsterdam: Elsevier.

Meyer, Arnoud de, Jinichiro Nakane, Jeffrey G. Miller & Kasra Ferdows (1989). Flexibility: the next competitive battle. The manufacturing futures survey. *Strategic Management Journal* 10, 135–144.

Miles, Matthew B. & A. Michael Huberman (1994). *Qualitative Data Analysis: An Expanded Sourcebook*. Thousand Oaks, CA: Sage Publications.

Miles, R.E. & C.C. Snow (1978). *Organizational Strategy, Structure and Process*. New York: McGraw-Hill.

Miller, Danny (1983). The correlates of entrepreneurship in three types of firms. *Management Science* 29: 7, 770–791.

Miller, Danny & Peter H. Friesen, (1978). Archetypes of strategy formation. *Management Science* 24: 9, 921–933.

Miller, Danny & Ming-Jer Chen (1996). The simplicity of competitive repertoires: an empirical analysis. *Strategic Management Journal* 17, 419–439.

Mintzberg, Henry (1973). Strategy making in three modes. *California Management Review* 16: 2, 44–53.

Mintzberg, Henry (1979). *The Structuring of Organizations.* Englewood Cliffs, N.J.: Prentice-Hall.

Mintzberg, H. & J.A. Waters (1982). Tracking strategy of an entrepreneurial firm. *Academy of Management Journal* 25: 3, 465–499.

Mitchell, Will (1989). Whether and when? Probability and timing of imcumbents' entry into emerging industrial subfields. *Administrative Science Quarterly* 34, 208–230.

Morgan, Gareth (1986). *Images of Organization.* London: Sage.

Mønsted, Mette (1998). Networking for legitimacy – overcoming uncertainties in small high tech firms. Paper presented at the *10th Nordic Conference on Small Business*, Växjö University.

NUTEK (1992). *Creating Viable Business Firms: A Study in Enterprise Creation.* B: 1992: 10. Stockholm.

Oliver, Christine (1997). Sustainable competitive advantage: combining institutional and resource-based views. *Strategic Management Journal* 18: 9, 697–713.

Osuuspankkikeskus (1997). *Yritystutkimuksen toimialatilasto 1996.* Helsinki: Oy Edita Ab.

Patton, Michael Q. (1990). *Qualitative Evaluation and Research Methods.* Second edition. Newbury Park, CA: Sage Publications, Inc.

Penrose, Edith (1959). *The Theory of the Growth of the Firm.* III ed. New York: Oxford University Press.

Perrow, Charles (1970). *Organizational Analysis: A Sociological View.* London: Tavistock.

Peteraf, Margaret A. (1993). The cornerstones of competitive advantage: a resource-based view. *Strategic Management Journal* 14 179–191.

Peters, T.J. & R.H. Waterman (1980). *In Search of Excellence: Lessons from America's Best-run Companies.* New York: Harper and Row.

Pihkala, Timo (1997). *The Realisation Process of Entrepreneurial Strategies.* Licentiate thesis in management and organization. Unpublished. University of Vaasa.

Pihkala, Timo, Elina Varamäki & Jukka Vesalainen (1999). Virtual organization and the SMEs: A review and model development. *Entrepreneurship and Regional Development* 9, 335–349.

Porter, Michael E. (1980). *Competitive Strategy*. New York: Free Press.

Powell, Thomas C. (1992). Organizational alignment as competitive advantage. *Strategic Management Journal* 13, 119–134.

Preisendörfer, Peter & Thomas Voss (1990). Organizational mortality of small firms: the effects of entrepreneurial age and human capital. *Organization Studies* 11: 1, 107–129.

Rich, Stanley R. & David E. Gumpert (1991). How to write a winning business plan. In *The Entrepreneurial Venture*. Eds. Sahlman, William A. & Howard H.Stevenson. Boston, MA: Harvard Business School Publications.

Roberts, Edward B. & Charles A. Berry (1985). Entering new businesses: selecting strategies for success. *Sloan Management Review*, Spring, 3–17.

Romanelli, Elaine (1989). Environments and strategies of organization start-up: effects on early survival. *Administrative Science Quarterly* 34: 369–387.

Ronstadt, Robert (1984). *Entrepreneurship: Text, Cases and Notes*. Dover, Massachusetts: Lord Publishing.

Ruhnka, John C. & John E. Young (1987). A venture capital model of the development process for new ventures. *Journal of Business Venturing* 2: 2, 176–184.

Rönkkö, Erkki (1998). *Elektronisten mittaus- ja analysointilaitteiden valmistus*. KTM toimialaraportti. Kauppa- ja teollisuusministeriö.

Sandberg, William R. & Charles W. Hofer (1986). The effects of strategy and industry structure on new venture performance. In *Frontiers of Entrepreneurship Research*. Eds. Robert Ronstadt, John A. Hornaday, Rein Peterson & Karl H. Vesper. Wellesley, MA: Babson College.

Scarborough, Norman M. & Thomas W. Zimmerer (1999). *Effective Small Business Management: An Entrepreneurial Approach*. Upper Sadle River, NJ: Prentice-Hall.

Schoemaker, Paul J. H. (1990). Strategy, complexity and economic rent. *Management Science* 36: 10, 1178–1192.

Schoenecker, Timothy S. & Arnold C. Cooper (1998). The role of firm resources and organizational attributes in determining entry timing: a cross-industry study. *Strategic Management Journal* 19, 1127–1143.

Schoonhoven, Claudia Bird, Kathleen M. Eisenhardt & Katherine Lyman (1990). Speeding products to market: waiting time to first product introduction in new firms. *Administrative Science Quarterly* 35, 177–207.

Schumpeter, Joseph A. (1934). *The Theory of Economic Development.* Cambridge, MA: Harvard University Press,

Scott, Michael & Peter Rosa (1996). Opinion: Has firm level analysis reached its limits? Time for a rethink. *International Small Business Journal* 14: 4, 81–89.

Shan, Weijian (1990). An empirical analysis of organizational strategies by entrepreneurial high-technology firms. *Strategic Management Journal*, 11: 129–139.

Shaver, Kelly G. & Linda R.Scott (1991). Person, process, choice: the psychology of new venture creation. *Entrepreneurship Theory and Practice*, Winter, 23–45.

Shrader, Rodney C. & Mark Simon (1997). Corporate versus independent new ventures: resource, strategy, and performance differences. *Journal of Business Venturing* 12: 47–66.

Simon, Herbert A. (1979). *Päätöksenteko ja hallinto.* Espoo: Weilin+Göös. Original version Administrative Behaviour, 3rd edition, 1957.

Smith, N. R. (1967). *The Entrepreneur and His Firm: The Relationship Between Type of Man and Type of Company. Occasional paper*: Michigan State University.

Sommerlund, B. & O. Kristensen (1988). *Textbase Alpha Computer-assisted Text Analysis. Version 2.0 Manual.* Psykologisk Institut. Aarhus Universitet.

Spilling, Olav R. (1995). Do small firms create jobs? Paper presented at *the Sixth Endec World Conference on Entrepreneurship. "Entrepreneurship in Transitional Economies"*, Shanghai, China.

Stalk, George, Philip Evans & Lawrence E. Shulman (1992). Competing on capabilities: the new rules of corporate strategy. *Harvard Business Review*, March-April, 57–69.

Stanworth, M.J.K. & J. Curran (1976). Growth and the small firm – an alternative view. *Journal of Management Studies*, May, 95–110.

Starr, Jennifer A. & Ian C. MacMillan (1990). Resource cooptation via social contracting: resource acquisition strategies for new ventures. *Strategic Management Journal* 11, 79–92.

Statistics Finland (1997). *Aloittaneet ja lopettaneet yritykset.* Yritykset 1997:7. Helsinki: Tilastokeskus.

Statistics Finland (1999). *Aloittaneet ja lopettaneet yritykset.* Yritykset 1999:9. Helsinki: Tilastokeskus.

Stinchcombe, Arthur L. (1965). Social structure and organizations. In *Handbook of Organizations*. Ed. James March. Chicago: Rand McNally & Company.

Storey, D.J. (1985). The problems facing new firms. *Journal of Management Studies* 22: 3, 327–345.

Stuart, Robert W. & Pier A. Abetti (1990). Impact of entrepreneurial and management experience on early performance. *Journal of Business Venturing* 5, 151–162.

Sudman, Seymour, Monroe G. Sirken & Charles D. Cowan (1988). Sampling rare and elusive populations. *Science* 240: May, 991–996.

Swain, Charles B. & William R. Tucker (1973). *The Effective Entrepreneur.* Morristown, N.J.: General Learning Press.

Tesfaye, Besrat (1997). Patterns of formation and development of high-technology entrepreneurs. In *Technology ,Innovation and Enterprise: the European Experience*. Eds. Dylan Jones-Evans and Magnus Klofsten. Basingstoke: Macmillan Press.

Thompson, James D. (1974). *Miten organisaatiot toimivat.* Helsinki: Weilin+Göös. Originally Organizations in Action, 1967.

Timmons, Jeffry A. (1994). *New Venture Creation: Entrepreneurship in the 21st Century*: Irwin.

Timmons, Jeffry A. Daniel F. Muzyka, Howard H. Stevenson & William D. Bygrave, (1987). Opportunity Recognition: The Core of Entrepreneurship. In *Frontiers of Entrepreneurship Research.* Eds. N. C. Churchill, J. A. Hornaday, B. A. Kirchoff, O.J.Krasner & K. H. Vesper. Wellesley, MA.: Babson College.

Tornatzky, Louis G. & Mitchell Fleischer (1990). *The Process of Technological Innovation.* Lexington Books, MA.

Trulsson, Per (1997). *Strategies of Entrepreneurship: Understanding Industrial Entrepreneurship and Structural Change in Northwest Tanzania.* Doct.diss. Linköping University.

Van de Ven, Andrew H. (1992). Suggestions for studying strategy process: a research note. *Strategic Management Journal* 13, 169–188.

Van de Ven, Andrew H. (1993). The development of an infrastructure for entrepreneurship. *Journal of Business Venturing* 8, 211–230.

Vesalainen, Jukka (1995). *The Small Firm as an Adaptive Organization – Organizational Adaptation Versus Environmental Selection Within Environmental Change.* Doctoral dissertation. Universitas Wasaensis. University of Vaasa.

Vesalainen, Jukka & Timo Pihkala (1998). *Laihian kunnan yrittäjyysprofiili.* Vaasan yliopiston julkaisuja. Selvityksiä ja raportteja 27. Vaasan yliopisto.

Vesalainen, Jukka & Timo Pihkala (1999a). Entrepreneurial identity, intentions and the effect of the push-factor. *Academy of Entrepreneurship Journal* 5: 2, 1–24.

Vesalainen, Jukka & Timo Pihkala (1999b). Motivation structure and entrepreneurial intentions. *Frontiers of entrepreneurship research.* Babson Park, MA.: Babson College.

Vesalainen, Jukka (1999). *Metalli– ja elektroniikkateollisuus – visio 2008: PKT-erityiskysymykset.* Helsinki: Metalliteollisuuden keskusliitto MET.

Vesper, Karl H. (1980). *New Venture Strategies.* Englewood Cliffs, NJ.: Prentice-Hall, Inc.

Vesper, Karl H. (1993). *New Venture Mechanics.* Englewood Cliffs, NJ.: Prentice-Hall.

Webster's Encyclopedic Unabridged Dictionary of the English language (1989). New Jersey.: Random House.

Weick, Karl E. (1979). *The Social Psychology of Organizing.* Addison Wessley.

Wernerfelt, Birger (1984). A resource-based view of the firm. *Strategic Management Journal* 5, 171–180.

Williams, Mary L., Ming-Hone Tsai & Diana Day (1991). Intangible assets, entry strategies, and venture success in industrial markets. *Journal of Business Venturing* 6, 315–333.

Yin, Robert K. (1988). *Case Study Research: Design and Methods.* Revised edition. Newbury Park, California.: Sage Publications.

Ylinenpää, Håkan (1997). *Managing Competence Development and Acquisition in Small Manufacturing Firms.* Doctoral dissertation. Business Administration and Social Sciences, Luleå University of Technology: Universitetstryckeriet.

APPENDIX 1: INTERVIEW THEMES

Käynnistämisen olosuhteet
- Yrittäjän tausta (taidot/ kokemus/ muuta)
- Aloitussyyt
- Tilaisuus
- Markkinat
- Resurssit
- Verkosto/ suhteet
- Vaihtoehtoiset aloitustavat
- Harkitut vaihtoehdot
- Vaihtoehtojen mielekkyys
- Yrittäjyyskyvykkyys

Aloitus
- Koska, kuinka
- Resurssien saanti
- Kuinka kuka miten millä ehdoilla
- Dokumentteja?

Prosessin tulokset
- Yrittäjälle/sidosryhmille
- Tuote/prototyypi
- Tuotemerkki
- Teknologia/osaaminen
- Kassavirta
- Hyväksyttävyys
- Kohdemarkkinat
- Organisaatio/tiimi
- Liiketoimintasuunnitelma
- Suhdeverkosto

Circumstances at start-up
- Entrepreneur's background (skills/experience)
- Motivation to start (desirability)
- Opportunity
- Market
- Resources
- Network
- Alternative ways of starting
- Options considered
- Viability of the alternatives
- Entrepreneurial capability

Start-up
- How, when
- Inflow of resources
- How, who, on what conditions
- Documents?

Outcomes of the start-up process
- For the entrepreneur/for the stakeholders
- Product/prototype
- Brand
- Technology
- Cash flow
- Legitimacy
- Target market
- Organisation/team
- Formal business plan
- Relationships/network

APPENDIX 2: QUESTIONNAIRE

Instructions: Please fill in the missing information and circle the options that best describe your situation. Remember to answer to every item, even if the question or the item did not correspond to your situation or opinion.

A. BACKGROUND INFORMATION

1. Your age? _____ years

2. Before the start-up, to what extent did you have

	not at all	very much
... technical education	0	1 2 3 4
... commercial education	0	1 2 3 4
... other education	0	1 2 3 4

3. Before the start-up, in what extent did you have

	not at all	very much
... experience from the industry	0	1 2 3 4
... experience from a start-up	0	1 2 3 4
... experience from management	0	1 2 3 4
... experience from co-operation	0	1 2 3 4
... acquaintances from the industry	0	1 2 3 4
... product development applicable to the industry	0	1 2 3 4
... inventions applicable to the industry	0	1 2 3 4
... patents applicable to the industry	0	1 2 3 4

4. Year of start-up _____

5. Branch of business _____

6. Which industrial clusters do you think your business is related to?

_____Forest	_____Electronics
_____Traffic	_____Energy
_____Health	_____Plastics
_____Basic metals	_____Telecommunications
_____Other, which?_____	No clear cluster

7. Do you think that your company is still in the start-up process?

1 Yes
2 No, the start-up process ended in the year _____

B. INFORMATION ON THE START-UP

Did you start your company alone or did you have a team?

8. Size of the start-up team _____ persons (including yourself)

9. Industry experience of the team _____ years (including yourself)

10. Product development experience of the team _____ years (including yourself)

11. Production experience of the team _____years (including yourself)

12. Marketing experience of the team _____years (including yourself)

13. How large an investment was the start-up?

total _____ thousand FIM
own investment _____ %
team investment _____%
external capital _____% total 100%
whereof bank loan _____%
other, what? _____%

14. How did you use the money?

Product development	_____%	
Marketing	_____%	
Creation of the network	_____%	
Raw material	_____%	
Machines and equipment	_____%	
Facilities	_____%	
Cash	_____%	
Other, what	_____%	total 100%

15. The resources of the start-up can be collected from three sources: the entrepreneur can use his own resources, the resources the team or a wider network can offer can be used, and thereby the entrepreneur can borrow the resources or gain them on reasonable conditions, or the resources can be purchased/rented/employed directly from the market at a normal market price. The following table includes a list of different resource types. Please mark to which extent you used each source of resources at start-up. (0 = not at all, 1= a little, 2= to some extent, 3=fairly much, 4= very much).

	invested myself	from the team or network	purchased/ rented/ employed
Facilities	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Machines and equipment	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Raw material	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Financing	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Employees		0 1 2 3 4	0 1 2 3 4
Expertise		0 1 2 3 4	0 1 2 3 4
Customers/business relations	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Patents, property rights, other contracts	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Other, what	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

16. The creation of efficiency in the company is a central element in the start-up process. How important were the following factors in regard to the efficiency of the company?

	not at all important	very important
Careful building of the start-up team	1 2 3 4 5 6 7	
Education prior to the start-up	1 2 3 4 5 6 7	
Writing a business plan	1 2 3 4 5 6 7	
Quick employing of people	1 2 3 4 5 6 7	
Speeding of the first sales	1 2 3 4 5 6 7	
Quick acquisition of the machines and equipment	1 2 3 4 5 6 7	
Using technology experts	1 2 3 4 5 6 7	
Careful building of the production process	1 2 3 4 5 6 7	
Building of the internal logistics	1 2 3 4 5 6 7	
Quick development of the control systems	1 2 3 4 5 6 7	
Other, what	1 2 3 4 5 6 7	

17. Which three factors in the above question were the most important? Mark the three most important factors with a tick.

18. Gaining business outcomes in the early phases of the start-up may be important for the business. How important were the following outcomes for you?

	not at all important						very important
Making the production process work	1	2	3	4	5	6	7
Improving quality to the level of the best in the industry	1	2	3	4	5	6	7
Securing access to raw materials	1	2	3	4	5	6	7
Gaining regular customers	1	2	3	4	5	6	7
Emergence of supporting relations network	1	2	3	4	5	6	7
Access to right delivery channels	1	2	3	4	5	6	7
Improvement in the company's recognisability	1	2	3	4	5	6	7
Turning the cash flow into positive	1	2	3	4	5	6	7
Improvement in the company's credibility	1	2	3	4	5	6	7
Other, what	1	2	3	4	5	6	7

19. Which three outcomes in the above question were the most important? Mark the three most important outcomes with a tick.

20. The credibility of the company and business may be of key importance for the start-up. How important were the following factors to your start-up?

	not at all important						very important
Positive financing decision	1	2	3	4	5	6	7
Possibility of starting with small stakes	1	2	3	4	5	6	7
Approved functioning of operations	1	2	3	4	5	6	7
Approved quality of operations	1	2	3	4	5	6	7
Approved cost efficiency	1	2	3	4	5	6	7
First sales gained	1	2	3	4	5	6	7
Purchase deal for raw materials	1	2	3	4	5	6	7
Entrepreneur's reputation	1	2	3	4	5	6	7
Set up/ expertise/ experience of the start-up team	1	2	3	4	5	6	7
Good business partners	1	2	3	4	5	6	7
Use of external expertise	1	2	3	4	5	6	7
Imitating other firms in the industry at start-up	1	2	3	4	5	6	7
Conservativeness of operations	1	2	3	4	5	6	7
Name of the company	1	2	3	4	5	6	7
Image of the company	1	2	3	4	5	6	7
Juridical form of the company	1	2	3	4	5	6	7
Written business plan	1	2	3	4	5	6	7

21. Which three factors in the above question were the most important? Mark the three most important factors with a tick.

SECTION THREE

All the questions in this section can be answered using the following scale:

I disagree completely	1
I disagree fairly much	2
I disagree somewhat	3
I do not agree or disagree	4
I agree somewhat	5
I agree fairly much	6
I agree completely	7

How well do the following statements apply to you or to your company?

22. My motivation to become an entrepreneur was	– +/- +
need for independence	1 2 3 4 5 6 7
unemployment	1 2 3 4 5 6 7
belief in my own competencies	1 2 3 4 5 6 7
earning a living	1 2 3 4 5 6 7
belief in success	1 2 3 4 5 6 7
excellent opportunity	1 2 3 4 5 6 7
unrealistic conceptions	1 2 3 4 5 6 7
persuasion	1 2 3 4 5 6 7
invention, innovation	1 2 3 4 5 6 7

23. I am active	– +/- +
in creating new acquaintances	1 2 3 4 5 6 7
in keeping contact with my friends and acquaintances	1 2 3 4 5 6 7
in participating in the activities of different associations	1 2 3 4 5 6 7
in discussing business in general	1 2 3 4 5 6 7
in planning co-operation projects with friends and acquaintances	1 2 3 4 5 6 7
in keeping contact with business partners	1 2 3 4 5 6 7

24. The most important contacts at start-up were...	– +/- +
friends	1 2 3 4 5 6 7
former colleagues	1 2 3 4 5 6 7
relatives	1 2 3 4 5 6 7
other entrepreneurs	1 2 3 4 5 6 7
raw-material suppliers	1 2 3 4 5 6 7
old customers	1 2 3 4 5 6 7
experts (e.g. lawyers, accountants...)	1 2 3 4 5 6 7
bank	1 2 3 4 5 6 7
entrepreneurs' association	1 2 3 4 5 6 7
trade union	1 2 3 4 5 6 7
other, what...	1 2 3 4 5 6 7

25. How well do the following descriptions apply to **the industry** of your company at the time of start-up?

	-			+/-			+
the companies in the industry were very different in terms of quality, service and marketing	1	2	3	4	5	6	7
there were a few well-established companies in the industry	1	2	3	4	5	6	7
new companies were entering the industry continuously	1	2	3	4	5	6	7
the industry was fragmented	1	2	3	4	5	6	7
the ways of operation in the industry were in constant change	1	2	3	4	5	6	7
the opportunities to select methods of competition became constantly fewer	1	2	3	4	5	6	7
there were a few equal companies competing each other in the industry	1	2	3	4	5	6	7
the products of the companies in the industry were rather similar	1	2	3	4	5	6	7
the number of competitors did not grow anymore significantly	1	2	3	4	5	6	7
the industry was still in its early phases of development	1	2	3	4	5	6	7
the demand in the industry was in high growth	1	2	3	4	5	6	7
there was much unsatisfied demand in the industry	1	2	3	4	5	6	7

26. How well do the following statements apply to you company in the start-up?

	–			+/-			+
we started to produce final products	1	2	3	4	5	6	7
we started as a project supplier	1	2	3	4	5	6	7
we started as a system supplier	1	2	3	4	5	6	7
we started as a component supplier	1	2	3	4	5	6	7
we started as a parts supplier	1	2	3	4	5	6	7
we started as a planning company	1	2	3	4	5	6	7

27. Due to the special features of the business or to the circumstances of the industry, some resources may be difficult to access, or their applicability to the operations may be low. Moreover, the prices of the resources may limit their use. How well do the following statements apply to resource availability during your start-up?

	– +/- +
Capital was easy to obtain	1 2 3 4 5 6 7
Capital was inexpensive	1 2 3 4 5 6 7
Facilities were easy to find	1 2 3 4 5 6 7
Facilities were inexpensive	1 2 3 4 5 6 7
Facilities applied well to the operations	1 2 3 4 5 6 7
Production technology was easy to acquire	1 2 3 4 5 6 7
Production technology was inexpensive	1 2 3 4 5 6 7
Ready technological solutions applied well to the operations	1 2 3 4 5 6 7
The availability of raw materials was good	1 2 3 4 5 6 7
Raw materials were inexpensive	1 2 3 4 5 6 7
Raw materials applied well to production	1 2 3 4 5 6 7
Access to distribution channels was easy	1 2 3 4 5 6 7
Distribution agreements were inexpensive	1 2 3 4 5 6 7
Distribution channels were applicable to operations	1 2 3 4 5 6 7
The availability of employees was good	1 2 3 4 5 6 7
Work force was inexpensive	1 2 3 4 5 6 7
Work force was skilful and professional	1 2 3 4 5 6 7

28. In industry competition, our principle was

	– +/- +
emphasising quick start-up	1 2 3 4 5 6 7
emphasising organisational learning	1 2 3 4 5 6 7
buying in already existing know-how	1 2 3 4 5 6 7
challenging the competition in the industry	1 2 3 4 5 6 7
careful development	1 2 3 4 5 6 7
gaining large attention	1 2 3 4 5 6 7
emphasising absolute quality	1 2 3 4 5 6 7
minimising costs in all operations	1 2 3 4 5 6 7
emphasising technological competitive advantage	1 2 3 4 5 6 7
selection of distribution channels	1 2 3 4 5 6 7
development of productivity	1 2 3 4 5 6 7
seeking economies of scale	1 2 3 4 5 6 7

APPENDIX 3: OPERATIONALISATION

The most important variables used in the study

Name	question	measure	meaning of the variable
IDEM	25	scale of 0–7	growth rate of demand
IDEV	25	scale of 0–7	phase of industry development
ISAT	25	scale of 0–7	level of unsatisfied demand in the industry
DEMAND	25	sum of IDEM, IDEV, ISAT	growth of demand in the industry
IOLI	25	scale of 0–7	level of integration in the industry
IEST	25	scale of 0–7	number of established companies in the industry
IPRO	25	scale of 0–7	level of similar products in the industry
STRUCTURE	25	sum of IOLI, IEST, IPRO	integration of the industry
TNUM	8	continuous	size of the team
EFAC	15	scale of 0–4	level of the entrepreneur's use of his own facilities
EMAC	15	scale of 0–4	level of the entrepreneur's use of his own machinery
EFYS	15	sum of EFAC, EMAC	level of the entrepreneur's use of his own physical resources
EFIN	15	scale of 0–4	level of the entrepreneur's use of his own financial resources
NFAC	15	scale of 0–4	level of the entrepreneur's use of facilities acquired through the network
NMAC	15	scale of 0–4	level of the entrepreneur's use of machinery acquired through the network
NFYS	15	sum of NFAC, NMAC	level of the entrepreneur's use of physical resources acquired through the network
NFIN	15	scale of 0–4	level of the entrepreneur's use of financing acquired through the network
NEMP	15	scale of 0–4	level of the entrepreneur's use of employees acquired through the network

NEXP	15	scale of 0–4	level of the entrepreneur's use of expertise through the network
NCUS	15	scale of 0–4	level of the entrepreneur's collection of customers through the network
NCON	15	scale of 0–4	level of the entrepreneur's use of contracts through the network
NRELA	15	sum of NCON, NCUS	level of the entrepreneur's use of relationships activated through the network
OFIN	15	scale of 0–4	level of the entrepreneur's use of financing acquired directly from external sources
OEMP	15	scale of 0–4	level of the entrepreneur's use of people employed directly from external sources
OEXP	15	scale of 0–4	level of the entrepreneur's use of experts hired directly from external sources
OFAC	15	scale of 0–4	level of the entrepreneur's use of facilities acquired directly from external sources
OMAC	15	scale of 0–4	level of the entrepreneur's use of machines acquired directly from external sources
OFYS	15	sum of OFAC, OMAC	level of the entrepreneur's use of physical resources acquired directly from external sources
THAT	16	scale of 1–7	the importance of the creation of the start-up team for efficiency
THED	16	scale of 1–7	importance of getting education before the start-up for efficiency
THBP	16	scale of 1–7	importance of writing a business plan for efficiency
THEM	16	scale of 1–7	importance of quick employing of people for efficiency
THSA	16	scale of 1–7	importance of hurrying the first sales for efficiency
THMA	16	scale of 1–7	importance of quick purchase of the machinery for efficiency
THTE	16	scale of 1–7	importance of the use of external expertise for efficiency
THETU	16	scale of 1–7	importance of the careful building of the production process for efficiency

THLO	16	scale of 1–7	importance of the careful building of the internal logistics for efficiency
THAC	16	scale of 1–7	importance of the quick development of the control systems for efficiency
LRAH	20	scale of 1–7	importance of received financing for company credibility
LASI	20	scale of 1–7	importance of the use of external expertise for company credibility
LBPL	20	scale of 1–7	importance of a written business plan for company credibility
HIGH PROFIL	20	sum of LRAH, LASI, LBPL	professionality-oriented approach to legitimising the venture
LFUN	20	scale of 1–7	importance of the proven functioning of the production for company credibility
LQUA	20	scale of 1–7	importance of the proven quality of the operations for company credibility
LCOS	20	scale of 1–7	importance of proven cost efficiency for company credibility
OPERAT	20	sum of LFUN, LQUA, LCOS	production-oriented approach to legitimising the venture
LKAU	20	scale of 1–7	importance of the first sale gained for company credibility
LINK	20	scale of 1–7	importance of the possibility of starting with small investments for company credibility
LYHT	20	scale of 1–7	importance of good business partners/co-operation for company credibility
INKREM	20	sum of LKAU, LINK	incremental approach to legitimising the venture
LIMA	20	scale of 1–7	importance of the image of the company for company credibility
LNIM	20	scale of 1–7	importance of the name of the company for company credibility
LJUR	20	scale of 1–7	importance of the juridical form of the company for company credibility
LTEA	20	scale of 1–7	importance of the set up/expertise/ reputation of the team for company credibility

LMAI	20	scale of 1–7	importance of the reputation of the entrepreneur for company credibility
IMAGE	20	sum of LIMA, LNIM, LJUR, LTEA, LMAI, LYHT	image-oriented approach to legitimising the venture
LRAA	20	scale of 1–7	importance of the purchase deal of raw materials for company credibility
LJAL	20	scale of 1–7	importance of imitating others in the start-up process for company credibility
LKON	20	scale of 1–7	importance of the conservativeness of the operations for company credibility
SAFE PLAY	20	sum of LKON, LRAA, LJAL	importance of avoiding uncertainties in the start-up

APPENDIX 4: SAMPLE AND RESPONSE CHARACTERISTICS

The sample and response are depicted in the table below. Considering the non-response rates, the basic categories seem rather similar, the electronics firms having been slightly more active than the metal companies. On the other hand, the highest shares of non-response can be found in the municipalities where the sample consisted of one or two respondents, and these entrepreneurs did not manage to reply to the questionnaire. In terms of regional aspects, the analysis of variance suggests that no clear patterns can be found.

		Sample				Response				
Municipality	Region	tot.	met.	el.	oth.	tot.	met.	el.	oth.	%
Kortesjärvi	ep	1	1	0	0	1	1	0	0	100
Kuortane	ep	1	1	0	0	1	1	0	0	100
Teuva	ep	1	1	0	0	1	1	0	0	100
Veteli	ep	1	1	0	0	1	1	0	0	100
Kokkola	kp	1	1	0	0	1	1	0	0	100
Kauhajoki	ep	6	6	0	0	5	5	0	0	83
Ilmajoki	ep	3	2	1	0	2	1	1	0	67
Ii	ou	3	0	2	1	2	0	1	1	67
Sievi	kp	4	2	1	0	2	1	1	0	50
Pietarsaari	kp	4	3	1	0	2	2	0	0	50
Kaskinen	ep	2	2	0	0	1	1	0	0	50
Vähäkyrö	va	2	2	0	0	1	1	0	0	50
Vaasa	va	34	30	4	0	15	13	2	0	44
Seinäjoki	ep	8	6	2	0	3	3	0	0	38
Kalajoki	kp	14	14	0	0	5	5	0	0	36
Oulu	ou	21	1	15	5	7	0	6	1	33
Mustasaari	va	6	5	0	1	2	1	0	1	33
Ylihärmä	ep	15	15	0	0	4	4	0	0	27
Kristiinankaup.	ep	4	4	0	0	1	1	0	0	25
Ylivieska	kp	10	9	0	1	2	2	0	0	20
Oulainen	ou	5	5	0	0	1	1	0	0	20
Alavieska	kp	8	6	0	2	1	0	0	1	13
Laihia	va	2	2	0	0	0	0	0	0	0
Maksamaa	va	2	2	0	0	2	2	0	0	0
Korsnäs	va	2	1	1	0	0	0	0	0	0
Maalahti	va	1	1	0	0	0	0	0	0	0
Kauhava	kp	1	1	0	0	0	0	0	0	0
Kurikka	kp	1	1	0	0	0	0	0	0	0
Merijärvi	kp	1	1	0	0	0	0	0	0	0
Kälviä	kp	1	1	0	0	0	0	0	0	0
Uusikaarlepyy	kp	1	1	0	0	0	0	0	0	0
Unidentified						4				
Total		166	128	27	11	67	48	11	4	

			Regions					
Response rate			Va	Ou	Kp	Ep	F-value	sign.
Branches	Overall	0,40	32.5	40.0	36.9	52.1	.496	.688
	Metal	0,38	30.5	10.0	37.7	61.7	.940	.436
	Electr.	0,41	25.0	45.0	50.0	50.0	.100	.956
	Other	0,36	100	50.0	25.0		.290	.840

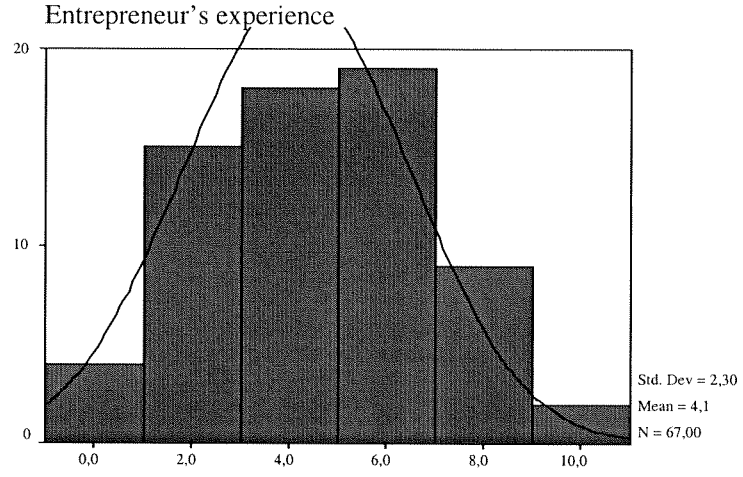
APPENDIX 5: RELIABILITY EVALUATIONS

The entrepreneur

Three scales were included in terms of the entrepreneur's characteristics. The entrepreneur's education was measured by three items, which do not provide a coherent and consistent measure for catching the entrepreneurs' diverse educational backgrounds. This was anticipated, as the different types of education often do not coincide.

Entrepreneur's education (EEDU)	Item to total corr.
1. To what extent did you have technical education before the start-up	-.03*
2. To what extent did you have commercial education before the start-up	.14*
3. To what extent did you have other education before the start-up	-.04*
Coefficient alpha .03	

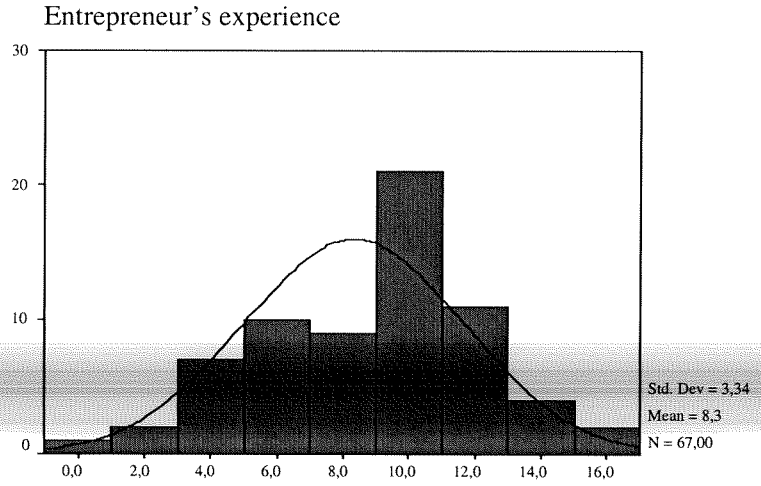
However, it is plausible to form a measure of the entrepreneur's education that describes the overall amount of education the entrepreneur has received. In the table below, the frequency distribution of the education suggests that the sum measure describes the entrepreneurs' level of education fairly evenly.



The measure of the entrepreneur's experience works in the same way as the entrepreneur's education does; however, in this measure, the items are not necessarily as exclusive as in the measure of education. Therefore, other experience than that from the entrepreneur's industry reached an acceptable level of correlation to the total measure. The low correlation of the industry item can be understood considering the fact that many of the ventures were started up by very young entrepreneurs.

Entrepreneur's experience (EEXP)	Item to total corr.
1. To what extent did you have experience from the industry before the start-up	.16*
2. To what extent did you have experience from a start-up before the start-up	.42
3. To what extent did you have experience from management before the start-up	.66
4. To what extent did you have experience from co-operation before the start-up	.51
Coefficient alpha .64	

However, even if the item-to-total correlation is low, the measure was formed in its original compilation. The co-efficient alpha reaches the level of .64, which is acceptable. The table below suggests the experience measure follows closely the normal distribution curve.



The entrepreneur's networking activity was measured by a 6-item instrument. The measure managed to reach a rather satisfying level of reliability. Only one item, viz. participation in the activities of different associations, did not reach a satisfactory level of item-to-total correlation. This could be explained by the entrepreneurs' lack of time for leisure activities. The measure was purified, after which the co-efficient alpha reached a satisfactory level.

Networking activity	Item to total corr.
1. I am active in creating new acquaintances	.54
2. I am active in keeping contact with my friends and acquaintances	.65
3. I am active in participating in the activities of different associations	.13*
4. I am active in discussing business in general	.42
5. I am active in planning co-operation projects with friends and acquaintances	.53
6. I am active in keeping contact with business partners	.51
Coefficient alpha .71	

The industry

The industry characteristics were described by two measures, both including three items. Industry structure reflects the competitive density of the industry. The first item suggests only few companies competing against each other, which would reflect the case of a relatively mature industry, while the second item concerns the number of well-established companies. In case the score is high, it relates to a more mature industry. Finally, the third item concerns the similarity of the competing products. The item-to-total correlations reach acceptable levels in each item, and the co-efficient alpha is relatively high, suggesting the measures are fairly reliable.

Industry structure	Item to total corr.
1. There were a few equal companies competing each other in the industry	.62
2. There were a few well established companies in the industry	.43
3. The products of the companies in the industry were rather similar	.55
Coefficient alpha .72	

Industry demand included three items, each of which managed to reach acceptable levels of item-to-total correlations. The items concern the rate of growth in the industry, the relative phase of development of the industry, and the level of demand and the number of eventual opportunities for new competition. As such, the measure seems internally sound, and the item-to-total correlations reach satisfactory levels. The coefficient alpha suggests the reliability of the measure is very good.

Industry demand	Item to total corr.
1. The demand in the industry was in high growth	.61
2. The industry was still in its early phases of development	.79
3. There was much unsatisfied demand in the industry	.56
Coefficient alpha .80	

Resource attainment

The use of different combinations of network resources was measured by eight items. The facilities, machines and equipment, financing, employees, customers and contracts seem to work reasonably well as items in the measure. On the other hand, the use of raw materials and expertise do not seem to correlate with the overall measure in a satisfactory way. This can be explained by the inherent nature of these resources: the raw materials relate to the on-going and growing usage of material that is transformed into products or other merchandise. This means that the use of raw-material does not mean loaning or borrowing, instead it relates to the irreversible transformation of the goods into something else. On the other hand, the use of expertise is somewhat more correlated with the total measure, even if it does not reach the satisfactory value of .35. There are two explanations to the low level of correlation. First, the use of networked expertise is likely to be difficult to build on in the long run, and therefore entrepreneurs prefer the use of purchased expertise. Second, the use of networked expertise may not build up the external credibility of the venture as effectively as the use of purchased expertise. The two items were left out of the final measure, and the purified coefficient reached a satisfactory level of reliability.

Network resources	Item to total corr.
1. Facilities	.44
2. Machines and equipment	.58
3. Raw material	.20*
4. Financing	.45
5. Employees	.56
6. Expertise	.28*
7. Customers/business relations	.46
8. Patents, property rights, other contracts	.45
Coefficient alpha .72	

The use of purely external resources was measured by eight items, in a way similar to the networking resources. The measure seemed to catch the use of different resources reasonably well in all but two cases: the acquisition of customers and other business relations did not relate to the overall measure in a satisfactory way. This applied to the acquisition of patents, property rights and other contracts. As suggested in the theoretical part of the study, this result was quite expected. These two types of resources are likely to be created in the course of on-going business and networking, rather than being bought in into a new start-up venture. The two items were excluded and the coefficient alpha reaches the satisfactory level of .76.

External resources	Item to total corr.
1. Facilities	.60
2. Machines and equipment	.62
3. Raw material	.52
4. Financing	.51
5. Employees	.44
6. Expertise	.41
7. Customers/business relations	.32*
8. Patents, property rights, other contracts	.30*
Coefficient alpha .76	

The entrepreneur's use of his own physical resources was measured by three items: facilities and machines. The correlation between the two items reached the level of .56 and the alpha coefficient suggests the measure is internally consistent and reliable.

Entrepreneur's own physical resources (EFYS)	Corr.
1. Facilities	.56
2. Machines	
Coefficient alpha .72	

The physical resources acquired through networking were counted in a sum measure. The item-to-total correlations suggest that the items do not work well as a unitary measure. After the exclusion of the raw materials item, the correlation of the facilities item and the machines item is .37, the coefficient alpha being .53.

Networked physical resources (NFYS)	Item to total corr.
1. Facilities	.45
2. Machines	.24*
3. Raw materials	.23*
Coefficient alpha .53	

A sum measure of the relational resources was formed by combining the networking items 'expertise', 'customers/business relations' and 'patents, property rights and other contracts'. These reflect the overall use of intangible resources that an emerging venture is unlikely to have in another way than through networking. Two of the items, 'expertise' and 'patents, property rights and contracts' do not reach a satisfactory level of correlation to the total measure. After the exclusion of the expertise item from the measure, the two items correlate at the level of .42 and the co-efficient alpha is at the level of .55, which is acceptable.

Relational resources (NRELA)	Item to total corr.
1. Customers/business relations	.46
2. Patents, property rights, other contracts	.33*
3. Expertise	.27*
Coefficient alpha .55	

For further analysis, two of the external resources variables, the use of facilities and the use of machines, were summed up. The measure describes the overall acquisition of physical resources to the emerging venture. The correlation suggests that the two items behave in a consistent way, and the alpha coefficient is at the level of .75.

Purchased physical resources (OFYS)	Corr.
1. Facilities	.60
2. Machines	
Coefficient alpha .72	

Legitimising approaches

The items of legitimising were factor-analysed to identify the different dimensions of legitimising. The analysis produced five factors.

Variables	Factor 1	2	3	4	5	Comm.
1. name of the company	*.849*	-.001	.006	.296	-.118	.826
2. image of the company	*.822*	.136	.005	.164	.005	.725
3. set up/expertise/reputation of the team	*.610*	.333	.286	-.267	.195	.675
4. good business partners/co-operation	*.548*	.250	.243	.006	.387	.576
5. juridical form of the company	*.514*	.221	.292	.451	-.270	.675
6. reputation of the entrepreneur	*.512*	.321	.125	.183	.265	.485
7. proven functioning of the production	.161	*.845*	.242	.007	-.010	.812
8. proven quality of the operations	.373	*.809*	.002	.001	-.007	.799
9. proven cost efficiency	-.006	*.678*	.162	.464	.010	.713
10. received financing	-.002	.218	*.792*	.122	-.003	.691
11. written business plan	.200	.194	*.733*	.010	-.002	.624
12. use of external expertise	.455	-.005	*.616*	.195	.266	.698
13. conservativeness of the operations	.235	.211	.004	*.766*	-.009	.695
14. purchase deal of raw materials	.008	.107	.154	*.571*	*.474*	.592
15. imitating others in the start-up process	.292	-.009	.403	*.557*	.165	.594
16. first sale gained	.008	-.168	.288	-.174	*.744*	.702
17. possibility of starting with small invest.	.004	.001	-.293	.185	*.746*	.679
Eigenvalue	3.17	2.35	2.23	2.00	1.82	
% variance explained	18.6	13.8	13.1	11.7	10.7	
Cumulative value	18.6	32.5	45.6	57.3	68.0	

Principal components analysis – Varimax rotation. Loadings are abbreviated to three-digit level.
KMO measure of sampling adequacy .752 (results exceeding .50 acceptable).

The legitimising approaches to venture creation were described through five measures. The first measure stems from the first factor in the factor analysis and describes the entrepreneur's way of building the venture into a externally credible form. The six items include image, juridical form, name, entrepreneur's reputation and the team's appearance, which can all be related to a credible business. The items correlate to the total measure satisfactorily, and the high co-efficient alpha suggests the reliability of the measure is very good.

Image	Item to total corr.
1. Image of the company	.71
2. Juridical form of the company	.53
3. Name of the company	.71
4. Entrepreneur's reputation	.51
5. Good business partners	.56
6. Set up/ expertise/ experience of the start-up team	.52
Coefficient alpha .82	

The second factor brought together three items, and form the *operative approach* measure. The items all relate to the internal operations of the company. As a whole, this measure reflects the company's internal efficiency and reliability. The coefficient alpha reached the level of .79, which is very good.

Operat	Item to total corr.
1. Approved quality of operations	.67
2. Approved cost efficiency	.52
3. Approved functioning of operations	.71
Coefficient alpha .79	

The third factor loaded high on three items, reflecting a high-profile approach to the start-up. The items seemed to correlate satisfactorily to the total measure. The co-efficient alpha suggests the measure is

reasonably consistent and reliable.

High profil approach	Item to total corr.
1. Positive financing decision	.48
2. Written business plan	.55
3. Use of external expertise	.54
Coefficient alpha .69	

The fourth factor loaded on three main factors: the conservativeness of the operations, the purchase deal of raw materials and the imitating of others in the start-up. This factor reflects the need to play safe by avoiding new concepts and by concentrating instead on well-known things in the start-up. The items reflect reasonable level of correlation to the total measure, and the coefficient alpha suggests the measure is fairly consistent and reliable.

Safe playing-approach	Item to total corr.
1. Conservativeness of the operations	.45
2. Purchase deal of raw materials	.42
3. Imitating of others in the start-up	.44
Coefficient alpha .62	

The final measure of the legitimising-approaches is the incremental-approach. The measure consists of two items, which gain relatively low item-to-total correlations. After the exclusion of the item, the alpha coefficient reaches the level of .48.

Inkrem	Corr.
1. Gained first sales	.31
2. Possibility of starting with small investments	
Coefficient alpha .48	

APPENDIX 6: TELEPHONE INTERVIEWS

The third phase of the data collection concerned the gaining of control over the survey response. The phase consisted of unstructured discussions with the respondents to the survey. To verify the survey data, 10 respondents were called back and asked further details about their answers. The telephone interviews totalled 1.5 hours of data, concentrating on the early times of the start-up and on the way the entrepreneurs answered to the questionnaire.

Summary

The entrepreneurs described the circumstances when the venture formation took place, and explained their views on the start-up. The information from the discussions matched well with the responses in the questionnaires. In the following, a brief summary of each discussion is provided.

1. Interview

The selection of the first case based on the confusion about the size of investment in the start-up. The discussion took about six minutes.

R: - what I am asking is about the start-up because you reported you did it alone...?
E: - uhhh... did I? ... you see, we were two, with a 50-50 split...
R: - ... right, you see, you answered in another question that the team invested 50% of the financing....

Beside the control on the confusion, the discussion centred on the importance of company credibility and of the entrepreneur's reputation:

E: -... especially the start-up company needs to gain credibility fast... and, of course, you'll get it when you get contacts and everything works out fine...
E: - ... in the region I happen to be reasonably well-known, because of my sports activities, and and of course I have been working here .... and, I guess, I have been trustworthy... that's what I mean by it... that you can trust one another...

Finally, the entrepreneur gave his opinion on the questionnaire:

R: - how did the questionnaire feel like?
E: - well, in my opinion, you see, there are all kinds of questionnaires, this was one of the best...

2. Interview

The selection of the second case concerned the confusion about the size of the start-up team. The discussion took about ten minutes.

R: - ...this start-up team, I couldn't make sense of it, how many were you?
E: - well, actually, we were four...
R: - right, was that a sort of unofficial team, or were you all part-owners in the beginning?
E: - well, in later phases all became owners...

The discussion moved to concern the legitimacy of the company. The entrepreneur emphasized this especially because in the start-up he had set the target of gaining large companies as customers, with whom credibility is of high value:

R: - well, then you answered that the credibility of the company was important in the start-up... was it particularly important in your branch?
E: - oh yes, when we had made our mind that we'd target big customers and there it's very important that the company can trust you...

3. Interview

The selection of the third case concerned the entrepreneur's comments on the questionnaire regarding the initial investment. The discussion took about 15 minutes.

E: - ... well it's based on the fact that in reality without money you cannot start in any way... you see, this standard of living has progressed so... when I started ... you must have money! Today, if

you start with less than 100 thousand, it won't work, it will fail...
R: - well, you started with quite a small investment yourself...?
E: - yes, but the situation was different then....
R: - well, the second issue was this speeding of the first sales...?
E: - yes, of course, you need to get the cash flow started... and it's a little embarrassing because... when I started, it was embarrassing.. I said to the first customer that I wanted the money at the time of delivery, and they told me that normally they had 30 days for payment, but I promised to allow them a little cash discount if I only could get the money that day... and that's how it started....
R: - the third thing you picked up was the business plan...?
E: - yes, it has to be clear... that, you see, many people start and then they hear something else.. about profitable businesses... and they start it too, that you should stick to it, where you choose to do business... and the business is bad ,you shouldn't have started it at all...
E: - quality, it has to be excellent.. if it's not, the business will fail... and the customers... long contracts and quality, these things belong together... that's how you earn your living... so to speak... and your reputation goes ahead of you...

4. Interview

The fourth case attached reports and other information on the company's early phases. This was the reason for the selection of the case. The discussion took about 14 minutes.

E: - ...the questionnaire was very clear and easy, there were so many alternatives that it was possible to find the suitable one for us....

The discussion concerned the development and use of the network.

E: - ... I have always had a very good network... that helped me so that I could sort of improvise things without financial investments and I have applied that...
E: - ... you see, I had my first order sort of agreed already with the customer, that sort of networking... and this is very valuable networking ,this... for the start-up...

The entrepreneur used networking as a main means for the building of customership and for offering various products. The network companies and entrepreneurs widened the overall capacity of the new-born company.

R: ... well this team, you answered that you had a team of five...?
E: - yes, and they all were key persons to their sectors of competence which was terrific even so that only after a long time we started to look for money ... if some of them wanted to have salary or something... this is a nice example of networking...
R: - could you have started without this type of team?
E: - no, that wouldn't have worked... in this business you can't start without having credibility... this such a cynical branch... I mean, the customers are, and with a good reason... you see, they are process manufacturers and if you let someone cut the process, you need to know that it will be fully functional after the project... and it doesn't help anything if you say you're sorry, it doesn't work... and that's why the threshold for entry is so high...
E: - .. but with this credibility thing it's the same as when a young person applies for a job and they ask for earlier experience but he can't have any experience because he's young! And in this business you have to create the first reference in that sort of vision, so that everything else looks very credible... and if you ask an engineer how long it would take to do this, he would say it would take a really long time and lots of money... and I'll go and sell it first and only then say that here's the deal, this is the deadline and start right now... and it works every time!

5. Interview

The selection of the fifth case concerned the confusion about the size of the start-up team. The discussion took about six minutes.

E: - ... when they built that new store there and needed that sort of special metal wires and there it started, our business, when that chief wanted this special arrangement... so it was a total

coincidence that this business is in the metal industry...

6. Interview

The selection of the sixth case concerned the confusion about the size of the initial investment. The discussion took about eight minutes.

E. - you answered the question about the initial investment with '5 million'...?

R. - well, in that case you have to off many zeros ... it should be 5 thousand... it started with really small money...

R: - you commented that the pushing people to entrepreneurship is wrong...?

E: - well, yes, if you use 'push' or something else... but anyway, I mean, those dreams that it would be like heaven... no-one tells anything about dangers and risks, and if you haven't experienced them, you have no idea...

E: - my job was about to change from the town to another place... and I had thought about this so it sort of a natural choice...

E: - and, you see, our work is made up of projects so everyday we have to remember that and develop something... some new business because when the project is over, there'll be nothing else to do.... so you have to sell yourself to the customer all over again... and in this business I've had to start from zero three times...

R: - how was the questionnaire?

E: - well, it was very much the same as they all are...

7. Interview

The selection of the seventh case concerned the confusion about the financing of the start-up. The discussion took about five minutes.

R: - you answered that your own investment was 15% and the external investment was 85% so was the team investment included in this 85%?

E: - yes, it was...

R: - well, you didn't have any employees in the start-up phase, did you?

E: -well, yes, that's right, I started it alone, there were no-one, not even employees...

- ... but you had no experience in this?

E: - yes, I did not have experience in start-ups, but in working, sure... you see, when you have grown up in the country, it's some kind of entrepreneurship... this agriculture... sure, I had an accountant but no-one else...

E: - I was an employee in a larger organisation until the start-up, and it didn't quite suit me to have so little work to do there...

8. Interview

The selection of the eighth case concerned the entrepreneur's comments about the young companies' responsibilities. The discussion took about six minutes.

R: - how long did it take before you'd made everything comply with all the regulations?

E: - ... well... it was right from the beginning, but those inspections, there were none in the very beginning...

9. Interview

The selection of the ninth case concerned the confusion about the size of the start-up team. The discussion took about ten minutes.

E: - well, it was terrible unemployment then... I saw some needs because I kept my eyes open and asked them if they needed this type of rack... and they answered that YES! that's a good idea... and I started making them...you see, these were new ideas...

10. Interview

The selection of the tenth case concerned the confusion about the size of the start-up team. The discussion took about 12 minutes.

> E: - the first welding machine that I bought with an IOU and there it started... and when you got some money, you bought some more hand tools and a drilling machine, but everything was so small... you know, it was mostly selling your own expertise... but then the technology developed and the machine inventory grew...