

New Venture Survival: Ignorance, External Shocks and
Risk Reduction Strategies

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Abstract

This paper begins by establishing our definition of mortality risk, and what is meant by new venture failure. We argue that the liability of newness is largely dependent on the degree of novelty of the new venture's product or service with novelty viewed in three primary dimensions, viz: to the market, to the technology of production, and to the managers. We argue that mortality risk increases with the degree of novelty in each dimension and with the number of dimensions in which the new venture is novel.

We postulate that mortality risk of a new venture typically declines over time (if the venture does not fail), whatever its initial risk rating, as its novelty in each of the three novelty dimensions is eroded by information search and dissemination processes, which allows the firm to evolve into an established small or growth business. In effect, novelty declines as ignorance (which prevails in the minds of potential consumers, producers and managers) decays over time.

We argue that the (typically) monotonic decline in mortality risk for a new venture can be disrupted by reversals in the decay of ignorance, by environmental shocks, and by the failure of the new venture managers to make smooth transitions through specific stages of the firm's growth and maturation process.

The paper suggests that risk reduction strategies can be employed, most of which impact on one or more of the determinants of mortality risk in order to increase the firm's chances of survival. A series of risk reduction strategies are enumerated and their impact on the determinants of mortality risk is considered. The contributing factors to a mortality risk function are demonstrated schematically along with the affect risk reduction strategies can have on a firm's probability of survival.

Entrepreneurism Rising From The Ashes Of Communism

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Abstract

Entrepreneurship and small businesses are likely to play a critical role in the development of a market-based economy in Russia and Poland. Major issues facing entrepreneurs in these countries are examined. Consideration is given to the role that international developmental agencies are playing in this economic transitional process. Here, attention is given to the Citizens Democracy Corps (CDC) and the authors' consulting experience with recently privatized firms and support organizations in Poland and Russia. CDC assignments ranged from helping a Polish manufacturer of furniture accessories develop an ISO9000 quality management system; providing training and consultation on curriculum development to a new, private business school in Russia; to helping a privatized Russian transportation company develop a business plan and internal controls. The article concludes with a number of observations and recommendations for nurturing the emergence of the small business sector and doing business in these countries.

Entrepreneurial Companies As Job Creators In Belgium:
The Processes Of Professionalization Of Management And
Institutionalization Of Ownership

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Abstract

This article summarizes the analysis of the growth of 26 entrepreneurial portfolios in Belgium. These portfolios consist of medium-sized companies that are owner-managed, have more than 50 employees with a record of growth in turnover and employment during the last five years.

Topics focus on the growth objectives, corporate governing structures, financing growth, internal and external growth path, strategic planning, the portfolio structure and on the evolution of these factors in the growing of the company.

The raw data resulted in a number of configurations. The framework that evolves indicates three stages of growth for medium-sized companies in the entrepreneurial portfolio. Each stage is described by the growth orientation, the ownership and management characteristics.

The stages are linked to the size of the company (as measured by the number of personnel). Management evolves from operational to professional ownership from closed to open. The evolutions are embedded in a dynamic process in which they do not occur at the same time, so it is a matter of transition.

This research shows that entrepreneurial portfolios and the medium-sized companies they consist of pass important cross-roads. These cross-roads can be distinguished in the process of management and the process of ownership. The first is based on "professionalization" of management, the latter on "institutionalization" of ownership.

The intimate knowledge of the data must be stressed: they are collected during a three year period (1993-1996), in which the entrepreneurs are members of the Impulse Centre. The findings are discussed with all entrepreneurs involved, with a high degree of recognition.

The Role of Customer Service in Small
Business Strategic Planning

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Abstract

With the changing environment of retail sales, where giant discount chain stores are gobbling up market share, the chance of survival for the small business may hinge on its ability to provide outstanding customer service. However, the decision to provide outstanding service is a strategic management choice and should be interwoven into all facets of the business operation. A model is introduced that depicts a customer's expectations of the retailer's customer service system. Expectations of the service encounter are depicted within a floating range. A small business must first attempt to provide the basic customer service needs prior to implementing a complex scheme. However, the service components designed to exceed customer expectations will be those more likely to result in loyal customers.

A Story of Bad Customer Service

A customer is in the process of remodeling his home and is in need of supplies to finish staining his hardwood floors. He is a novice home-repairman and goes to his local hardware store in hopes of getting the needed supplies and some instruction on how to use them. He enters the store and notices a young girl sitting at the cash register. She is wearing blue jeans and a sweatshirt. She is reading a book and never looks up to acknowledge the customer.

The customer wanders around the store for about five minutes looking down the unmarked aisles but cannot locate any floor stain products. He then notices several men seated around a desk. The men are dressed in blue jeans and assorted work shirts. They are telling stories about a recent deer hunt. The customer approaches this group of men and is unsure if they even work for the hardware store. The customer stands at the desk for several minutes while the stories continue. Finally, and with an air of annoyance at having their story interrupted, one of the men looks up and asks if he can help with something. The customer tells him what he is looking for and the store clerk says, "Yeah, they're over there" and points with his hand toward a back corner. The story of the deer hunt resumes. The customer goes to the back corner of the business and looks around until he finally finds the floor stain products. There are three different brands, several varieties of colors, and each product seems to have various qualities that set it apart from the competing brands.

After reading the labels to gain as much information as possible, the customer returns to the desk to obtain some assistance. Again the deer story must be interrupted and again the employees seem annoyed at being troubled by a customer. The customer states that he found the products, states the type of project he is working on, and asks which of the brands would best be suited for his particular task. The clerk replies, "Aw, they're pretty much all the same." Now in frustration, the customer returns back to the stain products and selects one. He then searches throughout

the store looking for a paint brush to apply the stain. Finally, the customer has the materials he needs. The customer had planned to look at some other materials that would be needed for future jobs but is now so frustrated that he simply wishes to leave the premises.

When the customer approaches the cashier, she looks up at him, puts her book down, and takes the products from him without so much as saying a single word. She then puts the items in the bag and tells the customer the amount of the total purchase. After the products are paid for, the cashier places the receipt in the bag, hands the sack to the customer, and as she is reaching down for her book says very unconvincingly, "thank you."

The aftermath of this situation of poor customer service is rather astounding in terms of a lost customer, bad word of mouth, and, most important, lost sales revenue. The customer in this case purchased less than \$10 worth of supplies for the floor-staining project. However, other projects soon totaled well over \$2,000. All of these subsequent supplies were purchased at another hardware store because the customer vowed to never go back to the original store. Additionally, he warned his friends about going to the business by sharing his story with them. He then recommended the second hardware store and lauded the friendly customer service he had received at this business.

Scenes such as this one occur daily in countless small retailers throughout the nation. Small retailers are continually searching for a way to compete against the retail giants. Outstanding customer service is one way in which they can compete. It is important to note, however, that not all small retailers should strive to deliver excellent customer service. The decision to provide such service should be a methodical one that is based on industry analysis and hard facts. The purpose of this paper is to examine the roles of strategic management and customer satisfaction in the small retail firm. The integration of these two very important business concepts can be the key to the survival of many small businesses.

What Small Retailers Do Wrong: Attacking the Strength

When a giant retailer such as Wal-Mart or Target enters a local market, many of the existing retailers experience a loss of market share and sales due to the cost competitiveness of the giant retailer. Sensing that its customers are price sensitive, the local retailer then tries to compete as a low cost provider. Not only is this a poor strategy to engage in, it could ultimately become a fatal mistake. A study was conducted to see how retailers in five Midwestern communities adjusted their strategies when a Wal-Mart opened within 20 miles of their location (McGee 1996). This study determined that the stores in competition with Wal-Mart were small in both earning power and number of employees. More than 95 percent of the stores had fewer than 15 full-time employees and 65 percent of the respondents had sales of less than \$500,000.

Surprisingly, half of the respondents felt that Wal-Mart had a neutral impact on their business. However, half of the respondents had experienced a decline in sales during the time that Wal-Mart began competing with their business. It may be

possible to infer from this data that small business owners do not engage in enough financial and industry analysis. If the businesses were to engage in this analysis, they would realize that Wal-Mart is impacting their business and taking sales away from them.

The study then broke up the participants according to their perception of impact from Wal-Mart. It was determined that those businesses who felt that Wal-Mart was indeed impacting them negatively were much more aggressive in altering their business strategy. For those businesses who aggressively changed their tactics, the choice was one of competing with lower prices and increased promotional activities. The strategy categories with the highest scores were "holding sales," "sales promotions," and "carrying lower priced items." This action was done in an attempt to offset the variety of merchandise and low prices that Wal-Mart offered.

This research indicates that many small retailers are out of sync with the commonly held beliefs that a small business should define its market, create a competitive niche, alter its product mix, and diversify into new areas of business in order to compete with a retail chain store. Retailers may also overlook the importance of customer service in attracting and maintaining a profitable customer base. The use of the service component as a differentiating factor can enable the small retailer to successfully compete against larger chains. In the following sections, an overview of the role of strategic management in the small retail establishment will be presented. Then several important components of customer service as a differentiating strategy will be discussed.

Strategic Management

Strategic management is generally defined as management's efforts to determine the organization's mission, goals, and objectives within the context of the influences of the external and internal environments. Strategic management then focuses on strategy formulation, implementation, and control (Wright, Kroll and Parnell 1996). The essence of strategic management is the obtaining of a better understanding of the environment in which a company does business. Some aspects of this environment are almost completely out of the control of management yet they may still impact the firm in a positive or negative manner. Other areas of the environment may be strongly influenced by the efforts of management and these areas should be manipulated in a fashion that puts the business in the most attractive position. It is important to remember that strategic management is a complex iterative process in which no element can be viewed in isolation because the various elements are intertwined.

A very important aspect of strategic management is the concept of Business Unit Level Strategy (Porter 1980). Porter developed a continuum with two business unit strategies at each end. He stated that a company could be a Low Cost - Industry Wide producer or a Differentiated - Industry Wide producer. Additionally, he stated that these two extremes existed for Niche producers as well. Small retailers, by their very nature, are niche competitors. They simply lack the capital, organizational strength, personnel, and economies of scale to be an industry

wide competitor.

Why Small Retailers Need Strategic Management

Utilizing strategic management can aid a small business owner in two very important ways: formalizing the planning process and providing better information from which to make decisions. Fredrickson (1984) stated that it is possible to have a highly formal planning system that is not associated with comprehensiveness in the decision process. However, Lyles et al. (1993) countered this by stating "the relationship between the formal planning system and the firm's decision process is particularly important to small businesses, where there may be little separation between the strategic thinking/decision making of the entrepreneur and the formal planning system" (p. 40). In a survey of the Inc. 500 CEO's, 72 percent believed that planning led to a better decision making process and, ultimately, better decisions.

Lyles et al. proposed three hypotheses regarding the use of strategic management in small businesses and then conducted a study of 188 firms in the U.S. The results showed that as small business owners utilized a more formal planning process, an increase was noted in the thoroughness of their decision process, the amount and type of strategic options, and the growth rate of sales. Those companies who engaged in formal planning possessed a growth rate in sales of 1.77 while those firms who did not engage in planning showed a growth rate in sales of 0.75. Clearly this shows the advantages of formalized planning.

As stated earlier, the goal of engaging in a strategic management process is to force management into a formalized planning routine and to provide higher quality information with which to make decisions. The process of planning, not just the plan, is important. The formal planning process emphasizes improving the quality of the strategic decision making process. Lyles et al. further add "the elements of goal formulation, developing distinctive competencies, determining authority relationships, deploying resources, and monitoring implementation receive more effective attention when small businesses engage in formal planning" (p. 42).

Customer Service

Customer service is one of the key elements that a small retailer has to offer its customers. In the changing world of retail sales, where giant retail stores and franchises are becoming the norm, small business owners are finding it more difficult to make sales, maintain market share, and, ultimately, stay in business.

This does not mean that small businesses are destined for extinction. On the contrary, small businesses can be flexible and creative to offset the changes that a giant retailer may bring to their market. One area, in particular, in which a small retailer should be able to excel is the area of customer service.

Customer satisfaction or customer service, as defined by Kotler (1994), is "the level of a person's felt state resulting from comparing a product's perceived performance (or outcome) in relation to the person's expectations" (p. 40). Basically this

means that a customer's perception, which may or may not be what actually occurred, of the entire shopping experience is compared to the customer's idea of what should have occurred. If the actual experience is less than the expected experience then the customer leaves with a sense of having received poor customer service.

The customer's expectations for customer service are formed from past buying experiences, statements made by friends and associates, and the information and promises made by the company and the competition. The challenge is to create an atmosphere in the organization such that every employee aims to delight the customer by exceeding the expectations of the service encounter (Kotler 1994).

Making the Commitment to Quality - A Strategic Decision

The difficult problem with customer service is that it is a constantly changing situation. In manufacturing, a standard of quality can be established for the measurement of a fitting or a part and this standard will remain constant. However, the standard for customer service is in a constant state of flux.

A small retailer should begin by engaging in strategic planning. By employing the activities shown in a strategic management model, the owner can scan the macro-environment and industry environment in search of opportunities and threats. Then the business owner should examine his own organization to determine strengths and weaknesses. Once this is done, the owner should determine in which direction he wants to take his business. Most small retailers, by their very nature, are niche players. Because of this, most small businesses will fall into the differentiated business unit strategy. It is simply the only way that a small business can compete with a retail giant such as Wal-Mart. It is a poor strategy, probably a fatal one, to try to compete with a retail giant on price alone.

Once the small business owner has decided to compete with a Niche-Differentiated Business Unit Strategy, the owner must formulate a strategy to accomplish this goal. Probably the key ingredient to any differentiation strategy is customer service. The business owner must make a commitment to provide outstanding customer service and utilize all resources within the company to meet this objective.

The next thing that management must do is formulate in their minds what outstanding customer service is. They must create a customer service vision of how the ideal customer shopping experience would be executed. This vision must be compared to the existing customer service system to reveal weaknesses and any organizational constraints.

The commitment to customer service must permeate all areas of the organization. It must not simply receive lip service and be an empty slogan. It must begin with top management's actions more than their words. It must be seen in the interview and hiring process. It must be in the training and job description for each employee. It must be seen in the commitment that management makes in other areas such as the type of equipment that is purchased

and the mix of full-time and part-time employees. Most important, it must be seen in performance appraisals and it must be rewarded when it is done well.

The Basics and Beyond

When a person begins the process of remodeling a house, it is important to set priorities and take the project in sequential order. There are certain tasks that must be performed first that lay the groundwork for subsequent improvements. A first-time remodeler may want to begin by painting the house or adding landscaping in order to improve the aesthetic appeal of the home. However, the most important repairs that must be made are usually structural. A fresh coat of paint will do no good if the foundation is cracking or the roof is leaking. Only when the house is given a firm foundation to stand on and a sound roof to protect it does it make sense to invest in other repairs. Otherwise, the weaknesses left uncorrected will eat away and ultimately destroy any improvements made elsewhere.

Customer service follows the same guidelines in a retailing environment. Before a company invests in developing a complex customer service system, they need to insure they are capable of performing the basics of customer service. The basics are those items that most consumers feel are expected from the retailers with whom they do business. An elaborate scheme implemented without first mastering the basics is destined for failure. Like the house mentioned above, the customer service program needs a firm foundation upon which to stand.

Figure 1 (Omitted) illustrates the concept of customer dissatisfaction and satisfaction by integrating them with Herzberg's dual structure theory of motivation. In the model, Herzberg's hygiene factors can be equated with the basics of customer service. Herzberg suggested that employees use certain factors to judge whether they are dissatisfied. If these factors are considered inadequate by the employee, they could lead to dissatisfaction with the job. However, when these factors are considered adequate, they do not necessarily result in satisfaction. This state is better described as no dissatisfaction. On the other hand, motivation factors, when present in a job, can result in satisfaction with that job. If they are not present, they do not necessarily result in dissatisfaction, but a state called no satisfaction (Moorhead and Griffin 1995).

This model helps to explain customer motivation. The hygiene factors can be referred to as "the basics." If these practices are not present in a small retailer's customer service program, customers may very well be dissatisfied and defect to another retailer (Level 1). The example at the beginning of the paper illustrates several deficiencies in the basics. However, the presence of these is not enough to satisfy the customer or to create a loyal customer (Level 2). Some suggested basic practices to be included in a customer service program are described in Table 1.

Between Levels 2 and 3 in the model is an area of neither satisfaction nor dissatisfaction. At this point, a customer is very vulnerable to competitors who might be operating in Level 3

or 4. When a customer is simply getting exactly what he expects (in other words, only the basics are being covered), there is little motivation to remain loyal to a retailer when a competing firm is performing beyond his expectations. Unlike the employees studied by Herzberg, customers can be very transient and have little to lose by patronizing another retail establishment. Therefore, it is extremely important for a small retailer who is positioning itself as a high service provider to not only perform the basics, but also to perform beyond (Levels 3 and 4). The more service components provided and the more unique and memorable the service components are, the more likely the retailer is to retain customers. Level 3 is an area of relatively low satisfaction, while Level 4 is the area of delightment. Only those customers in Level 4 possess a strong sense of loyalty to the retailer.

Beyonds, or motivators, may vary by type of retailer. However, in general, service that is beyond the customers' expectations and pleasantly surprises them can be motivators for the customer to remain loyal to a retailer. Service heroism refers to employees going out of their way to make the customers' life easier. Employees are given the freedom to solve customers' problem, even if it means suggesting the customer visit a competitor (Leland and Bailey 1995). Frequency marketing is another very common practice that helps to cultivate customer loyalty. In this type of program, customers are rewarded with free or discounted products or services when a certain threshold of purchases is reached (buy five lunches, get one free). Another beyond would be to provide a personal touch by getting to know the customer by name and understanding their needs. The most effective way of accomplishing this would be to maintain customer profiles through a database. Another suggested beyond is the designing of a service recovery system, the purpose of which is to retain customers when they have problems. This system might include such things as customer tokens (airline vouchers when a flight is canceled) or easy return policies. This is not a comprehensive list of beyonds. Motivators which can enhance customer loyalty are limited only by the level of creativity and innovativeness of the retailer.

Table 1
Basics of Customer Service for Small Retailers

1. Easy to locate. Large print in phone book. Ad in yellow pages with a map. Employees trained to give precise directions over the phone or offer to fax a map. An external sign that clearly indicates where the business is located.
2. Posted hours of operation.
3. Acknowledge the customer when they enter the business.
4. Don't let the customer leave the store until you have exhausted every opportunity available. "No" is not a solution.
5. Thank the customer for their business.
6. Make sure employees are identifiable via a shirt, cap, apron, or name-tag.
7. Make the customer's time in your store as enjoyable as

possible.

8. Follow up after the sale to make sure the customer is satisfied.
9. Develop a relationship and keep a customer profile. Learn their needs, likes, and remember special dates such as birthdays and anniversaries.
10. Smile!
11. Don't talk about a customer after they leave, especially if other customers are in the store. Don't gossip!
12. Customer service should be a part of the company culture. Customer service should play a major role in the interview process and the new employee's training process.

Understanding Customer Expectations

The norm is the minimum acceptable level of service for an individual customer. This will represent a floating range of expectations that may vary by individual and may even vary for a single customer during different service encounters with the same retailer. It may also vary by geographic region, type of retailer (for example, convenience store vs. hotel), and competitive intensity in the industry. The floating level of expectations is determined by the customer and can move to any level above the floor of the model. This floor represents the minimum expectations that all customers have for any type of retailer and may include aspects as basic as set business hours and adequate lighting. This level is hypothetical since any business operating below this standard would not remain in business. Figure 2 (Omitted) demonstrates the floating of the model to the minimum expectation level.

As the expectation level moves up, it pulls up with it the four levels representing degrees of customer service so that the entire model floats around this level. Therefore, as the customer begins to expect more, the retailer must provide more basics to prevent dissatisfaction and a higher level of service to provide satisfaction. As the retailer provides more service in an attempt to satisfy the customer, the customer may raise his level of expectations in response. Customers rarely communicate their changing expectations of service performance with retailers, so it is the responsibility of the retailer to identify customer expectation levels.

An example of the effect of different expectation levels on service strategy would be to compare convenience stores with car dealerships. A customer entering a convenience store may have very low expectations of the service he hopes to receive in the store. In this case, the model would float very close to the floor. If the customer went in to purchase a newspaper and found that the store had expanded its limited offering of newspapers/magazines, the customer may think the retailer has moved up into Level 3. They may leave the store thinking "that's nice." If the customer purchases his newspaper everyday at the same convenience store and is waited on by the same clerk, the retailer may move into Level 4 if the clerk were to call the customer by name. The customer may think "Wow!" However, the same

customer doing business with a service department at a car dealership may actually expect to be known by name. His higher expectations, due to the high-involvement nature of the product, moves the model upward. If the customer had been promised his car on Wednesday but the car was finished Tuesday, the customer would think "that's nice." But, if the car is ready a day early and the dealership has washed and vacuumed it for him, then the customer may be delighted (Level 4). At that point, he is likely to become a loyal customer of that dealership.

It is important to note that there may be no wasted utility in attempting to exceed customer expectations. Theoretically, the customer may "bank" good encounters with a retailer so that even if basics are not met on some encounters, the retailer may have sufficient deposits in the customer service account to offset some negative encounters. As long as a retailer maintains a positive net service balance in the customer's mind, then a customer will most likely continue to patronize the retailer. If the balance becomes negative, that customer will most likely begin to evaluate whether competing retailers can better serve their needs. The monitoring of the level of service expectations of a small retailer's customer group is essential in designing the customer service program. Customer surveys and mystery shopper programs are two ways this can be accomplished. An understanding of the role of expectations in the service system can aid the retailer in designing their Niche-Differentiation strategy much more effectively.

Conclusion

If a small businesses wishes to compete against a retail giant such as Wal-Mart, they will need to utilize the Niche-Differentiation business unit strategy. One of the key ingredients in a Niche-Differentiation business unit strategy is customer service.

Customer service must be viewed from the customer's perspective and not from the perception of the company. In the end, the customer is the final judge of quality. To determine what the customer perceives as quality and what they expect from the company, a learning relationship must be established. The needs of the customer will probably change over time and may even change with every visit to the business. It is imperative that the small retailer be attuned to these changing needs and be able to meet them.

Once a commitment to provide outstanding service is made, the focus on customer service should begin with the owner or president of the company and spread down through the organization. Customer service should become part of the company culture and be reflected in all areas of the business process. Internal customers should be treated with the same courtesy and respect as external customers because the internal operations ultimately flow out to the end consumer. Additionally, the emphasis on customer service should be reflected in the hiring, training, and promoting activities of the company.

Customer service is difficult to define, difficult to measure, and difficult to evaluate. However, it is imperative that the company use a mixture of methods to perform this task. No one

method can be identified as ideal. Management, the employees, and the customers must realize that customer service will always be in a constant state of flux and therefore the aforementioned parties must work together to achieve a sustainable level. In the book *Raving Fans* (Blanchard and Bowles 1993), the authors tell how a company can change a one-time shopper into a raving fan who is loyal to the business and who functions as a marketer for the company by singing its praises to others. To accomplish this the business must employ three strategies. First, they must decide what they want to be. This involves identifying their target customer and formulating the type of service they wish to provide. Next, they must discover what the customer wants. This information is then compared to the company's idea and adjustments are made accordingly. Finally, the company must deliver the vision plus one percent. By taking a small incremental approach, they will ensure that their goals are attainable and that the company is involved in a program of continuous improvement.

Small retailers must determine the service expectations of their customers. They must also understand that customers expect certain basics to be provided in the service system. If these expectations are not met, dissatisfaction and defection may occur. It is also imperative for the retailer to understand it is what is done beyond expectations that results in loyal customers.

Benjamin Franklin once said that the writer who tries to mimic the perfection of an engraved printing plate will always fail, but his handwriting will be the better for the endeavor (Brown and Angee 1975). So, too, is the predicament of customer service. It may be impossible for a business to provide perfect customer service to every customer on every occasion, but the company will certainly be the better for the endeavor.

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International Entrepreneurship: A Literature Review

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Abstract

This paper reviews 51 international entrepreneurship articles gleaned from the ABI/Inform database of business citations. It divides the articles into four categories: (a) individual entrepreneurs and their traits, (b) entrepreneurial processes, (c) environmental factors, and (d) small and entrepreneurial ventures. It suggests that there is much room for further research, particularly in cross-national comparisons of individual entrepreneurs, and entrepreneurial processes.

Introduction

In response to an Academy of Management mandate to internationalize all of its divisions, Giamartino, McDougall, and Bird (20) assessed the current state of the field of entrepreneurship by surveying one hundred forty-seven Entrepreneurship Division members. Responses were used to (a) better define the concept of "international entrepreneurship", (b) identify opportunities and hindrances to the internationalization of entrepreneurship, and (c) examine the appropriate role of the Entrepreneurship Division as well as the Academy of Management in internationalizing this field. The authors concluded that the next step should be a thorough review of journal outlets for international entrepreneurship research.

In a more recent article, Wright and Ricks (53) asserted that international entrepreneurship is a new and somewhat surprising thrust of international business research activity. They noted that, given the emerging global environment, entrepreneurs and small businesses are no longer limited to domestic markets, and even locally oriented entrepreneurs must be attentive to competition from international players. They observed that research on small business "is evolving to reflect these new realities" (53, p. 699). However, they did not offer any evidence regarding the extent or direction of this research.

This paper reports the findings of a much-needed literature review on the topic of international entrepreneurship. A search was conducted using the ABI/Inform Periodicals Index which lists business articles from over 1,400 international journals, and which is widely held to be one of the most comprehensive sources for business-related citations. Keyword searches using the terms "international entrepreneurship" and "international new venture creation" resulted in an initial list of 219 articles (from 121 journals) which were published from 1986 to 1995. Items were then eliminated from the list because they came from either the popular press, trade journals, or government reports. What

remained was a database of 99 citations.

Next, each article was acquired from the library for closer scrutiny. Only those items which were considered by the author to be both "entrepreneurial" and "international" were retained for further analysis. To qualify as "entrepreneurial" an article had to conform to the framework suggested by Gartner () and discuss: (a) individual entrepreneurs (i.e., their characteristics and how they differ from other individuals), (b) processes involved in new venture creation (e.g., start-up, marketing, or marshaling resources), (c) environmental factors effecting the level entrepreneurship (e.g., development programs, venture capital structures, or socio-economic conditions), (d) small or entrepreneurial organizations (e.g., small exporting firms), or (e) special topics within the field of entrepreneurship (e.g., franchising, or intrapreneurship). To qualify as "international" an article had to: (a) make comparisons between two or more countries, (b) discuss a non-U.S. phenomenon, or (c) address a topic considered to be in the domain of international business (e.g., exporting). This more rigorous round of review reduced the database to 51 articles. A summary of the number of articles in each of the above categories is found in Table 1.

TABLE 1
Number of Articles by Category

"Entrepreneurial" Criteria	"International" Criteria		
	Multi-Country	Non-U.S.	International Business Activity
Individual Entrepreneurs	3	5	0
Entrepreneurial Processes	2	0	5
Environmental Factors	16	14	2
Small or Entrepreneurial Ventures	0	0	4

Review of the Literature

Individual Entrepreneurs

There was great variety between the eight articles included in this category. Two sets of authors addressed issues surrounding female entrepreneurs in specific country contexts. Erwee (18) cited archived data to assert that entrepreneurship amongst black South African women is on the rise. Siu and Chu (45) conducted eighteen in-depth interviews with female entrepreneurs in Hong Kong and found that the personal problems associated with starting a venture outranked financial difficulties for these women. They concluded that the Chinese socio-cultural environment is problematic for aspiring female entrepreneurs. Two other papers highlighted differences in developing economies. Quddus (39) reported on the phenomenal growth of the ready-made garment export industry in Bangladesh -- the only billion dollar manufacturing and export industry in the country -- and surveyed 36 entrepreneurs to probe the nature of this success story. Kolvereid and Obloj (26) compared the attitudes of entrepreneurs from the United Kingdom, Norway, and Poland. and discovered that Polish entrepreneurs functioning in a post-communist context do

not perceive their environment to be any more hostile than do British entrepreneurs, but receive support services only from the private sector.

Three studies examined "types" of entrepreneurs in various cultural contexts. Birley and Westhead (7) looked at the differences between "novice" and "habitual" business founders in Great Britain and found that the latter are younger at founding, more likely to use personal finances, and have divergent reasons for starting their venture than the former. McGrath, MacMillan, and Scheinberg (33) contrasted entrepreneurs and non-entrepreneurs in eight countries. Their findings indicated that there is an underlying pattern of values shared by entrepreneurs despite the cultural diversity of their origins. Befus, Mescon, Mescon, and Vozikis (5) examined the nature of small expatriate companies operating in developing countries by interviewing 43 business persons in Honduras. Evaluation of the motivation for investment, types of enterprises, and traits of the entrepreneurs revealed that expatriate small businesses are a unique phenomenon. The final article in this category (42) compared 436 undergraduates from the United Kingdom, the United States, and Ireland and found support for the hypothesis that "predisposing" factors (e.g., background, personality, and perception), situational factors, and "having a business idea" act independently and in conjunction to direct students into entrepreneurial careers.

Entrepreneurial Processes

Almost all of the articles in this category are the work of McDougall and Oviatt who have mapped out the theoretical underpinnings of this phenomenon (35). These researchers have pioneered the study of enterprises which are international from inception -- firms which choose not to internationalize after a period of domestic maturation, but which "derive significant competitive advantage from the use of resources and sale of outputs in multiple countries" (32, p. 1) from birth. In the very first empirical investigation of this phenomena, McDougall (30) surveyed 188 new firms in the computer and communications equipment manufacturing industries. She showed that global start-ups significantly differ from their domestic counterparts in terms of strategy and industry structure. Internationals pursue broader market-based strategies, control numerous distribution channels, serve diverse market segments, and develop high visibility. In addition, they emphasize a more aggressive entry strategy, utilizing outside financial and production resources to penetrate numerous geographical locations. A follow-up study of the same firms two years later (31) demonstrated that early international sales are positively associated with relative market share but not ROI.

Two later articles, McDougall, Shane, and Oviatt (32), and Oviatt and McDougall (36), were based on a multiple case study of global start-ups. The former verified that: (a) founders possess special competencies for combining resources across national boundaries, (b) early internationalization is necessary to avoid path-dependency, and (c) founders prefer hybrid organizational structures, such as strategic alliances and networks. The latter added a description of several forces which seem to drive the creation of global start-ups, and a list of characteristics of

successful firms. In critiquing Oviatt and McDougall (36), Hordes, Clancy, and Baddaley (23) pointed to the MCI / British Telecom formation of Syncordia to suggest three further requirements for global start-ups: (a) instant critical mass, (b) development and leverage of knowledge workers, and (c) global coordination.

The final article in this category was a comparison of the planning characteristics of U.S. and Japanese entrepreneurs (10). The researchers examined eleven medical products firms and nine electronics firms in Japan and the U.S. and concluded that they were similar in several ways. For example, they were all sophisticated planners and adaptive to environmental shocks, with abilities to perceive market niches and compete against large firms. On the other hand, there were key differences in the source of venture funds, the formality of the planning process, the role of government and large business, and the long term orientation of the firms.

Environmental Factors

These articles investigated the environmental factors surrounding entrepreneurship. They comprise the largest group in the literature review and are summarized in Table 2 (Omitted). As suggested by Gnyawali and Fogel (22), they were further grouped into three subcategories -- (a) publications which addressed general environmental conditions for entrepreneurship, (b) studies which described the environmental conditions of a particular country or region, and (c) articles which delineated the role which public policy plays in shaping the entrepreneurial environment. Since most of the thirty-two items in this category make political policy prescriptions, it was often a difficult distinction to make. However, the subcategory decision was based on whether or not an article primarily spoke to the connection between the general environment and entrepreneurial performance ("a" above), or the indirect effect of public policy on other environmental factors. In addition, each article was evaluated to determine which of the five environmental dimensions posited by Gnyawali and Fogel (22) were discussed: (a) government policies and procedures, (b) socioeconomic conditions, (c) entrepreneurial and business skills, (d) financial support, and (e) non-financial support to businesses.

Small or Entrepreneurial Ventures

Three of the articles in this category dealt with the nature of small exporting firms. Yeoh (54) developed a conceptual model for understanding the interaction of entrepreneurship, government promotions and export performance. Walters and Samlee (51) compared large and small exporters and found that differences between the two groups was not as great as expected. Small firms were just as committed to exporting as large firms, however, managerial support of export activities was more prominent in the larger firms. Erramilli and D'Souza (17) examined the foreign market entry behavior of 141 small and large service firms. Results from their research suggested that in industries characterized by low levels of capital intensity, small firms are just as likely as large firms to choose foreign direct investment as the mode of entry.

The final article in this category identified critical success factors in the use of joint ventures in Third World countries. It contended that further research is necessary regarding the link between international and local operations -- especially for smaller firms. It proposed a framework for assessing the fit between small firms in developed nations, and the Third World firms that join them in joint ventures.

Discussion

There are some clear limitations to this study. The ABI / Inform Index does not contain any references from a few more recent international entrepreneurship journals -- notably, *Entrepreneurship, Innovation, and Change*, *Entrepreneurship and Regional Development*, and *Journal of Enterprising Culture*. It is certainly to be expected that these newer journals contain articles not included in this review. In addition, it is possible that articles centering around specific non-U.S. countries would not be located by the keyword searches invoked in this research. Future research might include searching by non-U.S. country name.

However, this review provides interesting food for thought, and suggests directions for future research efforts:

1. More studies need to compare the characteristics and behaviors of individual entrepreneurs across cultural and national boundaries. Only three studies were found which made such comparisons. Some evidence was found for a set of shared values, but more confirmatory and expansive research is called for.
2. McDougall, Oviatt and a few others have laid the groundwork for the study of global entrepreneurship, but more studies are needed to "fill in the gaps". What are the contexts in which global entrepreneurship is mandated? How can global start-ups be assisted?
3. Other entrepreneurial processes have not been addressed in the international realm. No studies were located which examined international funding, marketing, or human resources from an entrepreneurial perspective.
4. The majority of environmental factor articles were descriptive in nature. More studies are called for which develop and test hypotheses regarding the role of the environment in shaping international start-ups and new ventures.
5. Finally, much more could be done in comparing large and small firms in the international business arena. How do entry strategies differ? How are they differentially affected by public policies? Where might smaller firms have a strategic advantage?

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Cognition As A Research Object
In The Scientific Literature
On Small Business And Entrepreneurship

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Abstract

The aim of this study was to highlight the characteristics of research on cognitive object in the scientific literature on small business and entrepreneurship. The study covered the period January 1987 to August 1994, and involved identifying and analyzing records from the ABI/INFORM database, together with the papers to which the records referred. The conceptual framework used to classify cognitive studies emphasized four categories of cognitive objects: processes, products, predispositions and props. The aspects analyzed were the journals in which the papers appeared, the specific cognitive objects studied, the samples used, the data collection and analysis techniques employed and the disciplines involved. In all, 156 papers published in 28 different scientific journals were analyzed.

Results show that most of the papers appeared in the only three journals specialized in small business and entrepreneurship, i.e. (in order) JSBM JBV and ETP. However, it is also worth noting the large overall number of journals 28 in which the papers were published. The number of papers remained remarkably stable over the years. Cognitive products attracted by far the most attention, and were the focus of attention in three studies out of four. The size of the sample varied from one paper to the next, but it rarely fell below 50 individuals, and frequently exceeded 100. Research focused almost exclusively on the individual aspect; cognition at the collective, organizational and even industrial levels, seemed to be of little interest to researchers in the fields of small business and entrepreneurship. The data collection technique used most frequently was the mail questionnaire. The researchers made massive use of statistics to analyze their data. In fact, content analysis was used on only a few occasions. The study of cognition in small business is dominated by the "organizational behaviour" sub-field, but is by no means its exclusive province; interestingly, 26 papers related to the field of finance and accounting.

The most important conclusion for the development of small business and entrepreneurship theory may well be that almost all the work on cognitive objects analysed during the research has been carried out using what we could call an "objectivist" viewpoint. Given the limits of this traditional stance, it is difficult to understand why it is overrepresented. The "subjectivist" viewpoint is an alternative that should not be discarded. In such a perspective, the initial precept is that the cognitive structure of subjects guides them in apprehending reality, that they are active in their relationships with the environment, and that they do not

simply "passively capture" or "perceive" an outside world that is imposed on them.

Estimating the Extent Entrepreneurial
Intentions Become Reality: A Note

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Abstract

Data from Small Business Development Centers (SBDC) throughout the United States were used to develop preliminary estimates of the proportion of nascent ventures that become organizations as measured by Katz and Gartner's (1988) properties of intent, boundary, and exchange. Results indicate that over 75 percent of individuals with entrepreneurial intent started a business. Of these, approximately 80 percent had hired employees or generated sales revenue within one year.

Introduction

Entrepreneurship is the creation of new combinations (Schumpeter, 1934). Of all of the venues in which new combinations can be created, the independent new venture is perhaps the most important and certainly the most widely studied. Researchers, however, face serious obstacles in the identification of populations of new ventures and the collection of data about the startup process. Several studies have addressed these problems by evaluating some of the existing sources of samples and data on new venture start-ups (Aldrich, Kalleberg, Marsden, and Cassell, 1989; Birley, 1984; Busenitz and Murphy, 1996; Williams, 1993). These studies show that each has strengths and weaknesses that must be considered because the choice of database may have a material impact on the types of ventures studied as well as empirical results.

These studies have made a valuable contribution to the literature. Furthermore, the databases that have been evaluated represent some of the best sources of samples of new ventures that are currently available, or are likely to be available for some time to come. However, these databases share a common problem in that each is composed almost exclusively of ventures that have become organizations. None capture nascent ventures that never complete the gestation process from conception to birth.[1] As Aldrich, Kalleberg, Marsden, and Cassell (1989) and Reynolds and Miller (1992) noted, if a substantial proportion of nascent ventures never become full fledged organizations, analysis of only those that do may yield conclusions that cannot be generalized to those that do not. As an example of this, Carter, Gartner, and Reynolds (1996) identified somewhat different patterns of behavior between aspiring entrepreneurs who eventually started a business, gave up, or were still trying. Our knowledge of the entrepreneurial process will benefit, therefore, the earlier in which we are able to identify nascent ventures.

Research by Reynolds and Miller (1992) has indicated that by far the most frequent first event in the life history of a nascent venture is the intention of the lead entrepreneur to found a

business. Bird's (1988) theoretical work suggests that entrepreneurs' intentions shape the subsequent goals, strategies, and organizational forms of emergent organizations. Therefore, from an empirical perspective using intention as a basis for sample selection seems to be the most logical approach if one wants to capture data at the earliest stage in the venture development process. Likewise, the stage of intention appears to be the most theoretically relevant as that stage is where the seeds of a venture's future development, or lack thereof, are sown.

Fortunately, Katz and Gartner's (1988) work on the properties of emerging organizations has provided some insights into possible sources of data for identifying ventures at the time of entrepreneurial intention, before other features that signal a venture's emergence as an organization have been completed. One of the sources of data mentioned by those authors is the client files of the Small Business Development Center (SBDC) program. SBDC files seem a particularly useful source for several reasons. First, the program is run on a national basis with SBDCs in operation in all 50 states, Washington D.C., Puerto Rico, Guam, and the Virgin Islands. Second, the SBDC's client files are, by and large, computerized, thus minimizing some of the problems in data transfer and analysis. Third, the SBDC's usually maintain their files over a period of years. Therefore, current data are available on ventures that have not yet started in a particular year. Data are also available on ventures that, at a previous point in time were at a very early stage of development.

Given the need to identify ventures early in their development, the purpose of this article is to provide a preliminary assessment of the frequency in which entrepreneurial intentions are transformed into new ventures. This article seeks to address this issue by using data from the most recent national study of the SBDC program (Chrisman, 1995).

Conceptual Development

Before discussing the methods by which we identified the proportion of nascent ventures that became new organizations, it is important to lay the theoretical groundwork for this study. The most important theoretical issue is how one determines when a new venture has been conceived and when it has completed its gestation and is born. Our primary guide in this endeavor was the work of Katz and Gartner (1988), arguably the most comprehensive theoretical treatment of the concept of emerging organizations. Katz and Gartner specified four properties of emerging organizations, intention, boundary, resources, and exchange. They argue that all of these properties are necessary for an organization to exist. However, for the purpose of this study we examine only three of those properties: intention, boundary establishment, and exchange. The exclusion of resources is not meant to downplay their importance but to recognize that their accumulation and use occurs throughout the entrepreneurial process and are integral to the development of the other properties of emerging organizations. In this respect, our view of resources is in line with that of Gartner and Shane (1995) who seen the control of resources as a requirement of entrepreneurship. It is difficult, if not impossible, to separate resources from the other properties of emerging organizations.[2]

Katz and Gartner (1988) define intention as the search for information that can be used to help fulfill the goal of venture creation. We take this to mean that intention is an active rather than a passive concept. Thus, we are concerned with evidence of serious intention -- e.g., seeking expert advice, conducting market research -- rather than merely an expression of a desire to form a business as an indication that a venture has been conceived.

Two of Katz and Gartner's properties are used to measure venture creation. The first, boundary, is defined as the establishment of a barrier between the emerging organization and its environment. The establishment of a boundary may be either formal, as when an entrepreneur selects a legal form of organization, or informal, as when an entrepreneur consciously makes the transition from mere intention to a concrete decision to proceed with business founding (Learned, 1992). The presence of a boundary thus suggests that it becomes more difficult for an entrepreneur to abandon the process of creation without some cost, monetary or psychic.

Exchange is a cycle of transactions within organizational subsystems or between an organization and environmental entities, whether individuals or other organizations. According to Katz and Gartner (1988), exchange will occur in an ongoing manner only after the other three properties are in place and marks the emergence or birth of a nascent venture. Reynolds and Miller (1992) seem to agree, notwithstanding their finding that initial sales, hiring, or financing were sometimes among of the earliest events in the gestation process rather than the last. In fact, those authors argue that first sales may be the optimal choice for the birth date of a new firm.

These properties are consistent with the opportunity, creation, and exchange stages identified by Bhava (1994). Although both the pace of development and sequence of events will vary, these three properties appear to represent critical demarcations in the gestation process of nascent ventures.

Methodology

This study was based on data obtained from the third national impact study of the counseling activities of the Small Business Development Center (SBDC) program in the United States in 1992 (Chrisman, 1995; also see Chrisman and Katrisha, 1994). In 1992, the participating SBDCs provided long term assistance (a minimum of five hours) to 43,461 clients. [3] The entire population of long term clients was sent a mail questionnaire in the Spring of 1994. Responses were received from 5,396 clients, a 12.4 percent response rate.

The focus of the analysis was on those clients who sought assistance in starting a business but had not yet done so at the time of the SBDC's intervention. These clients showed intent in that they endeavored to obtain assistance that could be applied toward the goal of starting a venture. We believe that using these clients has some advantage over measuring intent by asking individuals in the general population whether they plan to start a business or not. Long term clients of the SBDC have

demonstrated that their intent is serious by taking the time and trouble to seek outside assistance. Thus, this database is less likely to be contaminated with individuals who express intent but never actually do anything about it.

In the context of this study, clients provided data on the year their business was started, or if it was not started. This was consistent with the approach used by Carter, Gartner, and Reynolds (1996) in their study of start-up event sequences. As this start date represents a recognition on the part of the individual that an organization has been formed, it meets the definition of boundary discussed above. If no boundary was formed before a client sought assistance from the SBDC, we could be reasonably certain that a venture had not yet been created. On the other hand, if a boundary existed prior to the counseling then, for our purposes, the venture had already been created. Thus, we classified ventures started in 1992 (the year in which counseling was received) or later, or that had not started at the time of the study, as nascent ventures. In all, we were left with usable data on 2025 nascent ventures. From this group we were able to determine the proportion of nascent ventures that had become organizations.

We measured exchange by whether the ventures had either made sales or hired employees within one year after seeking SBDC assistance. Clients were asked to provide this information for 1993, the year after assistance was received. A study by Brush and Vanderwerf (1992) suggested that self-reported performance data of this type are reliable. Unfortunately, data on sales and employment were not available to track exchange in subsequent years. However, research by Reynolds and Miller (1992) and Carter, Gartner, and Reynolds (1996) suggest that most new business births will occur within this time window. Finally, we also collected data on the geographic sector of the U.S. in which the ventures were located.[4]

To determine if the sample was representative of the population we divided it according to early versus late respondents and tested for bias along four dimensions: boundary (year started or not started), employees in 1993, sales in 1993, and geographic location. Chi-square tests and ANOVAs revealed no significant difference on any of these dimensions except for geographic sector. Since some of the state SBDCs had sent out the questionnaires earlier than others, we decided that additional testing was necessary to establish whether that finding was an artifact of the timing of the questionnaire or a reflection of a real bias among respondents. Therefore, we repeated our analysis for nascent ventures in each of the four geographic sectors of the U.S. used in this study, East, South, Midwest/North, and West, comparing early and late respondents on the year started (boundary), employees, and sales variables. Out of all these tests the only indication of a possible bias was in terms of the sales of early and late respondents in the Eastern sector of the U.S., with early respondents having significantly higher sales than late respondents.

Oppenheim (1966) argued that late respondents are very similar to nonrespondents. Given the general lack of difference between early and late respondents, we were reasonably comfortable that our sample was representative of the population of long term

clients served by the SBDC program in 1992.

Results

Tables 1 provides demographic breakdowns of nascent ventures by geographic sector.[5] Table 2 provides a breakdown of the number of entrepreneurs who claimed they started a business after receiving SBDC assistance. Again, this is an indication of the extent to which serious entrepreneurial intent is translated into boundary formation. According to our data, almost 78 percent of the nascent ventures in our sample had created boundaries between 1992 and 1994. This proportion is substantially higher than the 48 percent found by Carter, Gartner, and Reynolds (1996). As suggested above, we believe that this may be partially due to the fact that this database ensures that the intent is a serious one, demonstrated by action rather than merely a verbal commitment.

Excluding missing data, of the ventures that established boundaries, 82 percent had employees and 80 percent had sales one year after receiving SBDC assistance (Table 2). In other words, 63 percent of the nascent ventures had employees by the end of 1993, and 60 percent had sales. This finding suggests a somewhat more optimistic picture on the ability of aspiring entrepreneurs to fulfill their start-up goals. In this respect, the results of our analysis are quite similar to those of Carter, Gartner, and Reynolds (1996).

In Table 3 the proportion of ventures started and not started is provided by geographic sector. As shown, there was a significant difference in the proportion of nascent ventures who established a boundary, with those in the East and West more likely than average to do so and those in the South and Midwest/North less likely. This is an interesting regional phenomenon that deserves further investigation.

However, we found no significant difference by geographic sector in the proportion of ventures with boundaries that engaged in exchange. As Table 4 shows, the proportion of ventures with employees was statistically equal for the four regions of the United States. Furthermore, the proportion of started ventures with sales revenues in 1993 was not statistically different by geographic sector either (Table 5) (Omitted). This is again an interesting finding that deserves further study since it suggests that once a boundary is established, geographic region has no impact on whether a venture becomes a contributing part of the economy.

Conclusion

Using data from the SBDC program in the United States, this article has attempted to provide some preliminary, benchmark estimates of the proportion of nascent ventures who create businesses as measured by the properties of boundary and exchange (job creation, sales generation). Our findings indicate that approximately 75 percent of nascent ventures with serious intentions establish boundaries within one year. Furthermore, we found that of those who establish boundaries, around 80 percent have become active participants in the economy either through the hiring of employees or the generation of sales. Again, these numbers suggest a more optimistic picture of the start-up process

than has been presented heretofore.

Our results imply that researchers must be careful in how they measure intent because it may have a material impact on the estimates of the entrepreneurial population and the proportion of startups occurring among aspiring entrepreneurs. Thus, measures that rely upon merely an expression of a desire to start a business on the part of the entrepreneur, without evidence of action, may lead to an overestimation of the numbers of nascent ventures in society and underestimation of the proportion that become organizations.

Our study also suggests that there is some reason to believe that the prospects or potential for startups among nascent ventures may vary somewhat across geographic regions with respect to boundary creation. On the other hand, there is a level of consistency in terms of the proportion of ventures with boundaries that engage in exchange that many might find surprising. Given the exploratory nature of this study we can only assert the need for further research on nascent ventures in general and across different geographic sectors in particular.[6]

Footnotes

[1] Throughout this article the terms "nascent venture" and "emerging organization" will be used interchangeably to denote organizations that are still in the process of gestation, i.e., have not yet been born.

[2] For example, entrepreneurial intent implies some expenditure of resources already accumulated in investigating and pursuing opportunity. At a minimum, this would involve an entrepreneur's time. The establishment of a boundary likewise suggests a commitment of resources in the entrepreneur's possession, as well as a distinction between resources possessed and those that an entrepreneur hopes to control in the future. Finally, gaining control of resources that are not in the entrepreneur's possession requires exchange.

[3] The study included nascent ventures who received assistance from the following SBDCs in 1992: Alabama, Alaska, Arkansas, Connecticut, Delaware, District of Columbia, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Utah, Vermont, Virginia, Washington, West Virginia, and Wisconsin. We did not include data obtained from the SBDC in commonwealth of Puerto Rico in this study even though that SBDC participated in the original impact study.

[4] The SBA's regional classification of states were used as a basis to delineate geographic sectors (See Table 1).

[5] It should be noted the participation rates of state SBDCs had an impact on the numbers of clients served in different geographic locales. Thus, our national sample does not necessarily reflect the extent of start-up activities across different geographic sectors.

[6] The author is indebted to the Association for Small Business Development Centers for funding this study and to W. Ed McMullan for his comments on earlier drafts of the manuscript.

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TABLE 1
GEOGRAPHIC SECTORS OF NASCENT VENTURES *

	Number	Percentage
East	591	29.2%
South	743	36.7%
Midwest/North	446	22.0%
West	245	12.1%
TOTAL	2025	100.0%

* The SBA's regional classification of states were used as a basis to delineate geographic sectors. The breakdowns were as follows:

EAST (Regions I, II, III): Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia.

SOUTH (Regions IV and VI): Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, New Mexico, North Carolina, Oklahoma, South Carolina, and Texas. (Tennessee did not participate in the study.)

MIDWEST/NORTH (Regions V and VII): Illinois, Indiana, Iowa, Michigan, Missouri, Nebraska, Ohio, Wisconsin. (Kansas and Minnesota did not participate in the study.)

WEST (Regions VIII, IX, and X): Alaska, Idaho, Montana, Nevada, North Dakota, Oregon, South Dakota, Utah, and Washington. (Arizona, California, Colorado, Hawaii, and Wyoming did not participate in the study.)

TABLE 2
NUMBER OF NASCENT VENTURES THAT
ESTABLISHED BOUNDARIES

ALL NASCENT VENTURES VENTURES STARTED

	Number	Percentage	Number	Percentage
Started Venture (Boundary)	1575/2025	77.8%		
With Employees (Exchange) (missing = 43)	1257/1982	63.4%	1257/1532	82.0%
With Sales (Exchange) (missing = 240)	1071/1785	60.0%	1071/1335	80.0%

A National Programme For Dissemination Of The Discipline
New Venture Creation In Brazilian Universities:
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Abstract

The aim of this text is to relate how the discipline 'New venture creation in software' was conceived in undergraduate computer science courses, to describe the pilot study where it was set up in UFMG, and the inbuilt strategies of the programme for its dissemination over the whole of Brazil. The importance of this report is due to results achieved in three areas: in the pilot study in the discipline in UFMG when 21 companies were set up after the discipline was offered over 3 semesters; in the fact that it has been included in the Reference Curriculum of SBC; in the programme created for its dissemination, the Softstart project, which in its first edition promoted the implantation of the discipline in 45 Brazilian major universities, with the aim for 1997 of expanding this to a total of 70 institutions. In this text, the author emphasizes the pedagogical methodology of the discipline, this being understood as the catalyst for co-operation between the university and the 'support systems' (the forces of society), the only union capable of making viable a system which can stimulate the creation of technology-based companies.

The main contributions of this paper are in the methodology proposed to face the fundamental questions, some forming true paradoxes. The first question deals with investigations into how, and under what conditions the teaching in this area can be examined? What should be taught? Is it possible to teach someone to become an entrepreneur? How can this be done? A second question emerges from the preceding discussion, and can be stated as follows: is the university capable of teaching entrepreneurship, considering its traditional teaching methods, the unstructured training period in this branch of knowledge.

A third central question refers to the profile of the teacher of this discipline. How teachers from computer science departments can teach entrepreneurship, a subject out of their field of interest.

Exploring A Classification Scheme For Closely-Held
Businesses:
Getting To Workable Definitions Of Family Firms

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Abstract

This paper describes the theoretical basis of a typology of family firms and firms having characteristics associated with family business. The typology categorizes firms along multiple dimensions of source of relationships, strength of the relationship, and source of control. The result is a set of sixteen classes of organizations having characteristics which transition between start-up entrepreneurial firms, through "traditional definitions" of family firms, to large corporations who demonstrate characteristics often associate with family businesses to finally those organizations that are in decline. What makes the typology unique is that it is not dependent on defining "family" in terms of ownership.

Exploring A Classification Scheme For Closely-Held
Businesses:
Getting To Workable Definitions Of Family Firms

Introduction

Family firms range from large publicly traded firms like Campbell Soup in the United States and News Corporation in Australia, to privately held giants like Bechtel, Mars Candy, Levi Straus in the U.S., Tata Industries in India and the large "Grupos" of Mexico, to the smallest neighborhood retail store, machine shop, street vendor or family farm the world over. The search for a uniform definition to distinguish between these various "types" of family firms would seem an almost daunting task. However, a workable typology is critical to the scientific research study of the family firm which combines the complex subsystems of family and business (Davis, 1982). The typology also forces family business researchers to address what the distinctive characteristics that define family. It may be that all organizations exhibit some degree of "family-ness" and family firms just have a larger "quota" of these characteristics. Therefore, "family" may actually be a continuum of social organizations with varying degrees of similarity on a variety of dimensions.

Previous Definitions.

Typologies and operational definitions have been proposed for any number of organizations. These include businesses in general (Filley & House, 1969; Lippitt & Schmidt, 1967), trade unions (Lester, 1958), nations (Bennett & McNight, 1956; Rostow, 1960), political and economic institutions (Weber, 1947), and mass social movements (Hoffer, 1958). The concern with how to organize different types of commercial organizations along various characteristics, or factors, is not new to the academic fields of strategy, organizational behavior, or entrepreneurship. One only has to look at the use of Standard Industrial Category (SIC) Codes to see the utility of such classification systems. In fact, the development of definitions, taxonomies, and typologies of business organizations, including family firms, have occupied management researchers for over thirty years. These definitions and typologies have used a wide variety of criteria including: size (Kimberly, 1976), use of technology (Child, 1973), strategies employed (Filley, House, & Kerr, 1976; Filley & Aldag, 1978), control systems utilized (Etzioni, 1964; Litz, 1995), degree of environmental stability (Lawrence & Lorsch, 1969). In fact Litz (1995) has attempted to provide a typology type approach by combining an intention-based approach with a structure based approach.

The Need for Models of Family Business.

Despite Litz (1995) work, there remains a need for a typology of family firms. Such a typology would help establish the unique characteristics of a family owned firm that differentiate it from an entrepreneurial firm, a publicly traded corporation, other commercially oriented organizations, or even not-for-profit groups. Some might argue that religious organizations are in fact "de-facto" families. A recent unpublished dissertation study by Bristow (1996) indicates that as much as 60% of the top 5000 publicly traded firms in the United States were in fact controlled by top management through significant stock holdings (20% or more). By some definitions, many of these firms could be considered family or closely-held businesses. Another reason also arises from the anecdotal evidence that family firms are managed differently from other firm types and are the dominate form of firms in all economies. Without an understanding of what is a family firm a substantial portion of the world economy goes unstudied. In fact Shanker & Astrachan (1996) have shown that how you define a family firm impacts the contribution of family businesses to the United States economy.

Current Models of Family Firms.

Some attempts have been made to provide models to study family firms, but most of these studies have focused on a single limiting factor such as:

1. transition from owner management to professional management (Steinmetz, 1969; Chandler, 1962; Flamholtz, 1986),
2. degree of ownership (Alcorn, 1982; Bork, 1986, Litz, 1995),
3. degree of family involvement (Beckhard & Dyer, 1983; Shanker & Astrachan, 1996),
4. life cycle (Churchill & Hatten, 1987; Ward, 1987),
5. degree of interaction between interdependent subsystems

(Davis, 1983; Davis, 1982),
 6. number of family or generations present (Donnelley, 1964; Rosenblatt, de Mik, Anderson, & Johnson, 1985; Shanker & Astrachan, 1996),
 7. succession processes (Longenecker & Schoen, 1978; Litz, 1995),
 or
 8. non-family "business relatives" (Danco, 1980). Obviously from the above list there are almost as many definitions of organizations, including family owned firms, as there are researchers.

The Need for a Better Typology.

A major problem limiting the existing family business research literature is a lack of a theoretical discussion on which to base adequate operational definitions of what constitutes a family firm from other types of organizations. Some firms are included in samples when they should not be while other types of family firms are excluded (Carsrud, Gaglio, & Kernochan, 1993) For example, some firms may be operationally defined as a family firm, but not consider themselves as such, while other firms may call themselves family firms, but by operational definition, not be included in the sample. Many non-family firms exhibit characteristics associated with family businesses and in some cases family firms don't exhibit family characteristics at all. Why is this so? Currently there are no models that attempt to explain these phenomena. The inability to agree on a common definition is not unique to the family firm literature. In the entrepreneurship literature a similar discussion has raged over a decade (Carsrud, Olm & Eddy, 1986). For example, some studies propose a very narrow definition of entrepreneurship (Hobson & Morrison, 1983; Low & MacMillan, 1988), while other researchers have proposed far broader definitions of entrepreneurial firms (Biggadike, 1979; Miller & Camp, 1985; MacMillan & Day, 1987; McDougall, et al., 1994). These are not unlike the arguments that family firms are only those who are in their second generation and have two generations present, versus the definition of a family firm as whenever a firm defines itself as such.

However, before one can make substantial progress in the scientific study of family firms, it is important to try to classify family firms along critical cultural and social dimensions that would readily identify as impacting various performance outcomes and survival of the family business organization. This is based upon theoretical discussions (Rogers, Carsrud, & Krueger, 1996; Litz, 1995) and empirical research (Dumas, 1988; Dyer, 1984; Rosenblatt, et al., 1985; Shanker & Astrachan, 1996) that there is a limited set of complex patterns of organization in family firms that differ systematically from other forms of business organizations, but still have their bases in basic patterns of human organization.

In her dissertation, Handler (1989) arranged then existing definitions of family business into four major categories: 1) ownership or management, 2) interdependent subsystems, 3) generation transfer, and 4) multiple conditions. Her groupings indicated a potential typology for family firms that could be helpful in finding a system for defining various kinds of family firms, rather than forcing a single definition.

A Proposed Typology of Family Firms

The typology described below owes much to the request by Woo, Nicholls-Nixon & Cooper (1991) for classification systems based on meaningful differences between various types of firms, and the principles of classification devised by Chrisman, Hofer & Boulton (1988), McKelvey (1982), and Mayr (1982) which see categories as mutually exclusive, and exhaustive. As important to family business any classification system should reflect the great diversity of the phenomena. Only through the recognition of such distinctions will future research in family business be able to seek explanations for the phenomena represented by Mars Candy and the start-up corner mom and pop retail store that sells its candy. The typology offers a refinement of the concept of family firms so as to identify various classes of family firms that are based on the concepts of:

Sources of Bonding (i.e., shared values and beliefs),
 Strength of Shared Values (i.e., degree of commitment to these values), and
 Sources of Control (be they internal or external to the group).

The parsimony of categories (two or four levels) assigned to each of the three factors is to easily defined groupings. This device will enable explication of the entire universe of firms exhibiting family like behaviors and provides a means for operationalizing specific membership based on simple, easy to make, judgments. The structure of the classification system is illustrated in Figure 1.

It should be noted that the typology is in a hierarchical order. However, no priority or significance is implied as this approach is a necessary feature of the typology. Likewise, the classes do not form a continuum. The resulting system has sixteen classes of firms. These represent traditional and less traditional "types" of family firms and other organizations that may act like "family businesses" or exhibit "family-like" characteristics at any time in their organization life cycle. There are likewise "family firms" that may not exhibit such "family-like" characteristics during the life cycle of those organizations.

Theoretical Behind the Proposed Typology.

Key to the typology is the concept of "organizational metamorphosis" (Filley & Aldag, 1978). That is, organizations tend to present an order of evolution much like the movement of a human being from adolescence to adulthood. Firms may move during their history through stages rapidly or slowly, skip stages, or return to previous ones during periods of change or "rebirth." Likewise, the time sequence can become frozen at any stage. Therefore some firms will show characteristics of an earlier developmental stage while others of the same age, will show characteristics of a later stage of development. There are also firms which will show characteristics of more transitional form (Hoffer, 1958; Weber, 1947). Therefore we would expect that at any time a firm may be moving from one class of firms to another because of the move from one type of bonding to another, from one level of shared value strength to another, or from internal control to external control. It is also possible that family firms may exhibit more sudden changes in "evolution" and suffer

from revolutions after periods of stagnation.

Sources of Bonding.

These sources are the primary source of bonding. While a family may be bound by biology, emotions, laws and events at any given time, the key to this is to look at the dominant source within the organization.

Biological/Clan.

This source of bonding is based on the notions of "clan" or biological membership in a human organization (Goody, 1958). This concept includes extended family groups that are tied together by biological relationships. For the anthropological basis of this discussion Rogers, et al. (1996) offers some critical insights.

Emotional.

As a source of bonding this one is based upon psychological attachment, rather than upon biological relationship. An example of this would be a husband and wife, who are not biologically related, but are emotionally attached. The same would be true of friends who become business partners, or same sex relationships (Fincham & Bradbury, 1990).

Legal.

This source, is as the name implies, reflects a formal, legalistic contractual relationship. An example would be as stockholders in a corporation, or being beneficiaries of a charitable remainder trust (Wilson, 1992).

Event.

As a source this is the least permanent one. With this as the basis of a grouping, as soon as the event passes, the group disbands. In the social psychological literature this has been known as ad-hoc groups (Cartwright & Zander, 1968).

Strength of Shared Values.

This variable is divided into two levels: high (or strong shared culture) and low (weak shared culture). By the concept of shared values is meant the holding of various cultural and organizational value and ethical systems. In essence this variable is about a shared organizational culture (Mead, 1953; Luthans, 1977). This variable is associated with the "strong" and "weak" cultures of Peters & Waterman (1982). One of their claims is that strong cultures are more effective than weak ones. Hofstede (1991) notes that a problem exists in the operational definition of culture strength. As with Hofstede the current paper defines high shared values as a homogeneous culture (i.e., all survey respondents give the same answers to key questions regardless of content). A weak culture, or low shared values, is where heterogeneous values dominate. The results of Hofstede' (1991) studies support Peters & Waterman's (1982) view that strong cultures are more effective.

Sources of Control.

This variable is divided into two categories, internal and external. By this variable is meant the primary sources of control of the organization or major influence on its management decision making. For example, a large publicly traded company may appear to be broadly owned and therefore externally controlled in relation to the decision makers (i.e., stockholders and boards of directors versus management). A large private firm in the same industry would be an example of an internally controlled firm.

Measurement of Variables

The measurement of the variables proposed above is not undaunting. One could ask firms to self report themselves as to the "primary" source of bonding in the firm, one could survey members as to their shared value systems, and one could also ask organizations as to who controls the decision making. Another approach would be to give panels of experts case information on an organization and then ask them to assign the organization to a class based upon their expert judgment.

Examples of Class Membership

Biological/Clan Based (Classes 1-4).

The resulting model produces 16 classes of firms. A Class 1 organization has a biological basis for bonding, is high in strength of shared values, and has internal control is exemplified by what we could call the traditional family firm as one would find in Latin America with a strong Catholic Church value system or Hong Kong with a strong Chinese family value system based on Confucius thought . A Class 2 firm is one in which membership in management is at least partially based on a biological connection, but is increasingly controlled by forces external to the family. An example would be News Corporation of Australia, while it has family members (the Murdock's) in key management positions, it is also a publicly traded company. One of the current issues in the firm are the roles of the Murdock children.

A Class 3 firm is a firm with a biological basis but has low strength of shared values even though it may be controlled by the family (internal control). This is a firm heading towards a crisis in management because of differences in values held by the family members. This type of family firm could be considered a firm in either crisis or transition. A Class 4 firm is which is more like an investment mechanism, or a firm being prepared for divesting or in turnaround. In this class while there is a biological source of bonding of its nominal management members, in fact there are little shared values and the control of the firm is primarily external. An example would have been Getty Oil after the death of J. Paul Getty and the transfer of the firm's stock to the Getty Trustees before the clear focus of the trust on the visual arts. This class of firm would be considered at the "end of the life cycle" of the firm.

Organizations in the above four classes could be characterized as having a high degree of potential permanence. However, this permanence is obviously modified by the nature of the strength of shared values and the degree of internal-external control. Most

of the existing research on family firms has really focused on these first four classes of organizations.

Emotional Based (Classes 5-8).

The Class 5 organization is one in which membership is based on emotional rather than biological relationships. This would be best exemplified by a partnership or a husband and wife organization or what is sometimes called "co-preneurs." In this firm there is an emotional bonding, with high strength of shared values and strong internal control from the organization leaders. A Class 6 organization is one in which there are emotional bonds upon which the organization is based, along with strong shared values, however the control is external to the bonding group. An example would be larger charities or family foundations such as the Salvation Army. Such organizations are classic forms of this type of "family firm."

A Class 7 organization is one in which the bonding is based on emotional bonding, but shared values are low and there is primarily internal control of the organization. This organization would be considered at a "cross-road" or change point in the organization life cycle. This class would be best explained by a partnership in which the partners are moving towards separate goals or reflect different cultural values and therefore may be in crisis or change in control structure and membership. A Class 8 organization is one characterized by an emotional bonding base, but low in strength of shared values and externally controlled. An example of this class would be an organization such as a partnership in bankruptcy dissolution. One can characterize a Class 8 firm as the "ugly divorce." In general, organizations in both classes 7 and 8 would be characterized as dying groups.

Legal Based (Classes 9-12).

A organization in Class 9 is one in which the bonding is primarily legal in nature, shared values are high, and control is internal. A good example of this would be an employee owned firm such as Avis or People Express Airlines which have often been compared to family owned businesses. Class 9 firms might be characterized as a "workers paradise." As the attachment basis of the members of this organization becomes an emotional one it would become a Class 5 business. A Class 10 business is one in which the bonding is based primarily on legal issues, has high strength of shared values, but is externally controlled. An example would be the U.S. Army. Often, organizations in Classes 9 and 10 would be larger, more bureaucratic, organizations with a developed culture, but whose bonding system is really more contractual than earlier classes.

One could conceive these first ten classes as a very expanded or broad definition of family firms. This is not unlike the definitional issues faced by Shanker & Astrachan (1996) in their study on the economic impact of family firms.

Class 11 firms would be ones that have a legal basis for their bonding, but are low in shared values and have internal control. An investment banking firm or venture capitalist group would be such an example, despite the "shared value of making money."

A firm in Class 12, legal basis, low shared values, and external control, would be characterized by a large bankrupt firm or one in turnaround. These two classes of firms would be best be characterized by unstable large organizations. These firms could be described as "pick-up-the-pieces firms."

Event Based (13-16).

The final basic group of organizations or groups is based on event bonding and represents what would be the least traditional definitions of a "family firm." A Class 13 organization is one best represented by ad-hoc committees, or single purpose organizations. These organizations have a high shared set of values and are internally controlled. Through continued exposure it is possible that the bonding base might shift to one of either legal, emotional, or biological. Community action groups are good examples of this class.

A class 14 firm is one in which there is event basis, no shared values and externally controlled. These would be best represented by travelers on a subway.

A Class 15 (event based, low in shared values, internal control) organization would most likely be a sole trader or merchant with no partners or "family." There are no other members of the group and control is vested in the one member. While this class may seem impermanent, it could quickly move to another class by either the creation of biological or emotional attachment.

The final group is a Class 16 organization (event based, low shared values, external control). This group is best represented by a collection of people at a flea market or tenants in an apartment complex. A firm that would fall in this category was the RTC (Resolution Trust Corporation) that These latter two classes are very temporary and would be expected to either cease to exist or transition to another form quickly. These last two classes are in fact the least like the "traditional definitions" of a family firm, but could represent the genesis of most other types of organizations including more traditionally defined family firms through any number of mechanisms.

Benefits of a Classification System

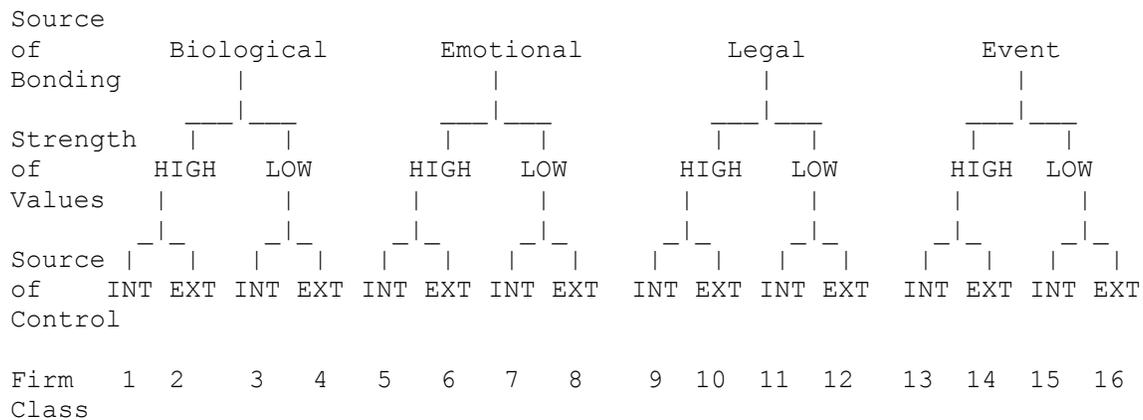
First, the classification system achieves the following broad objectives as identified by Chrisman et al. (1988) concerning business strategies. Its differentiation of various types of family ventures allows for more valid generalizations to be made about the members in each classification thus forming the basis for comparative studies between classes of family firms and other venture forms. Identification of various classes of family firms ought to improve the consistency and comparability among future studies. The proposed classification scheme can serve as a convenient method for information retrieval about the transition of firms from one form to another by the generalizations made from comparative studies (Chrisman et al., 1988).

Perhaps most importantly, the proposed classification system for family businesses reduces ambiguity typically associated with the term. It reduces reliance on arbitrary criteria such as number of generations present in the firm in classifying a firm as a family

business. Thus arbitrary or gross classifications of samples can now be replaced by specification of a particular family business class, reducing the reliance on ownership and generations as the major distinguishing criteria. The proposed system could aid in the targeting of services to specific family firm niches. That is advisors can better tailor their advice to the real and anticipated needs of different firm types. The typology system also recognizes that family businesses might be of vastly different sizes and that all small businesses are not necessarily family firms. The classification system even proposes other possible types of family firms not previously considered in the research or practice literature.

Next, reliance on defining family business as a unitary concept is hopefully avoided. The typology permits a focus on analysis of family firms of the same class and enhances the likelihood of building valid understandings of similar phenomena and avoiding inflating Type II Error rates. The use of typologies will also help better address the issues raised in Shanker & Astrachan (1996) about the role of family firms in local economies. One could ask how certain types of family firms impact an economy. Some types may have a more positive impact than others.

The typology proposed also encourages research on family firms in a class as a distinctive group, drawing insights from theories relating to mature, public owned, and well established organizations, and discovering the shortcomings of those theories. It promotes the search for theory of family firms as phenomena in their own right rather than assuming such ventures are special cases to which more general theories of psychology, anthropology, sociology, management, or organizational behavior apply.



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The Training And Development Needs Of Owner-Managers
Of Small Businesses With Export Potential

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Very few small firms in Quebec are considering the challenge of exporting, even in a context where competition has increased as a result of the new open markets. Research has shown that the

decision of an owner-manager to move into a foreign market is conditioned basically by his or her personal attitude to exporting. A number of organizations currently offer export information and training services to small firms, but these services do not seem to meet the needs of entrepreneurs. The aim of this study was to identify the export training and development needs of small business owner-managers. It took the form of exploratory research using a sample of 15 small business owner-managers in Quebec. It highlights their representations of their own strengths and weaknesses as regards exporting, the areas of competence in which training was thought to offer possibilities for improvement, and the type of training and teaching personnel preferred.

Respondents were asked to describe how they viewed exporting for a small firm such as theirs. More than 80% perceived exporting as a necessity or a necessary evil they would have to face at one time or another. Strikingly, despite the perceived potential benefits, exporting was by no means regarded initially as an attractive opportunity, but remained a forced longer-term choice. Concerning the export-related weaknesses and strenghts, the main problem lays in the lack of foreign contacts, which seemed to constitute a major obstacle to exporting. In-depth questioning revealed that respondents did not seem to know where to begin, or who to ask for help. A second major source of perceived difficulty lay in the general lack of knowledge of potentially interesting foreign markets in the firm's sector. Many respondents did not know which countries or regions they should consider, how their products should be adapted to the specific requirements of those markets, or the efforts required to make the necessary changes or additions. Third, the technical aspects of export payment methods were also perceived to be a major difficulty by many respondents.

Three strengths also emerged and were mentioned by nearly a third of respondents. First, the quality and/or originality of the product design was perceived to be a significant advantage. The quality of the product and its special characteristics ranked second. Finally, many respondents mentioned their firm's flexibility and speed of adaptation, due in particular to its small size and the speed of its decision-making and direct action processes. The owner-managers interviewed were asked to list five main training and/or development themes that they thought would improve their export trade skills. Table 3.4 (in the text) shows the themes identified in response to this question. Regarding the types of training and teaching staff desired, our

main finding from analysis of the responses to this question is that none of the respondents considered traditional lectures, as given in most colleges and universities, to be of much use. They suggested a combination of conferences and workshops together with practical case studies, discussion workshops with experienced entrepreneurs and ad-hoc seminars on specific themes.

The Exportation of the American Model of Entrepreneurship:
Reality or Illusion? A Comparative Trait Study of American And
Finnish Entrepreneurs

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Abstract

This paper develops the key aspects of the entrepreneurial psyche as depicted in the American model of entrepreneurship. The authors empirically compare an American group of entrepreneurs to a Finnish group in terms of traits. The paper concludes with a discussion of the implications of identified differences for the potential success of the exportation of the American model to other nations attempting to encourage entrepreneurship.

Introduction

With the crumbling of the centrally planned economies of Eastern Europe has come the cry: ENTREPRENEURSHIP! Virtually everyone seems to be looking toward the resurgence of entrepreneurship to drive a conversion of these economies toward free enterprise and to fuel an increase in standards of living and in the health of the nations (Roman, 1991). A similar attitude toward entrepreneurship seems to exist throughout the world as numerous countries look toward the phenomenon as a savior of stagnating economies (i.e., Kohi & Sood, 1987; Tiffin, 1987; Gupta, 1989; Meredith, 1989; Balkenhol, 1990; Giamartino, 1991; Nelson, 1991). Like the legendary Phoenix rising from its ashes to live again, entrepreneurship is expected to surge from its grave and leap to the defense of crumbling economies around the world.

Americans seem to see this international focus as proof of the superiority of the American model of entrepreneurship. Those who are more generous might say that the American view is a result of history. Less generous ones might say that the American view has its roots in innate feelings of superiority. At any rate, increasing numbers of American researchers are traveling the globe to teach entrepreneurship. The American ideology has dominated the conventional world view of entrepreneurship (Peterson, 1988). There is great danger in this view because entrepreneurship occurs differently in other nations (Giamartino, McDougall & Bird, 1993).

Entrepreneurship is unique among organizational and economic functions in that it is initiated by an act of human volition (Hofer & Bygrave, 1992). It is this intentionality that distinguishes the entrepreneur (Bird & Jelinek, 1988). If one wishes to understand the entrepreneurial process, one must understand the role of the individual in triggering that process (Carland, Hoy & Carland, 1988). Further, entrepreneurship is

enmeshed with culture (Peterson, 1988). The natural conclusion drawn from these perspectives is that the American model of entrepreneurship is not necessarily effective in understanding or encouraging entrepreneurship in a given nation. Before one can export the American philosophy to a given nation, one must investigate and seek to understand differences in the entrepreneurial psyche in that nation.

In the 1930s, Aksel Sandemose described the rules of behavior in a fictitious city called Jante. The Jante Laws were hailed as an erudition of Norwegian culture. That culture is clearly different today, but the undertones persevere (Hjelmervik, 1988). In fact, a similar attitude seems to exist throughout much of the world (Peterson, 1988). Sandemose's perspective is translated as follows (Peterson, 1988):

The Jante Laws

1. You shall not believe that you are something.
2. You shall not believe that you are as good as we are.
3. You shall not believe that you are wiser than we are.
4. You shall not believe that you are better than we are.
5. You shall not believe that you know more than we do.
6. You shall not believe that you are more than we are.
7. You shall not believe that you are capable of anything.
8. You shall not laugh at us.
9. You shall not believe that anyone cares for you.
10. You shall not believe that you can teach us anything.

The central tenet of the American model of entrepreneurship is individualism. In fact, a plethora of articles focussing on the personal characteristics of entrepreneurs has emerged (i.e., McClelland, 1961; Pickle, 1964; Hornaday & Aboud, 1971; Timmons, 1978; Brockhaus, 1980; Dunkelberg & Cooper, 1982; Brockhaus & Horwitz, 1986; Carsrud, Olm & Eddy, 1986; Solomon & Winslow, 1988; Winslow & Solomon, 1989; Carland & Carland, 1991). Still other researchers have posited types of entrepreneurs (i.e., Smith, 1967; Webster, 1977; DeCarlo & Lyons, 1979; Vesper, 1980; Mescon & Montanari, 1981; McClelland, 1987; Louis, Blumenthal, Gluck & Stoto, 1989; Gartner, Mitchell & Vesper, 1989). Much of the American research in entrepreneurship has been founded upon the premise that entrepreneurs embody distinctive personality characteristics which can be identified (Cooper & Dunkelberg, 1987), and used to indicate a potential for entrepreneurship (Lachman, 1980). Clearly, the focus of the great mass of this research is the individual and his or her role in venture creation. This may be quite natural given the historic antecedents of the United States, however, the cult of individualism is unacceptable in many countries of the world (Peterson, 1988).

Can the American insight into entrepreneurship be successfully exported to other nations? The importance of this issue cannot be overstated as it goes to the validity of attempts to aid and support entrepreneurship internationally with any model which is American based. However, these researchers feel that an antecedent to the export issue lies in an earlier question. Just how much do the entrepreneurs in America differ from those in other nations? If culture is enmeshed with entrepreneurship, there must be differences and those differences are likely to

vary from nation to nation. This paper presents an exploratory study of differences in entrepreneurs. The authors have approached the question by investigating the entrepreneurial drive and the key components of the entrepreneurial psyche as espoused in the American model. Clearly, any comparison of the American view of the entrepreneurial psyche must be made on a nation by nation basis. Any other approach would be so confounded by cultural differences as to make interpretation of the findings problematic, if not impossible. Because there is a dramatic, nationwide focus on entrepreneurship in Finland and because there is a cadre of entrepreneurship researchers in that nation who are vitally interested in exploring the nature of the entrepreneurship phenomenon, the authors have begun this exploratory study with a comparison between American and Finnish entrepreneurs. This paper will describe the results of an empirical comparison between entrepreneurs in the two nations and will explore the significance of the differences in terms of the potential value of the American model in Finland.

The American Model Of Entrepreneurship

From the time of Adam Smith in 1776 through the middle of the Twentieth Century, the literature was dominated by economists focussing upon the outcomes of the entrepreneurship phenomenon. McClelland (1961), with his landmark work on individual need for achievement, kindled an inferno of interest in the two generations of American entrepreneurship researchers who followed. The concomitant interest in entrepreneurship inputs placed the focus of the American model of entrepreneurship squarely on the individual. As a result, three major characteristics have emerged as primary aspects of the entrepreneurial personality.

The first of these characteristics is the propensity for risk taking, the earliest identified entrepreneurial characteristic. Cantillion (circa 1700) portrayed an entrepreneur as the individual who assumed the risk for the firm (Kilby, 1971), a perspective echoed by Mill (1848). Palmer (1971) proffered that risk assessment and risk taking are the primary elements of entrepreneurship. Some studies have indicated no significant differences in risk taking propensities for entrepreneurs as compared to the general population (i.e., Brockhaus, 1980; Sexton & Bowman, 1983), but others have discovered a higher propensity for risk taking among entrepreneurs (i.e., Sexton & Bowman, 1986; Carland, Carland, Carland & Pearce, 1995), when confronted with business risk (Ray, 1986), but moderated by experience, age, education, and type of business (Schwer & Yucelt, 1984). Further, entrepreneurs evidence low uncertainty avoidance irrespective of culture (McGrath, MacMillan & Scheinberg, 1992). Risk taking propensity remains a key aspect of the entrepreneurial psyche as visualized by American researchers (Carland, Carland & Stewart, 1996).

The second characteristic which is central to the American model is preference for innovation. Schumpeter's view of entrepreneurial innovation was rooted in the classic theories of economists such as Say and Marshall (Hornaday, 1992). In the literature, innovation remains a frequently identified functional characteristic of entrepreneurs (e.g., McClelland, 1961; Hornaday & Aboud, 1971; Timmons, 1978; Brockhaus, 1982; Carland, Hoy,

Boulton & Carland, 1984; Gartner, 1990). Timmons (1978) suggested that creativity and innovation were conditions inherent in the role of entrepreneurship. Drucker (1985) actually defined entrepreneurship as innovation in a business setting. Olson (1985) included invention, an activity analogous to innovation, as a primary entrepreneurial activity. This contention was intensified by Carland, Hoy, Boulton and Carland (1984) who proposed that innovation was the critical factor in distinguishing entrepreneurs from managers and small business owners. Hornaday (1992) deftly illustrated that while innovation is a necessary element of entrepreneurship, alone it is insufficient to fully circumscribe entrepreneurial behavior because of the broad parameters of the function. The preference for innovative behavior is firmly established as central to the American view of the entrepreneurial psyche (Carland, Carland & Stewart, 1996).

The third, and perhaps the most ubiquitous entrepreneurial characteristic, is the need for achievement. This insight was initiated by the work of McClelland (1961). In a study of behavior in young men, McClelland (1961, 1965) concluded that a high need for achievement would influence the self selection of an entrepreneurial position, defined as a salesman, company officer, management consultant, fund-raiser, or owner of a business. Numerous subsequent studies have shown a positive relationship between achievement motivation and entrepreneurship (i.e., Hornaday & Bunker, 1970; Hornaday & Aboud, 1971; DeCarlo & Lyons, 1979; Lachman, 1980; Begley & Boyd, 1986). Other studies have shown that need for achievement is not the most important variable for predicting the likelihood of starting a business (Borland, 1974; Hull, Bosley, & Udell, 1980). Johnson (1990) suggested that because of the variability of the samples, different operationalizations of the achievement motive, and convergent validity problems in instrumentation, more research is necessary to prove a definitive link between achievement motivation and entrepreneurship. Nevertheless, achievement motivation remains a central tenet in the American view of the entrepreneurial psyche (Carland, Carland & Stewart, 1996).

A relatively new, yet promising perspective of the entrepreneurial psyche involves cognitive or managerial style (i.e., Hoy & Carland, 1983; Brodzinski, Scherer & Wiebe, 1990; Dugan, Feeser & Plaschka, 1990; McKee, 1991; Shaver & Scott, 1991; Carland & Carland, 1992; King & Masters, 1993; Carland, Carland & Stewart, 1996). Carland, Carland and Hoy (1992) posited a perspective of entrepreneurship which treats the phenomenon as an individual drive; the drive toward entrepreneurial behavior. They developed and validated an instrument which measures the strength of that drive, the Carland Entrepreneurship Index, and demonstrated that entrepreneurial drive is normally distributed (Carland, Carland & Hoy, 1992). They hypothesize that the differences in entrepreneurial drive explain the differences in observed entrepreneurial behavior. Carland, Carland and Stewart (1996) describe the entrepreneurial psyche as a gestalt of multiple personality factors including the need for achievement, the propensity for risk taking, the preference for innovation, and cognitive style. They demonstrated that the various factors are normally distributed and that the varying strengths of the traits in an individual entrepreneur combine to affect that individual's behavior. It is this gestalt of drives which combine

to produce differences in entrepreneurial behavior.

These authors conclude that the American model of entrepreneurship is based upon a view that the individual is the key to the process and that the individual is characterized by several key attributes. Among these attributes are the need for achievement, the propensity for risk taking, and the preference for innovative behavior. The synthesis of varying levels of attribute strength in an individual results in a gestalt of drives which affects one's approach to entrepreneurship. In essence, the process of entrepreneurship is a result of an individual's actions, and that individual's actions are profoundly affected by his or her personality.

The Research Methodology

Logically, if the American model of entrepreneurship is valid in other nations, then the perspective of the individual entrepreneur as the driving force behind the entrepreneurial process must be valid. To test such validity, the researchers selected instruments to measure the key entrepreneurial traits, combined them into a survey with demographic questions and questions concerning the goals, objectives and strategies of the firm, and translated the survey into Finnish. The survey was administered to a group of American and a group of Finnish entrepreneurs.

The Instruments

The instrument used to measure the need for achievement is the Achievement Scale of the Personality Research Form (Jackson, 1974). The instrument has been shown to have reliability (Jackson, 1974), to display convergent and discriminant validity, and high correlations with self and peer ratings; .65 and .46 respectively (Jackson and Guthrie, 1968). It consists of 16 forced choice questions, and can be scored by untrained people. Odd-even reliabilities for two groups (N=83 & N=84) were .57 and .66 after application of the Spearman-Brown correction (Jackson, 1974).

To measure risk taking propensity, the authors used the Risk Taking Scale of the Jackson Personality Inventory (Jackson, 1976), which consists of 20 forced choice questions and can be scored by untrained people. It displays high reliability and validity and exhibits high correlations with self and peer ratings; .77 and .52, respectively (Jackson, 1976). Jackson (1976), in a test involving two samples (N=82 & N=307), reported internal consistency reliability values of .93 and .91 using Bentler's coefficient theta and .81 and .84 using coefficient alpha.

The instrument selected to measure preference for innovation was the Innovation Scale of the Jackson Personality Inventory (Jackson, 1976) which also consists of 20 questions in a forced choice format and can be scored by untrained people. It has been reported to display high reliability and validity and to exhibit high correlations with self and peer ratings; .73 and .37, respectively (Jackson, 1976). Jackson (1976), in tests involving two samples (N=82 & N=307), reported internal consistency reliability values of .94 and .93 using Bentler's coefficient

theta and .83 and .87 using coefficient alpha.

The instrument selected to measure entrepreneurial drive was the Carland Entrepreneurship Index. The instrument consists of 33 forced choice questions, can be scored by untrained people, and results in a scalar score which can be interpreted as a representation of the strength of one's entrepreneurial drive. The test-retest correlation for the Entrepreneurship Index was .80 with a split-half, odd-even reliability of .73. The Kuder-Richardson test for validity was .73 indicating good reliability and validity for the Index (Carland, Carland, & Hoy, 1992).

The Samples

The American sample consisted of 211 principal owners of small businesses as defined by the U.S. Small Business Administration. Graduate students from the southeastern United States were asked to have small business owners complete the surveys. The group represented a convenience sample, however, it was sufficiently large as to eliminate most criticism since the central limit theorem holds that larger samples have a level of confidence which approaches that of a random sample (Mason, 1982). Further, the methodology of collection minimized non-response bias. Since the data were collected through personal approaches, there was a high level of participation; fewer than 20% of owners approached declined to participate. The result was data collected from individuals who might not have responded to a mail questionnaire.

The Finnish sample consisted of 424 principal owners of small businesses which meet the U.S. Small Business definition. The sample was developed by mailing the surveys to a group of 1,000 owners of small businesses throughout Finland. The high response rate, 43%, demonstrates the keen interest which Finnish entrepreneurs have in supporting entrepreneurship research. Further, the high response rate suggests a minimal non-response bias. The demographics of the two groups, displayed in Table 1, show remarkably similar distributions.

TABLE 1: DEMOGRAPHICS OF SAMPLES
(May not add to 100% due to missing responses)

		American	Finnish
Type of Business	Retail	38	18
	Service	44	44
	Wholesale	3	4
	Construction	9	15
	Manufacturing	4	15
Annual Sales	\$100,000 or less	36	34
	\$100,000 to \$250,000	19	16
	\$250,000 to \$500,000	18	19
	\$500,000 to \$1,000,000	9	14
	\$1,000,000 and over	4	15
Number of Employees	10 or less	84	8
	11 to 25	8	10
	26 to 50	5	2
	51 or more	2	2

Business Form	Proprietorship	51	25
	Partnership	13	38
	Corporation	36	38
Age of Business	Over 10 years	54	50
	5 to 10 years	38	32
	1 to 4 years	4	17
Sex of Respondent	Male	68	75
	Female	32	25
Age of Respondent	25 to 35 years	23	15
	36 to 45 years	35	29
	45 to 55 years	24	41
	Over 55 years	13	13
Education of Respondent	12 years or less	33	73
	12 to 15 years	27	9
	16 years	23	3
	More than 16 years	13	9

Results Of The Study

Descriptive statistics for the two samples are displayed in Table 2. The table reports the key statistics for each of the instruments included in the survey.

TABLE 2: DESCRIPTIVE STATISTICS

CEI: The Carland Entrepreneurship Index
 ACH: The Jackson Need for Achievement Score
 INN: The Jackson Preference for Innovation Score
 RISK: The Jackson Risk Taking Propensity Score

for the American Sample

	CEI	ACH	INN	RISK
Mean Score	20.5	1.3	13.7	9.5
Variance	30.1	7.7	19.1	27.0
Standard Deviation	5.5	2.8	4.4	5.2
Minimum Score	6	3	1	5.2
Maximum Score	35	16	20	19
Number of Cases	209	209	209	209

or the Finnish Sample

	CEI	ACH	INN	RISK
Mean Score	18.3	10.6	13.3	7.3
Variance	26.2	5.8	18.3	16.0
Standard Deviation	5.1	2.4	4.3	4.0
Minimum Score	4	4	1	0
Maximum Score	31	16	20	19
Number of Cases	434	434	434	434

for the Combined Sample

	CEI	ACH	INN	RISK
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Mean Score	19.0	11.1	13.5	8.0
Variance	28.4	7.0	18.5	20.6
Standard Deviation	5.3	2.7	4.3	4.5
Minimum Score	4	3	1	0
Maximum Score	35	16	20	19
Number of Cases	643	643	643	643

The first phase of the empirical analysis consisted of a correlation between the scores on the four instruments for each of the two samples, as well as for the combined sample. The results are displayed in Table 3. As the table shows, the correlations were high, and were remarkably similar for each of the two groups.

TABLE 3: CORRELATION MATRIX

CEI: Carland Entrepreneurship Index ACH: Jackson Need for Achievement
 INN: Jackson Preference for Innovation RISK: Jackson Risk Taking Propensity

for the American Sample

	CEI	ACH	INN	RISK
CEI	1.00			
ACH	0.45	1.00		
INN	0.55	0.45	1.00	
RISK	0.58	0.28	0.55	1.00

for the Finnish Sample

	CEI	ACH	INN	RISK
CEI	1.00			
ACH	0.50	1.00		
INN	0.54	0.44	1.00	
RISK	0.60	0.40	0.51	1.00

for the Combined Sample

	CEI	ACH	INN	RISK
CEI	1.00			
ACH	0.51	1.00		
INN	0.54	0.43	1.00	
RISK	0.60	0.39	0.52	1.00

The next phase of the investigation involved an analysis of variance. The results are displayed in Table 4 (Omitted). Each of the four instruments were compared across nationalities. As the table shows, there were significant differences between the American and Finnish scores on all of the instruments except for the preference for innovation. To determine the direction of the difference revealed by the analysis of variance, t-tests were conducted between the scores of the two groups on the three instruments with significant differences. The results, also displayed in Table 4 (Omitted), showed that the Americans produced significantly higher scores on all three instruments, the Entrepreneurship Index, need for achievement, and propensity for risk taking.

Since the Carland Entrepreneurship Index purports to be a measure

of the gestalt of individual traits, the researchers conducted a regression analysis with the CEI as the dependent variable. The results, displayed in Table 5 (Omitted), showed a strong relationship for both American and Finnish groups with R^2 scores of 46% and 48%, respectively. Regression on the combined sample, also shown in Table 5 (Omitted), produced only a slightly higher R^2 of 49% but with strong significance.

The previous investigation concerning correlations, displayed in Table 3 above, suggested that the scores on the various instruments were significantly correlated. This suggests that the regression analysis displayed above could have been affected by multicollinearity. Consequently, the researchers collapsed the scores on risk taking, innovation and achievement into a single variable. A new regression analysis, displayed in Table 6 (Omitted), employing the combined scores shows that the effect on the CEI was not distorted. The R^2 scores remain high at 46%, 47% and 48%, for the American, Finnish and combined samples.

Conclusion And Implications Of The Study

The results of this exploratory study cannot be extrapolated to broader, international populations. The results are of value strictly with regard to Finland. Nevertheless, the results demonstrate the feasibility of comparing American entrepreneurs to the entrepreneurs in any given nation to determine how well the American model of entrepreneurship fits that nation.

This study suggests that there are significant differences in the strength of several key, personality traits between American and Finnish entrepreneurs. Among these are need for achievement and risk taking propensity. Nevertheless, the basic entrepreneurial function is a reality in both nations. The results of the regression which demonstrated a valid entrepreneurial drive function with key personality drive traits as independent variables is far reaching. It suggests that, even though the relative strength of various traits important to entrepreneurial behavior do differ between the United States and Finland, the role of those traits in producing entrepreneurial drive are the same.

The researchers conclude that the American model of entrepreneurship can be exported to Finland. Consequently, the American experience can be of value in helping to explain the entrepreneurial process in Finland. However, attempts to influence entrepreneurial behavior in Finland must take different avenues from attempts which might be successful in the United States. Specifically, there is a dramatic difference in risk taking propensity displayed between Finnish and American entrepreneurs. This difference suggests that any attempts to influence Finnish entrepreneurship must be predicated on activities which are perceived by Finns to be much less risky than would be required in the United States. On the other hand, Finns are just as strongly oriented toward innovation as are Americans. That similarity suggests that Finnish entrepreneurs will be just as likely as Americans to react well to new and different approaches and opportunities.

The entrepreneurial mystique in Finland is as much a gestalt as it is in the United States. Further, the role of the individual

in the entrepreneurial process is as central in Finland as it is in the United States. Consequently, these authors conclude that much of the American perspective of entrepreneurship can be of value in understanding and supporting Finnish entrepreneurship.

To gain the maximum from sharing our models and our knowledge with each other, we must be sure that we share a common foundation. The United States and Finland do. We cannot speak for other nations, however, we do know that all nations share one basic, overriding reality. For all nations, wealth, and the common good are dependent upon people. Sharing knowledge and insight can endow us with common purpose. If we employ that purpose to pursue entrepreneurial goals, we can, each of us and each nation, become the best that we can be.

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The Role of the Board of Directors
In the Successful Startup of New Ventures

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Abstract

Startup is considered the most difficult time in a venture's life. It is a period when critical decisions must be made about how to structure, position and finance the venture, amidst the greatest level of uncertainty the firm may ever face. Successfully managing under such uncertainty requires that the entrepreneurial team either possess extraordinary skills or utilize the expertise of outsiders. While the benefits of a board of directors are well understood for more established firms, there is relatively little known about how an active board can influence new venture success at the startup stage. This paper examines the appropriate role for an active board of directors at startup. Implications for both scholars and practitioners are discussed.

"Startup" Defined

Businesses experience a variety of special situations as they grow and mature (Singer, 1995). One of the most unique periods in the life a venture is its startup. Startup is that period of time between when the business idea is conceptualized and when the new venture achieves a satisfactory level of stabilization in its day-to-day operations. This stage of development consists of three distinct phases: pre-entry; market entry; and early growth (Kuratko and Hodgetts, 1995). Though the characteristics of startup are relatively common across different types of ventures, the duration of startup can range from one to five years depending on the experience of the entrepreneurial team and the complexity of the new opportunity. Experts report that the failure rate for startups is approximately 25 percent within the first two years and as much as 65 percent in the first five years (Dennis, 1993). It is a period when critical decisions must be made amidst the greatest level of uncertainty the firm may ever face. This includes uncertainty about critical matters such as the size and growth of the market, the reaction of entrenched competition, the demand for the new product or service, the availability of key resources, the feasibility of innovative technologies, and the timing of the window of opportunity.

Experts agree that there are three crucial components needed for the startup of a successful new venture: an opportunity, an experienced entrepreneur or entrepreneurial team, and access to critical resources (Timmons, 1997). Opportunities consist of product/service ideas that tap existing or developing market needs. The entrepreneur or entrepreneurial team provides the industry, management, and startup experience necessary to successfully pursue the opportunity. Effective resource management involves minimizing overhead costs, maximizing

productivity; and limiting capital asset requirements. The decisions involved in successfully starting a business venture require the entrepreneur to establish a "fit" between these core elements so as to minimize the amount of resources needed and to maximize the effectiveness of those resources that are available (Timmons, 1997). The unique decisions faced by the entrepreneur and the lead management team in each phase of the startup process are briefly described below.

Pre-Entry (1 - 12 months)

Pre-entry is that period when the business idea is conceptualized and the plans are formulated for market entry. The substance of each plan depends to a large degree on the intentions of the lead entrepreneur. His or her focus is typically on the opportunity and on minimizing the amount and cost of resources necessary to pursue the opportunity. The entrepreneur has determined that the business idea is feasible and attempts to design an organization to pursue specific objectives. Most of his/her energy is spent scanning the environment, developing the appropriate entry strategy, marshaling resources, and completing any details in the final product/service offering.

Many aspects of the pre-entry situation are uncertain, including: the size and nature of the market; the strategy and position of leading competitors; the costs of materials, equipment, facilities and capital; the role of the management team, and the most effective market entry strategy. For many new ventures, future success can literally ride on whether the entrepreneur successfully positions the new venture in the marketplace based on their judgments about the market in the pre-entry stage (Naffziger and Kuratko, 1991). The pre-entry phase of the startup process is where the entrepreneur relies most heavily on his/her industry experience. Successfully designing an organization while using information highly prone to error requires an in-depth, working knowledge of how the market works and what the key factors are for competing successfully.

Market Entry (6 - 18 months)

Market entry refers to that period beginning with the first customer order or sale and extending until the planned distribution, sales, and manufacturing operations are firmly established. The entrepreneur drives this phase of the process, however, a great deal of the day-to-day implementation of the entry plan is delegated to the management team. Though the initial plans for the venture are still in effect, the results of implementing the plan derived from careful evaluation begin to drive the entrepreneur's decision-making process at this phase. The market entry phase is said to be completed when the initial plans are sufficiently satisfied and management can turn its attention toward stabilizing the operations. This phase can be as short as six months for relatively simple business concepts, or as long as 18 months where multiple facilities in multiple locations with unique strategies make it difficult to coordinate in a short time frame.

The lead entrepreneur or the entrepreneurial team is focused on operationalizing the business plan at this phase. All managerial energies are directed toward accomplishing very specific short-

term goals, such as: securing properties and lease arrangements, constructing facilities, closing on capital programs for sources of funds, securing the early management team, and serving the initial customers. Market entry represents a period in the life of the new venture where the entrepreneurs strives to validate many of the assumptions under which the entry plans were developed during pre-entry. It is also the point at which the lead entrepreneur begins to test many of his/her initial ideas about the future of the business and whether the idea possess the same level of value as originally believed.

The entrepreneur's startup experience is most critical at this phase. Stakeholders rely upon the entrepreneur to closely monitor the day-to-day implementation of the plan, to control costs, coordinate with initial customers, and troubleshoot problems in the original plans and to reformulate strategy as the business makes its early moves to position itself in the marketplace.

Early Growth (24 - 48 months)

The focus of the early growth phase of the startup process is on stabilizing the operations, or reaching a point of legitimacy for the new venture. Stabilizing operations is the most time consuming startup task and can be the most complex for the lead entrepreneur. This period is characterized by a moderate level of uncertainty given management's preparation for accelerated growth. Various financial and operational control systems are being designed as a result of successful market entry and a greater understanding of how to effectively compete in the chosen market.

The role of the lead entrepreneur at this point is two-fold: bringing stability to the growing operations and setting the future growth agenda. His or her role moves beyond that of the visionary, a role necessary in the earlier stages of the process, and shifts to that of a true leader. It is exactly this role transition which makes this phase of startup the most difficult for the lead entrepreneur and his or her team (MacMillan, 1983). They often struggle with which areas of responsibility need their close control and which can be effectively delegated (Osborne, 1991). Though the process can be difficult, most entrepreneurs understand that the single greatest threat to the future growth of the business is their inability or unwillingness to delegate as their own role changes (MacMillan, 1983). This is why the management experience of the entrepreneurial team is most critical at this stage. The team is now firmly responsible for profits and losses and should have established the appropriate control systems for insuring their success.

Advantages of an "Active" Board of Directors

The primary question for the entrepreneur with respect to establishing and utilizing a board of directors is how active he or she wants the board to be in the decision-making process (Ford, 1992). Two factors ultimately determine the answer: 1) the degree to which the entrepreneur possesses the skills and experience required to successfully manage the venture, and 2) how much control he or she is willing to relinquish over the decision-making process (Ford, 1992; Daily and Dalton, 1992). There are several ways in which boards have been shown to benefit

their businesses, namely networking, providing access to critical resources, formulating business strategies, establishing governance policy, conducting independent assessments, providing specialized expertise, overseeing change and innovation, and managing in crisis situations (Moskowitz, 1990; Mace, 1971; Castaldi and Wortman, 1984; Osborne, 1994; Borch and Huse, 1993).

However, each phase of the startup process involves a unique set of issues. Thus, like the role of the lead entrepreneur, the role of a board should change as the venture progresses in startup. As we review the primary issues in each phase below, we also explore how a working board, as portrayed in the research literature, could benefit the entrepreneurial decision-making required at that point in the process.

Pre-Entry Issues

Boards are rarely used at the pre-entry stage of the startup process (Ford, 1992). However, given the types of issues entrepreneurs are challenged with at this stage, assembling an active board prior to market entry might be very beneficial. There are five major issues that entrepreneurs and their management teams must avoid when planning for a new venture (Naffsinger and Kuratko, 1991). The first issue is establishing a set of realistic goals for the organization. There are two concerns with objectives: 1) they must be specific and set according to an appropriate time table, and 2) they must be realistic. An active board can assist in setting realistic objectives if the experiences of its members (inside or outside the firm) help to round out the experiences of the lead entrepreneur and the management team. In its role as overseer, a board can also hold the entrepreneurial team accountable for achieving any pre-entry milestones, like developing prototypes, accumulating resources, and writing the business plan.

A second concern during pre-entry is the failure to anticipate potential problems (Naffsinger and Kuratko, 1991). A key to overcoming this issue is establishing a set of contingency plans. Contingency plans force the decision maker(s) to identify the weaknesses inherent in the original plan and to formulate alternative strategies for overcoming obstacles that arise. Once again, an active board could be instrumental in assisting the management team in developing such plans and in holding the lead entrepreneur accountable to see that the company was ready to implement the contingency plans if needed.

A third pre-entry issue is the tendency to lose commitment to the new venture (Naffsinger and Kuratko, 1991). Because of the difficulty many entrepreneurs experience when starting a new venture, many lose interest along the way or otherwise reach a point where they are no longer motivated to pursue the idea. Indications of a problem in this area are excessive procrastination on major issues, failure to invest personally in the new venture, and missed opportunities (Naffsinger and Kuratko, 1991). An active board could help to see that the entrepreneur stays personally attached to the proposed business. An active board could also assist the entrepreneur overcome the common hurdles which often lead to a loss of commitment, including gaining access to key resources, securing participation of key personnel, understanding complex issues in technology, and

researching the market.

The fourth major concern during the pre-entry phase of startup is the lead entrepreneur's lack of proven experience (Naffsinger and Kuratko, 1991). A board can indirectly work towards a solution to this issue by assisting the entrepreneur in recognizing key weaknesses in industry, startup or management experience and securing key managers to round out the experiences of the management team. More directly, a working board might provide additional skills such as long-range planning, environmental scanning, strategy development and implementation, and control. In addition, while a board should have little direct involvement in making day-to-day decisions, a board could effectively structure how day-to-day decisions get made, thereby insuring that most major issues are covered with experienced oversight.

Finally, the lack of a well defined market niche is also a major issue during pre-entry (Naffsinger and Kuratko, 1991). Ventures are often started with limited market niches and no real uniqueness to their product/service offering. A board whose members are knowledgeable about the particular market will be able to assist the entrepreneur in identifying the key success factors in the market and designing how to best serve the customer needs. The key at this stage is to insure that a specific market segment is targeted and that the product is appropriately designed to satisfy the unique needs of that segment. The ability of a working board to assist in this area depends to a large degree on whether its members possess a solid working knowledge of the industry. Thus, it is crucial that the entrepreneur hand select his or her board members during pre-entry so they can be assured that there is adequate knowledge of the market.

Market Entry Issues

Kuratko and Hodgetts (1995) identify five critical factors that must be carefully managed during market entry: 1) the relative uniqueness of the venture; 2) the availability of product; 3) the availability of customers; 4) the relative size of the investment; and 5) the expected rate of growth in sales and profits. The key to success in market entry is to "manage" the entry process so as to balance the resource requirements in each of these areas with the skills and resources of the young organization. Three of the factors - the uniqueness of the product/service offering, the availability of customers, and the availability of product - are closely linked to the day-to-day operations of the business. As such, management is not likely to involve its board of directors with such issues. The other two issues - the size of investment and growth in sales and profits - are more closely linked to the firm's strategic plans. Active boards should be heavily involved in the strategic (i.e., long-range) planning efforts of their young organizations (Ford, 1992).

The size of the startup investment is a critical issue to all new ventures. When the amount of capital required is relatively large, the ability to acquire the capital is limited, and the window of opportunity is short, a working board can be an effective asset for the new venture. The members of the board themselves might serve as a source for startup funds, or they may utilize their networking abilities to tap additional sources of

funds. At the very least, their involvement in the development of the market entry plan lends credibility to the plan and creates the best opportunity for raising the necessary capital at the least cost.

The projected rate of growth in sales and profits is also of critical importance to the new venture. This factor, more than all others, illustrates how a venture can benefit from the input and oversight of an active board. An entrepreneur who does not project increasing sales and profits for his or her venture will face few challenges beyond their abilities. Therefore, they will have only minimal needs for outside resources and little need for expert advise. Otherwise referred to as "lifestyle" businesses, such entrepreneurs are commonly looking for independence, autonomy in their decision making and control. As such, they are least likely to need or desire the input of an active board of directors.

In growth-oriented ventures, however, the entrepreneur makes projections which stretch the firm beyond its present capabilities. Their plans typically call for access to large amounts of capital, increasing numbers of qualified managers, and lots of expert counsel and access to critical resources as the business grows. While these entrepreneurs also desire independence and control, their primary focus is on building wealth via the growth of the venture. As such, they are the most likely to need and desire the input of an active board of directors. Active directors of these types of firms assist in setting growth objectives, designing strategies to achieve those objectives, and accessing the resources required to see the strategies effectively implemented. Growth oriented firms also benefit from their board's relatively close interaction with the entrepreneurial team and their task of holding the entrepreneurial team accountable for achieving specific milestones.

Early Growth Issues

The goal of this phase of the startup process is to stabilize operations so that management can shift its focus away from market entry issues and begin to develop a more long-term perspective for the young venture. Though marketing and financial issues have dominated the entrepreneurial team's attention to this point, they now begin to consider growth issues and the need to reformulate their vision for the future. During this period, the entrepreneur is focused on 1) preparing for growth, 2) enhancing the company's perceptions of opportunity, and 3) establishing innovation as part of the company's overall strategy (Osborne, 1994).

Preparing for growth involves tasks similar to those in the pre-entry and market entry stages of startup. The firm begins to plan for its future based on the solid foundation management has established to this point. In addition to stabilizing the organizational structure, a great deal of the preparation for growth involves increasing the "opportunity mindset" of key managers and declaring innovation as a basic building block for the future. Enhancing an organization's perceptions of opportunity requires a sound knowledge about what market opportunities exist and a support for pursuing those which are

consistent with management's intentions for the firm. Members of the board who are experienced in preparing young ventures for growth could provide great insight to the entrepreneurial team at this stage of the startup process. In addition, the future of the new venture will depend to a large degree on the entrepreneur's ability to establish innovation as a cornerstone of its competitive strategy. Members of the board who are experienced in the core technology of the company's products will also be beneficial to the efforts of the entrepreneurial team to redirect strategic focus on innovation.

Establishing an Active Board at Startup

A recent survey revealed that of the nations fastest growing small companies who where "very likely" to go public in the near future, almost one third had not established a formal board of directors who met on a regular basis. (Heller, 1995; Daily and Dalton, 1993). However, several other studies have shown that a board of directors provides a useful tool when striving for survival and growth in entrepreneurial ventures. Ford (1992) identified the following ways an active board can be effective during startup:

- 1) setting overall company goals and developing plans for reaching those goals;
- 2) assessing the performance of the organization as a whole, as well as the performance of the entrepreneur and other senior managers;
- 3) taking appropriate corrective action to ensure that goals are met and that an effective organization is established;
- 4) establishing and evaluating corporate policies and procedures;
- 5) overseeing major organizational transitions (e.g., startup to growth);
- 6) accessing critical resources needed for successful startup (e.g.; people, capital, equipment, technology, etc.); and
- 7) periodic independent audits of management.

Due to the nature of the process and the high degree of uncertainty surrounding many of the decisions that must be made, the key to establishing an effective board for the startup of a new venture is to look for experience within the board members that the entrepreneurial team lacks. This, more often than not, means going outside the firm for specialized expertise. The advantages to having outside directors include: 1) added credibility for the firm; 2) assistance with making major management decisions; 3) access to additional management expertise that is not otherwise available; 4) an unbiased outlook on the future of the company; and 5) a fresh perspective on many issues (Daily and Dalton, 1992; Lauenstein, 1984; Nelton, 1985; Aronoff and Ward, 1992). Studies have also linked the presence of outside directors on the board with superior performance among young entrepreneurial ventures (Daily and Dalton, 1993).

The board should be composed of no more than five directors, with at least three being from outside the organization (Ford, 1992). The chosen outside directors should be experienced in all aspects of the new venture, including the startup process, the industry, the product technology and the specific target market. When recruiting directors, it is important to be realistic about the skills required and the level of commitment expected. Prospects should be informed of the specific issues for which their expertise is being sought so they can factor that into their decision to join.

Implications

This paper has explored ways in which an active board of directors could benefit a young entrepreneurial company during startup. The benefits of a board depend on at what phase of startup they are used. However, this paper has shown ways in which a board can be effectively utilized at all phases of startup. The implications of the ideas presented in this paper for practitioners are clear - a more effective use of an active board of directors during startup can influence the future success of young entrepreneurial companies. However, the extent to which the board is utilized will depend heavily on the nature of the opportunity being pursued and the willingness of the lead entrepreneur(s) to relinquish control. This paper has shown that the need or desire to maintain control on the part of the lead entrepreneur will vary from phase to phase in the startup process, but an inability to share responsibility will ultimately stifle the growth of the new venture. Many of the ideas presented here are conceptually well founded in the research literature on the role of boards of directors in entrepreneurial companies.

The implications of this paper for scholars however, may not be as clear. Though the literature has aptly explored the role of a board in more established firms, it has failed to consider what that role might look like as organizations develop, particularly at the earliest stages. There could be a simple methodological issue leading to the lack of research on the role of boards at startup - very few startup firms establish active boards prior to market entry. This makes obtaining a representative sample difficult. What boards are established are usually "token" boards assembled to meet state incorporation requirements (Ford, 1992). This fact should strike both scholars and practitioners as odd, for at no other time in a young venture's life are the risks so high, the complexities so vast, and the procedures so uncertain. In characterizing the startup process, this paper intended to lead scholars to areas of fruitful empirical research which will have real and lasting implications for future entrepreneurs. Such research could explore why so few entrepreneurs establish their boards prior to startup; to what extent and why the boards which are established are not involved extensively in the planning of the new venture; how and to what extent board composition influences the success of new venture creation; and what the implications are for the role of boards in startups as future legislation increases the extent to which a board member can be held liable for the firm's actions.

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Survey of Small Business Owners in Togo, West Africa
Using the Kirton Adaptor-Innovator Scale

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Abstract

The Kirton Adaptor-Innovator Scale (KAI) was submitted to a sample of 23 Togolese owners of small manufacturing or service businesses.

Hypotheses examined:

- 1) Family business owners score higher as adaptors than owners of incorporated businesses. Correlation is 0.18 and is stronger for women's firms.
- 2) Incorporated businesses have business plans, professional managers and formal training programs. This finding indicates that business training would be valuable.
- 3) Small businesses owners have higher innovation scores than larger businesses. This finding supports neo-classical economic theory that competitive markets inspire innovation.
- 4) Owners of older businesses score higher as adaptors. Correlation 0.36 for men, but correlation -0.17 for women.
- 5) Togolese men's scores as innovators are higher than women's. Correlation of 0.12 gives scant support for this hypothesis, especially in regressions.

Introduction

Currently considerable effort is expended in Africa on encouraging small and medium enterprises. Under Structural Adjustment Programs to reduce foreign debts, as state corporations are dismantled the politically acceptable alternative would be African-owned companies. In most sub-Saharan countries with weak business classes unable to launch large companies, African entrepreneurs must be nurtured from small beginnings.

In the process of nurturing small and medium enterprises, a major issue is whether the market creates entrepreneurs or cultural dynamic creates entrepreneurs. Neo-classical economic theory assumes that profit-oriented individuals will naturally respond to new market opportunities. In that case, the existence of many small competing firms in the formal and informal sectors in African countries leads inevitably to entrepreneurial behavior. Historians of capitalism, such as Max Weber and David McClelland, who explain why market systems did not appear sooner in history, use models of cultural changes among business owners to explain the development of entrepreneurs. Though in practice both market and cultural conditions are necessary to nurture entrepreneurship, a statistical test that would separate the two

would be helpful.

Kirton Adaptor-Innovator Scale

For corporations, Michael Kirton developed an Adaptor-Innovator Scale (KAI) to show the difference between entrepreneurs and administrators within a business organization. Through a list of questions about management style, Kirton shows that some business people prefer to be innovators and others adaptors. Kirton stresses that he is testing "a theory of cognitive style" rather than intellectual capacity (Kirton, 1989, pp.1-36). Nevertheless, he finds that in business successful entrepreneurs have high innovator scores, while successful subordinates have high adaptor scores. Given the deference shown to entrepreneurs, Kirton's theory still is value-laden, despite its statistical robustness.

Kirton's scale (KAI) has been tested in Australia, Canada, Great Britain, New Zealand, U.S.A., Malaysia and Singapore (all English-speaking samples) as well as Italy and Mexico in translation. All of them have "remarkably similar mean scores" (Kirton, 1989, 62). The common European cultural context of the samples seems to result in a similar distribution of cognitive styles.

Within the European cultural context, gender is the most important difference in KAI scores. Women, irrespective of their occupation, score significantly more adaptor than innovator (Kirton, 1989, 60).

In studies of Iranian and Indian managers and black South African business students, the KAI scores are significantly more adaptor than European scores (Kirton, 1989, 62). Though Kirton does not mention it, the Iranian, Indian, and South African KAI scores are very close to European women's scores. He does point out that Indian women managers, though, score significantly more innovator than male managers. He hypothesizes that Indian women managers have had to cross more cultural boundaries than men, so only the most innovator have done so (63).

Togo's Business Environment

The Republic of Togo is a tropical country in West Africa known for its exports of cocoa and phosphates. It gained its independence in 1960 from France. Since the four million Togolese people speak as many as 44 languages, the official language remains French. The government is controlled by a military dictator who took power in 1967. As is the practice along the West African coast, men run the government, while women traditionally control internal trade. Though the market has been relatively free, the Gross Domestic Product per person was equivalent to only U.S. \$738 in 1991. Modern industry and services remain undeveloped with the consequence that Togo's Human Development Index only surpasses Bangladesh, Cambodia, Bhutan, Nepal, Afghanistan and twenty-four other African countries (UNDP 1994, p.131). If modern entrepreneurship can develop in Togo, it can appear in the poorest of the poor nations of the world.

Using the KAI in an African context involves some cultural adjustments in addition to translating it. Interviews with

African students in the United States revealed that a psychological test that required a respondent to evaluate his or her own cognitive style was quite unnerving for people from cultures based on pride and shame motivations. This may well be the reason that Kirton found differences between respondents from European and non-European cultures. Instead, the questions were re-phrased to refer to the professional ideal of "an excellent manager." For example,

--The excellent manager masters all details [adaptor].
--The excellent manager needs the stimulation of frequent change [innovator].

Once the questions are posed differently, there is less comparability with the original KAI scale so the issue of European vs. non-European scores cannot be tested.

Despite the change in KAI questions, a comparison between women's and men's responses can be made. In order to encourage women respondents, the test administrator was a woman known to them, a loan officer in a bank. While the relationship between the test administrator and the respondent may bias the answers, it is necessary in Africa to have some relationship in order to elicit cooperation. The social science ideal of the objective investigator with unbiased respondents does not fit well in a society based on strong human bonds.

In this preliminary survey no attempt was made to draw a random sample based on a defined population from which statistically significant inferences could be drawn. Instead the sample consists of owners of businesses that transform a product, such as manufacturing and personal or business services. The sample is divided in the following way:

--five men owning businesses with fewer than ten employees,
--five women owning businesses with fewer than ten employees,
--five men owning businesses with ten or more employees, and
--five women owning businesses with ten or more employees.

A small random sample would not have found enough businesswomen, besides traders, to have filled the category of ten or more employees.

Hypotheses

Most industrial studies distinguish between firms with fewer or more than 10 employees and fewer or more than 50 or 100 employees. The category of 10 employees seems the relevant one in this case, since more than 10 employees implies that the business has hired workers who are not family or former apprentices and so is no longer operating for subsistence. The hypothesis derived from neo-classical economics would be that smaller businesses would be more subject to market competition and would inspire more innovators, while large businesses would nurture adaptors.

Besides asking questions based on the Kirton Adaptor-Innovator inventory, the questionnaire also gathers information on the owner's firm. It asks the year the firm was founded, the number of employees today, the number of employees when the firm was founded, whether the firm is a corporation, whether relatives

work in it, whether the firm does formal planning, what kind of training is needed and what are its major business problems.

Results

The sample of ten women and thirteen men was not randomly selected, so many statistical tests cannot be applied to it. However, correlation coefficients and regressions can indicate relationships within the sample that would support hypotheses for a study using a random sample.

Although the questions were not phrased the same way as in the English version of the KAI, the respondents showed a tendency to answer as adaptors rather than innovators. Out of all responses to the questionnaire 70.4% were adaptor and only 9.6% innovator. As the KAI would predict, the score for adaptors is negatively correlated with the score for innovators (-.18). Adaptors and innovators have different management styles.

Regarding the first hypothesis that family businesses are more likely to score as adaptors, while incorporated firms are more likely to score as innovators, the results confirm it weakly. The owner's score as an adaptor correlated at (0.18) with an index that included family ownership (proprietorship or partnership) and relatives working in the firm. A positive correlation occurred in sub-samples of small and large firms or men's and women's firms, only it became stronger (0.60) for women's firms.

The second hypothesis that incorporated businesses are more likely to have business plans, professional managers and training programs than family businesses is also borne out. Business incorporation legally separates business from family relationships. Corporations in Togo are not giant businesses that might downsize unfeelingly in the way that Americans stereotype corporations. In this sample the Togolese incorporated businesses are slightly smaller in terms of employment but have grown at the same rate or faster than the family businesses.

The third hypothesis that owners of smaller businesses are more likely to score as innovators is supported by the sample. Since the larger businesses are family-run, adaptor skills may be needed. Whether the size of the business is measured by current employment or employment at the time of founding, there are negative correlations (-.36 and -.45 respectively) with innovator scale. The same occurs in firms owned by women or men. Innovator score is negatively correlated with employment growth (-.25), because large firms have grown faster than small firms.

The fourth hypothesis that owners of older businesses are more likely to score as adaptors is supported only by the men. The women's subsample adaptor score is negatively correlated to years (-0.17), while men's is positive (0.36). Most women are in newer, smaller firms, so other influences occur that must be tested in the regressions below.

The fifth hypothesis that men are more likely to score as innovators and women as adaptors in Africa has scant support (correlation 0.12). Since in West Africa a woman in business is socially acceptable, this result is similar to other countries.

The relationship between innovators and job creation is influenced by gender. In this sample men's and women's businesses grew at approximately the same rate, 0.86 jobs per year for women's businesses and 0.76 for men's. When job creation rate is correlated with percentage scores as innovators, women show a negative correlation (-0.30) while men have a positive one (0.32). Women whose businesses grow more in employment have higher percentages of adaptor responses. On the other hand, men whose businesses grow more in employment have higher percentages of innovator responses. In the regressions below the effect of female gender disappears once other variables are included.

Neo-classical theory might predict, though, that employment growth would be brought about by innovators who would find ways to substitute cheap labor for expensive capital. The correlation between increased employment and percentage of innovator responses is negative (-.25). If innovators are employing labor more productively, rather than providing more employment, the social consequences would be unhelpful at this conjuncture. One reason may be that men own businesses with more employees today (correlation 0.17), which also started with more employees (0.31), even though the men's businesses did not hire more in the meantime (0.01) than women's businesses.

To distinguish the influence of gender and business size, some multiple regressions were run. The variable to be predicted is the percentage of responses as an innovator on the KAI. Since the sample of respondents was not a random one, no t-statistics can be derived, though the standard errors are listed under each beta coefficient in parentheses:

%Innovator = 45.53 - 10.77 Female - 1.58 Employment at startup
(7.12) (7.75) (0.60)
adj. R2=0.28

%Innovator = 37.72 - 6.78 Female - 0.28 Employment today
(6.12) (8.07) (0.15)
adj. R2=0.16

Female owners of the firm may give fewer responses on the KAI as innovators, but once the influence of number of workers in the firm is factored in to the equation the standard errors in parentheses are about as large as the purported influence of gender. Hence, this sample does not confirm the hypothesis that African business women respond less as innovators on the KAI.

Owners of smaller firms in terms of employment at start up and today respond more as innovators on the KAI. This result supports the hypothesis of neo-classical economic theory that firms subject to market competition will elicit innovator motivations in their owners. Unfortunately, these innovator motivations do not seem highly correlated with employment growth, which is the social benefit most needed in West Africa at this time.

While neo-classical economic theory may be confirmed by beta coefficients on firm size, the cultural influence can be measured by whether the firm is incorporated. When that is included in the regressions, the following occur:

%Innovator = 34.44 - 11.08 Female - 0.27 emp.today + 13.31 incorp.

(6.26) (8.19) (0.15) (8.28)
R2=0.26

%Innovator =42.20 - 14.87 Female -1.55 emp.startup +13.06 incorp.
(7.05) (7.75) (0.57) (7.60)
R2=0.38

Incorporation is related to the owner being an innovator. Again, even though the beta coefficient for the female sex is negative, the standard errors are almost as great as the coefficient. The result does not demonstrate that women firm owners are less innovator.

The four regressions have weak predictive power. The R-squared statistic of R2=0.28 for the first regression indicates that only 28% of the responses at innovators can be predicted by gender and employment. The second indicates 16% can be predicted. In the third only 26% can be predicted. Finally, in the fourth 38% can be predicted. Perhaps with a larger sample, the relationships might be clearer.

This paper uses a modified version of the Kirton Adaptor-Innovator Scale as a test of entrepreneurship in Togolese small- and medium businesses. It shows that the cultural variable incorporation makes the firm owner more likely to score as an innovator. Owners of smaller businesses are more likely to score as innovators. The results support a neo-classical hypothesis that exposure to markets leads to more innovative attitudes toward entrepreneurship as well as a cultural hypothesis that firm incorporation affects entrepreneurship.

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Electronic Markets: Collaborate
If You Want To Compete

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Abstract

Electronic markets can change the structure of industries, ultimately causing a shift from decentralized markets without significant intermediaries to more centralized markets with few organizational intermediaries. It is not too early for small businesses to seize the initiative by assessing their own industry prospects for electronic markets. It may be desirable for industry members to collaborate on an indexing scheme to help customers find the small businesses, even if it means finding their competitors as well. If the small businesses do not work together, a large corporation or database will so dominate the market that there will be no room for the small business.

Introduction

Electronic markets are inevitable in virtually all industries (Malone et al., 1987, 1989; Bakos, 1991). They can change the structure of competition, pose threats, and offer attractive opportunities for perceptive firms. Small businesses would be wise to seize an element of control early on in the development of the electronic market structures that will eventually dominate their market. A collaborative initiative with fellow competitors will not only help protect them from exploitation by dominant firms, but will also assure them of economical access to the by product industry statistics on their industry, own firm's market share, and individual clients' inquiries and buying patterns. This paper constitutes an update and extension of the concepts put forth in an earlier document (Bradley and Peters 1996) on the state of interfirm electronic markets, where they are headed, and strategies for participating in their development.

What is an electronic market?

An electronic market can be viewed as a public listing of products and their attributes from all suppliers in an industry segment, and available to all potential buyers. The database is accessible online and is capable of being kept continually up to date. Further, the system is organized to facilitate comparisons of product offerings in some useful way. It is a powerful concept because it makes it potentially affordable for small suppliers to have total exposure to the market at large, and it makes it potentially affordable for the shopper to know the best buy

available. Electronic markets can lower coordination and transaction costs for producers and retailers, lower physical distribution costs, or eliminate retailers and wholesalers entirely, as purchasers directly access manufacturers (Benjamin and Wigand, 1995).

The state of electronic markets today.

One of the earliest examples of an electronic market is the online stock exchange, which includes not only matching, but also ordering, and payment in real time. It is a special case in that any one product offered at any one time is unique. However, because the business dealing resembles an auction in some respects, it points to the way in which other types of industries may conduct future business once customers have access to virtually all offerings on the market at one time. Usually the first phase in the evolution of an electronic market is a catalog, followed by progression to an online ordering facility. Proprietary networks make possible secure provisions for adding an online payment system as well. As secure transmission features become more prominent on the open Web, the way will be opened for widespread acceptance of direct payment options through that medium instead.

However, today's Web searching system is not adequate for achieving an interfirm electronic market as defined in this paper. Electronic matching on the Web using generalized search engines is a disorderly task for businesses who typically do not have the time or do not want to the thrill of the hunt for information. The users' search boundaries are dramatically extended by the Web but they get too much irrelevant data. This problem stems directly from the lack of an indexing structure useful to most business search needs. This is not to discourage the creation a web presence, however. On the contrary, it is inexpensive to establish a Web home page, and success stories show that your site just may be spotted by chance by someone, somewhere who can bring can bring business your way.

In order to be useful for sustained industrial purchasing, however, the system must go beyond the role of a generalized search engine to provide a standard of some type for searching within a given product domain. The standard can be based on the corporate product codes which a dominant player carries over into a public database subscribed to by competitors. Some pharmaceutical firms have done this. Or the project may emanate from a pre-existing product classification system which some industries, such as building and airlines and stock exchanges, are fortunate to possess. Alternatively, the code can be set up from scratch by an initiative from cooperating parties, such as manufacturers' consortiums, which some grocery wholesalers and music distributors have done.

At the consumer retail level, by contrast, comprehensive electronic catalogues are not much evident. Shopping malls for consumer products are just that: a limited set of dissimilar shops still requiring browsing in each, although some do offer product indexes at a very general level. This method of shopping is pleasant to a number of consumer clients to whom searching is an end in itself and to whom a comprehensive listing is not important. However, it does not serve as a particularly good

model for efficient industrial shopping, which is characterized by specialized purchasing staff seeking broader boundaries for the best match.

Some major threats of electronic markets

The history of electronic markets have been characterized by both negative and positive experience, depending upon who has taken the initiative in forming them. There are a number of instances in which a failure of anticipation has been to the disadvantage of businesses large and small. However, a threat can often be turned into an opportunity if perceived in time.

First movers can ultimately present competitors with no option but to join their database, at a cost, and exposing their market statistics to the firm which controls the database. The most highly publicized example of this threat is the early experience of the American Airlines SABRE reservations system (HBS, 1967; McFarlan, 1985; Clemons, 1986; Copeland and McKenney, 1988; Malone et al., 1989; Hopper, 1990). In the pioneering days of online systems, American Airlines invested heavily in a system that would process its reservations more efficiently. It then occurred to them to extend access to this database of airline seats to terminals on the desks of its direct customers, the travel agents. They soon found that significant increased market share was being obtained from the travel agents. American Airlines decided to extend the service to its competitors, for a fee. But American's flights always appeared on the first screen, thereby biasing the database in American's Airlines favor. They found that first screen placement strongly influenced purchasing behavior. American Airlines also charged for making reservations and issuing tickets for competing airlines who listed.

By this time it was too late for all but one airline to respond to this highly enterprising sequence of initiatives. United Airlines made its system available, resulting in a "clash of the Titans" for the business. The market proved big enough to sustain two databases, but both of them eventually had to adopt a common access procedure, as travel agents did not want to learn how to use differing systems. Because SABRE was proprietary, American Airlines had access to rich data not only on its own operations but on its competitors as well. When legally challenged again, American Airlines made competitors' own data available to them at still another usage charge.

The SPECTEL owner also accommodated its competitors on its database. SPECTEL is a building industry electronic market which started off as an in-house online catalog for the products of the Fletchers, the largest building products supplier in New Zealand. When the catalog's clients grew accustomed to using the wide-ranging Fletcher system, competitors felt obliged to request listings too. Fletchers had access to query transaction statistics of all its competitors, but fortunately for the other industry players, Fletchers did not abuse the information source. The database activity was eventually sold off to a completely independent third party and no one firm was disadvantaged.

The first mover can inflict major damage on competitors. American Airlines bowed to legal pressure and sold competitors the right to preferential places on the listings. However,

priority display still remained American's. When monopoly action again succeeded, a priority listing service was made available to competitors, at still an additional charge. Today the database is unbiased, but during the intervening years of litigation much competitive damage was done.

Another example of competitive damage inflicted is The ASAP ordering system of American Hospital Supply Corporation (now Baxter International), who placed terminals in its hospital customers' premises, directly linked to AHS' existing in-house order system. Once customers began to rely on this system many of them stopped dealing much with other firms. By this time competitors found it difficult to respond because hospital purchasing agents were unenthusiastic about accepting a second system with its separate operating and searching procedures. Partly as a result of this, at least one of AHS' major competitors was forced into corporate reorganization. Over time competitors did make considerable inroads with electronic catalogues of their own but they had lost market share and the smaller players remained at the mercy of larger ones who were willing to list them.

Electronic markets can change the way the industry competes. SABRE changed the intra-industry competitive balance, encouraging niche marketing among some smaller players, but forcing most to go beyond service and compete on price. But price competition favored American Airlines, who used their experience with information technology to develop an advanced seat yield management system based on data from SABRE. This allowed them to charge different prices to different customers and thereby maximize their profits. Their competitors at the time had no such database to analyze.

The French company, Lamy, dramatically changed the way the freight-forwarding business competes. Lamy is a publishing firm which traditionally derived an important part of its business from publication of the voluminous government-regulated tariffs for freight handlers to charge, depending upon freight origin, destination, and item volume and dimensions. When the government deregulated the industry, the 50,000 haulage firms could then set their own individual tariffs. This spelled the end of the tariff publishing business. However, Lamy was quick to set itself up as the intermediary for a database which brings customer and common carrier together. At any moment of the day a carrier can list one or more origins, destinations, capacities, and dates, but not prices. Customers put in bids and carriers scan and usually accept the highest one. This auction-like system has actually stood the competitive mode of the trucking industry on its head, and its success raises the question of whether auctions may replace ways of doing business in other industries as well.

Electronic markets threaten the middleperson.

Industry-wide online product catalog offer direct access to the market, with lowered transaction costs and lowered barriers to entry. In short the way is paved for more open and more competitive markets and this has considerable implications for middlepersons. Begotal is a European consortium of distributors of music CD's and related retail products. They have formed a common database access service which offers the retailer a choice

of consortium or wholesalers for ordering. There is no discount from central ordering but this has raised tensions with the wholesalers who are uncertain about their future role.

If your business stands between the manufacturer and the consumer in the distribution chain, you need to think very carefully about your future. Brokers and wholesalers of all types of products and services are especially vulnerable to either the original manufacturers' consortiums or outside enterprising firms who will start electronic markets on their own with value added features. You will either need to retain or create distinctly attractive alternative value added services or, better yet, take the initiative with your fellow competitors to secure your places by becoming the electronic market intermediary yourselves.

The customer can get the best price.

If there is pressure to list prices in an electronic catalog, and if you are competing virtually on price alone, your market position may be at risk. This is more of a problem for retailers, because by and large, mass consumer retail buying is not characterized by negotiated prices and bulk terms. A USA Today reporter found that it took a minute to search through eight online stores for prices on Billy Joel's Greatest Hits. He was presented with three price quotes, ranging from \$US23.77 to \$US28.01, along with various shipping charges and return policies of the different stores. Some stores did not like the competition and three retailers blocked it (USA Today 1996).

But distributors are not immune from the threat. For example, German exporters, who were battling a strong currency and high labor costs, put the Internet to blame for their declining share of international markets. Germany's wholesale and foreign trade association claimed that companies were losing lucrative niche markets because the Net makes it easier to compare prices, making competition tougher (Toronto, 1996).

Some major benefits and opportunities in electronic markets

Because of the inevitability of electronic markets, the threats can be turned into opportunities, the benefits of which are many for those who are prepared to pro-act. The smallest firm can get equal exposure with the largest firm. The relatively low cost of listing makes knowledge of your product available globally. This kind of exposure was previously affordable only by large firms. SPECTEL covers 80% of the suppliers in the building industry and reaches 60% of the buyers. Lamy and stock exchanges put all contributors on an equal footing. If your product is competitive, you will profit by the ability of the customers to get the best matches to their needs.

Electronic markets can expand geographical scope. Extension of geographical scope of marketing is a tremendous unrealized potential, as industry online catalogs are just learning to serve regional boundaries. Electronic markets can diminish the large competitors' advantage of one-stop shopping. Large competitors with comprehensive product lines have traditionally enjoyed the advantage of single source shopping for buyers because of the expense in time and money that it takes to search for the best deal going. Database users can scan the smaller firms' offerings

almost as easily as it can the traditional catalog listings of the big companies.

Electronic catalogs can support a strategy of personal marketing. The database can track activity not only of the industry, segment, and firm, but it can also support personal marketing targeted at individual clients. Customer loyalty programs, in which the systems can respond to clients based on their purchase or query patterns, is feasible. For instance, a client may have purchased data in the past week dealing with a certain company. The program will then advise the client that further information is available on another database held at the same site. The opportunities for up-selling and cross-selling are considerable. Your firm can then seek out the customer, rather than put the burden on the customer to come hunting for you. All of the electronic markets described in this paper possess the raw data for making this possible. One can respond to threats by starting up an independent intermediary. Lamy proved this. However, you may find, as some United Kingdom building databases did, if you want to do start up on your own, it may be too costly without possession of a pre-existing contact database of some kind. Sparse listings in the early days of a product listing site are not of very much use to buyers and they may lose interest. Brokers or middlepeople should band together to pool their contacts in order to start off with a critical mass of information sources. Suppliers' consortiums can exploit excluded firms by closed membership, or charge high fees for outside suppliers to participate when the venture becomes a going concern. EUROSELECT shows how businesses can collude to form a powerful alliance which collectively can wield resources in a similar way to large players and to the disadvantage of other competitors. It is a proprietary electronic market acting to the advantage of a consortium of small players who have invaded territorial markets where they do not compete with one another.

EUROSELECT is the name of an online procurement network for grocery wholesalers in Europe. It is based on a product/price catalog which is maintained by Van Erd Holding on behalf of a collaborative band of small wholesalers. It came about because smaller firms were not able to gain access to systems run by large competitors, who used them as a source of competitive advantage. In order to defray the costs of such a system, Van Erd approached similar sized competitors in different European states to contribute to the project. The outcome is a joint wholesale venture centered on a common product listing and procurement system which operates throughout Europe. The home country of each member is preserved for itself, however. In the process the collaborators developed their own extensions to the Economic Community's EAN product numbering system as the standard access code.

The customer can take the lead. The customer in an electronic market will have a greater role in the selection of information and the customization of products (Klein 1995). In fact, companies that are powerful in their markets can force suppliers to provide information to fit their own databases. A large pharmaceutical firm was in the process of promoting its own indexing system tied to a proprietary electronic market, which it hoped would give it a competitive advantage with hospital purchasing officers. The region's largest hospital instead developed a classification scheme which it forced all suppliers

to subscribe to for free and feed its database, thereby accruing all of the advantages of the database to itself. The hospital plans to franchise its use to other hospitals in the country. Government agencies are in an ideal position to do the same thing.

There is vast scope for differentiation in electronic markets. From the buyer's standpoint, the most efficient electronic market is the most comprehensive and easily searchable one. However, the scope for value added features in an electronic market is significant and customers may put up with searching more than one somewhat incomplete database if some kind of service which particularly appeals to them is offered. It has been observed that buyers basically are looking for solutions, not searches or raw information (Laufman 1996). Ralenti, a competitor to SPECTEL, offers customized services going beyond the Net to solve the client's problem. SPECTEL offers a suite of building design programs to be used in connection with searches.

Conclusions

Electronic markets can change the structure of industries, ultimately causing a shift from decentralized markets without significant intermediaries to more centralized markets with a few organizational intermediaries.

It is not too early for small businesses to seize the initiative by assessing their own industry prospects for electronic markets. It may be desirable for industry members to collaborate on an indexing scheme to help customers find the small business, even if it means finding their competitors as well. It may also mean providing added value services within or beyond the Net to help customers find solutions, not bland product information. Collaboration can secure economies of scale, leverage industry experience and know-how, and share the development cost. A critical mass of listings is necessary before the benefits are realized and the job of creating this is far more easily done cooperatively than on one's own.

Not all industries are suitable for online catalogs. Where asset specificity is high, such as interior decorating services, methods of search may be just as effective by using traditional yellow pages. Nor do all industries have equally good prospects for cooperative efforts. If a dominant player does not wish to join in, then the day of realization may be much delayed, but in the meantime interested firms can proceed to think about and draft a classification code in order to preserve bargaining power when a scheme actually does eventuate.

For industries in which the way is clear for initiatives, a good incremental approach might be as follows: Ask an independent body such as a university business school or small business advisory body to chair efforts at cooperative planning and development. This tends to take the political heat out of competitors' leadership in the project. While the index is being developed, start an industry information page on the Web which will eventually metamorphose into an electronic catalog. Once the system is introduced, undertake a continuing plan of adding value to the services provided. If competitive databases arrive on the scene, strive to capitalize on your established position to

differentiate your offerings in new ways.

Finally, for those who wish to look ahead and plan an entrepreneurial venture that will provide services beyond the separate industry database, an opportunity presents itself of an intermediary of intermediaries which provides solution-oriented results. This observation is compatible with Klein's proposition. It was Klein's contention that an information broker may be necessary to fulfill the trust requirements of buyers who do not know much about the firms whose products are on offer and to act at developing relationships between buyer and seller. Beyond that there are opportunities for ventures to provide the equivalent of consumer report services which match product attributes to value for money, on the basis of prices compiled from sources outside the online database.

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Leveraging Resources Under Threat of Opportunism:
Predicting Networking in International Growth

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During recent years, theories of the firm have made significant progress. These theories seek to explain why firms exist, why they are different, and what factors constrain their evolution and growth. Thus, these theories hold great potential for insights into the determinants of organization success and failure.

A particularly rich conversation has taken place in the strategic management literature between the resource-based (or knowledge-based) and contractual views of the firm. The resource-based view suggests that the firm is not merely a nexus of contracts, but also a competence-bearing entity. These competencies are stored in organizational routines and structures, in employees, and, for example, in the control and information systems of the firm. The focus on distinctive competencies helps explain why firms differ in their pursuit of growth.

Each of the two views of the firm has potential strengths for explaining the international growth of new, technology-based firms. Because an internationalizing firm inevitably knows less about the target market than do its foreign partners, the potential for opportunistic behavior is particularly important and an understanding of the contractual views of the firm may be essential. On the other hand, new, technology-based firms are highly knowledge intensive. Employing a knowledge-based view of exchange relationships promises to lend additional insights into how and when the new, technology-based firm will seek innovative combinations of its core resource with external complementary assets.

In our paper, we draw on both theories of the firm in order to develop a set of propositions and hypotheses regarding the intensity of networking in the international growth of new, technology-based firms. The model is empirically tested with data from 86 new, technology-based firms in Finland. We receive mixed support for our hypotheses suggesting that new, technology-based firms do try to leverage their strengths through alliances when they can, and that the appropriability (here, a combination of non-substitutability and non-imitability) of the core technology resources of the firm influences the extent to which alliances can be used to leverage international growth.

Early Growth and External Relations in
New Technology-Based Firms

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Abstract

This paper develops further the resource-based system model of the early growth of new, technology-based firms. In many growth models the environment in which the firm operates is viewed as exogenous or as the theoretically residual category. Here we attempt to show how key environmental factors become internalised through the operation of the growing firm's external relations and resource dependencies. The resource-based system model developed by Garnsey (1996) is extended by an analysis of the influence of network relationships on growth processes and competence building. This type of analysis can explain the rationale for networking patterns which cannot be inferred from cross-sectional survey findings.

1 Introduction

In this paper we argue that a firm's early growth depends above all on effective external relations with other organisations. New firms can use their own resources for leverage, to secure a dynamic market position and enhanced capability. In recent years, theories of the firm have been actively debated in the microeconomic and strategy literature (Hart and Moore, 1990; Conner, 1991; Kogut and Zander, 1992; Barney and Zajac, 1994; Brynjolfsson, 1994; Foss, 1996a; Conner and Prahalad, 1996; Kogut and Zander, 1996; Foss, 1996b). This debate is of value to strategy and entrepreneurship research, as it focuses on the fundamental issues of the existence and evolutionary dynamics of firms. As Conner and Prahalad (1996) argue, any theory that seeks to understand performance differences between firms must incorporate a theory that addresses the question of why firms exist.

In the context of small and medium sized firms, effective performance is most often interpreted as growth: growth in sales, assets, number of employees, value added, and so on. As growth and profitability may actually have an adverse effect on each other, growth is the preferred measure of success among SMEs, whereas profitability measures, such as ROI and ROE, are more commonly used as a metric of success in large firms. We focus on early growth, which often makes or breaks the firm at a vulnerable stage of its existence.

The literature on the theory of the firm assumes a firm already in operation. Even Penrose's theory of the growth of the firm starts with a firm already in existence and examines the inducements to and constraints on growth rather than the process of

start-up and early enterprise (Penrose 1995). It is in the practical management literature that the issues of stages of growth, including early growth, have been addressed (Greiner, 1972). However growth models in the management literature lack an explicit theory of the firm; the unit of analysis is taken as given rather than requiring a grounding in theory. This deprives these diagnostic models of the contribution theory can provide to the understanding of interlinked causal processes involved in small firm growth, which are not addressed by the description of variations in growth stages. A more explicit link between theory of the firm and models of growth could provide a common discourse unifying approaches to growth, competence building and strategy. Such an approach could help in identifying ways in which cumulative constraints are created internally and encountered externally, providing managers with a better basis for strategic positioning.

The theoretical foundation for such an approach is provided by the definition of the firm as a system of activity, an input output system operating in wider networks of production and consumption. The present paper develops a growth model that is based on the resource-based view of the firm, as originally put forward by Penrose (1959) and up-dated by systems thinking. It draws on the extensive literature on the resource-based (or knowledge-based) view of the firm stimulated by Penrose's ideas, building on the work of Garnsey (1996) and Yli-Renko and Autio (1996) for the 41st ICSB World Conference, Stockholm. The growth model developed by Garnsey is extended by a discussion of the influence of network relationships on growth processes and competence building and on ways to exploit complementarities between firms to achieve growth. Growth plateau and growth reversal situations, largely neglected in existing models, are a focus of attention.

We begin by reviewing 'traditional' models of the growth of small firms and outlining their main characteristics. We go on to summarise the growth and network models used in the analysis. Finally, a revised model of the growth of new, technology-based firms is developed by integrating the network approach with the resource-based model of early firm growth. Further work is underway on the operationalization and empirical application of the revised model.

2 Traditional Models of the Growth of Small Firms

Numerous growth models have been designed to depict the development of small firms. Since Greiner's work (1972), and even earlier, a variety of growth models have been proposed. In addition to that of Greiner, well received growth models include the ones by Churchill and Lewis (1983), Kazanjian (1983; 1988), Flamholtz (1990), Scott and Bruce (1987), Kazanjian and Drazin (1990), and Eggers et alii (1994). The above models are all linear stage models, conceptualizing firm growth as a sequence of growth stages. Particularly in earlier models, the sequence of stages is predetermined. The early growth models are linear, in the sense that all firms are expected to go through the same sequence of stages.

The model by Greiner (1972) identifies five stages of growth and turbulent transitions between these. As a company progresses

through developmental phases, each evolutionary period creates its own revolution. The reaction to each revolutionary period determines whether the company will move into its next stage. In the model, the external factors determining the rapidity of growth transitions are industry growth rate and its profitability. Greiner was not concerned in particular with start up and early growth, with which he deals in passing.

The stage model by Churchill and Lewis (1983) is an application of the Greiner model to small firms. Growth is not considered to be the only alternative available for the firm, as the model recognizes also stages of non-growth or stability. In the model, such stages are presented as a kind of disengagement or failure. The situations of non-growth can be either caused by the small size of the industry segment or by the lack of growth motivation by the entrepreneur.

The Scott and Bruce (1987) model is an elaboration of the Churchill and Lewis (1983) model. The Scott and Bruce model takes a broader look at each growth stage, extending the discussion by considering managerial and industry issues in addition to the organizational issues considered by Churchill and Lewis. Similarly to Greiner (1972), Scott and Bruce identify crisis points between different growth stages, during which points the firm is more likely to fail.

The model proposed by Kazanjian (1983, 1988) represents a special application of the stage model approach to technology-based firms. However there are no major departures from the more general growth models. The model comprises four stages, each associated with dominant problems typical of the respective stage. Kazanjian's model conceptualizes growth largely as production intensive, with the problems in the main growth phase arising from scaling up production and sales capacity to build up market share.

In a later work, Kazanjian and Drazin (1990) linked stage models to contingency perspectives in management. The central thrust of this discussion is on the fit between the growth stage of the firm and the design of the organization. They propose that decision-making centralization and formalization as well as functional specialization define the management processes that need to fit each growth stage. A similar approach can be found in the study of McDougall et alii (1994), in which industry conditions are conceptualized as the contingency with which strategy has to fit to produce an above average performance.

Recently, Eggers, Leahy, and Churchill (1994) have revised the original Churchill and Lewis model. The new model allows for stability of the organization as a third stage, thus no longer taking growth aspiration as granted. As a result the possible number of stages is expanded to six. Moreover, the authors have relaxed the linearity of the model. They recognize that a firm may skip one or more stages during its growth. They also identify situations of growth reversal, in which the firm may slide back to a previous stage. As a result the 'stages' of growth should be considered as constituting configurations of the firm rather than as a predetermined sequences that all companies have to go through.

The above discussed models share a set of common features:

1 they are stage models, identifying stages of growth and transitional periods between these

2 they all emphasize the fit between the design of the organisation and growth stage; growth is considered to distort the balance between the design of the organisation and the stage of growth, and the task of management is to restore this balance; in this sense, the models reviewed are also metamorphosis models, as the organisational configuration of the firm needs to be changed for each stage

3 growth orientation itself is seldom questioned in the earlier models; later models have started to recognize that not all new firms are growth oriented and the linearity of the models has been relaxed

4 the organisational growth models acknowledge the importance of external conditions but do not incorporate these as theoretical components of the conceptual scheme; rather they refer to environmental contingencies as external conditions to which the firm must adapt; the rate of growth of the industry is one such parameter influencing the speed of growth; however, the descriptive focus of the models is what goes on within the firm

It is our view that it is necessary to find ways to build into a model with explanatory potential the mechanisms of influence connecting the industrial environment to the firm's growth pattern. The firm's environment impinges upon it via its relations and interactions with others in that environment - and through the absence of such relationships for the isolated firm. The firms interact with the customers for and distributors of its outputs, and with suppliers of inputs on which the firm depends (such as knowledge, labour, funds, material resources). Even competitors affect the firm through the relationships which constitute the firm's transaction environment or network, since it is through the pre-empting of customers, the disruption of relations, etc, that a firm experiences the forces of competition as conceptualised by Porter (1991). The firm, in turn, is able to influence its environment to a certain extent through its interactions with others in that environment (March 1981). This cannot be incorporated into a perspective on the environment as a set of external conditions to which the firm must adapt.

While the number of studies on small firms in networks is abundant, growth models using a network perspective for small firms are scarce. There has been no shortage of theorizing and empirical studies on the external relationships of small firms (eg, Hakansson, 1989, 1990; Amendola and Bruno, 1990; Rothwell and Dodgson, 1991; Gemunden and Heydebreck, 1992; Autio, 1995), but no network growth models to speak of have been proposed. Many of the empirical studies take the perspective of innovation theory, focusing on technology and knowledge links between small, often technology-intensive firms and their environment. Thus, their approach comes close to the resource-based perspective, as technology constitutes the core resource of the firms. Explicit references to theories of the firm, especially to the resource-based perspective and agency theory, are made by Autio and Koskinen (1995). They do not propose growth or evolution models,

however, but are concerned rather with the applicability of agency theory to new, technology-based firms in particular. Focusing on the internationalization process of small firms, McDougall et alii (1994) point to the lack of a unifying theory, and propose steps for developing a kind of resource-based theory of the internationalization of small firms.

In the present paper, we attempt to sketch out how relations with other agents in the industrial environment can be incorporated into a model of firm growth which emphasises the importance of shifting relationships for the firm as it grows.

3 A Resource-Based Model of the Growth of the Firm

The resource-based model of the early growth of the firm on which we build here includes as an explanatory factor the influence of external players on the firm's growth prospects (Garnsey 1996). In the following, this model is briefly summarised; reference to interdependencies and systemic feedback mechanisms are of special interest in relation to the integrated network model developed below.

Growth phases are symptoms of the dominant problems to which growth processes give rise, consequently phases vary in duration and extent of overlap. It is the problems and processes that are universal, not their phase manifestations. Resources must be accessed and mobilised in order to generate further resources if a firm is to become a system of activity with growth potential. (1) Founders go through a preparatory search phase of identifying matching resources and opportunities. (2) Once the founders embark on a viable course of action they must gain use of the required resources and set up a resource conversion process with revenue potential; this set of problems dominates the resource mobilisation phase. Sometimes it is necessary to return to preparatory work when resource mobilisation is unsuccessful. The problem-solving undertaken in the first two phases is put to the test as the resource conversion (production) process reaches operational stage. (3) In the resource-generation phase, problems centre around ensuring that the process of generating revenue on the basis of the firm's output is both operational and sustainable.

Incubated firms spin out of another organisation with a resource-generating process in place if, as a previous unit, they were already producing output or services for customers. In incubated or spin-out ventures, the need to access, mobilise and generate resources has already arisen. In spin-outs these problems may have been addressed before the boundaries of a newly incorporated firm are formed. Either way, when these early problems are solved, the firm reaches a minimum level of self sufficiency.

The challenges of sustaining resource generation overwhelm many firms, leading to closure or to a struggle for existence. Other firms move onto a plateau, either because entrepreneurs have limited growth ambitions or because they are locked in by unfavourable market relations. (4) However in some cases, growth reinforcement occurs and constitutes a distinct phase in which the problems surround how to use the forces propelling growth to good effect. (5) Growth beyond the capacity to be self-sustaining has its own problematic and sets off negative feedback effects

which have to be overcome if growth is to continue. Growth reversal processes may be such as to create a distinct reversal phase. (6) The relative strength of the growth-reinforcing and growth-offsetting effects determines the firm's capacity for resource accumulation which occurs when the firm reaches maturity.

Structural factors and chance are at work, but both leave scope for initiative. Attributes of successful firms are likely to include foundation by a team rather than an individual, by founders who aim for growth and have qualifications and relevant business experience. These attributes increase the networking capacity of founders and their ability to match opportunities and resources and to develop production competence. The successful firm is likely to be innovative and secure market position by offering significant benefits to a growing set of customers. Its members build partnerships and alliances to secure complementary assets and achieve market repositioning. In these ways they increase exposure to favourable demand and investment conditions.

Initial conditions and resource endowments incline the system in a certain direction, but the actual path taken is unpredictable because it is subject to contingent occurrences and the initiative of agents. Not all chance events are significant; only those subject to reinforcing or feedback effects which result from the internal dynamics of the firm and its external interactions. In growing firms, chance occurrences are significant when they bring about a change in perceptions that affects the ability to address and solve problems, when they make available or close off resources, when they initiate or alter key interactions and relationships.

Penrose (1959) recognised the unpredictability of specific growth paths but saw that growth involves certain common processes. She sought to uncover general incentives for and constraints on growth in established firms, and especially those that emerge within the firm. In extending her analysis, the model here uses the concept of the firm as an open system interacting with others in its environment to identify incentives and constraints which originate from the environment and those which form through the internal dynamics of growth.

Industrial structure sets the bounds of opportunity, but among the factors which make it possible to realise opportunities, the most important, as Penrose emphasised, are the perceptions of entrepreneurs and managers. Market aspirations and attitudes to finance are influenced by interaction with others in a common business culture and by incentives linked to the institutional framework. The perception by others of the firm's prospects is no less important. How many new ventures will seek funding on the stock market and at what stage of development is a function of institutional structures and economic conjunctures, together with the entrepreneurs' assessment of the risk-reward trade off.

Those entrepreneurs who do aim for growth are likely to encounter a number of the problems which are brought on by the very processes of growth. These factors include the increasing complexity of the firm as it grows. The mix of resources required for growth is very precise, and shortages of any one resource can create bottlenecks with knock-on effects. People with the right

combination of skills and experience are the most difficult of resources to ensure for the growing firm, and the assimilation and motivation of staff can create serious difficulties. These are exacerbated if labour markets cannot provide qualified recruits, another institutional effect. As the firm grows there is increasing complexity in the information relevant to running the growing firm. The difficulty for decision-makers of assimilating and making considered judgements increases under conditions of rapid growth. Where reserves have been run down, delays and ill-judged decisions can bring growth to a halt. These problems cannot easily be remedied; decision makers in authority who have built up knowledge and experience of the firm cannot be obtained on the external market.

Factors stimulating and facilitating growth are the obverse of these inhibitors, and again internal developments are linked to factors in the wider environment. The drive and ambition of entrepreneurs is in no small part influenced by their cultural setting and the example and help of others. Sponsorship can provide forms of accreditation which can reduce the "liability of newness". Access to key staff and financial resources depends in part on training and labour market conditions; funding is shaped by wider selection processes in the economy. Within these structures there is scope to obtain leverage from resources and to pursue external opportunities. As early problems are resolved, there is pressure to exploit the unused capacity associated with resource discontinuities for further growth, allowing members of the firm to build on past experience to enhance their competence and career opportunities. These internal pressures will be reinforced by external pressures in the growing firm, as funders, customers and distributors call for expansion. Growth reinforcement processes propel further expansion. However here growth may run into difficulties. Unless the firm is developing the capacity to integrate its new resources, respond to market discontinuities and synchronise expanding activities, the firm that earlier experienced successful growth is likely to encounter serious setbacks.

We have seen that key relationships with others have a major impact on the firm's growth prospects. We turn now to a model which analyses further the network in which a high technology enterprise operates.

4 Network Model of the Evolution and Growth of New, Technology-Based Firms

The "network model of the evolution and growth of new, technology-based firms," developed by Yli-Renko and Autio (1996), looks at constraints on the growth of firms imposed by their systemic environment, as well as the growth opportunities provided by network evolution. In this sense, the model complements the resource-based theory of the early growth of the firm by Garnsey and work on innovative supplier relations (Garnsey and Alford 1996).

In the network model, the new, technology-based firm is viewed as operating in an innovation network or production chain. The model thus takes a systemic perspective to the evolution and growth of new, technology-based firms. The network, of which the firm is a part, both imposes constraints on and facilitates the evolution

of the new, technology-based firm. The systemic evolution model of new, technology-based firms is presented in table 1.

Table 1 Systemic evolution model of new, technology-based firms

- 1 New, technology-based firm is founded
 - ú a new, technology-based firm is founded as a spin-off or as a private venture to exploit new technological solutions
- 2 New, technology-based firm is linked to network or chain
 - ú new, technology-based firm develops initial customer and other connections
 - ú some of these connections become intensive
 - ú new, technology-based firm starts to become embedded in an innovation network or a manufacturing chain
- 3 Cluster develops
 - ú positive externalities develop in the network; development and growth starts to feed itself
 - ú many new, technology-based firms are founded
 - ú locomotive effect takes place
 - ú locking-in into paradigmatic technological stage
 - ú firm is manufacturing and or technologically embedded
- 4 New, technology-based firm is able to link into other networks and clusters
 - ú new, technology-based firm has developed firm-specific distinctive competencies
 - ú new, technology-based firm has reached critical mass
 - ú it is possible for the firm to link into other networks and clusters and become less dependent on the initial cluster

The new, technology-based firm is held to be founded either as a spin-off firm or as a private venture. The technology, application, and the capabilities of the management team determine the potential of the firm to reach stand-alone growth. As most new, technology-based firms do not possess realistic potential for stand-alone growth, they tend to become embedded in an innovation network or in a manufacturing chain. In Garnsey's terms, the dominant process in this start-up phase is prospecting, to match resources and opportunities (resource access).

As the network is established, in stage 2, the new, technology-based firm becomes embedded in it, by developing relationships with customers, suppliers, research institutions, etc. Resource mobilisation takes place in the individual firm, and the firm finds its place in the network. Shifting to a more aggregate level, many new, technology-based firms are founded in the network, often but not always in proximity. Thus for individual firms there is the opportunity to grow with the network, in this third phase of the network model. At some point, a lock-in to a dominant design takes place. Positive externalities develop in the network. The expansion of the network starts to be self-reinforcing. The dominant process at the individual level for the new, technology-based firm in the network is resource generation.

The development of the cluster is often driven by a locomotive firm. The locomotive firm benefits from the technological network

externalities, gaining competitive advantage over its competitors. It may expand through direct organic growth and by acquiring other firms. Dynamic complementarities are exploited between the constituent firms of the network.

In such a synergistic value-creating system, the new, technology-based firm develops distinctive competencies, to create value for its customers in the network. At this point, the new, technology-based firm is often very dependent on the locomotive firm and the development of the network. This has been observed in practice in many of Nokia Corporation's small supplier companies in the Finnish telecommunications industry.

The growth of the new, technology-based firm is facilitated or constrained by the network. To decrease this dependence, a new, technology-based firm may seek to establish linkages to other networks in new geographical or application areas. At this stage, the new, technology-based firm may be able to carry out this expansion, through a growth reinforcement process, having developed its distinctive competencies in the initial network. These firm-specific competencies make the new, technology-based firm valuable to firms in other networks. Also, with the growth of the initial network, the new, technology-based firm has reached the critical mass necessary for moving into new networks. For example, several of Nokia's supplier firms have expanded into international telecommunications markets or gained new customers in other industries, such as home electronics. Some of these firms may even become new locomotive firms themselves.

If, however, the favourable network evolution, as described above, does not take place, the new, technology-based firm may be trapped in its network position, with limited growth opportunities. It has not yet developed its distinctive competencies or reached the critical mass necessary for growth reinforcement. This situation is characteristic of a growth plateau or growth reversal.

Thus the network model is concerned with the systemic environment in which the new, technology-based firm operates. The model has strong resource-based characteristics, making it intellectually compatible with the resource-based model of firm growth developed by Garnsey, with which it shares a common Penrosian concern with competence and learning.

5 Partnerships for Resource-Based Growth

The growth models by Garnsey and by Yli-Renko and Autio take a systems perspective, emphasising the linkages between the firm and its environment. Garnsey's resource-based growth model illustrates the way in which dominant problems underlie each stage. External influences and relations with others are more likely to have an impact when they are subject to reinforcing or reversal feedback effects. The consideration of systemic feedback mechanisms constitutes an important addition to earlier growth models; it opens a way to addressing the effect of external relationships and contingencies on firm growth. In what follows, we attempt to construct a 'resource-based network model' of the growth of new, technology-based firms.

In examining the influence of external relations on the firm, we

are in a position to refine the analysis of the environment. Instead of taking it as given, we include in our analysis various contingencies which will influence the nature of relationships affecting the firm's growth prospects. In dealing with interorganizational relationships (IORs), we refer to analysis by Oliver (1990) of critical contingencies affecting firms, applying her approach to issues of growth.

In her extensive overview of research and theory on interorganizational relationships, Oliver distinguishes six critical contingencies (as italicised) affecting relationship formation. For small firms, necessity refers to the need of the firm to access external resources, a tenet of resource dependence and open systems theories. Asymmetry refers to the potential to exercise power or control over other organizations or customers. Reciprocity refers to balanced co-operation and to exploitation of complementary strengths between partners. In the context of small firms, efficiency refers to the pursuit of economies of scale through different mechanisms. Stability refers to predictability and to the reduction of uncertainty. Legitimacy refers to the demonstration or improvement of reputation, image, prestige, or congruence with prevailing norms.

In the following, incentives to set up partnerships at various stages in the firm's development path (Garnsey 1996) are examined. A summary table is provided at the end of the discussion, relating relationship formation to various growth stages, and to illustrate how critical contingencies, internal and external, affect whether relationships serve to solve or create problems for the growing firm.

A firm's position in wider production chains is clearly the most significant basis for its relations with other firms. Firms that are producing leading-edge products usually require close relations with sources of technological knowledge in the national or international research base. The nature of the product also affects the relationship with other producers. Certain products, notably in telecommunications and computing, must be compatible with other commodities because these products and services are only useful to the purchaser as an integrated product set, or require an infrastructure (Katz and Shapiro 1994). Diverse incentives to form alliances or produce in-house follow from the availability of internal competence and the systemic or autonomous nature of the firms' products (Chesbrough and Teece 1996 p. 73).

Resource Access

In the earliest prospecting phase, the potential market for the product and funding availability are key considerations. An alliance with a customer provides the basis for a realistic market position. Some new ventures spin-out of incubator organisations where the resource access and mobilisation phases were carried out. This enables them to move straight into the third phase of growth, where the dominant problems are concerned with establishing revenue-generating trade. Firms spinning out of other firms are also at an advantage if they have a lead customer. For example, the team in Logica that started up Vocalis, a UK phone software house, already had a contract with a large Swedish customer for call-control phone software when the

spin-out from Logica was agreed. This made the start-up viable and provided the basis for extending a customer base. However at a certain stage, and especially if the parting was stormy, ties with the incubator are broken. The spin-out may be friendly, but the new venture may also enter into competition with its parent organisation. Either way, a relationship with an incubator constitutes the most formative type of alliance in which a new venture can engage, and continues to shape the firm's development long after it becomes self-sufficient.

In terms of critical inter-organisational contingencies, relationship formation is driven by the necessity of finding resources and establishing legitimacy, or credibility as a trading partner, in order to avoid "moral hazard" (Williamson 1975). Horizontal relationships can enhance credibility, provide funding and risk sharing in resource mobilisation. The search for a position in the production chain (which may take part in an innovative network) where inputs can be obtained and output exchanged drives the search for vertical relationships (to identify potential customers and suppliers).

Resource Mobilisation

Resource mobilisation is put to the test when attempts to generate further resources are made. A case in point is an academic start-up firm, Cedar Systems, a spin out from Cambridge University. The background to this venture involved the line-up of various partnerships and alliances between 1984 and 1989, with a view to generating revenue for digitising recordings. Each time the arrangements failed, until after five years of negotiations and early development work in the university, a joint venture with Cable and Wireless was undertaken. Cedar Systems moved into an established market right away. Removing scratches from old records for which there is proven demand involves meeting an old customer need in a new way. A mature market offers proven demand for a product already adopted by consumers, but also the likelihood of domination by established companies which can dictate terms - even to innovative firms providing a new service. Competitive structure dominated by powerful buyers can limit the new venture's growth opportunities, keeping the firm on a plateau. However whether in a new or a mature market, partnership arrangements with customers may be essential to reduce the vulnerability of the new venture and can decrease uncertainty, one of the central problems of the start-up.

Vertical relationships may be used to increase credibility for resource mobilization (risk capital in particular), whereas horizontal relationships, particularly with universities, may be used to increase the credibility of the new venture in the eyes of customers in addition to providing valuable knowledge. Reciprocity concerns dominate the drive to set up vertical customer relationships in which dynamic complementarities between small and large firms are exploited (Rothwell and Dodgson, 1991). Horizontal reciprocal links may be set up in order to create a 'virtual product' family, as is sometimes the start-up strategy of small software and consulting firms. Complementary resources and assets may be sought out through attempts to establish vertical links with customers and suppliers.

Resource Generation

Supplier relations

Because new ventures in high tech usually take on a specialised role in the production chain, relations with suppliers are of key importance in establishing revenue-generation either through a production process or by some other means. There are attractions in obtaining low cost components on a "cherry picking" basis, as Alan Sugar of Amstrad puts it, that is through more or less impersonal market exchange. But the danger of arms length supplier relations is illustrated by Acorn Computers, a UK company which failed to obtain the support of its suppliers when it encountered a major cash-flow crisis. In effect, a winding up petition from one of the suppliers precipitated the take-over by Olivetti. By the same token, close supplier relations can keep a company going through a difficult period (Sako 1992). The suppliers of Tadpole Technology, another UK computer company, provided funding when cash flow was a problem for the computer venture. In certain cases, a high tech venture can become a lead customer to a major supplier, which may use the venture to try out new waters with a new product. Tadpole Technology had close relations with Motorola, which supplied them with the chip they used in their SPARC notebook computer. This greatly enhanced the credibility of the start-up computer firm in the market, since it provided an informal endorsement of their technology.

Sub-contract arrangements

Because of the demanding requirements for establishing a production system capable of generating resources on a continuous basis, high tech ventures often avoid in-house production. However, orchestrating the production of others requires special competence; it is necessary to build supplier management skills since these are unlikely to be available in a new venture. Sub-contracting arrangements often lead to cash flow crises when inventories tie up resources in the face of a sudden fall in demand. Acorn Computers and Tadpole Technology both faced serious difficulties from this source.

Partnership with suppliers and sub-contractors can greatly facilitate the management of the supply chain, affording more predictable and continuous sourcing and producer quality control. Various writers have noted that dynamic networks characterising innovative specialist firms which perform complementary activities in the production chain, are favourable to successful innovation (Miles and Snow 1986). Often proximity offers further benefits to members of such networks. Where firms enter into relations of co-production with other firms, the question of location becomes significant. Where continual consultation and interchange is needed between those designing and manufacturing a product, for example, proximity can offer considerable advantages; this is one of the reasons for the clustering of firms engaged in similar or complementary activities in a given location (Saxenian 1990).

Licensing

Rather than orchestrating the production of other firms as in sub-contracting and co-production, the firm may decide to avoid

any involvement in production. This can be achieved by gaining revenue from licensing a design or software directly to potential distributors, or, even more directly, to customers (Teece, 1986). This has been the strategy of ARM, a semi-conductor firm from Cambridge with an innovative RISC chip, which has licensing relationships with leading companies in a wide range of markets. The benefits of licensing is that it gives immediate access to users and therefore once again secures the licensee a specific position in the market (ie the production/consumption chain or nexus.) The drawbacks of licensing are that it often requires extensive contacts and time for networking if the product is ultimately to reach consumers. The demands of networking may be so extensive, and the network become so complex that the entire complex of deals may collapse like an elaborate house of cards. The networking undertaken by MIPS in Silicon Valley is a case in point. Moreover the motivation for purchasing a license is the prospect of revenue from customers; the licensee is deliberately forgoing such revenues. However, the difficulties of gearing up for production and reaching customers to secure market position are such that they often surpass the resources available to a new venture, especially in a mature market. So it is that it is in the maturing markets of telecommunications and computing, complex licensing alliances are especially common. An example is Ionica, a Cambridge firm with novel radio technology for providing low cost customer access and services.

Of the various IOR contingencies, reciprocity and efficiency are likely to dominate relationship formation in the resource mobilization phase. Reciprocity can be exercised in exploiting dynamic complementarities in vertical relationships, if the core technology resource of the firm is distinctive and sustainable enough. Also reciprocal horizontal relationships can be used for the advantage of the small firm, particularly when operating a virtual corporation through a joint marketing interface. Efficiency concerns may drive the setting up of vertical relationships to scale up production through outsourcing arrangements, as described above.

Growth Reinforcement

Even once they have established a viable production process, or some other way of generating revenue, the new firm must act to sustain growth if it is to avoid moving onto a plateau where its prospects are at best static. Indeed survival itself may call for a stream of new products to update the product range as existing products reach maturity. Few new and small firms are able to cope with the pressures to volume production and cost reduction which accompany the maturing of markets and entry by more powerful competitors. A strategy many technology-base firms must follow is to produce a stream of new innovative products to keep ahead of the competition. Those firms that are able to develop reliable partnerships to promote new product introduction are likely to be at a considerable advantage over firms attempting to "go it alone" on the basis of self-sufficient new product introduction strategies. For example, Soft-Line, a growing Finnish new, technology-based company, supplies an essential software component to laser printers. Developing new generations of the software is a continuing process carried out in tight co-operation between Soft-Line and Canon.

The problem of new product introduction becomes pressing once the revenue-generating potential of its initial product is threatened. Firms that remain on a plateau may be able to remain in a niche market producing largely the same, or somewhat updated products. But firms whose niche is threatened, or who wish to move into more promising growth markets, must address the issue of introducing new products. This raises once again the question of the maturity of the market for the product. As the market matures, a dominant design is likely to have become industry standard, making it more difficult to gain acceptance for non-standard products. For example, Unida, a Finnish company, saw the niche market for its graphical workstations for advertising agencies dwindle away, as PCs became more powerful and gradually took over the market.

We saw that even for the initial product it may be necessary to form alliances from the outset, so as to ensure that the product will be compatible with other supporting products and receive the endorsement required to provide credibility to the new product. This problem arises repeatedly in connection with new product introduction, so that alliances are of continuing importance as time goes on. Through new product introduction, the firm can to a certain extent select its position in a new production chain, should the production-consumption nexus be unfavourable for its initial products. Alliances may be required to facilitate market entry, whether to provide endorsement for a very new type of product, so as to encourage consumer adoption of the innovation, or to ensure compatibility and consumer acceptability for products in more mature markets.

When coping with the pressures of growth, the firm faces a multiplicity of problems. All of the critical IOR contingencies come into play in this growth reinforcement process[1].

Growth Reversal, Plateau

If growth reversal occurs, or if the firm reaches a growth plateau, the need to secure market position and reduce instability becomes critical. The firm caught on a plateau needs to define and stabilize its niche in order to be able to sustain a profitable operation. In addition to strengthening its customer base, links with sources of technology are important, as they enable the firm to sustain the distinctiveness of its core technology resource. The more distinctive an advantage the technology resource of the firm can offer, the better a position it is in to offset dependency and promote reciprocity in its customer and supplier relationships. If no such avenue is available, several small firms may, if their networking capability permits, link up to enhance their bargaining power in relation to suppliers.

Resource Maturity

A variety of external contingencies continue to affect those firms that reach the resource maturity stage. Our focus has been on firms in the vulnerable early growth stage. A firm that comes through this stage successfully may be able to use its key position in the supply chain to its own advantage in the industrial network. Reciprocity concerns may encourage the active use of horizontal relationships to encourage network

externalities and keep the virtuous circle of positive feedback in motion. Efficiency concerns become increasingly important, reflected in emphasis on scale and more rapid throughput assisted by strong vertical relationships, and in the drive toward industry standard inputs and outputs. In the maturity phase, it continues to be important to reinforce the firm's legitimacy by enhancing its reputation and image. The influence of critical inter-organisational contingencies on growth is outlined in table 2 (omitted).

6 Discussion

We can predict that those firms that are able to form extensive alliances are more likely to overcome the early difficulties of sustaining expansion than those that are isolated. Through partnerships firms can access the complementary resources that extend their capacity to appropriate returns on its activities. Alliances allow a firm to use its resources to leverage access into new markets, as where licensing to firms in different markets opens up a new source of demand for a design or for other intellectual property. Alliances with distributors and suppliers allow a firm to extend its activities up or down the production chain more easily.

The reason for the difficulties with partnerships and alliances usually stems from the changing needs of the firm along its development path and shifts in the markets in which it operates. As the firm moves from early resource mobilisation to accumulation, its partnership requirements alter. It may no longer wish to sell through the outlets of its former distributor, who may not be prepared for this repositioning. As it grows, the firm may no longer be satisfied by a subcontractor who could meet its earlier specifications but not its more sophisticated current requirements. Moreover, markets also change, altering the structure of incentives and dislodging firms from their former positions, shifting the incentives a firm can provide to partners and the balance of power. There is tension in partnerships when firms individually require both commitment and flexibility, when each firm needs both clearly specified goals from the alliance and the capacity to change direction as the need for the unexpected arises. These are frequently incompatible requirements for an alliance, leading to breakdown. Yet there are examples of alliances - as between Hewlett Packard and many of its suppliers - which outlive both early development problems and market vicissitudes, affording benefits to both parties (Saxenian 1990). These usually involve a high level of trust and relations of power which retain a certain equilibrium though the nature of give-and-take shifts over time. If trust is not built up and preserved, then when the balance of power shifts, an alliance can break down dramatically, as in the notorious case of IBM and Microsoft[2].

The logic of alliances and partnerships that operate among firms is not self evident, and the rationale for networking patterns is not apparent without an understanding of the inter-systemic context of these interactions. It is consequently hard to interpret cross sectional survey research that present diverse quantified evidence on inter-firm relations without reference to the nature of the firms' production chain and product markets. The rationale for developments can be better understood when

firms are viewed as engaged in a web of evolving and interdependent systems of production and consumption and motivated by the incentives and constraints to which these give rise. Firms can be locked into partnerships that no longer serve their best interests as a result of the balance of power. This is often the fate of plateau firms. Firms are more likely to succeed when they are proactive in shaping their relations with others, and use these to reposition themselves and renew their competence. The most successful of firms use their relations with other firms to shift market configurations instead of remaining constrained by them.

Footnotes

[1] The asymmetry motivation may drive the firm to initiate alliances with suppliers of critical components to improve their position in a potentially vulnerable period when all resources are fully stretched. Reciprocal relationships may initiate virtuous growth circles, in which growth reinforcing positive feedbacks are in operation. The drive for efficiency may drive the firm to standardize supplier interfaces, as dominant designs start to emerge. The firm may also actively support the emergence of dominant designs, especially through horizontal licensing agreements (stability contingency). Legitimacy concerns may become critical again, as entry to foreign markets is contemplated.

[2] Microsoft changed its bargaining position in relation to IBM by finding a partner to help it develop a PC compatible operating system, as a result of which Microsoft was able to extend the market for the software it had developed initially for IBM. This expansion of Microsoft's competence beyond its earlier skills of computer language and software development reduced its dependence on IBM and shifted the incentives which had earlier maintained the alliance, allowing Microsoft to achieve market dominance.

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A Model For Economic Development:
The South Carolina Enterprise Zone Act

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Abstract

This paper comments on some worldwide Enterprise Zone activities which have occurred over the past thirty-five years and then reports on the recently enacted South Carolina Enterprise Act and the Rural Development Act by providing information on those portions which are most relevant to the Small and Medium Enterprises.

The South Carolina Enterprise Zone Act benefitted from having a history of the efforts of other state and local governments, both within the United States and worldwide to use as guidelines for some "lessons learned" in the practice of developing and putting into practice the enterprise zone concept. The Act has been well received in South Carolina and a number of firms and government agencies have already began the process of implementing the provisions of the Act.

The important aspects of involvement of all levels of government are reported. The act is recommended as a model for adoption by governments at all levels.

Entrepreneurship Development Amongst
the Ethnic Community in Australia

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Abstract

Entrepreneurship is the process that takes place in different environments and settings and causes changes in the economic system through innovations brought about by individuals who generate or respond to economic opportunities to create value for both the individuals and the society (Hills, 1994). Wherever immigrants have settled in advanced western societies, ethnic minority businesses have flourished- whether they be Turkish tailors in Amsterdam, Moroccan grocers in Paris or Chinese restaurants in Australia. (Waldinger, Eldrich, and Ward, 1990).

In Australia, the growing participation of ethnic minorities in self-employment has been a conspicuous feature of the small business scene. Entrepreneurs from different cultures are flourishing. The emergence of ethnic small business is a part of a global process of change. This paper examines the phenomena of the ethnic business development in Australia and looks at the question as to why the ethnic groups in Australia are highly represented in the business activity. This paper also examines the theories of the development of ethnic small business and identifies their applicability and relevance to Australia. This paper presents its conclusions that the emergence of ethnic small business can be related to the relationship between the cultural and social characteristics of different groups together with the circumstances of their arrival and settlement.

Introduction

Australia has a large and more diverse immigrant population than most western societies. Since 1788 Australia has been a land of immigrants. Official policy prevented non-Europeans from immigrating between 1901 and 1966. The White Australia policy was finally abandoned in 1973. Australia's immigration history is linked to the story of family migrations. Australia sought immigrants for permanent settlement. Waves of non-British immigration to Australia began early in the nineteenth century and reached a peak during the gold rush era. Post-world war II immigration brought a flood of European immigrants, many of them non British. The immigrants have since made an enormous contribution to the country, enlivening its culture and broadening its vision.

Until WWII, Australians were predominantly of British and Irish descent, but that changed dramatically when large immigrations from Greece, Italy, Yugoslavia, Lebanon and Turkey followed the war and have been supplemented by more recent influx of immigrants from Asia. Amongst those who could not speak English

found it impossible to secure work other than unskilled work. Many eventually opened small business, where a high level of English was not required. Some even became rich. (Jupp, 1995.) This paper provides answers to many questions such as, (a) Which group of migrants go into small business?, (b) Why do they go into business?, (c) How important is the ethnic ties and community links to the ethnic small business?, (d) What are the problems faced by the ethnic small business in Australia?, and (e) Are the cultural, structural and situational theory as developed by Bonacich and Model (1980) relevant to the ethnic small business in Australia?. The paper concludes that as a result of the social and economic changes Australia has experienced, what we see today is a multicultural society with unique features.

Arrival of the Different Ethnic Groups

The First Wave -- Pre-World War II Period

The first distinctly different from non indigenous communities to arrive in the Australian colonies were Chinese, German and Jewish people, which has been described as the first wave of immigrants covering the period until the World War II period.

The Chinese in Australia: Of all the significant groups of non-European settlers in Australia, the Chinese have the longest history of contact. Political unrest and population pressures in China and the need for workers were the factors in the development of the coolie or indentured labourer system that even before the 1850's saw young Chinese men travelling abroad in the hope of bringing a fortune home, just as guest workers' do today. In Australia, the Chinese labourers worked largely as shepherds on the large landholdings of the time. In 1854, it was estimated that 2000 Chinese-born persons were living in Australia.

Germans in Australia: There have been two distinct waves of immigration from Germany to Australia. In fact, German people were among the first non-English speaking settlers. From the late 1830's German settlers began to arrive in South Australia, motivated to immigrate by rural poverty and religious oppression. Many more came in the 1880's. Large family groups formed agricultural villages, particularly in South Australia, in which German was the common language, and assisted new arrivals to settle. Between 1847 and 1851, 4000 German settlers arrived.

The Jewish People in Australia: People of the Jewish faith have been participants in Australian life since the arrival of the First Fleet. They comprised a small number of the convicts transported to Sydney Cove, and were among the first British arrivals at the original Port Phillip settlement in Victoria in 1803. Though British born, technically many of these people were of European origin and had anglicised their surnames.

The Second Wave- Post -World War II

The global effects of World War II influenced patterns of immigration to Australia profoundly. The poverty and destruction that many Europeans faced at home created a willingness to consider migration. Australia's small population and primary and manufacturing industries created a demand for a larger pool of

labour. Various schemes of assisted migration provided the solution to these complementary needs.

The Italians in Australia: Italians arrived in Australia in large groups especially in the late 1940's and early 1950's. Generalisations and assumptions about them were based on one primary difference, that of language. Historical records indicate that an Italian crew member was on board the Endeavour when Cook landed at Botany Bay in 1788, and it has been suggested that Italians were involved in even earlier exploratory visits to the mysterious southern continent. The first wave of Italian immigrants to Australia came from northern Italy from the time of the gold rushes until the end of nineteenth century. Later, numbers fell, and new migration was affected by quotas on non-British arrivals.

The Maltese In Australia: The state of Malta comprises of three islands in the western Mediterranean and has a population of about 330,000 people. The Maltese population of Australian migrants and direct descendants is now greater than the one at home. Influenced by invasions by Arabs from North Africa, Italians and Spaniards from Europe, and Ottoman Turks, Malta was later ruled by French troops becoming an intensely Catholic nation until conquered by Britain at about the same time as the European settlement of Australia began.

Greeks in Australia: Though several interesting historical footnotes refer to the participation of Greeks in early European cartography and explorations of what was at one time called New Holland and even during convict times, it was not until the gold rushes of the 1850's that people came to Australia from Greece in any numbers. Many Greeks did not themselves become miners but earned a good living by providing catering and stores to miners. At this time some of the men who came out inter married and anglicised their surnames, and so much of their history is lost. At the turn of the century it was estimated that there could be about 1000 Greek- born people living in Melbourne and Sydney.

People from the Former Yugoslav Republics in Australia: The former Yugoslav republics include Bosnia Herzegovina., Croatia and Slovenia, the Former Yugoslavia Republics of Macedonia, Serbian and Montenegro. Immigrants from the now separate countries that were once collectively known in Australia as Yugoslavia have, since their first arrivals in the nineteenth century, made tremendous contribution to Australia's national development. Historically there have been several waves of departure from the former Yugoslavia. As with so many other national groups, the arrival of small numbers in Australia began in the 1850's. Some were independent settlers, others were sailor's from the Adriatic coast who simply stayed on. Among them were people whose surnames became Italianised and who were gradually misidentified as being of different origins.

The Dutch in Australia: The history of Dutch contact with Australia dates back to explorer's visits to the northwest coast in the 1600's when the mysterious southern continent was referred to as New Holland. In 1642 Abel Tasman sailed from Indonesia to Tasmania which he called Van Diemen's Land and later New Zealand. Having colonised parts of Southeast Asia, the Dutch were seeking trade opportunities. They failed to establish a

trade connection. Subsequently they had only minimal contact with Australia until the mid-1950's.

Hungarians in Australia: The history of the Hungarian people encompassing the wars revolutions and changes in national and political boundaries, affecting their lives for over many generations is very different from that of the Australians. While there have been distinct waves of Hungarian arrivals in Australia since European settlement began they have come for a range of reasons and from a wide variety of backgrounds, historically, however, the first significant wave comprised adult males who were political refugees from the revolutionary period of 1848-49. The discovery of gold in the early 1850's encouraged others to follow.

The Poles in Australia: Like other middle European countries Poland has undergone through many occupations and changes in its national boundaries. As in Hungary, there was large scale immigration in the late nineteenth century. Many Poles settled in the eastern US. However a few chose to travel the much longer distance to Australia. During the gold rush period, many more people came, mostly adult men. As with other groups a minority of them settled as miners and married into the wider community and became fully assimilated.

The Third Wave- 1960s and later

Over the last 35 years, with the embrace of multiculturalism and increasing acceptance of Asian migrants, immigration to Australia has diversified even further. International events such as wars throughout Indochina and the Middle East, the disintegration of the Union of Soviet Socialist Republics (USSR) and the imminent return of Hong Kong to the People's Republic of China, all have influenced the patterns of settler arrivals. Family migration has also increased the numbers of ethnic groups already established in Australia.

Turkish People In Australia: The 1991 census reports that a total of 38,000 Turkish speaking people live in Australia is interesting, because when they first began arriving in 1968, they never intended to stay. Population growth, small-scale agricultural production and low incomes in Turkey in the early 1960's generated 'guest work' immigration to Germany, Austria, France and Sweden. Turks were the first non-Europeans who were offered participation in the so-called 'worker migration' scheme arranged between the two governments.

Indians in Australia.: People from India have a long tradition of seeking economic opportunity through immigration or guest worker tenure. Unlike other places including Fiji, Mauritius, the West Indies and some African states where the Indian migrants found employment and set up trading businesses, the White Australia policy prevented Indians from coming to Australia in large numbers until quite recently when at a political level India's equality of membership of the Commonwealth was recognised. Occasional exceptions did occur. For the most part these were relatively eminent persons who secured particular professional appointments where local expertise in Australia was considered insufficient. A number of highly qualified individuals were given entry on a special case basis. Tertiary students also came, and

some of these stayed on. After 1966 free immigration began and numbers grew, since the professional skills they brought were in demand at a time of full employment in Australia.

Sri Lankans In Australia: Formerly known as Ceylon, Sri Lanka (like India) was colonised by the British, and in earlier times, by the Dutch and Portuguese. Many of its former systems of government were of the imposed bureaucratic type familiar in Australia. Now it is a nation with largely an agrarian and small-business economy. The Sri Lankans comprise of several people, the dominant Sinhalese, the Tamils, Muslims and a large mixed-race group known as the Burghers who favoured English language usage and Christianity. It was these people who began to immigrate following Independence in 1948, and again in the 1960's when Sinhalese and Tamil groups became dominant. (Shaw,1990)

Analysis of the Australian Immigration

Over the last 30 years, with the embrace of multiculturalism and increasing acceptance of Asian migrants, immigration to Australia has diversified even further. International events, such as wars throughout Indochina and the Middle East, the disintegration of the Union of Soviet Socialist Republics (USSR) and the imminent return of Hong Kong to the People's Republic of China, have all influenced the pattern of settler arrivals. Family migration has increased the numbers of ethnic groups already established in Australia. Immigrants have come to Australia to make new homes and establish themselves as an integral part of the community and the economy. They have made significant contribution in the past and are making today to the growth of Australia through their involvement in small business enterprises. (Strahan & Williams, 1988) Yet not much research has been done in this country, until the last couple of years, on immigrant entrepreneurs, their motivation, their strengths, resources, characteristics and skills, leading to the apparent success of their business and the contribution they are making to the economy. (Strahan & Williams, 1988) There has been substantial research in the last decade in Europe, Britain and America, seeking to explain why some immigrants or minority groups such as Indians and Pakistanis in some parts of Britain, or Chinese, Koreans, Jews or Cuban's in the United States, have had high rates of business involvement and success while others such as West Indies in Britain or native Blacks or Irish have had much lower rates. A considerable debate has raged, with one view stressing that the main focus should be on the opportunity structure of the economy and also on the blocked access to desirable alternatives resulting from discrimination. An alternative view has emphasised the culture and motivation of the entrepreneurs themselves. (Lever & Tracy, 1990) Ethnic migrants in Australia are choosing Entrepreneurship more often than ever before. Three significant factors affect the creation and the survival of ethnic owned businesses: educational level, relevant business experience and training, and access to adequate capital and credit. The issues related to the growing development of Entrepreneurship amongst the ethnic community in Australia have been discussed later in the paper.

Culture and Entrepreneur

"A self-made culture entrepreneur is one who acquires all his skills experience and capital after immigrating, from scratch and

invests them in any enterprise. (Ward & Jenkins, 1984). Palmer (1984) coined the term 'culture entrepreneur' to describe the way Italianness was developed by migrants in Britain as a marketing strategy over several centuries. The belief was effectively fostered that Italians had an innate and inimitable quality which qualified them as superior waiters. Chinese chefs in Australia have been successful Culture entrepreneurs in this mould. (Lever & Tracy, 1990)

Culture here refers to the individual and collective attributes of the ethnic entrepreneur including social customs and traditional values. Culture is believed to involve elements such as hard work and individual achievement that can open the door to a modern capitalist spirit. Ethnic cultural background includes many cultural characteristics such as group socio-cultural factors like innovation, reliance, independent attitude towards work and ambition, which predispose the immigrants to self employment in small business. It is important to note that these ethnic cultural values of a migrant are difficult or virtually impossible to change. (Multiculturalism, Good for Business, 1990)

Entrepreneurship from different cultures is flourishing in Australia. Many factors are responsible for the same such as opportunity structure of the economy, blocked access to desirable alternatives resulting from discrimination, contribution to business made by continuing links with the countries of origin of those ethnic cultures in terms of privileged access to new skills being developed there and to knowledge and contacts useful for trade, and the culture and motivation of the entrepreneurs themselves. (Lever & Tracy 1990). The multicultural composition (and major difference amongst them) of Australia mask the generalisations that can be made from studies alone on entrepreneurs belonging to different cultures. Cultural factors at times can vitiate the linkages between entrepreneurial characteristics and their manifestations. It will be fruitful to explore the specific factors and common factors that are present among entrepreneurs belonging to different cultures since they will provide understanding of the qualities of human beings in different settings.

Small Business Development in Australia

As of 1996, small business dominates the Australian business scene with 97% of total Australian Businesses being small. In fact small business keeps 2.7 million Australians working. Since 1983-84 small business has grown by 43% and employment by small business has also grown by 32%. About 65% of the small business operators were aged between 30-50 years, and 34% of operators were female. More than 20% of the small business operators considered their business to be highly successful; and over 75% of the operators consulted some form of external advisory service. (Australian Bureau of Statistics, 1996).

Australia in the 1970's saw a surge in interest in small business by Governments, educational institutions and the community. This stemmed largely from a Federal Government initiative in June 1968 to establish an Advisory committee to assist the Department of Trade and Industry in its task of exploring ways of providing guidance to small business management. Special attention was to be given by the committee to small manufacturing businesses. The

Wiltshire Committee Report. (Wiltshire, 1971) recommendations made in 1971 have had a marked influence on events in Australia. During the late 1960's and early 1970's a number of Australian academics had also become involved in research on small business issues (Brodribb 1967, Farghe, 1971, Bailey 1974, Meredith 1975, Williams 1975, Johns et al 1978). Their work has also impacted greatly on the directions that Australian small business has taken in the recent years. During the 1970's, largely as a result of the Wiltshire Report, the Federal and State Governments, trade and industry associations, service clubs, educational bodies and large businesses have taken steps to improve the situation for small business in Australia due to the perception that the small businesses make significant contribution to national productivity, employment and community at large. This is not to suggest that in the decades prior to 1970, small business was less important. However, in that era greater attention was paid to the development of the larger organisation and small business was perceived to be a necessary, though relatively unimportant, component of the economy. (English, 1995)

Ethnic Small Business Sector In Australia.

The Wiltshire Committee Report. (Wiltshire, 1971) used the Ethnic small business term to describe all small businesses which are independently owned and controlled by owner managers whose ethnic and cultural origins are different from the host country. Ethnicity can be established from the owner managers' country of birth. Small business here is defined as one which employed up to 50 persons including the owner/ managers. In addition, the enterprise is assessed as owner managed, independent of external managerial and/ financial control, and has a relatively small share of the market in which it was engaged. However, most migrant businesses, like most Australian businesses, are small. According to the definition of the Australian Bureau of Statistics, small businesses are those enterprises which employ less than 20 employees. Ninety percent of all small business employ fewer than ten people. Considering all enterprises, very small enterprises (less than 10 people) constitute more than 80% of all enterprises, with the exception being the manufacturing industry, where only 74% of all enterprises employ less than 10 people. In the private sector, non agricultural enterprises on an average employed less than 4 persons.

The rise of Entrepreneurship amongst different ethnic cultures in Australia is mainly due to the post war intake of immigrants, nearly half of whom are from non English speaking backgrounds (Theophanous, 1987). The ethnic small business sector is a crucial yet relatively unexplored dimension of the Australian economy. This perhaps explains why the migrant contribution to the small business sector has been generally overlooked in the debate about the economic impact of Australian immigration (Douglas, 1982 & Baker & Miller, 1989). Most studies focus on the role of migrants as workers rather than as self employed or employers. However, the census data attests to the disproportionately high profile of many birthplace groups among employers and self-employed in Australia. Besides, the phenomenon of ethnic small business cannot be adequately captured within the restricted framework of a single discipline. The liberal economist would examine it in terms of Entrepreneurship and competitiveness; the political economist as

a case study of predatory and parasitic relations between the petit-bourgeoisie and monopoly capital; the social geographer would point to its role in renewal of inner city areas desolated by shifts in industrial and residential setting, the sociologist would emphasise the interlinked dimensions of class, culture and gender, while the political scientist would look to the emergence of ethnic elite's and their role in city politics. (Collins, 1990) The emergence of ethnic small business in Australia is a part of a global process of change which can only be grouped through a concept of the totality of the world market and its local effects. The Greek Milkbar, the Italian Fruiterer, the German Baker are a part of the postwar urban culture in Australia. Today the fish and chips is more likely to be served up by the Lebanese, while the baker has been replaced by the Vietnamese hot bread shop. (Collins,1990)

Theories of Ethnic Small Business and Their Relevance to Australia

Cultural Theory

Cultural explanations emphasise the cultural resources or predispositions which may lead to business success. The cultural theory is useful for the importance it attributes to "cultural" characteristics which may predispose an immigrant group to success in small business. The cultural theory stresses on the individual traits and behaviour patterns brought from their homeland. However cultural theories do not consider the economic environment in which the immigrant business operates. Group solidarity or a willingness to take risks may be considered necessary conditions for business success. However, neither is sufficient.

For immigrant success in business there needs to be :

1. An area in which the firm can operate viably.
2. The possibility of gaining access to ownership opportunities.
3. Resources to exploit these opportunities.

Development of a particular ethnic minority business is always the product of unique historical circumstances. These include opportunities for newcomers, ethnic group characteristics, and strategies used to exploit entrepreneurial options. (Waldinger, 1996). Further confounding the applicability of this theory in Australia, is the finding that Italian business owners, often described as possessing cultural values appropriate to business ownership, who were surveyed in South Australia did not rank family factors as the main reason for going into business, despite a very large number of them coming from a family tradition of business ownership or self-employment. (Lampugnani & Holton,1989)

Despite its limitations as a complete explanatory theory, the relevance of cultural values and institutions cannot be entirely dismissed. All ethnic businesses in Australia and its operations are distinctly marked by ethnic cultural norms, values, beliefs and customs. The ethnic cultural ties and community contacts are important for the majority of the businesses here to run successfully. Majority of their customers are from their own

cultural background. As such they cannot forget their cultural upbringing and beliefs. Thus culture does play a significant role in the success of their business. Alternatively, immigrant groups were able to collectively organise the resources needed to establish small business due to the solidarism arising from kinship and ethnic community ties. (Light, 1980) Immigrant minorities also bring from their home land individual traits and behaviour patterns which aid them in moving from low paid jobs to small business positions.

Ethnic Enclave Theory

Martin & Portes(1980) have argued that where an ethnic area can be developed into a more complex enclave, with its own interlinked manufacturing, wholesaling, retailing and business service networks, small firms within it can control competition, gaining some of the advantages of primary sector firms while retaining secondary sector flexibility. They have demonstrated the successful development of such an integrated enclave amongst Cubans in Miami. (Wilson Portes, 1980; Wilson Martin, 1982). The existence of immigrant enclaves requires the presence of immigrants with sufficient capital and initial entrepreneurial skills as well as a regular supply of enclave labor through sustained migration. The inferences drawn from the study include low wage labor of immigrant workers which permit the survival and expansion of enclave enterprises and creates new opportunities for economic advancement. Ethnic small business cannot possibly survive and be successful in an ethnic enclave economy. Another reason why enclave economy does not relate to Australian ethnic small business is the low number of immigrants of any one cultural group. A study by Castles (1989) of ethnic small businesses in Sydney found that ethnic small business catered for the population as a whole and had business links with non-ethnic firms. Ethnic enclave is not the cause, but rather the result of immigrant business growth (Waldinger, 1986).

Interactive Theories

The Interactive Theory approach suggests that ethnic business proliferate in industries where there is a congruence between the demands of the economic environment and the informal resources of the ethnic population. (Waldinger, 1986) Discrimination has left members of immigrant groups with only very restricted channels of escape from menial or working class jobs or from unemployment into a narrow ethnic business area. The most obvious area of this kind involves the provision of goods and services to members of their own group, who themselves are employed in undesirable jobs abandoned by native workers in the mainstream economy. Another kind involves the filling of a particular mainstream need which is unattractive to native business or for some other reason can be better provided by a minority group.

A clear example is the pizzerias in Australia which Lovell-Troy (1980) describes as constituting, over decades, a majority of Greek businesses, providing employment for a large part of the community and with negligible participation by any other group (Cummings, 1975). This area involved a very restricted product, sold to mainstream customers.

This theory is quite relevant to Australia, as it does link the

economic opportunity to the economic and cultural resources of an ethnic group. There is a demand for ethnic small business and the supply of this ethnic small business is influenced by the informal resources of the ethnic population like family and community ties ensuring labor supply, and a common understanding of behaviour and expectations in the work place. Thus the interactive theory which is more like an organising framework, appear to be the most appropriate theory for explaining Ethnic small business in Australia (Lampugnani & Holton, 1989).

Middle Man Minority Theory

The middleman minority concept deals with a particular cultural group occupying an intermediate position due to some competitive advantage on a high adaptive capacity. The Chinese in South East Asia, the Jews in Europe, Armenians in Turkey, and the Asians in East Africa (Bonacich, 1973) extend the application of the middleman minority theory. Two conditions cited as necessary are that of sojourning temporary settlement with the intention to return to their place of origin and the culture of origin. The sojourners exhibit solidarity by forming their own communities, usually marry within their own group, segregate themselves residentially, establish language and cultural schools for their children and cling to their cultural and religious traits.

Ethnic small business is just not found amongst intermediate areas, but all over the Australian economy. So the middleman minority theory cannot be applicable to Australia. More over, we do not see many people sojourning to their mother country and if they do, they replace themselves by their young sons to carry on their business before they do so. Australians generally exhibit relatively less class distinction and social segmentation, so the middleman minority theory seems generally inapplicable in the Australian context.

Opportunity Structure/ Ecological Succession

Some cultural groups have had high rates of business involvement and success while others have had much lower rates. Opportunities for minority enterprise establishments are influenced by a number of market factors to which both (Aldrich, 1989) and (Waldinger, 1980) have refereed. Ethnic consumer products provide the initial market which can extend to the entire ethnic community. Immigrants often have special need and preferences which cannot be filled by native owned businesses. This gives rise to protected markets (Light, 1980). Immigrant business may find an area in the general market in satisfying the demand for exotic goods. Immigrants may be the only business people capable of supplying exotic goods or they may be able to supply them in seemingly authentic condition and at relatively low prices.

Ecological succession is another way in which business vacancies may arise for immigrant entrepreneurs. As the concentration of an ethnic group in a residential area builds up, vacancies arising due to the naturally high failure rate of small business are more likely to be filled by the ethnic group rather than the native group who are diminishing in numbers or members of the emerging ethnic group pursue these openings due to a lack of alternative opportunities for social mobility and employment (Aldrich & Reiss, 1989).

Opportunities are not the same for all cultural groups. For example, in the US the Hispanics have a relatively large population size and more opportunities, which is not available to Koreans as they are too few in number and residentially dispersed. Although the Koreans differ markedly from both whites and Hispanics in term of background characteristics, access to informal social resources and work ethic, they appear to be the most successful small business owners. Although the opportunity structure and ecological succession theory have limitations, factors of the opportunity structure like protected ethnic markets and non-ethnic markets have been observed to be a relevant consideration in Australian Ethnic Small Business.

Moreover, the Ecological theory also attempts to explain ethnic small business concentration in terms of population concentration without real reference to ethnic group characteristics. But the pattern of immigration and settlement in Australia has not resulted in permanent ghettos. The Ethnic population is more dispersed. This tends to be unsupportive of the ecological succession theory.

Findings of A Pilot Survey

A full scale study on the Entrepreneurship Development amongst the Ethnic Community in Australia has been launched in Sydney, Australia. An initial analysis has been carried out on 105 questionnaires received so far. The survey questionnaire received so far relate to ethnic communities from Spanish, Polish, Lebanese, Philippines, Chinese, Mauritius, Cambodian, Turkish, Greek, Korean, Indian, and Iraqi backgrounds and the types of businesses surveyed were builders, tiling, decorating, laundry, fruit shop, mixed business, motor mechanic, coffee lounge, take-away, flower shop, pharmacy, etc. Some of the findings are as follows:

- (a) The ethnic communities had varied reasons for undertaking business as their career.

The Interactive Theory is relevant to Australia to some extent. However, it cannot be generalised and applied to all ethnic migrants and to all categories of ethnic small business because numerous reasons as to why different ethnic migrants go into business have emerged as a result of the survey so far. The main reasons are their arrival circumstances, settlement, education, financial status, family background, job market, knowledge of English, past experience, no job satisfaction, retrenchment, independence, bad job conditions, discrimination, better opportunities, and opportunities for better financial benefits, and to some extent personal characteristics. Most of the Lebanese said they were into business because they had their uncles, fathers or brothers into business who helped them (A case of family background). The Spanish and the Polish said that they had tried hard getting jobs but because of the lack of knowledge of English and the non recognition of their qualifications they had to go into business to survive (A case of language problem). An Iraqi mechanical engineer said that there were not enough jobs for professional mechanical engineers. So he decided to go into business (A case of lack of job opportunities). The Korean and the Chinese had a more positive attitude and indicated that they migrated to Australia to start their business owing to there

being better opportunities for business in Australia (A case of opportunity structure). Many Philipppines said, "It was very hard working owing to worst job conditions for Asians. So they went into their own business" (A case of discrimination). The Indians thought that it was unjustifiable that their qualifications were not recognised in Australia and many highly qualified doctors, engineers, computer professionals, teachers were forced to work in lower positions and different areas. So many of them preferred to be self employed rather than working in subordinate positions (A case of non recognition of qualifications). The Turks and the Greeks said they went into business largely due to strong support from many businessmen from their own ethnic background. Their previous business experience also helped (A case of past experience). The Mauritius businessmen said they were into business as they did not have job satisfaction and were not given promotions when they deserved it. (A case of no job satisfaction). The Cambodian businessmen went into business to earn more money so that they could give their children a better education. (A case of monetary factor).

- (b) More than 50% of their customers are from their own ethnic background.

Many respondents revealed that more than 50% of their customers were from their own ethnic background. But ethnic dependency for customers was relevant to only some kinds of businesses and to some ethnic groups. Businesses like grocers, restaurants, catering were dependent on the ethnic customers.

But interestingly businesses like pharmacy, laundry, coffee lounge, food suppliers and other necessities did not depend on the customer from their ethnic background.

- C) Owning small business means hard work and slog.

Although many of the businesses were making profits and some were doing very well, the majority of them did not want their children to go into business as they said that business was too demanding. There was lot of hard work, long hours, and no great money. But they wanted them to be professionals like doctors and engineers.

- (d) Ties with their ethnic communities is not important.

This survey highlights the lack of homogeneity among the ethnic groups particularly in respect of their relationship between business people and the ethnic community organisations.

Recommendations

Although no generalisations can be made yet without detailed analysis of larger sample, there are some issues which are likely to surface strongly that will provide support for the development of ethnic small business. One of them being the need to train the different ethnic groups in specialised training programs prepared for them taking into consideration their ethnic background and the problems faced by them. For example the Chinese small business operators should have a Chinese mentor and a special training program for Chinese small business. The Greeks should have a mentor from their own ethnic background and so on. More over trainers and training institutes should also take into

consideration the nature and the type of business before providing training. Policy makers devising programs for migrants in business should be reminded that what is applicable to a Turkish cafe proprietor may be totally irrelevant to a Turkish solicitor. In short there should be an appreciation of inter- and intra-group differences as well as similarities. Business policies designed to assist migrants in small business are most likely to succeed if they are complemented by policies that encourage and strengthen ethnic community organisations. The business and ethnic community relationship should be developed and exploited as a two way transmission belt, because ultimately the conventional wisdom which claims that immigrants do well in business because their culture makes them entrepreneurial could stand true for some ethnic groups and can be challenged for others by showing how the development of a particular ethnic minority businesses is always the product of unique historical circumstances such as opportunities for newcomers, ethnic group characteristics, and strategies used to exploit the entrepreneurial options. They also show that not all groups are equally interested in the business ownership option for advancement or equally successful at it.

Conclusions

To sum up, it may be said that generality of any of the problems besetting small business people, for example the need to meet rents, property taxes, taxes interest rates on loans, power charges etc. is common to all. Such operating costs are universal and not dependent upon ethnicity. It is recommended that reduction or rebate in rents and taxes, easing of loans access and terms, tax incentives etc. would seem to be the most positive expression of government assistance to ethnic business people. The economic and financial constraints affecting small business should be taken into account. It is clear that a majority of the migrants in Australia rely on other migrants for the bulk of their business. Hence, it may be proved that the government policies designed to assist migrants in small business are most likely to succeed if they are complemented by policies that encourage and strengthen ethnic community organisations. In conclusion, it may be said that the emergence of ethnic small business in Australia cannot be related to a particular theory but to the relationship between the social and cultural characteristics of that ethnic group together with the circumstances of their arrival and settlement.

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Profiling The Small Business Owner-Manager:
Identifying Personal Characteristics Linked To "Growth-
Orientation"

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Abstract

This paper reports on work carried out with groups of owner-managers in the UK using a multiple-assessment approach. The resulting personal profile has been found to have practical value in increasing the owner-manager's self-awareness and enhancing decision making relating to personal and business development.

The assessment dimensions can be related to a criterion of "Growth-Orientation" (GO) such that characteristics which differentiate high, medium or low GO owner-managers can be identified. The practical and policy implications of the findings are discussed.

Introduction

This paper reports on work in progress in the UK to profile small business owner-managers against a range of personality dimensions.

This profile is constructed from the results of an "Assessment for Enterprise" (ASSENT) workshop which is modeled on the Assessment/Development Center (ADC) employed in large organizations to identify and develop managerial potential. The ADC generally has been shown to have validity as a means of assessing and predicting managerial performance (see eg Dulewicz 1989, Gaugler et al 1987, Thornton III and Byharn 1982). As far as can be ascertained, the ADC approach has not been used with small business owner-managers. There was felt to be some potential benefit in using an adapted form of the ADC both to gain greater insight into individual owner-manager personality and also to improve the efficacy of management development interventions aimed at the owner-manager.

The ASSENT workshop has been piloted within extended management development programmes for owner-managers of both young and more established small businesses (ie 2 years or more). In general the businesses are either in the early survival phase or embarking on growth. Sometimes the growth involves building the management team and investing in people development. The profile of the owner-manager can therefore assist in identifying aspects of personal as well as business development which may need to be addressed through the programme. At the very least the profile provides a focus for discussion of individual values, needs, goals and of the "fit" between the individual and the business.

This approach has been used successfully with 75 owner-managers to date in two distinct regional contexts in England (North East and South West) and is currently also being tested in Atlantic

Canada.

The purpose of this paper is to present some initial findings from the ASSENT workshops showing how the personality dimensions which constitute the individual's profile can be related to an independent measure of "Growth Orientation" (GO). This allows for differentiation of individual characteristics according to level (high, medium or low) of GO.

Method

The approach advocated here with regard to investigating personality attributes is explicitly multi-dimensional utilizing a, wide-range of instruments to tap different aspects of motivation, cognition, ability etc. and relating these to the perceptions, plans, needs and goals of the individual owner-manager. The fact that the instruments may have been designed for general use is not a sufficiently robust argument for eschewing them (as eg Chell and Haworth 1992 have argued). However, clinically-oriented instruments are probably best avoided (Carsrud et al 1989) since, apart from their possible lack of validity in relation to the small business population, the feedback from them is likely to be highly controversial and may indeed be destructive of relationships between researcher and owner-manager. However, instruments developed and validated on "normal" populations would be appropriate since owner-managers (in general) are part of the "normal" population. Arguments for "domain specificity" (eg Robinson et al 1991) do not hold water unless there are valid and appropriate tools and measures for the domain and an agreed underlying theoretical model on which they are based. Neither palpably exist. Tools which have been specifically constructed to measure eg "entrepreneurial personality" tend to be highly unreliable due to the transparent nature of the items and the possibility of socially-desirable response bias (Caird 1993). There may therefore be a considerable advantage in employing instruments which have been designed for a wide range of application, are soundly-constructed, have been tested on a wide range of samples and embrace a model or concept which is of some relevance to the small business context. A similar approach has been employed within leadership development programmes for some time (Campbell and Van Velsor 1985).

The selection of instruments for ASSENT was determined on the basis of factors such as previous experience of using the instruments with groups of owner-managers; likely relevance of the underlying model or concept to the owner-manager role; evidence of reliability and validity (nb including face validity or acceptability to the user); cost; availability (nb some common US tests difficult to access in UK); ease of completion, scoring and interpretation; and the need for a broad spread of tests to produce a reasonably comprehensive individual profile. A number of combinations were tested within the piloting process for ASSENT and the ones which appeared to work well in terms of acceptability to the participants and in terms of producing worthwhile results, including discriminating in relevant and significant ways between participants, were retained.

After eight pilots of ASSENT, involving 75 owner-managers, a reasonably workable combination has been found to include:

- * a general personality measure, such as the Myers-Briggs Type Indicator (Briggs Myers 1993) which is particularly suitable for a developmental setting (nb tests such as 16PF which are more suitable for a selection/assessment setting were not found to be so suitable and moreover were difficult for participants to relate to and make use of)
- * an instrument to measure learning style (eg Learning Styles Questionnaire - Honey and Mumford 1986) since this will be important in helping the participant make best use of the development programme as well as in understanding the learning process within his/her business
- * a measure of managerial or leadership orientation (eg Leadership Opinion Questionnaire - Fleischman 1989) which is particularly important if the participant is intending to grow the business and having to take on much more of a people management and team development role (Harrison and Leitch 1994)
- * a measure of preferred team role such as Belbin SAQ (Belbin 1981) since again this is an important consideration should the intention be to build a strong team for the future growth of the business
- * a measure of values such as Survey of Personal Values and Survey of Interpersonal Values (Gordon 1984, 1976) which could indicate what were the most important "drivers" of the individual's behavior and were therefore likely to influence the shape and direction of the business; the SPV and SIV were felt to be particularly useful in this context since they include dimensions such as Achievement, Leadership, Independence and Decisiveness
- * Additional measures have also been used from time to time in the piloting of ASSENT such as Alternate Uses (Guilford et al 1978) which is intended as a practical measure of creativity or more precisely of "spontaneous flexibility" (ie how many acceptable alternative uses of a particular, everyday object can the respondent think of under time pressure?); and ability measures such as an "in-basket" exercise to test information-processing ability and decision-making, and a problem-solving exercise. Due to high levels of missing values these measures have not been included in the analysis on which this paper is based.

The intention was not to attempt to test any specific trait or characteristic such as Need for Achievement, Locus of Control or Risk-Taking but to inductively examine a range of variables within the context of an attempt to profile the individual owner-manager. It might then be possible to see which factors were particularly important in an individual case and how these might impact on the development of the business. This was done through feedback and discussion of results with each participant following the one-day ASSENT workshop (usually one or two days later). Together with the information already known about each participant through their involvement on the particular development programme, this process helped to ensure that the profile constituted a valid picture of the individual and

moreover enabled the individual to relate this picture to the business development process including decisions about personal development, recruitment and deployment of staff, team-building, delegation, and overall scale and pace of growth (if applicable). The author and an associate, as trained psychologists, were responsible for analyzing the test results and constructing the profile for each individual usually in the form of a one-page narrative to aid assimilation and comprehension, and then discussing the profile with the participant in a counseling/feedback session (usually lasting 45-60 minutes). Construction of the profile was found to be a highly complex and time-consuming exercise usually requiring 2-3 hours work per participant. Feedback from participants during the follow-up discussion and subsequently indicated the value of the profile in helping them to understand themselves better or at least validate their existing understanding. This is despite many of the participants initially being highly skeptical of the process although sufficiently curious to try it.

Results

From a practical point of view, the approach described can be recommended as a means of profiling the individual owner-manager within a management development process. It may have other applications where an in-depth understanding of the owner-manager is required eg for venture capital providers, however these have not as yet been tested. Meanwhile the approach continues to be used within owner-manager programmes at Durham and is subject to continual refinement and development, including the introduction of new tools as appropriate. A set of guidelines has been issued (Moran 1994) to help other organizations set up their own version of an ADC along the lines of ASSENT.

As well as its practical utility, what research insights does the application of the ADC approach provide? These will be explored drawing on the existing database of ASSENT participants and relating their scores on the various measures to an appropriate criterion. In this case the criterion chosen was Growth Orientation (GO). This was felt to be particularly relevant because participants were in general looking to develop their businesses in a particular direction and many were indeed explicitly seeking growth. It should be noted that GO is primarily a measure of the individual rather than the business (although the one will inevitably impact on the other; see eg Miller 1983). The aim was to see whether there were any particular characteristics which differentiated those rated as "High GO" from those with "Medium GO" or "Low GO".

The assignment of participants to the GO categories was based on the following considerations:

- a. how the business has developed to date
- b. intentions/plans with respect to future development of the business
- c. the nature of the market in which the business is operating (eg dynamic v static)
- d. the position of the business within its market (eg

niche player v "common or garden")

- e. extent of innovation in the business (products, processes, market approaches, people development etc.) participant's power of decision-making within the business
- g. score on a proprietary measure of "enterprise tendency" (eg General Enterprise Tendency or Self-Evaluation of Business Style - both developed at Durham Small Business Center)

To be categorized as High GO", the individual would need to exhibit ALL of the following:

- a. a business which has been growing to date AND
- b. future intentions/plans for growth AND
- c. in a dynamic/growth market sector AND
- d. holding an unique/niche position in the market AND
- e. with evidence of innovative capability and processes AND
- f. the key decision-maker in the business AND
- g. with high overall scores on GET or SEBS (ie "enterprising tendency")

For Medium GO, the individual would have at least some of the above; for Low GO the individual might have f and possibly one other but in the main would have none of the above. It will be noted that a number of the elements are interrelated such that having eg c, d and e, it is highly probable that the individual will also have b. Therefore, the GO categorization was felt to be a reasonable way of differentiating between participants particularly because the knowledge of the individual required to make such an assessment could be gained both through their involvement to date in the particular development programme and through the in-depth discussion following the ADC. Such a categorization of the individual was important because some participants turned out not to be the main decision maker in the business (see f above), but were the "number 2" or son/daughter of the owner being groomed for succession. Even though the business may have been growing, it would be hard to make a case for these to be categorized as High GO since they may have had little to do with the growth and general performance to date. Therefore, the High GO category was reserved for those who were the "prime mover" in the business and also fulfilled the other requirements of growth performance and intentions etc.

The sample of 75 on which the analysis is based were categorized as follows against the GO criterion:

High GO	22
Medium GO	37
Low GO	16

It was not intended that the sample should be statistically representative since by their very nature the groups were self-selecting, not only because they chose to enrol on a management

development programme but because they volunteered to take part in the ADC exercise. This does limit the generalisability of the findings with regard to the small business population as a whole. However, it could be that a sample such as this represents a sub-set of the population who are strongly oriented to their own development, are open to the external environment and may, in some cases at least, represent the successful businesses of the future (at least within their own regions). In other words, the type of business which is of particular interest to the policy-maker and the support networks. Generalisability of the findings are likely, therefore, to be of particular interest to these two constituencies.

While space precludes a full presentation of the findings, the following significant differences were found between High, Medium and Low GO owner-managers using a Kruskal-Wallis One-Way Anova (2 degrees of freedom):

Dimension*	Chi-Square (corrected for ties)	Significance
Introversion (MBTI)	-6.04	< 0.05
Activist (LSQ)	13.26	< 0.005
Pragmatist (LSQ)	6.56	< 0.05
Structure (LOQ)	9.78	< 0.01
Company Worker (Belbin SAQ)	-15.63	< 0.0005
Shaper (Belbin SAQ)	8.11	< 0.05
Team Worker (Belbin SAQ)	-6.01	< 0.05
Completer Finisher (Belbin SAQ)	-8.10	< 0.05
Decisiveness (SPV)	8.25	< 0.05
Orderliness (SPV)	-6.44	< 0.05
Leadership (SIV)	8.56	< 0.05

* See Appendix for description of personality dimensions.

With the exception of Introversion and Team Worker, all the above were also found to be significant using the more rigorous Scheffe test. Thus the key positive indicators of the High GO owner-manager appear to be:

- * Activist and Pragmatist learning styles (i.e. learning by experience and application)
- * A leadership orientation towards Structure (nb Consideration is also likely to be in evidence but this does not differentiate to such an extent in relation to Growth-Orientation)
- * A Shaper team-role which tends to be strongly task-focused, action-oriented and competitive (nb may not be conducive to bringing the best out of others)
- * Importance of Decisiveness as a personal value (ie rapid decision-making, having the strength of one's own convictions)
- * The key negative indicators appear to be:
 - * less likelihood of playing team roles involving turning ideas and concepts into practical working procedures (Company Worker) and ensuring attention to detail and adherence to standards (Completer-Finisher)

- * less likelihood of valuing Orderliness (ie system, structure, order)
- * It will be interesting to see to what extent the differences identified above persist as the database of results is added to from subsequent implementations of ASSENT. It will also be useful to carry out some cross-cultural comparisons, perhaps in the first instance focusing on North America.

Discussion

The picture which emerges of the high GO owner-manager is of an individual who feels it is important to be the leader and decision-maker, who puts a lot of energy and drive into this, and who learns almost solely by doing. This person does not, however, tend to operate as a conventional manager and would prefer not to be too wrapped up with the more organizational/administrative tasks.

This suggests that the High GO owner-manager may equate to the "entrepreneurial leader" although it is interesting to note that attributes such as Achievement, Goal-Orientedness and Practical-Mindedness (materialism/instrumentality) which are often associated with successful business owners turned out to be relatively unimportant for the High GO owner-managers (and, in the case of Achievement, for all three groups),

Independence (on SIV) was found to be an important attribute for all the sample (and particularly for High and Medium GO groups) but did not differentiate significantly between High, Medium and Low GO. It is probable that Independence is an important value for performing the owner-manager role but does not necessarily differentiate the more from the less entrepreneurial.

Finally, Variety (on SPV) was found to be the highest personal value for High Go group indicating the importance of openness to change for these owner-managers. However, this did not significantly differentiate between the three groups, largely because it was also important to the Low GO group. The Medium GO group, on the other hand, gave priority to Practical-Mindedness and therefore may view obtaining a "payoff" for their efforts as being more important than other factors.

Indeed, the Medium GO owner-manager may be said to be less change-oriented and more concerned with stability, conformity and Organization. This group may be thought of as "incrementalists" in relation to growth, and would not be expected to take too many risks or introduce major changes. This is reinforced by the Myers-Briggs profile for this group of ESTJ ("pragmatic administrator") in contrast to the ENTP profile ('enthusiastic innovator') for the High GO group. The Learning Styles for both High and Medium GO groups also exhibit contrasts - the former as noted above emphasising the Activist/Pragmatist combination ("Executor"); while the latter emphasises the Theorist/Pragmatist combination ("Converger").

The Low GO group, by way of further contrast, has a Reflector/Theorist Learning Style ("Assimilator") and, although having a similar Myers-Briggs profile to the Medium GO group, tends to have less of an "executive" orientation and more concern

with orderliness and system and more dependence on others. The Low GO owner-manager may therefore have inbuilt constraints on growth deriving from their personality and values but may, nevertheless, be effective, within an environment where there is co-operation and mutual support and relatively little requirement for executive decision-making and leadership.

In summary, the process used in this study to derive a personal profile of the ownermanager can also reveal differences between owner-managers on particular personality dimensions dependent on their assessed level of Growth-Orientation. The resulting "clusters" indicate that a particular combination of personality attributes is appropriate for different levels of Growth-Orientation. This may suggest that the High GO owner-manager can to some degree be identified "in advance" and appropriate interventions provided to enable him/her to maximize growth opportunities, within a business setting. However, it is not known whether and to what extent personality may be modified by experience of being in the owner-manager role. In other words, which way does causality operate? This can only be assessed by tracking owner-managers from pre-start to ongoing business utilizing an appropriate combination of measures at the outset and repeating them at appropriate intervals. Such a longitudinal study (see also Bygrave 1989, Sexton 1982), could be enriched by using an ADC approach such as ASSENT to assess the degree of stability or change of the individual personality through successive transition phases in the development of the business.

Two other points need to be made. First, the assessment of GO is dependent to a large extent on prior knowledge of the owner-managers such as to be able to score them against the set-down criteria. This in-depth knowledge may however affect objectivity, and therefore the process of assigning owner-managers to GO category may need to be done by panel rather than one assessor. Whichever method is used, the categorizations will inevitably be less than ideal and, in any case, may over time be subject to revision (eg as the business grows and/or the owner-manager develops). Secondly, the profiles derived from ASSENT need to be checked against actual behavior and performance of the owner-managers in order to ensure that they are actually valid "measures."

With these provisos in mind the approach described in this paper can enrich our understanding of small business owner-managers and moreover help them to understand themselves better. The practical consequences of this include:

1. The owner-manager is able to see more clearly how "the way they are" shapes the way the business is run and influences its strategic development. Thus decisions can be made about future business direction, team-building, personal development, employee development, human resource management practice etc. from a position of greater self-awareness and self-knowledge.
2. Those involved in training and developing owner-managers are able to use the results of ASSENT as a means of gaining greater insight into their clients' characteristics and needs and hence design programmes which are better oriented to successful personal and business development.

3. For the small business support network generally, there arises the possibility of SEGMENTING provision more appropriately in accordance with Growth Orientation or similar. For example, the professional, middle-management background of many of those in the small business support network may predispose them to deal with the Medium GO owner-manager, who is likely to be of a more stable, conventional, predictable disposition as compared with the High GO client. Equally those from a community development or micro-business back ground may be more comfortable dealing with the Low GO client. The question arises as to who in the support networks will be predisposed to deal with the High GO owner-manager? Perhaps only other High GO owner-managers? There may however be a role for those in the training and development and HR field to assist the High GO owner-managers to think through the key "people" implications of growth and adapt their strategy accordingly.
4. Those involved in shaping policy for the small business sector can do so on the basis of a better understanding of the people who are the main recipients or targets for the policy. This may lead to more focused policy interventions with more likelihood that they will achieve their objectives.
5. Finally, those involved in funding small business, particularly from a risk capital perspective may be able to make better decisions on the basis of a more in-depth understanding of the person.

From a research perspective, the findings highlight the deficiencies in existing models of the owner-manager/entrepreneur which tend to be overly simplistic and one-dimensional. Employing a multi-dimensional approach such as ASSENT can begin to provide greater insight into the depth and complexity of the subject and may over time contribute to the building of theoretical models of greater sophistication and practical application.

In conclusion, the ASSENT approach has been shown to have some value in enhancing our understanding of owner-managers and, in particular, in distinguishing between owner-managers having different levels of Growth-Orientation. It can thus contribute to improving the relevance of strategic interventions in the small business sector and enriching our models of the "entrepreneurial" personality.

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Appendix
Summary of Dimensions Assessed During "assent"

Myers Briggs Type Indicator

Extraversion (E):

Oriented to the external world of people and events and draw energy from this; likely to be sociable and expressive, learn by doing and discussion, and have a breadth of interests.

Introversion (I):

Oriented o the inner world of ideas and experiences and draw energy from this; likely to be private and contained, learn by reflection and mental practice, and have a depth of interest in 1 or 2 particular things.

Sensing (S):

Prefer to deal with the practical here-and-now; observant, factual, concrete, notice the details, want information step-by-step (sequential processing).

Intuition (N):

Like to see the Big Picture and the relationships between facts/events; look for patterns and possibilities ans new ways of doing things, abstract/theoretical, future-oriented, trust to inspiration, jump around/leap in anywhere (parallel processing).

Thinking (T):

Prefer to make decisions on the basis of logic, objectivity, analysis; look for an objective standard of truth, orientation to problem-solving, reasonable/fair.

Feeling (F):

Prefer to make decisions based on person-centered values; look for harmony and recognition of individuals, sympathetic, compassionate and supportive of others.

Judging (J):

Prefer to live in a planned, orderly way' like to ave things settled and decided, tend to stick to a plan or schedule and see things through to completion, systematic, organized, methodical, eliminate ambiguity and uncertainty.

Perceiving (P):

Prefer to live in a flexible, spontaneous way; seek to experience

and understand life rather than control it, adaptable, open to change, energized by last-minute pressure, comfortable with ambiguity and uncertainty.

Learning Styles Questionnaire

Activist (A):

Learning by experiencing; open-minded, gregarious, try anything new, act first/ think about the consequences later, jump from one activity to the next, get bored with consolidation/ implementation, tackle problems by brainstorming.

Reflector (R):

Learning by reflection/ observation: cautious, thoughtful, look at all the angles before reaching a decision, low profile, listen to others and get the drift of a discussion before making their own points, tackle problems by collection and analysis of data.

Theorist (T):

Learning by assimilation/ conceptualisation; adapt and integrate observations into theories, interested in basic assumptions, like to fit things into a rational scheme, uncomfortable with the ambiguous, tackle problems by logic.

Pragmatist (P):

Learning by testing/ practice; keen to try out new theories, techniques and ideas, respond to problems and opportunities as a challenge, practical, down to earth, decisive, tackle problems by action/ application.

Leadership Opinion Questionnaire

Consideration (C):

Emphasis on creating opportunities, releasing potential, encouraging growth, providing guidance, "management creates the framework within which people achieve their own goals", "management by control"

Structure (S):

Emphasis on intervention, direction, persuasion, supervision, rewards/punishments; "management consists of getting things done through people", "management by control"

Belbin Self-Assessment Questionnaire

Company Worker (CW)*:

Hard working, practical, disciplined, loyal reliable; will do what needs to be done irrespective of personal preference; may be prone to rigidity.

Chairman (CH)*:

Mature, trusting, confident; good at spotting individual talents

and harnessing them to group effort, strong on delegation; may be better at dealing with colleagues of equal or near rank than directing subordinates.

Shaper (SH):

Energetic, strong drive, competitive, assertive, challenging; thrive under pressure; will take the unpopular decisions; action oriented; may be insensitive to others.

Plant (P):

Innovative, unconventional, independent; generate new proposals; solve complex problems; may lack practical constraint.

Resource Investigator (RI):

Outgoing, inquisitive; adept at developing contacts externally and exploring new opportunities; natural negotiators; need to be stimulated by others or may lose enthusiasm.

Monitor Evaluator (ME):

Serious, prudent, high in critical thinking; thinks things through before reaching a decision; seldom wrong; may appear dry and overcritical.

Team Worker (TW):

Supportive, sociable, perceptive, diplomatic, flexible; good listeners; promote morale and harmonious relations; may be indecisive to avoid friction.

Completer Finisher (CF):

Strong on follow through and attention to detail; foster sense of urgency; concern with high standards; may be unwilling to delegate and become overloaded.

* Company Worker and Chairman have been renamed as implementer and Co-ordinator respectively in the more recent version of Belbin's model.

Gordon's Survey of Personal Values

Practical Mindedness (P):

To always get one's money's worth, to take good care of one's property, to do things that will pay off.

Achievement (A):

To work on difficult problems, to have a challenging job to tackle, to set the highest standards of accomplishments for oneself.

Variety (V):

To do things that are new and different, to have a variety of experiences, to travel a great deal, to experience an element of

danger.

Decisiveness (D):

To have strong and firm convictions, to make decisions quickly, to come directly to the point, to come to decision and stick to it.

Orderliness (O):

To have well-organized work habits, to keep things in their proper place, to follow a systematic approach, to work according to a schedule.

Goal Orientation (G):

To have a definite goal toward which to work, to stick to a problem until it is solved, to direct one's efforts towards clear-cut objectives.

Gordon's Survey of Interpersonal Values

Support (S):

Being treated with understanding, receiving encouragement from others, being treated with kindness and consideration.

Conformity (C):

Doing what is socially correct, following regulations closely, doing what is accepted and proper.

Recognition (R):

Being looked up to and admired, being considered important, attracting favourable notice.

Independence (I):

Being free to make one's own decisions, being able to do things in one's own way.

Benevolence (B):

Doing things for other people, sharing with others, being generous.

Leadership (L):

Being in charge of other people, having authority over others.

In conclusion, the ASSENT approach has been shown to have some value in enhancing our understanding of owner-managers and, in particular, in distinguishing between owner-managers having different levels of Growth-Orientedness. It can thus contribute to improving the relevance of strategic interventions in the small business sector and enriching our models of the "entrepreneurial" personality.

Potential Capability And Organizational Transition:
An Application Of Elliott Jaques' Stratified Systems Theory
In A Family-Owned Business

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Abstract

The ability for a family-owned business to transition from one organizational stage to another can be extremely difficult. It requires the owner and their managers to develop new skills as the business grows. Unfortunately, many family-owned businesses do not survive the transformation. The problem may stem from the owners' and their managers' potential capability. An exploratory study was conducted using Elliott Jaques' Stratified System Theory to understand the difficulties facing a family-owned business in the transformation process.

Introduction

The passage from one organizational phase to another is often difficult in an entrepreneurial and family-owned business. The empirical literature in entrepreneurship and family-owned business indicate that one of the major problems is the inability of the founder(s) and his or her managers to navigate the change from an entrepreneurial business to a professionally managed business (Gupta and Chin 1994; Dyer, Jr., 1988; Hofer and Charan 1988).

The successful passage requires the founder/leader(s) and their managers to grow and acquire new skills as the business expands. Their ability to assimilate new skills and knowledge may be based on their potential capabilities, as outlined in Elliott Jaques' Stratified Systems Theory (1989). The study examines the validity of using Jaques' theoretical framework in helping a family-owned business ease the transition from one organizational stage to another. Therefore, the purpose of the study was to explore the relationships among key managers, their potential

capabilities and their changing roles and responsibilities in a family-owned business.

Literature Review

Researchers have argued that organizations evolve through various stages of development in a consistent and predictable manner (Adizes 1989; Churchill and Lewis 1983). Each stage is characterized by the organization's size or complexity, the business task, and the managerial leadership role requirements (Hanks et. al, 1993). According to a study conducted by Eggers and Leahy (1993), different managerial leadership capabilities are required at each organizational stage. Therefore, management builds the foundation for the organizational structure by making choices based on the task associated with each stage (Greiner 1972). As a result of these choices, the organization's structure emerges (1972). Consequently, managerial leadership behaviors and/or capabilities of an organization will determine the organization's outcome (Eggers and Leahy 1993; Greiner 1972).

Managerial Capability

Jaques and his co-author, Clement, explain that a managerial leadership role requires an individual to organize, solve problems and provide meaning for his/her subordinates (1991). Therefore, managers must have the capability to see further than the individuals they are leading. Otherwise, managers will not add value to their employees. The problem stems from finding conditions where the manager's capability will contribute to the organization's performance, and finding an accurate measure for an individual's capability (1991).

In a study conducted by Jaques and Cason (1994), they found that an individual's potential capability (PC) can be measured by determining the mental process used by a person when solving a problem. The following section is the background theory of Jaques' theoretical framework and its application to a family-owned business.

Background Theory

Jaques proposes that an organization should be requisitely structured so that managerial roles, task complexity of each level, and an individual's PC are aligned. In summarizing his Stratified Systems Theory, Jaques points to "four major sets of factors [that are] in relation to each other:

"...(1) the capability [PC] of the individual, in terms of modes, mature throughout life at a series of higher and higher levels of capability ... (2) a series of higher and higher levels of inherent complexity in work which corresponds to the levels of capability [PC] in individuals ... (3) a series of higher and higher levels of organizational structure which reflects both levels of work complexity and of individual capability ... (4) wide range of processes, including managerial leadership practices, to be applied with accountability and consistency" (1996: 12).

Managerial Accountability Hierarchy (MAH)

Jaques Stratified Systems Theory is based on a "managerial organizational system" with a structure of a "hierarchical system of managerial layers" (Jaques 1996: 2). According to Jaques, "the MAH is an organizational system in which to employ people and to deploy their talents to get work done" (1996: 35). He defines "a manager specifically as a person who is held accountable for the output of others, for sustaining a team capable of producing those outputs and for giving effective leadership to that team" (1996: 35). Therefore, "a manager must be able to add value to the work of immediate subordinates" (1996: 35).

Jaques found a universal underlying pattern of stratification in managerial hierarchies. The number of accountable managerial layers required for an organization is based on role complexity and the number of business functions that must be delegated (Jaques 1996). For example, when a business is small, an owner-manager may be able to handle all but a few functions of the business. As the business grows and becomes more complex, the owner-manager needs to delegate more of the functions. Consequently, when the role complexity of the owner-manager increases as the organization grows in size, the number of required managerial layers also grows.

Role Complexity

According to Jaques, role complexity is defined as the level of difficulty of the required tasks. He states that "the true source of difficulty in any problem lies in its complexity" (1996: 64). Jaques explains that "the complexity in a task lies not in the goal but in what you have to do in order to get there" (1996: 64). Therefore, he argues that "complexity may be defined in terms of the number of variables that have to be dealt with in a given time in a situation, the clarity and precision with which they can be identified, and their rate of change... As complexity is reduced, tasks can be delegated to lower strata" (1996:64). Jaques found the manager's time-span of discretion (TSD), which is further explained in the next section, is the key measurable attribute of role complexity.

Time-span of Discretion

Jaques defines time-span of discretion as "the targeted completion time of the longest task or task sequence in a role" (1996: 132). Jaques found that "time-span measurements reveal a universal basic structure of organizational strata for all MAH [managerial accountability hierarchy] everywhere" (1996: 38). Using a manager's time-span of discretion as a measure of role complexity, Jaques developed a system for measuring executive roles. He postulates that the boundaries in a managerial hierarchy increase logarithmically from 1 day to 3 months (Level 1), 3 months to 1 year (Level 2), 1 year to 2 years (Level 3), 2 years to 5 years (Level 4), 5 years to 10 years (Level 5), 10 years to 20 years (Level 6), 20 years to 50 years (Level 7) and 50 years + (Level 8) (Jaques 1996).

In addition to time-span of discretion, Jaques observed that at each managerial level there is a "progression of complexity from one level to the next higher. This progression is marked [not only] by increasing time-span [but also] by increased complexity of the cognitive process required of the incumbent" (Lewis and

Jacobs 1992: 19). Jaques also asserts that he has found "a series of higher and higher levels of inherent complexity in work [at different managerial layers] which corresponds to the levels of capability in individuals" (Jaques 1996: 12). Therefore, he suggests that "people carry out tasks of different levels of complexity" based on the type of mental processing and order of information complexity that an individual is capable of using (1996: 12). Mental processing and complexity of mental processing are explained in the next two sections.

Mental Processing

Jaques states that mental processing is the individual's "mental working processes by which you [an individual] take information, pick it over, play with it, analyze it, put it together, reorganize it, judge and reason it, make conclusions, plans and decisions, and take action" (Jaques 1996: 18) According to a study conducted by Jaques and Cason, an individual will use one of four types of mental processing, each of which has distinctive phrases or processes, when solving problems (1994). The four processes are declarative, cumulative, serial, and parallel (1994). In addition, they found the "four methods of mental processing can be observed in each of two different orders of information, symbolic and abstract, used by adult subjects; they are recursive and maintain their hierarchy of complexity" (Jaques and Cason 1994: 61). (See Table 1)

Complexity of Mental Processing

Jaques points out that an individual's PC to perform work is determined by his or her level of complexity of mental processing (1996). He defines complexity of mental processing as the type of mental process together with the level of information complexity that an individual uses when solving problems. Therefore, the process of identifying an individual's complexity of mental process is a two-part procedure. First, the researcher observes the type of mental process used and second, the order of information complexity.

According to Jaques and Cason, the range for most adults is from declarative/symbolic, level 1 to parallel/abstract conceptual, level 8 (1994). They suggest "there is one category [of complexity] of mental processing that matches the span of level of work for each specific organizational stratum in the managerial hierarchy" (1994: 61). Table 1 provides a summary of the complexity of mental processing associated with each managerial role. The table includes the logic used, pattern of mental process, order of information, and the managerial level associated with each organizational role in Jaques' MAH.

Table 1: Level of Managerial Role Associated with Complexity of Mental Processing in Jaques' Managerial Accountability Hierarchy

Logic	or-or	and-and	if-then-then	if-and-only-if
Pattern of Mental Process	declarative	cubulative	serial	parallel

Explanation of Mental Process	* unconnected arguments	* linked arguments	* cause/effect sequences	* cause/effect sequences linked & interwoven
Order of Information Complexity	Symbolic verbal	Symbolic verbal	Symbolic verbal	Symbolic verbal
Explanation of Information Complexity	* thoughts used as symbols	* thoughts used as symbols	* thoughts used as symbols	* thoughts used as symbols
Level	I	II	III	IV
Logic	or-or	and-and	if-then-then	if-and-only-if
Patern of Mental Process	declarative	cumulative	serial	parallel
Explanation of Mental Process	* unconnected arguments	* linked arguments	* two or more cause/effect sequences	* two or more cause/effect sequences interwoven
Order of Information Complexity	Abstract conceptual	Abstract conceptual	Abstract conceptual	Abstract conceptual
Expanation of Information Complexity	* thoughts refer to other thoughts	* thoughts refer to other thoughts	* thoughts refer to other thoughts	* thoughts refer to other thoughts
Level	V	VI	VII	VIII

Potential Capability (PC)

According to Jaques, PC refers to "a person's highest current level of mental complexity. It is the maximum level at which someone could work at the present time, given the opportunity to do so and provided that the work is of value to him/her, and given the opportunity to acquire the necessary skilled knowledge. This level of work is the level that people aspire to have and feel satisfied if they can get. When people have work at their current PC, they feel [believe] they have an opportunity for the full expression of their capability" (Jaques 1996: 134). Jaques also points out that an individual's PC increases as his or her complexity of mental processing increases (1996). An increase (or maturation) in an individual's PC is associated with a change in level and enables an individual to work at higher levels of role complexity.

Method of Measuring PC

Jaques and Cason conducted interviews with individuals from various managerial levels in two different organizations to explore the reliability of using an interview method to observe a subject's mental processing (1994). They believed that when an individual was fully engrossed in discussing a problem that he or she values, his or her mental processing could be observed. In addition, they wanted to test the relationship between "a person's category of complexity of mental processing when fully engrossed in a discussion (dependent variable) and the highest level work role that person was judged to have the PC to carry at that time (independent variable)" (1994: 41). Jaques' and Cason's hypothesis was that individuals will be effective managerial leaders when their complexity of mental processing matches the role complexity of the task required.

The correlation between Jaques' and Cason's assessments of complexity of mental process was high (.95) and significant (1994). In addition, the correlation between the average of the researchers' assessments of the subjects' complexity of mental process and the average of the managers' and subjects' judgments of the subjects' PC was high (.97) and significant (1994). Therefore, Jaques and Cason contend that an individual's category of complexity of mental processing is a valid and reliable method of measuring an individual's PC to perform managerial work at a specific organizational level (1994).

Study's Objective

The purpose of the study was to explore whether Jaques' Stratified Systems Theory could be used in a family-owned business to understand the difficulties and the changes required to transition the business from one organizational stage to another. Therefore, the objective of the study was to identify, explore and describe the relationships among key managers, their potential capabilities and their changing roles and responsibilities.

Method

The method section includes a description of the organization selected for the study; a description of the sample used, procedures used for the present study; and the methods employed to perform the study.

Description of the Organization

A successful second generation family-owned business was chosen for the present study. The fifty year old business is experiencing significant external and internal changes. In the last few years, several competitors have entered the market. For the most part, the competition is highly motivated, and has the competitive advantage of size. If the family-owned business is going to compete with the large publicly-owned companies, it must keep pace with the sophisticated competition. Since the family-owned business cannot compete on size alone, it must become more professional. The CEO's concern is whether his long-term employees are capable of handling the managerial difficulties present in the changing environment. If the business is to survive, then new learning must occur. Transitional periods are

uncomfortable for all concerned, and the family-owned business used in the present study is no exception.

The subject's and company's names were changed to provide anonymity for the participants and the business. Uniform, Inc. was formed with one plant in 1947 to lease and service uniforms for industrial businesses. For fifteen years, George, the founder's son was the president. In 1981, George became the CEO and a new president was hired. The new president, Jim, became a close friend of the family and continued to manage the business using the same managerial philosophy as the founder and his son.

In 1992, Jim was ready to retire, but as had been the case in 1981, none of the family members were interested in running the business. A new president, Geoffrey, was selected based on his previous experience in managing other large corporations. Currently, George is the chairman of the board and CEO, Jim is the vice-chairman and Geoffrey is the president.

There are seven plants and three branch operations. Each plant is run by a general manager (GM) who is responsible for running his plant's operation including sales, service and production. Each plant has a similar managerial structure and each position in the various plants has similar tasks. The five vice presidents act as consultants with various specialized functions (marketing, engineering, finance and human resources) to the GMs. However, the senior managers do not have managerial responsibility for the GMs. Therefore, the seven GMs and the five vice-presidents report directly to the president. The CEO is actively involved in assuring that the president continues to personify the values that both he and the founder have espoused. The CEO is the builder and gatekeeper between the family and the business systems. He acts as a sounding board and shares information with the president regarding the changes in strategy and structure. The president is accountable for strategic planning, managing and running the business. The vice chairman, Jim, works four hours a day and is responsible, as needed, for mentoring and advising the new president.

During the early 1990's, the company experienced marginal increases in gross receipts and the profit percentage has declined. The reduction in profits is a result of competition's sophisticated technology and financial resources that has constrained industry prices and reduced Uniform Inc.'s sales growth and profit margins. The new president, Geoffrey, is aware of the changes that are required for the business to remain competitive. Consequently, Uniform, Inc. is starting to grow and professionalize its operations with the active use of formal systems and procedures. In addition, the president has developed a strategic plan which includes modernizing the existing plants and adding plants in new markets. The company will need additional financial and human resources to implement the plan. Since the company has substantial assets and no debt, leverage is an option. However, the company has never used debt to finance their growth.

The president and CEO are concerned that the business lacks the human resources to implement the strategic plan. Specifically, they are concerned that some of the existing general and senior middle managers, who have grown up, with the company, may not be capable of managing their existing plants in the new highly

competitive market. In addition, the company has not made a concerted effort to hire employees that will have the capabilities to move up into more complex jobs as the business expands. Previously, when a management position was available, the person next in line was usually given the position. Therefore, very few middle managers have been hired from the outside. Since several general and middle managers are nearing retirement, there is an increased demand for capable individuals to fill those roles. The president is concerned that the company does not have enough capable people to fill these required positions and has gone outside of the organization. The decision represents a philosophical change for the company.

During the 1980's, the general managers were somewhat autonomous. Managers were rarely fired and there was little enforcement of accountability for a plant's performance. In interviews with the researchers, many of the long term employees stated that the change to a more professional organization has been difficult for them. The new president, supported by the CEO, is trying to implement a formalized structure that is fair to all the employees. They believe that Jaques' model may provide a method to measure the capabilities of the existing managers and to assess the level of PC of the new managers needed to implement their strategic plan.

Description of the Sample

Four plants in North Carolina, which have been in operation for at least 3 years, were chosen for the present study. All the general managers, functional managers and a random selection of the first line managers were interviewed from the four plants, along with all of the vice-presidents and president. There were a total of 30 subjects chosen. Each plant can be studied as a small business, with approximately the same number of managerial levels and services.

Procedure

To assess PC, each subject was asked, "What is the single most exasperating business problem you are aware of, and what kind of solutions should be considered?" In addition, a second question was used in two of the plants to determine whether in future research a second question was needed to assure sufficient data for the ratings. The question was, "What should be done to solve the welfare problem in the United States?" This question was broad enough to give the subject ample opportunity to become engrossed in the conversation and to employ his or her highest level of PC. Furthermore, a non-business related question was chosen because it was thought to be less threatening to individuals who might be apprehensive about discussing disturbing business issues. The subjects were assured that their discussions were to be used for research and would be kept confidential. The interviews were taped and transcribed.

The researchers analyzed the interview transcripts to determine each subject's highest level of PC. The researchers' ratings were based on the criteria shown in Table 2. Each rater marked the sections of transcript that corresponded with a specific category of mental process (declarative, cumulative, serial or parallel) and level of information complexity (symbolic or

abstract). In order to quantify the mental processing levels, they were converted to a series of numbers taking values from 1 to 21. Individuals who were on the boundary, between levels, were fisted halfway between whole numbers. The next section displays the analysis of the data, followed by a discussion of the results.

Data Analysis

The correlation between the researchers' assessments of the subjects' PC was high (.98) and significant. The finding constituted sufficient evidence that the researchers' ratings were reliable. Figure 1 (omitted) represents the distribution of the sample subjects' PC based on their displayed level of mental process (PC).

Table 2 presents the managerial role and their intended level of complexity based on the president's assessment of time-span and tasks requirements.

Table 2
Summary of the Managerial Role within the Organization

Role	Jaques' Levels	Time-Span
President	V	5-10 years
Vice President	IV	2-5 years
General Manager	IV	2-5 years
Sales/Service Manager	III	1-2 years
Production Manager	III	1-2 years
Office Manager	II	3 months - 1 year
Sales Supervisor	II	3 months - 1 year
Service Supervisor	II	3 months - 1 year
Production Supervisor	II	3 months - 1 year
Production Workers	I	1 day - 3 months

Figure 2 (omitted) represents the number of managers at each level of PC that are necessary to operate the four plants.

After completing the subjects' ratings and the level of PC required at each organizational level, the researchers were interested in validating their assessment of the subjects' PC. Therefore, the president was asked to assess the subjects' level of potential capability (PC) based on their performance. There was a .92 correlation between the president's assessment of the subjects' PC to work at a specific level and the researchers' observation of the subjects' level of mental process.

Finally, the researchers determined the number of subjects whose PC were not in alignment with the level of complexity of their assigned roles. In Figure 3 (omitted), the integrated model shows that 50% (including those on the borderline between levels) of the managerial roles are being occupied by individuals who did not exhibit the PC for fulfilling their role requirements.

Discussion

There were a number of interesting observations that occurred as a result of the study. As shown in Figure 3, there are a number of subjects are on the borderline between levels, thus making it difficult for them to function at the higher level. The problem

appears to be that the PC (including those on the borderline between levels) of half of the general managers and vice-

presidents are not at the level necessary to perform in the roles they have been assigned. In addition, five functional managers, representing approximately 50% (including those on the borderline between levels) of the subjects interviewed, have PCS that are not at the level necessary to perform in their assigned roles. However, most of the first line managers displayed the mental processing necessary for their current role. Therefore, the issue facing the president is to determine whether it is possible for the managers to help those individuals who are placed in roles beyond their current PC until they mature to the next level of PC, or whether he is going to reassign those individuals to different roles.

The researchers also found that when the PC of the general managers was close to their senior middle managers, the GMs reported having difficulty in their managerial roles. In one case, for example, the general manager believed the problem with his subordinates was "psychological distance." Another explanation for the problem, which was brought to light by the present study, is that the PC of the subordinates and the managers might be too close. Therefore, the general manager could not add value to his subordinates.

In addition, the researchers were interested in determining the usefulness of a control question in analyzing the subject's PC. In several circumstances, the control question was necessary in assessing a subject's PC. For example when the president of Uniform, Inc. was interviewed, the researchers found that using a control question resulted in a higher assessment of his PC. In the first interview, the president's display of mental processing was limited. The interviewer decided to re-interview the president for two reasons: 1) no control question was used; and 2) the topic of discussion in the first interview related to a personal issue that the researcher speculated may have caused him to hold back on complete engrossment in his discussion. When the second interview was conducted using the control question, the president became engrossed and used a higher level of mental processing. In another interview with a general manager, in which the control question was not used, the researchers were concerned that the general manager may have had a similar experience with the interview process.

The present study provides support for future research using an individual's PC to assess managerial capability in a family owned businesses. The next section includes several recommendation for future research.

Future Research

- * Control question should be used in future research
- * Duplication of the present study to support the reliability and validity of the initial study
- * Longitudinal study, using the existing business, to observe the long-range ramifications of Jaques' theoretical framework on the performance of the business
- * Explore whether differences between predecessors' and successors' PC are related to differences in the performance of a family-owned business following a

succession

Conclusion

Jaques' model appears useful to family-owned businesses that are attempting to transform their business to a more professionally managed organization. by assessing the PC of the managers and the requirements of the managerial roles. In addition, the study supports Jaques' proposition that an individual's displayed level of mental process does appear to correspond to an individual's ability to successfully perform in a managerial role. The close correlation (.92) between the president's assessment of the subject's PC with the evaluation obtained from mental processing supports the conclusion that evaluating complexity of mental processing is a valid measure of PC. The study suggest that it is not necessary to assess the PC of employees as long as the president is aware of his or her employee's current PC. However, Jaques' method of measuring an individual's PC can be helpful in the selection of new employees, in understanding the level of PC required by the employees required for the future of the business and in determining when their current employees will have the PC to handle the complexity of their role.

The study explores how Jaques' theoretical framework can be useful for family-owned businesses to support the transition from one organizational stage to the next. However, structural changes are often difficult in these businesses, especially when the business culture has been one in which the employees have been treated as family members. Therefore, implementation of the strategies and long-range ramifications need to be studied before moving ahead.

In summary, the study demonstrates how Jaques' theoretical framework can be used as a framework for long-term solutions, rather than as a quick-fix instrument. Jaques' Stratified Systems Theory may provide a helpful guide for business owners during the transition from an entrepreneurial venture to a more professionally managed business entity. In addition, Jaques' theoretical framework can provide an objective measure for hiring individuals for roles that match their capabilities to ensure adequate human resources for the present and the future. Anticipating the problems in advance will help the business owners in planning the future growth of their business.

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Founding Family Controlled Firms: Efficiency, Risk, And Value

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An agency theory framework is used to test the effects of founding family control on firm efficiency, capital structure and value. Both the finance literature and the management literature regarding the relationship between firm control and firm value are explored. Controlling for size, industry, and managerial ownership, the results suggest that founding family controlled firms have greater value, are operated more efficiently, and carry less debt than non-founding family controlled firms.

Introduction

While it has generally been accepted that family-controlled businesses differ from professionally managed firms, there is little empirical research to support and advance our understanding of this premise (Daily and Dollinger 1991). What research there is does suggest that there are key differences. Jensen and Meckling (1976) propose that family controlled businesses should be more efficient than professionally-run firms because the costs of monitoring are less in a family controlled firm. Daily and Dollinger (1991) found that there are valid differences between family controlled firms and non-family controlled firms. They report that non-family controlled firms are larger, have lower mortality rates, use different strategies, and rely more on formal control systems than family controlled firms.

In the United States, it is estimated that 30% to 60% of the Gross Domestic Product is generated by family-controlled business (Bellet, Dunn, Heck, Parady, Powell, and Upton 1995). Often these are thought to be "microfirms" (Carsrud 1994, page 39), "mom and pop" type operations. It is estimated, however, that family owned businesses make up approximately 35% of Fortune 500 firms (Carsrud 1994). Furthermore, some estimate that in 80% of all businesses, a controlling family has a significant say in the company's strategic direction (Carsrud 1994, Kets de Vries 1993). Nevertheless, little attention has been given to the effect of family control on business performance and only recently has the definition of a family business been addressed.

A review of both the finance and management literature regarding the relationship between firm control and firm value suggests several important questions. Are founding family controlled firms (FFCFs) run more or less efficiently than other firms? Are FFCFs less risky than other firms? Do FFCFs have a greater value than other firms?

Related Literature

Agency Theory

Though the finance literature has focused on the impact of ownership control on corporate value, it has little to say about how family control affects the way in which a firm is operated (e.g. Jensen and Meckling 1976, Fama and Jensen 1985). More recently, finance scholars have studied the effect of the increase in ownership concentration associated with corporate takeovers on corporate efficiency (e.g. Kaplan 1989, Smith 1990, and Muscarella and Vetsuypens 1990). The literature has also examined the relationship between ownership structure and capital structure (e.g. Masulis 1988, Grossman and Hart 1986).

Jensen and Meckling (1976) brought the issue of misalignment between the interests of managers and those of owners to the forefront of financial economic study. Using agency theory as a basis for developing a model of corporate structure, the authors define the agency relationship as "a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent" (Jensen and Meckling 1976, page 308). Agency costs are defined as the sum of the monitoring expenditures by the principal, the bonding expenditures by the agent, and the residual loss (Jensen and Meckling 1976). Jensen and Meckling hypothesize that the larger the firm becomes, the larger its agency costs because monitoring becomes more difficult and costly in a large firm. However, they argue that agency costs can be reduced by increasing the level of managerial ownership in order to reduce monitoring costs.

The authors acknowledge, however, that several considerations are missing in their analysis. Among these considerations is that they assumed that they were dealing only with a single investment financing decision. In other words, they did not deal with any multi-period financial issues. Second, they did not include any consideration of the types of relationships among owner-managers and outside equity holders.

The corporate takeover literature adds support to the agency theory position that more concentrated management ownership leads to greater firm efficiency, due to lower agency problems. Takeovers concentrate ownership and control among a small groups of managers and buyout specialists. This concentration is generally followed by improvements in operating efficiency and increases in firm value. Kaplan (1989), Smith (1990), and Muscarella and Vetsuypens (1990) find evidence of improved efficiency following buyout. The work on corporate efficiency and value changes after takeovers suggests that reduced agency costs due to the concentration of control created by the takeover are responsible for the improvements.

The Jensen and Meckling (1976) position, however, is not uniformly accepted. Demsetz (1983) and Demsetz and Lehn (1985) argue that the level of managerial ownership varies systematically as the managers try to maximize the firm value. Demsetz and Lehn (1985) suggest that the forces affecting ownership structure are the optimal firm size, effective control of managers by owners, government regulation, and the firm's ability to provide amenities to owners.

Thus, they assert that the level of managerial ownership does not affect firm value. However, Daily and Dollinger (1991)

illustrated that there were differences between family controlled and non-family controlled firms with respect to measures of firm size, firm age, firm strategy, and internal control systems. They observed that family controlled firms are smaller, have higher mortality rates, use different strategies, and rely less on formal control systems than family controlled firms. Fama (1980) suggests that the separation of ownership and control can be an efficient form of economic organization. He suggests that the labor market for managers takes the role of assuring that managers act in the best interests of the firm.

The management literature suggests that the lack of separation of ownership and management can offset the positive long-term orientation of the business (Morris 1989). Family differences and role conflict can lead to behavior that does not support the best interests of the firm. Psychological conflict within the family can create costs from sibling rivalry, autocratic behavior, and nepotism that offset the benefits of reduced monitoring (Kets de Vries 1993). Family emotions can also cloud financial vision in issues such as succession planning (Morris 1989).

Ownership Structure, Capital Structure, and Risk

Capital structure is viewed broadly here as the proportion of debt to equity rather than specific types of securities used to finance capital investments. In evaluating capital structure, managers must consider the risk and time frame of the financing decisions.

Masulis (1988) suggests that managers prefer less leverage than shareholders in order to reduce the risk of their undiversified investment in the company. Grossman and Hart (1986), modeling the stockholder-manager conflict, find that increasing leverage reduces managers' discretion over corporate decisions and reduces agency costs associated with managerial discretion.

Risk is defined in the finance literature as the probability that the actual return on an investment will deviate from the expected return (Van Home 1980). A firm will be more or less risky depending on its capital structure (Van Home 1980). Conventional decision theory considers investment choice a trade-off between risk and expected return (March and Shapira 1987).

The management literature suggests that the concept of risk is not nearly so straightforward for managers. Managers do not consider risk to be a probability concept nor do they attempt to reduce it to a single quantifiable construct (March and Shapira 1987). Further, individuals have been found to treat risk as a dynamic factor, using the perspective of change in value rather than total value to evaluate decision (Hollenbeck, Ilgen, Phillips, and Hedlund 1994). Individuals also tend to separate gains from the initial outlay but integrate losses into that outlay (Hollenbeck et al 1994). Finally, only approximations of time frames for are needed for managerial planning rather than the accurate time forecasts called for in the financial model (Simon 1993).

Family businesses are generally considered to have a longer-term perspective than public organizations (Kets de Vries 1993). Oswald and Jahera (1991) found that high levels of inside ownership were associated with higher excess returns. They

state, "The higher levels of inside ownership implies improved decision-making resulting in higher earnings and dividends..." (page 325). These authors conclude that having individuals in the firm with vested interest is beneficial to the long-term performance of the business. Thus, closely held firms would be expected to structure more cautiously than diffusely held firms. Agrawal and Nagarajan (1990) found that there is significantly greater family involvement in corporate operations of all-equity firms than in leveraged firms.

If the founder controls the business, a dimension of risk perception is added. Decisions made with perceived information and individual differences bias the selection among alternatives (Lord 1985). Palich and Bagby (1992) found that entrepreneurs view situations more positively than non-entrepreneurs. Thus, entrepreneurs may be likely to use less debt simply because they have confidence in their ability to handle possible losses resulting from ownership.

The Impact of Founder and Family Control on Firm Value and Other Characteristics

The literature cited establishes that the level of equity held by a firm's management does influence its efficiency and capital structure and, therefore, its value. But if that management is composed of members of a founding or controlling family, does that change the level of influence? Not only do family controlled businesses differ in structural areas (Daily and Dollinger 1991) but the dynamics of family businesses are different than those of a public corporation because of the added dimension of the family relationship (Rosenblatt, de Mik, Anderson, and Johnson 1985, Kets de Vries 1993). The mix of a firm's financial claims such as debt and equity affect the value of a firm because any changes to that mix affect the firm's cash flow and therefore its value (Jensen and Warner 1988).

There are both benefits and problems associated with family control. Culture is more clearly defined because the family spirit will determine the prevailing, values, norms, and attitudes (Kets de Vries 1993). Further, the family members have extensive expertise regarding the family firm since they have known it from early childhood (Kets de Vries 1993). Fama and Jensen (1983), referring specifically to closed organizations suggest that family relationships among owner-managers should reduce agency costs. DeAngelo and DeAngelo (1985) suggests that family membership served to monitor and discipline managers.

The empirical evidence that family control affects the value of the firm has been primarily supplementary detail found in more general studies. The evidence fails to clarify the relationship of founding family control to firm value. Morck, Scheifer, and Vishney (1988) found that the Tobin's Q measure of firm value increases when the founding family holds one of the top two positions for firms incorporated after 1950. Johnson, Magee, Nagarajan, and Newman and Schwert (1985) found that the sudden death of founder-CEOs leads to a stock price increase. While examining the effects of the death of blockholders, Slovin and Sushka (1993) found that founder status does not have any significant effect. Stultz 1988 found that a curvilinear relationship results between managerial ownership and firm value.

Initially values rise as ownership becomes more concentrated and monitoring costs decrease. However, as management becomes more insulated, firms values decrease.

Hypotheses

While the empirical results are mixed, financial theory still indicates that ownership structure affects the efficiency and capital structure of a firm which in turn affect firm value. The arguments for increased efficiency in a family controlled or closely held firm are derived from agency theory arguments. The reduced costs of monitoring resulting from having owners involved in firm management will increase the firm's efficiency. Capital structure is assumed to be affected by risk profile and time frame. Family owners are generally assumed to take a longer term outlook and be less willing to take risks. The increased efficiency of the firm also can lead to increased cash flows which also influence the firm's capital structure.

Existing research supports the premise that family controlled firms are different from non-family controlled firms (Kets de Vries 1993, Daily and Dollinger 1991). The next step is to determine if the value of founding family controlled firms is indeed greater than that of other firms. Fama and French (1992) stress the importance of the market to book equity (ME/BE) ratio in measuring value. "Strong firms with persistently high earnings" have high ME/BE ratios (Fama and French 1996, page 56). The ratio is similar to the Tobin's Q used by Morck et al (1988) and McConnell and Servaes (1990) in assessing firm value.

H1: Founding Family Controlled Firms (FFCFs) are have higher market to book equity ratios than Non-Founding Family Controlled Firms (NFFCFs).

Since this increased value is a result of the assumed increased efficiencies suggested by agency theory and the capital structure preferred by owner-managers, elements of a firm's operations must be examined to determine whether FFCFs operate more efficiently than nonFFCFs. Higher operating efficiency suggests better management. Efficiency can also be viewed as a proxy for lower agency costs.

H1a: FFCFs have more favorable operating ratios than NFFCFs.

As the amount of debt in a firm's capital structure increases, the firm becomes increasingly risky (Van Home 1980). Managers can adjust their capital structure to satisfy their preferences regarding risk and return (Van Home 1980). Managers in FFCFs have a heavy investment in their firms in terms of both financial investment and human capital. They also have a likelihood of receiving quasi-rents from their positions. Thus, FFCFs would be expected to finance more conservatively than non-FFCFs, using less debt and relying more on retained earnings.

H1b: FFCFs choose capital structures that involve less risk than NFFCFs.

Research Methods

Founding family controlled firms are defined to be public corporations whose CEOs are either the founder or a member of the

founder's family. Through biographical sketches of firm CEOs provided by "The Business Week CEO 1000," 219 such firms were identified. Managerial ownership data come from the June 1987 Disclosure and are calculated as the percentage holdings of officers and directors as reported in proxy statements. The remainder of the data comes from COMPUSTAT database for the years 1986 through 1988. The stock prices are year-end closing prices. The 1986-1988 averages are calculated using only those firms that have data for all three years.

Matched pairs methodology was used to control for size, industry, and ownership effects. Using COMPUSTAT, screens were run for public companies whose 1987 sales were plus or minus 25 percent of each Founding Family Controlled Firm (FFCF) initially using four-digit SIC classifications, then three- and finally two-digit classifications. Next, data was obtained on the percentage of the firms owned by officers and directors of the FFCF firms and the potential controls. When proxy data was unavailable, data from SEC Forms 3 and 4 was used.

In order to separate the effects of family ownership and control from non-family management ownership, two sets of control matches were formed using size, industry and ownership data for the FFCFs and the potential control firms. One set, the "ownership match," contained the firms closest to each FFCF in terms of size, industry, and managerial ownership. These will be referred to as the Non-Family Controlled Firm, or NFCF, group. The other control set, the "diffuse set," was also matched in terms of size and industry but also contained the firms with the lowest percentages of managerial ownership in the size and industry class. These will be referred to as the diffusely held firm, or DHF, group.

Because exact ownership matches were not available, an attempt was made to match the ownership level of the ownership control firms with the ranges used by Morck et al (1988): 0 to 5 percent ownership, 5.01 to 15 percent ownership, 15.01 to 25 percent ownership, 25.01 to 50 percent ownership, and over 50 percent ownership. A slight variation was added. The two highest ranges were subdivided. When a match could not be found, an attempt was made to find a firm with managerial ownership within 10% of that of the FFCF.

After forming matched pairs, the data set contained 109 ownership matches and 128 diffuse matches. Eighty-five FFCFs had both ownership and diffuse matches. The sample was tested for an ownership effect with the FFCFs and each set of controls. A second test was conducted to determine if there was an ownership effect between the two control groups. Comparisons were made using the one-tailed Wilcoxin signed rank tests.

The comparisons were made using market data performance measures, accounting data operating efficiency measures, and accounting data measures of firm financing. The ME/BE ratio was used to measure firm value. The stock return were also examined as an additional measure of firm value.

Accounting ratios and sales growth were used to assess operating efficiency. Productivity was measured through sales growth, sales per employee, and cash flow per employee. Profitability was examined through gross margin and net margin. Asset utilization was examined through total asset turnover. The ratio of working

capital to sales was used to determine if FFCFs controlled their investment in working capital differently than non-FFCFs.

To measure the financial structure of the firm, the ratio of total debts to total assets was examined as well as the ratio of short-term debt to assets and the common stock dividend payout rate.

Results

Part A of Table 1 compares the characteristics of the FFCF group and the NFCF group. Part B of Table 1 compares FFCFs with DHFs. Part C of Table 1 compares the two control groups. Each control group includes firms that are of similar size and from the same industry but differ in the percentage of managerial ownership.

Table 1: Descriptive Statistics

	Founding Family Group	Non-Founding Family Controlled Group	Founding Family Controlled Group	Diffusely Held Group	Non-Founding Family Controlled Group
Number (n)	109	109	128	128	85
Mean Sales (\$ million)	1,283	1,278	1,442	1,391	1,373
Standard Deviation Sales	1,819	1,842	2,316	2,272	2,046
Median Sales (\$ million)	610	632	579	515	573
Mean Ownership (percent)	12.8	12.3	20.7	2.6	12.9
Standard Deviation	11.9	13.1	19.5	2.9	13.4
Median Ownership	9.1	6.7	13.1	1.6	7.6
Founder controlled (n)	73	NA	83	NA	NA
Founder's Family Controlled	36	NA	45	NA	NA
Median Earnings/Price Ratio	0.065	0.075	0.063	0.066	0.060
Difference (See Note a.)/[n]	-0.010	[58]	-0.003	[68]	-0.007
Median Beta ('86-'88 See note b.)	1.225	1.125	1.300	1.200	1.175
Difference (See Note a.)/[n]	0.100	[62]	0.100**	[71]	0.025

** Significant at the .05 level

Notes

- a. Differences are the difference between the sample firm's median and the control firm's median. Significance levels are based on one-tailed Wilcoxin signed-rank tests.
- b. Individual year-end betas are calculated using five years of

monthly data.

An examination of Table 1 shows that the matching process appears to have worked well. In each panel, mean sales levels for the samples and controls are much the same. Median sales levels differ more because of the skewness of sales volume within industries. Managerial ownership percentages for the FFCF sample and the ownership controls are comparable, while they are dissimilar for the FFCF sample and the diffuse control.

While there was no conscious effort to match on earnings/price (E/P) ratios, the groups are similar across this dimension. In no case is there a statistically significant difference between the FFCFs and the control firms' E/P based on a one-tailed Wilcoxin signed-rank test. However, there is a significant difference between the median E/Ps of the ownership and diffuse controls.

The FFCF sample and the control groups have similar median betas. The FFCF sample firms' betas are generally slightly higher. Only in one case, however, is there a statistical difference. In Part B, the difference between the sample firms' median beta of 1.3 is significantly different from the 1.2 median beta of the diffuse control group at the 0.05 level.

The differences between sample and control group statistics were tested using Wilcoxin signed rank tests for the median values on all but the stock market returns. The mean difference for stock market returns were tested using a two-tailed t-test while the significance difference for the standard deviations on stock returns was tested using a one-tailed F-test. Where significance exists, these tests allow us to note that there are differences between FFCFs and the control group.

FFCFs vs. Ownership Match

Table 2 presents the comparison between the FFCF sample and the control group matched on size, industry, and managerial ownership percentage. As expected, the FFCFs have higher Market/Equity to Book Equity ratios, provide higher stock market returns, have attributes that suggest they are better run, and have more conservative financing than similar closely held firms in which managers are not family members.

Table 2: Comparison between Founding Family Controlled Firms and the Control Group Matched on Size, Industry, and Managerial Ownership

Measure	1986	1987	1988	1986-1988
Value				
Sample Median				
(Market Equity/Book Equity)	2.26	1.94	1.97	2.06
Difference from control				
(See notes a, b)	0.64***	0.66***	0.65***	0.64***
Number (n)	69	69	69	59
Sample Mean Stock Return	0.340	0.166	0.042	0.584
Control Mean Stock Return	0.211	0.046	0.111	0.35
Difference from control				
(See notes a, c)	0.129**	0.120*	-0.069	0.234**
Number (n)	104	91	83	83
Sample Standard Deviation	0.445	0.448	0.321	0.642

Control Standard Deviation	0.472	0.392	0.482	0.788
Difference from control				
(See notes a, d)	-0.027	0.056	-0.161***	0.146**
Number (n)	104	91	83	83
Operating Efficiency				
Sample Median Sales Growth	0.139	0.165	0.321	0.209
Difference from control				
(See notes a, b)	.012***	.070***	.068***	.043***
Number (n)	109	101	97	97
Sample Median Sales /Employee (\$000s)	107.9	113.5	115.6	107.2
Difference from control				
(See notes a, b)	8.9	4.3	1.8	0.6
Number (n)	96	94	77	77
Sample Median Cash Flow /Employee (\$000s)	11.0	12.2	12.3	13.3
Difference from control				
(See notes a, b)	4.4***	5.3***	5.0**	6.2***
Number (n)	88	86	71	71
Sample Median Gross Margin	0.365	0.364	0.350	0.360
Difference from control				
(See notes a, b)	.069**	.069***	.058**	.068***
Number (n)	89	89	78	78
Sample Median Net Margin	0.063	0.069	0.067	0.066
Difference from control				
(See notes a, b)	0.021***	0.027***	0.024***	0.023***
Number (n)	106	107	93	95
Sample Median Total Asset Turnover	1.100	1.090	1.115	1.070
Difference from control				
(See notes a, b)	-0.070	-0.125	-0.130	-0.162
Number (n)	109	104	86	80
Sample Median (Working Capital /Sales)	0.215	0.212	0.204	0.212
Difference from control				
(See notes a, b)	0.014	0.027	0.050**	0.017*
Number (n)	77	77	66	66
Risk				
Sample Median (Total Debt /Total Assets)	0.158	0.206	0.200	0.196
Difference from control				
(See notes a, b)	-0.078**	-0.032**	-0.071***	-0.062***
Number (n)	107	107	96	96
Sample Median (Short-term Debt /Assets)	0.014	0.018	0.016	0.021
Difference from control				
(See notes a, b)	-0.023***	-0.017**	-0.022***	-0.019***
Number (n)	106	107	96	96
Sample Median Cash Dividend Payout Ratio	0.154	0.151	0.186	0.149
Difference from control				
(See notes a, b)	-0.090**	-0.096***	-0.103***	-0.146***
Number (n)	76	78	67	58

Notes:

- a) Significance levels: *** denotes 0.01 level, ** denotes 0.05 level, and * denotes 0.10 level.
- b) Significance level based on one-tailed Wilcoxin signed-rank test.
- c) Significance difference between sample and control means based

on two-tailed paired sample t-test.

- d) Significance difference between sample and control standard deviations based on two-tailed F-test.

The first comparison illustrates that FFCFs sell at higher ME/BE premiums than NFCFs. Each \$1 of FFCF book value sold for \$2.06, a premium of about \$0.64 over the control groups. This difference is significant at greater than the 0.001 level for each of the years 1986, 1987 and 1988 and for the three year average. Thus, Hypothesis 1 is supported.

The FFCFs generate higher sales growth (an additional 4.3 percent per year on average), higher gross and net margins on sales, and more cash flow per employee. Each of these differences is significant at the 0.01 level, showing support for Hypothesis 1a. It is interesting to note that these differences are not the result of higher-volume operations. The FFCFs' sales per employee, while minimally higher, are not significantly different from those of the ownership match firms. The total asset turnover is lower for the FFCFs but the difference is not statistically significant.

In further support of Hypothesis 1a, examination of Table 2 suggest a more conservative management style on the part of FFCFs. FFCFs have more working capital per \$1 of sales volume. They use less debt, particularly short-term debt. FFCFs pay out a considerably smaller portion of earnings as dividends. The difference in the working capital to sales ratios are relatively modest. FFCFs carry working capital equal to 21 percent of sales, an average difference from the controls of 1.7 percent over the 1986 to 1988 period. This difference is significant at the 0.10 level and appears to be driven by the 5 percent difference in 1988 which is significant at the 0.05 level. The differences for 1986 and 1987 are not significant.

Hypothesis 1b is also supported. The differences between the ways the FFCFs and the ownership match finance operations are much greater. Over the 1986 to 1988 periods, the median debt/asset ratio for FFCFs is 19.6 percent while that for the ownership match is 6.2 percent higher. This difference is significant at greater than the 0.001 level. Individual year differences range from 3.2 percent to 7.8 percent and are significant at the 0.01 and 0.05 levels.

The difference in the use of short-term debt is even more pronounced and just as significant statistically. FFCFs carry approximately one-half the relative amount of short-term debt that the ownership match control group firms carry. The FFCFs short-term debt to sales ratios are approximately half those of the ownership match firms. The median short-term debt to sales ratio for the FFCFs over the 1986 to 1988 period is 2.1 percent while that for the ownership match is 4.0 percent, a difference of 1.9 percent ($p < .01$). The differences for the individual years range from 1.7 percent to 2.3 percent and are significant at either the 0.01 or the 0.05 levels.

FFCFs vs. Diffusely-owned Controls

Table 3 presents the comparison between the FFCF sample and the control group matched on SIC classification and size. Most firms

in the control group are diffusely owned. As expected, the hypotheses are again supported. The FFCFs have higher Market/Equity to Book Equity ratios, provide higher stock market returns, have attributes that suggest they are better run, and have more conservative financing than similar closely held firms in which managers are not family members.

Table 3: Comparison between Founding Family Controlled Firms and the Control Group Matched on Sic Classification, Size, and Diffuse Ownership

Measure	1986	1987	1988	1986-1988
Value				
Sample Median (Market Equity /Book Equity)	2.16	1.98	1.94	2.11
Difference from control (See notes a, b)	0.66***	0.61***	0.43**	0.54***
Number (n)	85	83	70	70
Sample Mean Stock Return	0.358	0.181	0.018	0.595
Control Mean Stock Return	0.205	0.047	0.214	0.459
Difference from control (See notes a, c)	0.153*	0.134**	-0.196***	0.136
Number (n)	120	101	94	94
Sample Standard Deviation	0.480	0.441	0.342	0.696
Control Standard Deviation	0.383	0.367	0.399	0.623
Difference from control (See notes a, d)	0.097**	0.074**	-0.057*	0.073*
Number (n)	120	101	94	94
Operating Efficiency				
Sample Median Sales Growth	0.165	0.163	0.370	0.239
Difference from control (See notes a, b)	0.059***	0.052***	0.135***	0.084***
Number (n)	128	115	112	112
Sample Median Sales /Employee (\$000s)	116.5	122.2	132.8	127.0
Difference from control (See notes a, b)	8.1**	12.9*	12.6	13.9*
Number (n)	112	107	82	82
Sample Median Cash Flow /Employee (\$000s)	12.0	14.0	16.5	14.7
Difference from control (See notes a, b)	4.8**	6.8**	6.6*	6.7**
Number (n)	106	100	78	78
Sample Median Gross Margin	0.407	0.416	0.377	0.399
Difference from control (See notes a, b)	0.099***	0.089***	0.061***	0.094***
Number (n)	105	102	90	90
Sample Median Net Margin	0.061	0.064	0.067	0.064
Difference from control (See notes a, b)	0.020***	0.022***	0.019***	0.023***
Number (n)	125	125	108	107
Sample Median Total Asset Turnover	1.115	1.115	1.115	1.078
Difference from control (See notes a, b)	0.050	0.100	0.075	0.061
Number (n)	125	122	91	92
Sample Median (Working Capital/Sales)	0.239	0.255	0.253	0.264
Difference from control (See notes a, b)	0.054**	0.170*	0.086*	0.070**

Number (n)	88	87	72	72
Risk				
Sample Median (Total Debt/Total Assets)	0.175	0.204	0.230	0.210
Difference from control (See notes a, b)	-0.059**	-0.025	0.004	-0.017
Number (n)	126	124	108	108
Sample Median (Short-term Debt/Assets)	0.014	0.018	0.017	0.020
Difference from control (See notes a, b)	-0.021***	-0.014***	-0.011**	-0.017***
Number (n)	125	123	106	108
Sample Median Cash Dividend Payout Ratio	0.117	0.115	0.141	0.117
Difference from control (See notes a, b)	-0.158***	-0.009**	-0.076*	-0.148***
Number (n)	83	79	70	59

Notes:

- a) Significance levels: ***denotes 0.01 level, **denotes 0.05 level, and *denotes 0.10 level.
- b) Significance level based on one-tailed Wilcoxin signed-rank test.
- c) Significance difference between sample and control means based on two-tailed paired sample t-test.
- d) Significance difference between sample and control standard deviations based on two-tailed F-test.

In general, the results in Table 3 duplicate the results in Table 2. Where there are differences, they arise from some of the differences in the two control groups which will be discussed in the following section.

Ownership-matched Control Group vs. Diffusely-owned Control Group

The two sets of control groups are very similar along most dimensions. Statistically, the two sets of controls sell for the same ME/BE ratio (Except for 1987 when they are different at the .10 level), generate similar sales growth, make the same margins, finance similarly, and generate similar stock market returns.

Table 4: Comparison of Ownership -Matched Control Group with Diffusely Owned Control Group

Measure	1986	1987	1988	1986-1988
Value				
Closely Held Control Median (Market Equity/Book Equity)	1.62	1.38	1.46	1.47
Difference from Diffusely Held Control (See notes a, b)	0.12	0.16*	0.15	0.03
Number (n)	43	42	36	36
Closely Held Control Mean Stock Return	0.219	0.044	0.130	0.400
Diffusely Held Control Mean Stock Return	0.190	0.053	0.178	0.463
Difference from Diffusely Held Control (See notes a, c)	0.029	-0.009	-0.048	-0.063
Number (n)	80	70	59	59
Closely Held Control Standard				

Deviation	0.474	0.326	0.409	0.761
Diffusely Held Control				
Standard Deviation	0.392	0.343	0.408	0.662
Difference from Diffusely				
Held Control (See notes a, d)	0.082*	-0.017	0.001	0.099
Number (n)	50	70	59	59
Operating Efficiency				
Closely Held Control Median				
Sales Growth	0.118	0.081	0.247	0.161
Difference from Diffusely,				
Held Control (See notes a, b)	0.03	-0.017	0.003	0.002
Number (n)	83	68	64	64
Closely Held Control Median				
Sales /Employee (\$000s)	98.2	111.7	118.2	110.5
Difference from Diffusely Held				
Control (See notes a, b)	-7.4	-2.4	-5.7	-3.9
Number (n)	76	74	51	51
Closely Held Control Median				
Cash Flow/Employee (\$000s)	7.2	7.7	8.2	7.8
Difference from Diffusely				
Held Control (See notes a, b)	-0.8	-0.1	-1.6	-0.8
Number (n)	73	70	50	50
Closely Held Control Median				
Gross Margin	0.303	0.294	0.322	0.297
Difference from Diffusely				
Held Control (See notes a, b)	-0.005	-0.034	-0.003	-0.003
Number (n)	72	70	55	55
Closely Held Control Median				
Net Margin	0.042	0.045	0.044	0.045
Difference from Diffusely				
Held Control (See notes a, b)	-0.001	-0.004	-0.009	-0.003
Number (n)	85	82	64	64
Closely Held Control Median				
Total Asset Turnover	1.100	1.100	1.175	1.132
Difference from Diffusely				
Held Control (See notes a,b)	0.110**	0.075***	0.240**	0.059**
Number (n)	83	77	55	56
Closely Held Control Median				
(Working Capital/Sales)	0.196	0.177	0.140	0.175
Difference from Diffusely				
Held Control (See notes a, b)	-0.053*	-0.039	-0.047***	-0.027
Number (n)	66	63	50	50
Risk				
Closely Held Control Median				
(Total Debt/Total Assets)	0.259	0.238	0.260	0.239
Difference from Diffusely				
Held Control (See notes a,b)	0.027	0.009	0.039	0.048
Number (n)	83	80	62	62
Closely Held Control Median				
(Short-term Debt/Assets)	0.049	0.039	0.039	0.041
Difference from Diffusely Held				
Control (See notes a, b)	0.008	0.001	0.013	0.000
Number (n)	82	81	63	62
Closely Held Control Median				
Cash Dividend Payout Ratio	0.267	0.258	0.188	0.290
Difference from Diffuse Diffusely				
Held Control	-0.052	0.037	0.017	0.029
Number (n)	50	53	36	29

Notes:

- a) Significance levels: *** denotes 0.01 level, ** denotes 0.05 level, and * denotes 0.10 level.
- b) Significance level based on one-tailed Wilcoxin signed-rank test.
- c) Significance difference between closely held control and diffusely held control means based on twotailed paired sample t-test.
- d) Significance difference between closely held control and diffusely held control standard deviations based on two-tailed t-test.

There are two notable differences between the two sets of controls. The ownership matched firms generate higher total asset turnover ($p < .01$) than the diffusely held firms. In two years (1986 and 1988), the manager-owned firms also have a lower working capital to sales ratio than the diffusely held firms, implying more aggressive capital management.

Discussion

The Wilcoxin signed rank tests merely indicates whether or not there are significant differences between two groups in terms of the dependent variable (Snedecor and Cochran 1989). We must be careful not to imply causality in relationships among the variables. Further, each hypothesis was tested with several univariate tests. Using the Bonferroni inequality, the overall alpha level (probability of at least one false rejection when the null hypotheses are true) for Hypotheses 1 and 1b is 3.6, while that for Hypothesis 1a is 8.4 (Stevens 1996).

However, these tests do indicate that there are differences between FFCFs and NFCFs that are not just due to decreased monitoring costs associated with management ownership. FFCFs have greater working capital per \$1 sales volume than NFCFs, generate higher sales growth than NFCFs, and carry less debt than NFCFs. The family controlled firms also have greater market value/book value ratios than either control group.

The absence of differences between the two control groups has important implications. Financial theory leads us to expect a closer alignment of managerial and shareholder interests in the closely held firms. This alignment should reduce agency problems and improve operating results and market returns. Without family control, the anticipated improvements in results and returns do not occur.

Thus, it appears that the key to reduced agency costs is not the concentration of ownership with top management but the group with whom ownership is concentrated. Founding family control yields the results anticipated by agency theory while management control in the absence of founding family ties does not.

This research demonstrates that founding family controlled firms (FFCFs) are generally run more efficiently than other firms, carry less debt than other firms, and have greater value as measured by the Market Equity/Book Equity ratio than other firms. It also suggests that it is the family control of the firm rather than management ownership that is the key to the differences.

This research also suggests further analysis is warranted. Several key questions come into focus from this study. First of

these is the causal nature of the relationship. While it makes sense that the greater efficiency and less debt found in FFCFs would lead to greater value, the nature of the statistical analysis used here does not allow for causal inference. Might increased efficiency be caused by the structure of the firm or some other characteristic of the founding family controlled firm rather than reduced monitoring costs? Is it caution that causes founding family controlled firms to use less debt or is it lack of access to financial markets? Results thus far suggest that further examination of the data would be useful.

Second, the differences in the management of FFCFs by founders and their descendants needs to be more fully explored. Family control is not necessarily the same as founder control. The nature of these differences raises several questions of interest. Do both descendent controlled and founder controlled family firms have the same differences with non-founding family controlled firms found in this study? Are descendent controlled family firms managed more or less efficiently than founder controlled family firms? Do descendants carry more or less debt than founders? Do founder controlled family firms or descendent controlled family firms have greater value in terms of market to book equity ratios and stock market returns? The findings presented here suggest that these are worthy questions to pursue in future research.

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Competence Development In
Swedish, South African And Russian Sme's:
A Study Of Attitudes And Preferences Across Countries

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Abstract

Attitudes towards learning, or the understanding of what kind of instruments and methods to utilize in training, are not necessarily the same in different countries. By comparing attitudes towards competence development among small business managers in Russia, South Africa and Sweden as well as their methodological preferences, we here especially pinpoint the differences across countries. Departing from a situation where EET-programs for training small businesses are extensively spread to different cultural settings, this paper addresses the dangers and limitations of an uncritical export of "best practice models".

Introduction And Purpose

The importance of small firms for development of national economies and employment are widely recognized. Initiatives to promote small business development are extensively promoted through both national and international funding bodies. Entrepreneurship Education and Training (EET) programs are utilized extensively in many countries to stimulate domestic entrepreneurship development. A common understanding and an underlying conception is often that there exists a kind of "best practice model" for transferring and exchanging knowledge that can be applied in the most different cultural settings. The export of best practice models, preferably developed on the basis of experiences made in Europe and the U.S., is, however (as been pointed out by e.g. Gibb & Haas 1995), not uncomplicated. Besides suggesting that there exists a standardized model for developing successful businesses[1], fundamental ideas underlying the transfer of best practice EET-programs are, for example,

- * that attitudes and motivations towards competence development are the like, and
- * that preferences regarding which methods SME-managers prefer and utilize for competence development are independent of, e.g., the cultural context.

In order to investigate similarities and differences relating to the aspects above we elaborate in this paper on some empirical survey data from small firms operating in three different nations: Sweden, South Africa and Russia. These nations represent significant variety regarding their cultural and economic tradition. Sweden is a traditional and stable capitalistic economy, to a large extent dependent on international trade. South Africa is, with its colonial history and despite its recent political and economical isolation, the most developed country in an internationally under-developed continent with a free market economy system. Russia, eventually, offers the case of a transition economy which after fifty years of command economy now is trying to promote SMEs and entrepreneurship.

The purpose of this paper, then, is to investigate cross-national differences and similarities regarding SME-managers' attitudes towards competence development, as well as their demonstrated preferences for different methods for competence development. The empirical results are based on a comparison of groups of Swedish, South African and Russian SMEs. First, however, we give a brief picture depicting some fundamental differences between the three nations.

SME's In The Three Countries

Throughout the world interest in the small business sector has increased, particularly during the recent decade. One reason behind this is that small businesses are expected to contribute with both new employment and technological innovations (Hendry et al 1995, Storey 1994). The statistical evidence is obvious: In for example Sweden 420 000 small businesses employ 64% of the work-force of the non-primary private sector[2]. Small businesses contributed with seven out of ten new jobs in 1985-90 (Johannisson and Lindmark, 1996). This situation is even more pronounced in Europe as a whole: An annual increase of 1.8 per cent in the number of enterprises between 1988-1993 is totally accounted for by the growth in the small business sector (Mulhern, 1995).

In the Republic of South Africa it is estimated that 99.1 percent of the formal business entities are small and medium sized firms (Haasbroeck, 1996). Figures released by the Department of Trade and Industry indicate that in 1995 there were 793 000 enterprises in the employment size-span 1-200. Of this number 500 000 had between 1-4 employees (Havenga, 1996). These SMEs had an estimated employment of 6.1 million. Apart from this figure another 1.26 million people were employed in the informal business sector. The major portion of these SMEs are to be found in trade (245 000), community and social sector (108 000), construction (93 000) and agriculture, forestry and fishing (91 000) (ibid). With regard to the informal small business sector the most prevalent types of businesses appear to be grocery and butcher shops, hairdressers, seamstresses and liquor establishments (Havenga, 1991). Although SMEs already play a significant role, there is a commonly held belief that entrepreneurship and development of small firms play a key role for the further growth and development of the economy and employment.

In Russia the situation is somewhat different. The representation of small businesses, especially in the manufacturing sector, is almost negligible and sometimes referred to as the "Socialist Black Hole" (Vahcic and Petrin, 1989). Small firms accordingly provide employment for only 3.5% of the active labor force (2.5 million people; Shulus 1996). The transition from communist suppression and a centrally planned economy to a decentralized market economy has just only started. The heritage from a command economy based on large, state-owned conglomerates, is an absence of a wide range of SME suppliers and sub-contractors (Bateman, 1994), and a stated lack of entrepreneurial spirit (see e.g. Hisrich and Grachev 1993). Consequently, the small business sector is in focus also in the Russian transition economy, but due to different reasons. From a very low level, the number of SMEs in, i.e., Russia is increasing: 60 000 firms in 1993, 100 000 firms in 1994 and 200 000 firms in 1995 (Kirillova & Kolesnikov, 1995). According to EEC-estimations, however, Russia referring to its potential and

population size should have 10-12 million SMEs (Shulus 1996). One of the means for "catching up" with the economic development in Western countries is substantial investments in educational and training programs in entrepreneurship and small business management (Savtchenko 1995; Shulus 1996).

Research Questions

This places, for somewhat different reasons, small firms, competence and competence development in focus in all three countries. The first underlying factor we investigate in this paper, affecting the content and, the design of different measures to enhance knowledge and competence, are competence-related attitudes and beliefs held by firm managers in the different countries. Manager perceptions and attitudes are generally regarded as important for understanding a firm's behavior (Keats and Bracker, 1988; Davidsson, 1989). This is especially relevant for small businesses, where the relative importance of the manager's attitudes and perceptions is even more determinant (Storey 1994). Historically and culturally embedded attitudes can accordingly be expected to influence the decision making process in a company regarding its investments in competence development Building on previous research of Ellstrom (1992), we will here try to detect whether attitudes towards competence development (purpose, target groups, time perspective, etc.) differs between small business managers in Russia, South Africa and Sweden respectively.

The other question that we address in this paper is whether the utilisation of different methods for competence development differs across countries. We here take the broad perspective on competence development of e.g. Argyris (1993) and Senge (1990), where development of competencies is much a wider issue than reading books and taking courses. Competence, then, is regarded here as the synthesis of knowledge, skills and aptitudes. Adopting this definition from Nordhaug (1993), we by competence development here mean all the activities a small firm undertakes in order to stimulate or develop one or several of the factors Nordhaug describes as constituting professional competence. Utilizing a list of different methods for competence development in Ylinenpaa and Horte (1995), the utilization of twenty pre-defined methods for development of competencies in SMEs in Sweden, Russia and South Africa respectively will be compared in this paper.

Method

In order to answer the above questions survey studies South Africa, Russia and Sweden were conducted. In Russia we interviewed eighteen small business managers from northwestern Russia (Murmansk region[3]) utilizing a structured form. The interviews were carried out by one Russian and one Swedish interviewer, and the questions and answers were translated between English and Russian. Data regarding the Swedish firms were generated by a mail questionnaire to 108 randomly selected manufacturing SMEs from different parts of Sweden. 64 responses were obtained, of which 52 could be used in this study. To these 52 manufacturing firms we added nine service companies (consultants, tourism and transport firms). Data from South African SMEs were generated by personal interviews and mail questionnaires to 200 SMEs, randomly picked from a register of

the Small Business Advisory Bureau containing 4500 small manufacturing and service firms throughout South Africa. Fifty-two answers were obtained, of which 42 could be used. Facts about the survey populations are depicted in Table 1:

Group	n	Branches (employees)	Size span size	Mean
Russian SMEs	18	11 service companies 7 manufacturing firms	1-200	38
Swedish SMEs	61	52 manufacturing firms 9 service companies	1-50	17
South African SMEs	42	18 service companies 24 manufacturing firms	1-150	26

Tab 1: Facts about the survey populations

The Swedish firms were preferably manufacturers, and operating in three different lines of business: wood processing, mechanical engineering and electronics. In the case of South Africa the division was 43 and 57 percent respectively between services and manufacturing. The service firms represented mainly motor and mechanical engineering, refrigeration, building and construction. With regard to the manufacturing sector it included a variety of businesses with the main classifications being chemical, plastics, wood processing, steel and iron, food, electronics, building and construction. The Russian group of firms represented service companies (trading firms, tourism and other services) and manufacturing industry (mechanical engineering, fishing, textile, building construction and plastic industries). This specific population consisted of a group of former participants in management training courses conducted in cooperation between Swedish and Russian organizers.

The methods used for identifying the different populations were different. The South African group was randomly selected from a register of the Small Business Advisory Bureau consisting of 4500 domestic SMEs. The Swedish group also consisted of randomly selected firms from a national official register, while the Russian group was represented by former participants in specific management courses conducted in 1992 and 1993. One might suspect that this resulted in a comparison of randomly selected SMEs (in Sweden and South Africa) with "front-runners" (in Russia) [4]. In order to check the validity of the data an additional spot test with small business managers in Sweden was conducted in December 1995. This survey population consisted of SME-managers from northern Sweden taking an academic course in Small Business Management arranged by the University of Technology in Lulea; a course which regarding length and level could be compared to the management training courses conducted in Murmansk region. Eight SME-managers representing service companies (n = 5) and manufacturing industry (n = 3) were interviewed. The firms had in average 17 employees spanning from 1-100. The results from this comparison supported (with one exception) the main results from this study. The exception was the results regarding utilization of networking as a means for competence development. This will be commented on later in this paper.

Also differences referring to the firms distribution on different

branches were evident: the Swedish group represented mainly manufacturing industry, while the Russian and South African groups represented service and manufacturing industry. In order to investigate whether Swedish populations orientation towards manufacturing would have any impact on the results, the same spot test population was used for comparing manufacturing and service firms in Sweden. This test did not reveal any major differences regarding attitudes towards, or utilized methods for, competence development that could depend on the fact that firms were operating in different lines of business.

Table 1 also reveals that the average size regarding the number of employees in the Russian group of SMEs was about twice the size of the Swedish and about 50% larger than the South African survey populations. The control group was not useful for investigating the validity of the data in this respect: the mean size was the same as in the larger Swedish survey, and the small size of the control group did not permit any further analysis. Relating data[5] regarding attitudes towards, and methods utilized for, competence development to firm size disclosed that there may be a bias referring to differences in firm size, affecting 0-2 out of 9 attitudes, and 1-5 out of 20 methods for competence development discussed in this paper[6]. The majority of the variables used in this study, however, could not be related to firm size, and accordingly seem to reflect real differences across nations.

Results

Attitudes Towards Competence Development

In order to monitor the attitudes held by SME-managers in the different economies, we asked nine different questions about opinions and attitudes towards different aspects of competence development (e.g. purpose, target groups and time perspective). The results are presented below. Using a five-graded Likert scale where 5 = "totally agree" and 1 = "do not agree at all" our results depict the degree to which the respondents in each economy agree with following statements:

Statement	Medium values (5-graded scale)		
	Swedish group N = 61	South African group N = 42	Russian group N = 18
1. "Competence development should be directed by the firm's goals and strategies"	4.4	4.3	4.4
2. "Competence development should be directed towards those key-persons/ specialists needed to fulfill goals and strategies"	3.7	3.9	2.9
3. "Competence development is a way to notice and pay attention to the staff; to make them more engaged & involved, and thereby more productive"	4.3	4.3	4.7

4. "Everybody needs development. Competence development must therefore involve everybody in the firm"	4.2	4.4	4.4
5. "Competence development is mainly a method for making people 'think and act alike"	2.6	3.2	3.8
6. "Who a company should invest in is a matter for the management to decide after negotiations where needs and arguments are weighed"	3.8	3.9	4.2
7. "Competence development is a long-term investment"	4.5	4.6	4.3
8. "Competence development is a short-term investment"	2.7	1.8	1.9
9. "Competence development investments increase the salary level in a company, and always involve the risk of losing valuable staff, i.e. a risk that you invest and other firms harvest"	2.9	4.0	4.0

Tab 2: Attitudes towards competence development held by the groups of Russian, South African and Swedish SME-managers

From Table 2 we can conclude that attitudes held by Swedish, South Africa and Russian small business managers to some extent are shared across countries. Statements 1 (competence development should be directed by the firm's goals and strategies), 3 (the value of competence development as means for paying attention and creating engagement and motivation), 4 (should address all employees), and 7 (is a long-term investment) receives the highest degree of concurrence in all three countries. We, however, also find some clear differences across nations. For example, Swedish SME-managers do not seem to be as afraid to invest in competence development due to the risk that "other firms may harvest what you have invested in" as their colleagues in South Africa and Russia ($p < 0.005$). Accordingly, Swedish managers also to a significantly higher degree than in South Africa ($p < 0.005$) and Russia ($p < 0.1$) recognize competence development investments as being both long-term and short-term investments. The results in this respect may indicate that small firms in an European economy as the Swedish are more familiar with the phenomena that knowledge and competence age more quickly, and to some extent can be regarded as perishable goods. Given these conditions the "risk of loosing valuable staff" becomes less salient, and the inclination to regard investments in competence development as short-term investments more apparent.

The small firm managers in all three countries perceive competence development as something that should be relevant for all their employees. In Sweden and South Africa this opinion, however, is combined with a significantly ($p < 0.1$) stronger orientation also towards key persons and specialists when compared to Russia. We also find that the idea of competence development being "a method for making people think and act alike" is most apparent in Russia and least

apparent in Sweden, revealing significant ($p < 0.1$) differences between all three groups of SMEs. The results in this respect may reflect a "collectivist orientation" especially in Russia - a term that Ageev, Gratchev and Hisrich (1995) utilized when analyzing Russian entrepreneurship. The result also can also be referred to the fact that production of concrete products and services in a transition economy is more standardized than, e.g., in Sweden, requiring a higher degree of uniformity among employees. In Sweden, and to some extent in South Africa, the markets are more fragmented, and competition often takes place in highly specialized market niches. This situation requires, to a greater extent than the Russian situation still dominated by standardized production, approaches aiming at sharpening the firm's competitive edge. This in turn is accomplished by, for example, highly skilled specialists.

A significant difference was eventually also detected regarding the perceived importance of attention and motivation (statement No. 3). Even if all three groups here scored high, the degree of concurrence was significantly higher ($p < 0.1$) among the Russian group of SME-managers. One reasonable explanation to this could be the fact that the question of how to motivate and stimulate work performance has been (and still is) one of the most critical issues in the Russian domestic debate. Russian SME-managers accordingly acknowledge the enormous challenge existing by the need to change work mentality, responsibility and engagement in a work-force that for decades have been trained to behave in accordance with the needs of a centrally planned and command-structured economy. The result, then, refers more to a personal insight than an existing situation among small and medium sized firms in Russia.

Methods For Competence Development

Methods utilized by the groups of SMEs in Sweden, South Africa and Russia respectively are, in rank order, presented in Table 3 (percentage of firms utilizing the specific method during the recent three year period).

Before we dig into the differences revealed in Table 5, a general reflection may be appropriate. All cross-cultural studies face the problem of cultural differences regarding how different conceptions are perceived; a problem that may resist even very ambitious definitions. Appointments, for example, may here have different meanings in different environmental settings. Questions like "What constitutes a course?", or "What is professional literature?", are here to a great extent delegated to the SME-managers in each group to define. Accordingly, when using questions like these, researchers always carry the risk of validity problems and biases. Bearing this reservation in mind, Table 3 provides a lot of interesting information depicting both similarities and differences. Group and nation specific differences however dominate:

Sweden (n=61)

1. Visiting expo's/trade fairs	85%
2. In-house training courses	75%
3. External courses	72%
4. Work rotation	64%
5. Study visits outside firm's location	61%
6. Delegation	59%

7.	Financed professional literature for reading after working hours	48%
8.	Permitted/encouraged reading of professional literature during working hours	44%
9.	Personal development meetings	38%
10.	Regular meetings with employees incl. elements of education	33%
11.	Recruitment of for the firm new competence	33%
12.	Tutor/mentor for newly-employed	31%
13.	Study visits at the same location	26%
14.	Cooperation with external competence	26%
15.	Linked competence development to salary by e.g. a bonus system	21%
16.	Project work	20%
17.	Participation in networks	13%
18.	Appointments	12%
19.	Senior tutor/mentor for already employed	8%
20.	Temporary work in another firm	7%

South Africa (n =42)

1.	Delegation	71%
2.	Work rotation	67%
3.	Visiting expo's/trade fairs	67%
4.	External courses	64%
5.	Regular meetings with employees incl. elements of education	55%
6.	In-house training courses	46%
7.	Linked competence development to salary by e.g. a bonus system	45%
8.	Project work	45%
9.	Tutor/mentor for newly-employed	43%
10.	Cooperation with external competence	43%
11.	Personal development meetings	31%
12.	Recruitment of for the firm new competence	31%
13.	Appointments	31%
14.	Study visits outside firm's location	24%
15.	Financed professional literature for reading after working hours	24%
16.	Permitted/encouraged reading of professional literature during working hours	24%
17.	Participation in networks	14%
18.	Senior tutor/mentor for already employed	14%
19.	Study visits at the same location	7%
20.	Temporary work in another firm	5%

Russia (n=18)

1.	External courses	83%
2.	Personal development meetings	83%
3.	Financed professional literature for reading after working hours	72%
4.	Appointments	72%
5.	Participation in networks	65%
6.	Visiting expo's/trade fairs	61%
7.	In-house training courses	56%
8.	Work rotation	50%
9.	Permitted/encouraged reading of professional literature during working hours	50%
10.	Linked competence development to salary by e.g. a bonus system	44%
11.	Delegation	39%
12.	Recruitment of for the firm new competence	39%
13.	Study visits outside firm's location	33%
14.	Cooperation with external competence	33%
15.	Regular meetings with employees incl. elements of education	28%
16.	Senior tutor/mentor for already employed	22%
17.	Project work	17%
18.	Study visits at the same location	11%

19. Tutor/mentor for newly-employed	6%
20. Temporary work in another firm	6%

Table 3: Methods utilized for competence development during a three year period (% of firms in each national group)

Focusing on the five methods utilized by the most of the firms in each group reveals that only "external courses" is on the "Top-Four-List" in all three countries. Visiting expo's and trade fairs in order to develop competence is, for example, significantly ($p < 0.1$) more common in Sweden than in South Africa and Russia. Also study visits outside the firm's location are more extensively utilized among Swedish SMEs as compared to South Africa ($p < 0.005$) or Russia ($p < 0.1$). The preference for methods facilitating "learning by watching" is combined with a significantly ($p < 0.1$) lower degree of incentives (e.g. a bonus system linked to competence development). In a similar way some characteristics of a South African learning style can be identified. Project work and regular meetings with employees including elements of education are more extensively ($p < 0.1$) used here as compared to the groups of SMEs in Sweden and Russia. On the other hand study of literature during work is significantly ($p < 0.1$) lower. Even more characteristics distinguish the Russian group of SMEs from both the others. The Russian SMEs reveal a significantly higher degree of personal development meetings ($p < 0.005$) and participation in networks ($p < 0.005$) than Swedish and South African SMEs. To finance professional literature for reading after working hours is more common than in South Africa ($p < 0.005$) and Sweden ($p < 0.1$). The use of appointments as a method to enhance competence is also more common (sign. $p < 0.005$ as compared to Sweden; $p < 0.1$ as compared to South Africa). Utilization of tutors or mentors for new employees, however, is less extensive ($p < 0.005$) than in the other two groups.

As mentioned earlier (under "Method") we utilized a Swedish control group similar to the Russian group of SME-managers to control whether results depended on the constitution of the group. This control group also consisted of SME-managers taking a course in small business management. The results from this test revealed that "participation in networks" was as common among the SME-managers taking the specific course that it was among the Russian group. This indicates that we, regarding the high Russian scores on networking as a means of enhancing competence, are not depicting true cross-national differences.

The utilization of literature for study after work, together with appointments, also turned out to distinguish all three groups of firms. Study of literature after work (paid for by the firm) was highest in Russia and lowest in South Africa (difference between Russia and South Africa significant on the level $p < 0.005$; Russia-Sweden $p < 0.1$). The use of appointments was also highest in Russia, but lowest in Sweden (difference between Sweden and Russia significant on the level $p < 0.005$; Russia - South Africa $p < 0.1$). The results in this respect reflect the literary tradition in eastern European nations as well as traditions formed by half a century of a centrally planned economy.

Conclusions

In table 4 below we conclude the results regarding attitudes

towards and methods used for competence development among SMEs in Sweden, South Africa and Russia. Besides results already presented, we here also depict significant differences between two specific nations/groups:

- * In-house training courses are more common in Sweden than in South Africa ($p < 0.005$)
- * Local study visits are more common in Sweden than in South Africa ($p < 0.1$)
- * Delegation in order to develop competence is more common in South Africa than in Russia ($p < 0.1$).

Table 4 gives an overview picture of similarities and differences regarding attitudes towards competence development as well as the practical utilization of different methods. Noticeable is that our results depicting the percentage of firms in each group that have utilised different methods during the recent three year period not necessarily reflect the relative importance of specific methods, nor the frequency by which each method is utilized by each group of firms. The results, however, indicate interesting differences regarding the distribution of different methods among SMEs in each country. Bearing this in mind we can conclude that several attitudes are shared among the national groups, and regarding their distribution among firms utilized to a similar degree:

- * The small firm managers in all three countries agree upon the importance of competence development being integrated with the firms goals and strategies, that competence development should address the whole firm, and that investments in competence development are long-term investments.
- * The distribution of external courses, work rotation, recruitment of new competencies, senior mentors for employees and temporary work in other firms in order to develop competence is similar in all three groups.

Nation-specific differences regarding attitudes towards competence development varies from the Swedish view of regarding competence development as long- and short-termed investments where key persons and specialists are important target groups, to the Russian view of competence development as risky investments in "making people think and act alike". The South African SMEs in this study position themselves somewhere between their Russian and Swedish colleagues. Regarding methods commonly used for developing competence the differentiating characteristics in Sweden seem to be "learning-by-watching methods" such as expo's/trade fairs and study visits combined with a higher degree of on-house training courses and a lower degree of personal incentives (e.g. bonus systems) for competence development. In South Africa "learning-by doing methods" such as meetings that include education, project work and delegation are salient, and combined with a low degree of study of literature. Russia, eventually, scores significantly higher on an interesting mix of traditional methods (such as an extensive use of literature) and methods suggested in modern textbooks on HRM (such as personal development meetings and career planning), but low on utilisation of tutor/mentor systems for new employees. Here appointments to other (higher) positions are extensively used as a method for developing competence. The preference for literature and

appointments, but also by the conception that competence development should aim at "making people think and act alike", can be understood as inheritance from Russian culture and history. Other characteristics such as personal development meetings, salary bonuses for competence development are and the extremely high agreement on the "attention and motivation argument" is better understood recognizing the turbulent transition towards new rules of the game that SMEs in Russia today experience.

	SWEDISH SME'S	S.AFRICAN SME's	RUSSIAN SME's
Attitudes	Orientation towards key persons/specialists		
a) differences	"Attention & motivation: important		"Attention & motivation" very important
	"Indoctrination" not important	"Indoctrination" of some importance	"Indoctrination" important
	Recognising competence development as also a short-term investment	Regarding competence development not as a short-term investment	
	Regarding competence development as not especially risky	Regarding competence development as risky: risk of increasing salary levels and "brain-drain"	

b) similarities

Competence development should be directed by the firms's goals and strategies; should involve everybody in the firm, and is a long-term investment.

Method pre-ferences	Extensive use of - study visits outside firm's location - visiting expo's and trade shows	Frequent use of - regular employee meetings including some education - project work	Extensive use of personal development meetings
a) differences	Less frequent use of individual incentives (e.g. bonus) linked to competence development		Less frequent use of tutors/mentors for new employees
	Some study of literature after work	Less study of literature after work	Extensive study of literature after work
	Less use of appointments	Some use of appointments	Extensive use of appointm.
	Extensive use of in-house training courses	Less use of in-house training courses	

Frequent use of
study visits at
the same location

Less use of study visits
at the same location

Extensive use of
delegation

Some use of
delegation

b) similarities

Utilisation of external courses, work rotation, recruitment of new competencies, senior tutor/mentor for already employed, and temporary work in another firm.

Tab 4: Concluded results

The differences regarding attitudes and method preferences revealed by this study accentuate the need for recognizing national characteristics. Returning to our starting point we may conclude that organizers of EET-programs would benefit from more thorough analysis of national characteristics when transferring concepts across national and cultural borders.

- [1] Materialised by, for example, the concept of business planning and a formal business plan.
- [2] If SMEs belonging to larger corporations are excluded, the SME-share is reduced to 50%; see Johannisson, B. & Lindmark, L. (eds.; 1996), p. 12.
- [3] Murmansk is the northernmost region in north-western Russia with borders to Norway, Finland and the Russian Republic of Karelia. The population is 1.1 million, of which almost 50% live in the city of Murmansk. The economy is dominated by mining, fish industry and the national defence; branches all at present in decline. The small business sector is here, as in other Russian regions, expanding.
- [4] It is appropriate to remark that the cross-cultural comparison exercised here is based on a limited empirical base. This is at least relevant for the Russian population, which is limited in size (n = 18) and with regard to its geographical location (one of the regions in Russia). It should be considered that the specific region (Murmansk) is a border-region to western Europe. Hosting one of the most important harbours in the world has fostered a tradition of comparatively regular contacts with, and influence from, other countries and cultures. A challenge worth exploring in future research is whether the attitudes and method preferences revealed in this study reflect a generic picture for the whole of the Russian federation.
- [5] A comparison of Swedish and Russian SMEs. For details, see Ylinenpaa (1996).
- [6] Compare Storey (1994, p. 145), who suggests that 'work-force training is associated with greater size, rather than necessarily growth'.

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Triggers And Barriers Affecting Entrepreneurial
Intentionality: The Case Of Western Australian Nascent
Entrepreneurs

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Abstract

This paper sheds light on the process leading to new enterprise formation while identifying the triggers and barriers to business start-ups. A new approach was used to conduct the study as the analysis focused on the pre-decision stage, i.e. the intention and characteristics of nascent entrepreneurs. In addition to the "usual" triggers to start-up, the research highlighted a more intriguing one: the will to invest savings in a business venture which will provide the investor with a job and the satisfaction of being rewarded on merits. It was suggested that this trigger matched the profile of mid-career professionals who wanted to become self-employed. Underlying barriers related to the lack of resources, compliance costs, and the hard reality of "going into business".

Introduction

More than ever the driving force in the modern economy remains entrepreneurship. Entrepreneurs are meeting our economic needs through the creation of thousands of new businesses each year. While larger corporations have instituted "downsizing" or "outsourcing" programs, job creation and economic growth have become the domain of the new ventures and the entrepreneurs who create them. If small businesses are to make the uttermost contribution to the economy, it is therefore incumbent on policy makers, trainers and business advisers to pay attention to the factors impeding and fostering their start-up.

This paper attempts precisely to identify the triggers and barriers to small ventures formation. In doing so, it focuses- in contrast to numerous past studies- on the person who has the intention to start a business, i.e. the nascent entrepreneur. We will therefore look at what the entrepreneur does to indicate this intention (intention indicators), as well as the triggers and barriers affecting the intention to set up a business venture.

As considerable research has already been undertaken about the start-up process, the first section of the report presents a review of the literature and a theoretical framework of startup. In section 2, the methodology used to carry out the project is presented. The intention indicators displayed by nascent entrepreneurs are outlined in section 3. The triggers are discussed in section 4, and the barriers are detailed in section 5.

Review Of The Literature

Definition Of A Business Start-Up

The definition of a new firm or new enterprise is an ambiguous issue. Mason (1983) identifies four aspects which should be

considered when defining a new firm:

- * Start-up date. The definition of the start-up date is arbitrary. Approaches in the literature have included the date the company registers; the date the first sales occur; and, the date the first employee is hired. Obviously, a firm can "start-up" before any of these events take place.
- * Changes in activity. If a company starts as a service firm and then switches to manufacturing, is it a new firm?
- * Independence. Independence usually means the firm has no obvious parent. Under this definition, new franchises are not new firms.
- * Newness. The term is related to the "changes in activity" aspect listed above. Is the company new if the owner bought an existing business and changed some of its activities?

Katz & Gartner (1988) addressed some of these difficulties in relation to definition with a compromise. They suggest four indicators showing that an organisation is in the process of coming into existence: (1) the intention to create an organisation (distinct goals); (2) the resources to create an organisation; (3) the development of an organisational boundary (e.g. registration); and, (4) the exchange of resources across the boundary (e.g. sales). When studying organisation creation, they suggest using at least one of these properties as a sampling frame.

Consequently, franchise businesses were not included in the scope of the study because of obvious independence problems in the franchiser-franchisee relationship. However, owners who bought an existing business and changed some of its activities were included in the research. This study considered that a new business has effectively started if the first sales have occurred.

Previous Research On Start-Ups

A number of researchers have attempted to identify relevant outcomes linked to organisation formation. In the early empirical research this interest was very much focused on the psychological characteristics of business founders, although the research was not closely linked to contemporary developments in psychology. A trait approach was often adopted, and almost endless lists of entrepreneurial traits were suggested (Hornaday, 1982). For example, such factors as need for achievement (McClelland, 1961), risk taking propensity (Brockhaus, 1980), locus of control (Brockhaus, 1982), tolerance of ambiguity (Schere, 1982), and desire for personal control (Greenberger & Sexton, 1988) have been identified and examined as possible traits associated with entrepreneurial behaviour.

This approach eventually reached a dead end as it could only partially answer the question: "What makes people found new firms?" It has been convincingly argued that personal background characteristics have a more reliable influence on the decision to found one's own firm than psychological traits (Reynolds, 1991; Stanworth, Blythe & Stanworth, 1991). Discussion has also addressed numerous other background factors linked to the personality, for example, previous employment (Storey, 1982; Ronstadt, 1988); family background (Scott & Twomey, 1988; Matthews & Moser, 1995); gender (Buttner & Rosen, 1989; Kolvereid, Shane, & Westhead, 1993); education (Storey, 1982);

ethnic membership (Aldrich, 1980); and religion (Weber, 1930).

A response to the limited success of the trait approach has been to view enterprise creation in context. One way of doing this is to apply a more aggregate level of analysis and to look for regional or national level variables that can explain variations in the rate of new enterprise formation (Aldrich, 1990). This approach has been relatively successful and fairly strong relationships have been established. In her literature review, Specht (1993) distinguishes five main contextual factors affecting organisation formation and these include social, economic, political, infrastructure development and market emergence factors.

Within the social environment, the impact of networks (Marett, 1980; Gartner, 1985; Aldrich & Zimmer, 1986; Johannisson, 1988) and the support of sociopolitical elites, along with the cultural acceptance (Gartner, 1985; Bull & Winter, 1991), are of particular importance. The economic environment studies focus on capital availability (Cross, 1981; Storey, 1982; Gartner, 1985), aggregate economic indicators (Walton, 1977), economic recessions (Delacroix & Carroll, 1983; Gould & Keeble, 1984; Shutt & Whittington, 1987), and unemployment (Pennings, 1982; Gould & Keeble, 1984). The political environment concerns mainly the support of public or semi-public agencies (Delacroix & Carroll, 1983; Gartner, 1985; Young & Francis, 1989; Walker & Greenstreet, 1990).

Infrastructure development encompasses numerous variables such as the education system (Gartner, 1985; Romanelli, 1989; Bull & Winter, 1991), nature of local labour market (Pennings, 1982; Gartner, 1985; Mason, 1989), incubator organisations (Gartner, 1985; Young & Francis, 1989), information accessibility (Romanelli, 1989), and availability of premises (Cross, 1981; Storey, 1982; Gould & Keeble, 1984; Mason, 1989). Finally, market emergence integrates both concepts of niche emergence (Boeker, 1988; Delacroix & Solt, 1988), and technological innovation (Cross, 1981 - Gould & Keeble; 1984; Mason, 1989).

Methodology

Virtually all the above mentioned studies focused on owner/managers of new businesses, not on persons who were in the process of starting a new business. These studies did not address Learned's (1992) observation that not all of those attempting to form an organisation will succeed. In order to get a comprehensive picture of entrepreneurship, it is not sufficient to approach only those who have fulfilled their objectives. Therefore, there is still a need for a desegregate level of analysis which can shed light on the process leading to new enterprise formation.

In this perspective, the analysis should focus on the pre-decision stage, i.e. interest, entrepreneurial career preference, and characteristics of nascent entrepreneurs (Bird, 1988; Krueger, 1993; Boyd & Vozikis, 1994). Given that the decision to found a firm can be regarded as a reasoned or planned behaviour, the relationship between intentionality and actual behaviour should be fairly strong (Ajzen, 1991).

The unit of analysis of this research focuses on the start-up

process and more specifically on the actor at the core of this process: the person who has the intention to start a business, i.e. entrepreneurial intentionality. Intentionality is defined by Bird (1989: 8) as "... a conscious state of mind that directs attention (and therefore experience and action) toward a specific object (goal) or pathway to achieve it (means)". This concept goes beyond the one of entrepreneurial propensity: Individuals with the intention to start a business not only have a propensity to start, but in addition, adopt a rational behaviour to reach their goal. They have therefore already taken some steps (e.g. gathered some information; established a business plan; saved some money) toward this goal.

Figure 1 presents a schematic overview of the start-up process and focuses on the assumption that the triggers and barriers influence the intention, and ultimately the decision, to launch the business (triggers prevail over barriers) or to give up the idea (barriers prevail over triggers). As there is a time lag in the start-up process, both those who effectively founded a new venture and those who abandoned the idea needed be approached to gather the information on barriers and triggers. For the purpose of policy decisions aimed at stimulating new enterprise formation, it is as useful to learn why individuals failed to implement their intentions (the barriers to start-up), as to study only those who carried them out (the triggers).

A total of 93 entrepreneurs were interviewed. Among them were 48 "starters", i.e. entrepreneurs who effectively launched a business venture over the last two years; and 45 "non-starters", i.e. potential entrepreneurs who abandoned the idea to launch their business at least for the moment. Different SMEs services providers such as the Small Business Development Corporation, the Business Enterprise Centres, and the Women's Economic Development Organisation assisted in the random selection of entrepreneurs. The Dun & Bradstreet data base of new businesses was also used to identify the starters.

Figure 1: A Model Of Organisation Formation

PERSONAL BACKGROUND:

Age

Gender

Previous employment

Family and ethnic group

Education

DECISION:

FOUND (Triggers > Barriers)

ENVIRONMENT:

INTENTIONALITY

Industry

Social

Economic

Political

Infrastructure development

DECISION:

ABANDON (Triggers < Barriers)

Data were collected with a semi-structured interview integrating closed questions (to gather demographic information and facilitate cross-case analysis) as well as open-ended questions (to gain a wider and more dynamic perspective). The interview provided in-depth information, through a "360 scanning" of the entrepreneur personality and his/her perception of the environment.

Intention Indicators

The focus of analysis in this study is entrepreneurial intentionality. We have clearly established that, in order to gain an insight into the barriers and triggers to start-up, it is vital to integrate in the research the nascent entrepreneurs who failed to set up their own business venture along with the successful ones.

With an expression of intention ("I am going to try to start a business"), the entrepreneur begins the process of founding the business. Intention implies action. Several indicators can reflect entrepreneurial intentionality, this conscious state of mind which directs attention toward the goal of establishing the new organisation. Table 1 shows the actions taken by starters and non-starters in our sample.

Although some differences appeared among the actions taken, it is important to notice at this stage that non-starters and starters took some similar steps to launch their business. As there are almost the same number of starters (48) and non-starters (45) in the sample, it should be noticed that in general they both:

- * Gathered some information on business start-up from various organisations (e.g. Small Business Development Corporation or Business Enterprise Centre), their family, or their friends.
- * Prepared a business plan.
- * Looked for facilities or equipment.
- * Were saving money to set up their business.

Table 1: Intention Indicators Of Starting A Business

While you were in the process of examining your business launch you...	Non-starters N (%)	Starters N (%)
Bought/rented facilities/equipment	12 (26.6)	34 (70.8)
Attended a course in business management	27 (60)	17 (35.4)
Developed models/prototypes	13 (28.8)	16 (33.3)
Organized a start-up team	10 (22.2)	23 (47.9)
Devoted full time to the project	7 (15.5)	28 (58.3)
Sought financial support	14 (31.1)	24 (50.0)
Invested my own money	21 (46.6)	38 (79.1)
Looked for facilities/equipment	32 (71.1)	35 (72.9)
Were saving money to start your business	17 (37.7)	22 (45.8)
Prepared a business plan	31 (68.8)	36 (75.0)
Gathered information (e.g. market, cost)	42 (93.3)	45 (93.7)
Applied for a licence/registration	10 (22.2)	31 (64.5)

Triggers To Business Start-Ups

A graph of the mean importance of the triggers listed in the questionnaire is offered as Figure 2 (omitted). Notably there is a large spread for the means which are quite evenly distributed between 'not important at all' and 'very important'.

Further, a factor analysis was performed to identify underlying triggers among the list of items proposed. Factors were extracted with a principal components analysis, followed by a varimax rotation. The rotated factor matrix presented in Table 2 shows six main triggers to set up a business venture. Overall, the six

factors explain 63.6 per cent of the variance - a middling performance. The reliability of the factors was also tested, and Cronbach alpha coefficients range between .65 and .91 which is a meritorious level.

Table 2: Rotated Factor Matrix Of The Triggers

Variable	1	2	3	4	5	6
The need for a job	.71					
Invest my personal savings	.65					
Receive a salary based on merit	.65					
Invest super/redundan. package	.61					
Take advantage of my talents		.83				
Have an interesting job		.74				
Create something		.72				
Realise my dream		.54				
Work at a location of my choice			.79			
Make my own hours			.78			
Be my own boss			.71			
Follow the example of a person				.82		
Increase my status/prestige				.59		
Maintain a family tradition				.59		
Take advantage of a mkt opport					.86	
Positive economic indicators					.75	
Keep a large part of the proceeds						.88
Earn more money						.74
Eigenvalue	4.50	2.42	1.79	1.58	1.33	1.07
Percent of variance explained	22.5	12.1	9.0	7.9	6.7	5.4
Cumulative percent	22.5	34.6	43.6	51.5	58.2	63.6
Cronbach alpha	.69	.77	.68	.65	.91	.66
Only loadings > .5 are shown						

1=Invest
 2=creativity
 3=Autonomy
 4=Status
 5=Mkt Opport.
 6=Money

The first factor, Invest, encompasses the following motives to start a business: "The need for a job"; "To invest my personal savings"; "To receive a salary based on merit"; and "To invest my superannuation/redundancy package". The typical profile of entrepreneurs who would put forward such motives appears to be mid-career professionals who have some savings and who want to be rewarded according to their effort. The combination of both the impression that their merits are recognised/rewarded and that they have money to walk away with, constitutes a powerful trigger for these people to set up their own business venture. In relation to some of these professionals who were made redundant, "The need for a job" together with the opportunity "To invest a superannuation or redundancy package" also correlated with this factor.

The second factor, Creativity, has been intimately associated with entrepreneurship in the literature. This factor encompasses variables such as "To take advantage of my own talents"; "To have an interesting job"; "To create something new"; and "To realise my dream". Altogether these variables translate the desire and the

ability to bring something new into existence. Potential entrepreneurs would like to take advantage of their own talents, or in other words do what they do best and what they like. Some, however, would like to have a more interesting job - which would enable them to create something and realise their dream at the same time.

Factor 3, *Autonomy*, reflects the willingness of independence of entrepreneurs, in that they want to work their own hours at a location of their choice. The desire to be one's own boss further reflects this autonomy. This factor has also been referred to during the interviews by such statements as: "I want to work with a person of my choice", or "I want to be free to start at 10 am or to take an afternoon off when it is convenient for me". The autonomy allows a greater flexibility.

Factor 4, *Status*, encompasses the following variables: "To follow the example of a person I admire"; "To increase my status/prestige"; and, "To maintain a family tradition". All these variables are external to the person. The launch of a business may be triggered by social forces, as shown by this factor; and these are either related to the current image (i.e. status or prestige of the entrepreneur) or to an historical image (i.e. to maintain a family tradition).

Factor 5, *Market Opportunity*, is a trigger resulting from the conjunction of two variables: an opportunity identified in the market place together with positive economic indicators. It should be noted, however, that the opportunity itself is not sufficient; because there also needs to be a conducive environment in order for the intention to set up a business enterprise to eventuate.

Factor 6, *Money*, underpins the financial drive often mentioned by entrepreneurs. Keeping a larger proportion of the proceeds and the desire to earn more money in turn are certainly reasons to start a business. However, it was not the most important factor in this study.

Barriers To Business Start-Ups

Figure 3(omitted) displays the mean importance of the barriers to launching the business as perceived by sample respondents. The variance of the means is much smaller than that of the triggers (see Figure 2 omitted).

Overall the barriers to establish a new business venture were perceived to be minimal in the study, in that, almost all barriers mentioned were ranked in the category "not so important" to " average importance". Only three barriers ("risks greater than initially expected", the "lack of own savings or assets", and 'a more difficult task than expected') appeared to be slightly more important than the average.

A factor analysis was also performed for the barriers to small business start-up. Factors were extracted with a principal components analysis, followed by a varimax rotation. The rotated factor matrix presented in Table 3 highlights three barriers to set up a business venture.

Table 3: Rotated Factor Matrix Of The Barriers

Variable	Factor 1 Lack of Resources	Factor 2 Compliance Costs	Factor 3 Hard Reality
Lack of marketing skills	.83		
Lack of managerial/financial expertise	.78		
Lack of info on business start-up	.64		
Difficulty in obtaining finance	.64		
Lack of suitable premises	.60		
High taxes and fees		.75	
Finding suitable labour		.74	
Compliance with govern. regulation		.67	
No one to turn to in order to help me		.61	
Risks greater than initially expected			.80
Task was more difficult than expected			.77
Uncertainty of the future			.63
Fear of failure			.59
Eigenvalue	7.88	1.50	1.46
Percent of variance explained	43.8	8.4	8.1
Cumulative percent	43.8	52.2	60.3
Cronbach alpha	.84	.78	.79

Only loadings > .5 are shown

The first factor, Lack of Resources, encompasses different shortages perceived by "would-be entrepreneurs". They often recognise themselves that they do not master the necessary skills in marketing, management, and finance. These personal deficiencies are further worsened by a lack of information on business start-ups. Finance and suitable premises are two other types of resources which are also correlated to factor 1 and which constitute an additional barrier.

The second factor, Compliance Costs, encompasses the high taxes and fees, as well as the compliance, associated with government legislation. Interestingly enough, finding suitable labour is also correlated with this factor. This shows the difficulty finding qualified employees and, labour may also appear as an "administered price", i.e. determined to a certain extent by legislation and the unions. All of these variables are linked to government regulations (legislation, taxes and fees) or policies (education and training to produce qualified and affordable employees). Also, they create hurdles for business start-ups and confusion for potential entrepreneurs, who appear to have the impression of being lost in this 'red tape' situation and have no one to turn to in order to help them.

The third factor, Hard Reality, indicates that setting up a business is often harder and with more risks than initially expected. It suggests that tasks appear more difficult and that risks are usually greater than expected when the time comes to launch the business. The future is perceived as very uncertain and, as a result, a certain fear of failure is also associated with this factor.

The Relative Importance of the Factors

Following the factor analysis each of these nine dimensions were developed into derived variables comprising a composite mean of

the original variables which were found to identify the factors. An examination of the overall importance of these nine factor variables to the respondents was then undertaken using t-tests of the differences between their mean scores.

Of interest was the finding that no significant differences (at the 5% level) could be found between the importance placed on these variables by the two sub-populations of starters versus non-starters. This finding suggests that these triggers and barriers are viewed with equal degrees of importance regardless of whether the individual proceeded to foundation of their business or not.

A comparison of how the nine factors variables were ranked in terms of their relative importance to the entire sample found a hierarchy. Table 4 shows the results of this analysis.

Table 4: Relative Importance Of The Factors

Factor variable	Mean 1 =not important at all, 5=very important	Std.Dev	t-value
1. CREATIVITY (Trigger)	4.17	0.78	
2. AUTONOMY (Trigger)	3.89	0.85	2.98*
MONEY (Trigger)	3.77	0.89	
3. HARD REALITY (Barrier)	3.18	0.97	4.25*
MARKET OPPORTUNITY (Trigger)	3.16	1.06	
4. INVEST (Trigger)	2.75	0.83	3.40*
LACK OF RESOURCES (Barrier)	2.63	1.22	
COMPLIANCE COSTS (Barrier)	2.53	1.25	
5. STATUS (Trigger)	2.03	0.88	3.76*

* indicates significant at the 5% level between the mean scores above and below the broken line.

As shown in Table 4 the most important factor was the "Trigger" CREATIVITY. This suggests that both starters and non-starters view the ability to use their talents, have an interesting job, create something or realise their dreams as the most important potential motivation to small business formation.

In second place were the two factors of AUTONOMY and MONEY. These two "Triggers" are somewhat related. The ability to be one's own boss and have autonomy is only possible if financial success has been achieved.

Third place was shared by the "Barrier" factor HARD REALITY and the "Trigger" factor MARKET OPPORTUNITY. These two factors are likely to relate to each other in terms of a trade off of one for the other. The motivation to found a business in the fight of a perceived market opportunity must be weighed against the risks and difficulties involved.

In equal fourth place were the "Trigger" factor INVEST and the "Barrier" factors LACK OF RESOURCES and COMPLIANCE COSTS. Once

again this may indicate a trade off between these triggers and barriers. Having money to invest in a potential business to secure future wealth must be considered against the lack of resources (particularly finances) and the costs of establishment.

Finally, in last place was the "Trigger" factor STATUS. This suggests that the desire to emulate others or follow family traditions are not particularly strong motivations for nascent entrepreneurs in Western Australia.

Conclusion

The objective of this paper was to shed light on the process leading to new enterprise formation while identifying the triggers and barriers to business start-ups. A great deal is known about the characteristics of owner-managers and the motives that urged them to set up a business venture. However, virtually all previous studies focused on owner-managers of new businesses, not on persons who are in the process of starting a new business. In order to get a comprehensive picture of entrepreneurship (and of the triggers and barriers affecting start-ups), it is not sufficient to approach only those who have fulfilled their objectives. This study took a new approach in that it focused on people who had the intention to start a business.

Several triggers - possibly a combination of triggers - appeared to be at the root of startups. These triggers were the level of creativity, the need for autonomy, the achievement of social status, the response to a market opportunity, and the drive for money. In addition to these "usual" triggers, the research also highlighted one intriguing trigger: the will to invest savings in a business venture which will provide the investor with a job and the satisfaction of being rewarded on merits. It was suggested that this trigger matched the profile of mid-career professionals - some of whom were made redundant - who wanted to become self-employed. This constitutes an emerging trend in entrepreneurship. Business advisers along with training institutions should better target these professionals who want to redirect their career toward running their own business and provide them with an ad hoc turnaround strategy.

The good news which came out of this research was that nascent entrepreneurs did not perceive any barriers which would significantly impede their start-up. This implies that they did not face any hurdle at all (otherwise all those who had the intention to start a business would have succeeded). In relation to those who did not proceed with starting up of their own business, three underlying barriers were identified: the lack of resources (knowledge, finance, and premises); compliance costs (high taxes and fees, finding suitable labour, compliance with government regulation); and, the disillusion associated with the hard reality of "going into business" (risks greater than initially expected, task more difficult than expected, uncertainty of the future, fear of failure).

The remedy for these problems are known and include: a better education and training (to improve the lack of managerial and marketing skills), an improvement of the services provided to nascent entrepreneurs (to improve the lack of information on business start-up and address the difficulty in obtaining finance), and a reduction of 'red tape' and taxes (to curtail

compliance costs). Last, but not least, nascent entrepreneurs themselves should be more self-confident and persevering when they face the hard reality of establishing their own business.

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Researchers Of Venture Capitalists' Decision Making,
Beware!

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Abstract

Researchers of venture capitalists' decision making must be aware of potential biases and errors associated with self reported data especially in light of this study's findings that venture capitalists' lack introspection into the policies they "use" to assess likely profitability. Surprisingly, venture capitalists demonstrate some introspection into the policies they "use" to assess probability of survival.

Introduction

Venture capitalists are conspicuously successful at predicting new venture success (Sandberg & Hofer, 1987; Hall & Hofer, 1993 and numerous studies have investigated their decision making. The majority of empirical research on venture capitalists' decision making has produced empirically derived lists of criteria that venture capitalists report they use when evaluating new venture proposals (e.g., Tyebjee & Bruno, 1981; 1984; Bruno & Tyebjee, 1985; Gorman & Sahlman, 1986; MacMillan, Siegal & SubbaNarasimha, 1985; MacMillan, Zemann & SubbaNarasimha, 1987).

Social judgment theorists suggest that "espoused" decision processes may be a less than accurate reflection of "in use" decision processes (Priem, 1992; Priem & Harrison, 1994; Zacharakis, 1995). Therefore, is the prior research which relies solely on the veracity of venture capitalists' introspection likely to be biased and inaccurate? Venture capitalist' decision making is analyzed to determine the accuracy of venture capitalists' introspection.

Venture Capitalists Decision Making Research

Research on venture capitalists' evaluation criteria reveals no thorough integrated explanation of new venture performance (Sandbero & Hofer, 1987, Shepherd, 1997c) with much still to be learned about venture capitalists' assessment decisions (Hall & Hofer, 1993). The primary objective of research into venture capitalists' decision making is to determine the criteria used by venture capitalists in the evaluation of potential investments. The methods used in previous studies typically ask venture capitalists to list and rank decision criteria based on their presumed affect on the investment decision (for example, Tyebjee & Bruno, 1981 MacMillan & SubbaNarasimha, 1986), on the likelihood of success (for example, Kahn, 1987; MacMillan et al., 1987), and/or on the likelihood of failure, (for example, Gorman & Sahlman, 1986; Meyer, Zacharakis & DeCastro, 1993).

Limitations of this research includes problems of retrospective reporting (for example, Tyebjee & Bruno, 1984), use of questionnaire responses rather than actual evaluations (for example, MacMillan et al., 1987 and Robinson, 1987) and biases and errors associated with self reporting (Sandberg & Hofer, 1987). Self reporting tends to overstate the number of criteria actually used and to understate the weighting of the most important criteria when compared to more sophisticated decision making techniques (Stahl & Zimmerer, 1984, Riquelme & Rickards, 1992).

Shepherd (1997a, 1997b) demonstrates that a model of venture capitalists' decision making that includes industry related competence, competitive rivalry, lead time, key success factor stability, educational capability, mimicry, scope and timing, has explanatory and predictive ability for venture capitalists' assessments of both likely profitability and probability of survival. Shepherd's (1997a, 1997b) model is used here to investigate venture capitalists' introspection.

Research Method

This study follows suggestions that venture capitalists' decision making can be researched through a decision making framework (Riquelme & Rickards, 1992; Muzyka et al., 1996; Zacharakis, 1995). Conjoint analysis is a Strong tool for decision modeling research providing significant, structured insight into venture capitalists' decision criteria (Muzyka et al., 1996; Zacharakis, 1995). Conjoint analysis focuses on concurrent rather than retrospective techniques for collecting and analyzing decisions. It uses a variant of regression to decompose a decision into a linear or multilinear equation allowing separation of attribute weights used by a venture capitalist from an overall preference. Respondents' judgments are then subjected to statistical analysis to discover which attributes affected their new venture performance assessments and in which ways. The theoretical basis for this study's use of conjoint analysis is information integration theory (Anderson, 1981; Louviere, 1988). Information integration theory provides a well-developed error theory to support the statistical tests that follow.

Dependent Variables

Tyebjee and Bruno (1984) found venture capitalists accept/reject decisions can be predicted from their risk and return perceptions. Return is most often evaluated by venture capitalists in terms of profitability (Robinson, 1987; Robinson & Pearce, 1984; Timmons, 1981; Roure & Keeley, 1990) and risk in terms of venture failure (Gorman & Sahlman, 1986). Profitability was defined as: "net profit on sales, using a ten year time horizon". An eleven point likert type scale was used with end-anchors describing "very low profitability" and "very high profitability". Probability of survival is defined as "the probability that this venture will continue to participate in the market using a ten year time horizon". Again an eleven point scale was used with end anchors describing "very low probability of survival" and "very high probability of survival". A ten year time horizon was chosen for both dependent variables. This was chosen to exceed Biggadike (1979) and McDougall, Covin, Robinson & Herron's (1994) choice of eight years to define a new venture

as it appears reasonable to assume that ten years captures sustainable performance.

Attributes, Levels and Performance

In developing conjoint profiles, levels were chosen to represent variation that typically occurs in the decision environment of venture capitalists, thereby maintaining believability and response validity. Venture capitalists evaluated a series of conjoint profiles which describe new ventures in terms of eight attributes: (1) Timing of Entry, (2) Stability of Key Success Factors, (3) Educational Capability, (4) Lead Time, (5) Competitive Rivalry, (6) Mimicry, (7) Scope and (8) Industry Related Competence. These eight factors were each manipulated at two levels, and are detailed in Table 1 in Appendix A. Discussions with venture capitalists, accountants and academics confirmed the face validity for both the attributes and their levels detailed above. Appendix B displays an example profile.

Experimental Design

Each of the eight attributes is varied at two levels in an orthogonal fractional factorial design consisting of 16 profiles (Hahn & Shapiro, 1966). This design enabled both individual subject and aggregate subject analysis. Each of the 16 profiles is fully replicated, permitting estimates of individual subject error for use in subsequent analyses of variance (Ettenson et al., 1992). These 32 profiles were randomly assigned to avoid order effects, with a further practice case to familiarize respondents with the task. Therefore the experiment presented 39 profiles.

Participants

Sixty six individual venture capitalists representing 47 venture capital firms completed the survey. Directors, Managing Directors, Executive Chairmen, General Managers and CEOs represent 52% of the sample. Senior managers constitute a further 42% with only 6% of the sample accounted for by analysts. Non government firms represented 74% of the sample with semi government and government contributing 14% and 12% respectively. 94% of their investment was in Australia with those investing overseas predominantly concentrating on Asia. Average total capital under investment using a trimmed mean was \$54.650 million and typical investment \$2.5 million.

Research Instrument

The research instrument used with venture capitalists contained instructions, conjoint experiment and a post experimental questionnaire that requested self explicated weights as well as information about the characteristics of the respondent. Relevant term definitions were also included on a detachable sheet that could be referred to while completing the survey. Once instructions were clear, respondents considered conjoint venture descriptions and provided a rating on an 11 point scale for its likely profitability and on another 11 point scale the probability of survival. Each performance measure referred to a time horizon of ten years.

After completing 39 profiles, a post experiment questionnaire was completed. The post experiment questionnaire asked each respondent to rate the importance of each factor on an 11 point scale from (1) very unimportant to (11) very important, and also collected personal and firm information. An example of that section of the post experiment questionnaire requesting self explicated weights is displayed in Appendix C.

Analysis of Variance

To identify the determinants of new venture performance that are statistically significant, an individual-subject analysis of variance (ANOVA) was performed on the decision making of each venture capitalist. Although two or more attributes may significantly affect the decision process, it is unlikely that those attributes will be of equal importance (Ettenson et al., 1992). Therefore, statistical significance at the individual level is supplemented with a measure of relative importance. Hay's (1973) omega squared (w^2), a measure of explained variance, was used to assess the relative importance of the eight attributes and selected two-way interactions to each respondent's decision.

Reliability

Experimental formats may have been new and unfamiliar to venture capitalists and therefore it was important to test consistency of responses within each individual. This provides an indication of the consistency with which they apply their decision making strategies. Sixteen replicated profiles were evaluated with the 16 original/identical cases and were used in a test-retest measure using, Pearson R correlations. Discussions with respondents indicated they were unaware that cases had been repeated.

Respondent's Insight

For each respondent, their self explicated weights were investigated in relation to their omega square (w^2) values, derived from ANOVA. If venture capitalists have insight into their own decision making, then Pearson R correlation are expected to be high.

Results

In the post-experiment questionnaire, respondents were asked to indicate the importance of each of the eight factors in the evaluation of likely profitability and then perform the same task for probability of survival. For each factor these assessments were made on a scale of 'Not at all Important', scored 1, to 'Very Important', scored 11. "Self explicated" reports of factor importance, averaged across venture capitalists are shown in Table 2 for profitability assessments and Table 3 for probability of survival assessments.

Omega squared is used as a measure of "Conjoint derived" importance weight. The mean omega squared value for each attribute in venture capitalists assessment of profitability and probability of survival are also shown in Tables 2 and 3 respectively. Mean reliability for profitability assessments

across venture capitalists is .62 and .69 for probability of survival assessments.

Table 2: Average Self Explicated Weights: Profitability

Factor	Self Explicated Weight	Conjoint Derived Weight
Industry Related Competence	9.24	0.23
Competitive Rivalry	9.13	0.10
Key Success Factor Stability	7.31	0.04
Lead Time	7.97	0.05
Timing of Entry	7.89	0.09
Scope	7.50	0.03
Educational Capability	7.32	0.09
Mimicry of Entry Wedge	6.52	0.03

Table 3: Conjoint Derived and Self Explicated Weights: Probability of Survival

Factor	Self Explicated Weight	Conjoint Derived Weight
Industry Related Competence	9.71	0.31
Competitive Rivalry	8.10	0.07
Educational Capability	7.79	0.11
Timing of Entry	7.57	0.07
Scope	7.37	0.02
Lead Time	6.92	0.03
Key Success Factor Stability	6.92	0.06
Mimicry of Entry Wedge	6.14	0.03

Since conjoint analysis is thought to be a more valid assessment of respondent's decision making, the question becomes what is the relationship between a participant's self reports of factor importance and importance measures derived from conjoint analysis. To address this question, the relationship is first explored diggramatically at an aggregate level and Pearson R correlations computed between each participant's "self report" of factor importance and their "conjoint derived" measure of factor importance.

Relative importance of each factor was calculated as a ratio of factor importance over total importance of all eight factors. Figures 1 and 2 demonstrate relative aggregate importance of attributes derived from conjoint analysis compared to those relative measures calculated from self explicated methods for venture capitalists' assessments of profitability and probability of survival.

When compared to conjoint derived importance weights, the self explicated weights underestimate the most important criteria and over estimate the least important criteria.

If participants have insight into their decision strategies, large and significant correlations should be found between their self reports of factor importance and their omega squared values, since they are presumably measuring the same thing. Furthermore, since participant's provided their assessment of attribute importance immediately after completing the conjoint task, their insight into the use of the eight factors should be considerably

better than might otherwise be the case. Results from this correlation analysis for venture capitalists profitability assessments are presented in the diagonal in Table 4 and venture capitalists' probability of survival assessments in the diagonal in Table 5.

Table 4: Conjoint/Self Explicated Correlation Matrix: Profitability

W2/self	Comp	Rivalry	Educ	KSF	Lead	Mimicry	Scope	Timing
Comp	0.122							
Rivalry		0.190						
Educ			0.465*					
KSF				0.160				
Lead					0.195			
Mimicry						0.137		
Scope							-.0.083	
Timing								0.231

* 1 tailed significance $p > .05$

From Table 4, it appears venture capitalists lack insight into their profitability assessment with only one of the self explicated weighted factors significantly correlated with a derived factor weight. Average correlation across the eight factors is only 0.17. Therefore, venture capitalists lack accurate introspection into their profitability assessments.

Table 5: Conjoint/Self Explicated Correlation Matrix - Probability of Survival

W2/self	Comp	Rivalry	Educ	KSF	Lead	Mimicry	Scope	Timing
Comp	0.512*							
Rivalry		0.388*						
Educ			0.482*					
KSF				0.213*				
Lead					0.334*			
Mimicry						0.189		
Scope							0.071	
Timing								0.232*

* 1 tailed significance $p < .05$

From Table 5, venture capitalists' "espoused" importance of educational capability and competitive rivalry is significantly different from the conjoint derived importance of educational capability and competitive rivalry in their probability of survival assessments. However, the "espoused" importance of timing, scope, mimicry, lead time, key success factor stability and industry related competence were significantly correlated with the respective conjoint derived importance weights. Six out of eight significant correlations could be considered high in conjoint versus self explicated weight research. For example, Ettenson et al. (1992) found two significant correlation coefficients ($p < .05$) from his stud using eight product attributes and concluded a lack of introspection. For this study the average correlation between 'self explicated' probability of survival assessment policy and 'in use' policy is .30.

Discussion and Conclusion

The findings of this study provide insight into research methods for those researching venture capitalists' decision making. For both profitability and probability of survival assessments, venture capitalists have a tendency to overstate the least important criteria and understate the most important criteria when compared to models derived from conjoint analysis. However does this mean that venture capitalists' lack introspection into their decision making? The findings show that venture capitalists lack introspection into their profitability assessments. However, the findings also demonstrate some introspective ability into probability of survival assessments.

Therefore those studies investigating the decision making of venture capitalists' profitability assessments using self reported data are likely biased and have errors. On the other hand, this may not be the case for venture capitalists' decision making research into probability of survival assessments where the use of self reported data could represent a reasonable approximation of the decision making actually used. It is unclear whether studies using self reported data to investigate either new venture performance or the overall accept/reject decision are biased, as both dependent variables include assessments of profitability and probability of survival. One clear message from this study to those researchers investigating venture capitalists' decision making using self reported data is, BEWARE!

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Appendices

Appendix A

Table 1: Factors, Levels and Definitions

Factors	Levels	Definition
Timing of Entry	Pioneer	enters a new industry first
	Late Follow	enters an industry late in the industry's stage of development
Key Success Factor	High	requirements necessary for success will not change radically during industry development
	Low	requirements necessary for success will change radically during industry development
Educational Capability	High	considerable resources and skills available to overcome market ignorance through education
	Low	few resources or skills available to overcome market ignorance through education
Lead Time	Long	an extended period of monopoly for the first entrant prior to competitors entering the industry
	Short	a minimal period of monopoly for the first entrant prior to competitors entering this industry
Competitive Rivalry	High	intense competition among industry members during industry development
	Low	little competition among industry members during industry development
Entry Wedge Mimicry	High	considerable imitation of the mechanisms used by other firms to enter this, or any other industry, e.g. a franchisee
	Low	minimal imitation of the mechanisms used by other firms to enter this, or any other industry, e.g., introducing a new product
Scope	Broad	a firm that spreads its resources across a wide spectrum of the market, e.g., many segments of the

Very Unimportant 1 2 3 4 5 6 7 8 9 10 11 Very Important

Scope

Very Unimportant 1 2 3 4 5 6 7 8 9 10 11 Very Important

Industry Relatedness of Venturer's Competence

Very Unimportant 1 2 3 4 5 6 7 8 9 10 11 Very Important

Lead Time

Very Unimportant 1 2 3 4 5 6 7 8 9 10 11 Very Important

Competitive Rivalry

Very Unimportant 1 2 3 4 5 6 7 8 9 10 11 Very Important

Stability of Key Success Factors

Very Unimportant 1 2 3 4 5 6 7 8 9 10 11 Very Important

New Venture Entry Strategy: An Analysis of Venture
Capitalists' Survival Assessments

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Abstract

This study addresses many of the limitations of previous research assessing venture capitalists' decision making, by using theoretically justified criteria from new venture strategy research to develop and empirically test a model of venture capitalists' decision making in the assessment of new venture survival chances.

Introduction

Venture capitalists are conspicuously successful at predicting new venture success and numerous studies have investigated their decision making (Sandberg & Hofer, 1987; Hall & Hofer, 1993). The majority of research on venture capitalists' decision making has produced empirically derived lists of venture capitalists' "espoused" criteria which are the criteria venture capitalists report they use when evaluating new venture proposals (see, for example, Gorman & Sahlman, 1986).

Social judgment theorists suggest that "espoused" decision processes may be a less than accurate reflection of "in use" decision processes (Priem & Harrison, 1994; Zacharakis, 1995). For example, studies have found that "espoused" processes typically employ a larger number of criteria than actually used. It has also been shown that decision makers overstate the least important and understate the more important criteria when compared to the models derived from statistical analyses (Riquelme & Rickards, 1992). Prior research on venture capitalists' decision making is therefore possibly biased (Zacharakis, 1995).

As a result of insufficient theoretical discussion and methodological limitations in previous research, Sandberg and Hofer (1987) believes there to be no thorough integrated explanation of new venture performance. Hall and Hofer (1993) propose that much remains to be understood about venture capitalists' decision making. This study aims to increase understanding of venture capitalists through the use of new venture strategy literature as a theoretical basis for the investigation of venture capitalists' decision making in assessments of a new venture's probability of survival.

Literature Review: New Venture Entry Strategy

The majority of new venture strategy research relates to timing of entry into a market or industry (Lieberman & Montgomery, 1988;

Mitchell, 1991). In general, it appears that early entrants have higher returns if they are successful (MacMillan, Siegal & SubbaNarisimha, 1985; DeCastro & Chrisman, 1995), but bear a higher risk of failure. However, the relationship between timing and performance appears more complex than the above statement depicts. It is proposed that the following new venture entry strategy theory will provide explanatory and predictive ability for venture capitalists' assessment of a new venture's probability of survival.

Stability of Key Success Factors

Requirements for success in a market may change radically with market evolution (Abell, 1978). Superior performance arises from a fit between the competencies of a venture and key success requirements (Andrews, 1987). Pioneers commit to a number of key factors they believe will lead to success within the competitive environment (Slater, 1993). If the competitive environment changes, so too may the key success factors rendering the venture at a competitive disadvantage (Abell, 1978; Golder & Tellis, 1993). Later followers are better able to recognize the attractiveness of a market, key success factors necessary for entry, and are able to minimize the costs of entry through cutting R&D corners and/or leapfrogging the pioneering technology (Yip, 1982). However, if key success factors within an industry remain stable, it is proposed that pioneers' early commitment to a new technology is likely to provide superior new venture performance. This leads to the first research hypothesis:

Proposition 1:

- (a) Level of key success factor stability affects venture capitalists' assessment of probability of survival.
- (b) Venture capitalists' assessment of probability of survival is significantly higher for high key success factor stability than for low key success factor stability.

Educational Capability

There is often considerable uncertainty about the rate at which customers will substitute new for old technology (Porter, 1980; Lambkin & Day, 1989). Pioneers' potential customers often lack a frame of reference for understanding a new product concept (Slater, 1993) and the benefits of a venture's offerings. A frame of reference needs to be constructed in order to encourage substitution into the industry. Customers then need to be persuaded that the benefits of purchase are greater than the risks (Slater, 1993; Rogers, 1983). Customers' frame of reference can be difficult and costly to construct, in terms of time as well as financial and human resources. If a venture already possesses these resources, it has educational capability that can be directed towards performing original market research and necessary market development (Stinchcombe, 1965). Venturers with high educational capability can hasten customer substitution into the industry (Slater, 1993; Rogers, 1983), thereby increasing industry and firm profitability (Porter, 1980).

Liability of newness is a concept introduced by Stinchcombe (1965) which associates greater risks of failure with ventures

which lack stable links with other stakeholders (Stinchcombe 1965), and lack customer trust (Hannan & Freeman 1989) and these death risks decline monotonically with age (Freeman, Carroll & Hannan, 1983; Hannan & Freeman, 1984). While liability of newness declines with age (Hannan & Freeman 1989), it is apparent that risk of failure decreases as liabilities of newness are eliminated or minimized through risk reduction strategies (Douglas & Shepherd, 1997). It is proposed that a venture with educational capability can more rapidly develop stable links with key stakeholders and engender customer trust. This has the effect of reducing the risk of failure.

Proposition 2:

- (a) Level of Educational Capability affects venture capitalists' assessment of probability of survival.
- (b) Venture capitalists' assessment of probability of survival is significantly higher for high educational capability than for low educational capability.

Lead time

Barriers to entry initially provide pioneers a period of monopoly, that is, a lead time, and thereafter minimize competitive rivalry within the industry. Together, lead time and competitive rivalry provide greater understanding of new venture performance by identifying how an advantage is obtained and the means by which it slowly reduces over time. Lead time is the period between the pioneer's entry into the market and the appearance of the first follower. A longer lead time may increase pioneering advantages through helping the pioneer establish an even stronger brand name (Schmalensee, 1982) and moving customers' ideal points closer to the pioneer's attribute mix (Carpenter & Nakamoto, 1989). Increasing lead time helps pioneers further broaden their product line (Robinson & Fornell, 1985), provide superior profits and prepare for new battle grounds (Porter, 1980).

Along with higher market share as a result of longer lead times (Spital, 1983) and an opportunity to charge premium prices, the pioneer may also achieve cost advantages through experience effects (Abell & Hammond, 1979). These cost advantages put later entrants at a competitive disadvantage. Pioneers may be able to erect barriers that lock out followers (Porter, 1980), further lengthening lead time. Therefore the market momentum supported by lead time helps pioneers maintain their advantage. If lead time is short however, little time is available to develop pioneering advantages, decreasing the advantages of early entry.

Little information exists in the literature specifically on the effect of lead time on survival. However, it is reasonable to assume that a period of monopoly provides time for a venture to learn new tasks, to invent and overcome conflict in new roles, to develop an informal structure, to create stable links with stakeholders, and to develop some organizational inertia and organizational stability that will encourage customer trust. In other words, in the absence of industry competitors, lead time allows pioneers to minimize the liability of newness. Reducing the liability of newness increases the probability of survival

(Freeman, et al., 1983; Singh, House & Tucker, 1986). Reduced strain on resources, coupled with increased certainty, increases the probability of survival of later entrants over pioneers (Mitchell, 1991).

Proposition 3:

- (a) Length of Lead Time moderates venture capitalists' assessment of the relationship between timing of entry and probability of survival.
- (b) Venture capitalists' assessment of probability of survival increases with later entry at a greater rate for short lead time than long lead time. For Pioneers, venture capitalists' assessment of probability of survival is higher for long Lead Times. For late followers, venture capitalists' assessment of probability of survival is higher for short Lead Times.

Competitive Rivalry

Competitive intensity usually reduces average industry profitability (Porter, 1980; Slater, 1993). It has the effect of reducing pioneering advantages developed through lead time. Therefore, when competitive rivalry is low, the initial advantages developed during lead time are likely to be more sustainable. Increased competition more quickly reduces initial advantages and creates pressure to reduce prices and profitability.

Proposition 4:

- (a) Level of Competitive Rivalry affects venture capitalists' assessment of probability of survival.
- (b) Venture capitalists' assessment of probability of survival is significantly higher for low Competitive Rivalry than for high Competitive Rivalry.

Scope of Entry

A narrow scope strategy has been found to reduce direct competition with large firms (Broom, Longenecker & Moore, 1983) and reduce the strain on limited resources (Low & MacMillan, 1988). Growth can then proceed incrementally (Low & MacMillan, 1988) effectively staging the risk. However, timing of entry might well moderate the relationship between scope of entry and survival. Romanelli (1989) found that when industry sales are increasing rapidly, broad scope firms are more likely to survive than are narrow scope firms. Rapidly increasing industry sales typify the environment of a pioneer (Miller, Wilson & Gartner, 1987).

Proposition 5:

- (a) Level of Scope moderates venture capitalists' assessment of the relationship between timing and probability of survival.
- (b) For broad Scope, venture capitalists' assessment of probability of survival decreases with later entry but for narrow Scope venture capitalists' assessment of probability

of survival increases with later entry.

Entry Wedge Mimicry

Lieberman and Montgomery (1988) believe an important research priority is the focus on the evaluation of specific entry mechanisms, rather than on General investigations of timing of entry. This concept of "mimicry" may help integrate Vesper's (1990) entry wedges into a conceptual framework of entry mechanisms. Entry wedges are competitive weapons that may be used to enter an industry, and comprise one of the few attempts to explain entry mechanisms. High mimicry represents a high level of imitation of others' entry wedges. This concept is useful in explaining franchising A franchisee buys and/or rents from the franchisor the use of a hopefully proven proprietary entry wedge and competitive shield (Vesper, 1990).

A "low mimicry" entry wedge may be achieved through offering an product or service and/or introducing a marketing innovation that allows the entrant to overcome barriers to entry (Porter, 1980). Innovation need not be a technological breakthrough (Karakaya & Kobu, 1994) or the creation of a new industry with a product's introduction- both developments are extremely rare (Vesper, 1990) but would be considered the extreme case of low mimicry. This concept of "low mimicry" supports Vesper's (1990) 'new product' entry wedge.

Franquesa and Cooper (1996) found lower survival rates for ventures which used innovative strategies based on relatively unique products or services than those which used less innovative strategies Carbone (1989) found a greater likelihood of survival in firms which used high mimicry entry wedges, such as franchising. Ventures using a high mimicry entry wedge apparently benefit from lower cost of entry and use of a proven formula than those using low mimicry entry wedges. Examples of a proven formulae include an established market, intellectually protected product/name, financial and managerial advice. Shane (1996) found that the more complex the franchise concept, the less likely the franchisee would survive. Added complexity retards mimicry and therefore decreases chances of survival.

Proposition 6:

- (a) Level of entry wedge Mimicry affects venture capitalists' assessment of probability of survival.
- (b) Venture capitalists' assessment of probability of survival is significantly higher for high mimicry than low mimicry.

Industry Related Competence

Shepherd, Crouch and Carsrud (1997) propose that a venture with a management team which has little industry related competence can be considered more new than a venture whose management team has experience and knowledge with the targeted industry. Little industry related competence indicates that a venture lacks important industry contacts, credibility with buyers and other industry specific information. This equates to greater liability of newness and therefore greater risk of failure (Freeman, et al., 1983). This is supported by Bruderl, Preisendorfer &

Ziegler (1992) who found industry specific human capital to be a significant determinant of venture survival.

Proposition 7:

- (a) Level of industry related competence affects venture capitalists' assessment of probability of survival.
- (b) Venture capitalists' assessment of probability of survival is significantly higher for high Industry Related Competence than for low Industry Related Competence.

Proposition 8:

Industry related competence is the most important factor in venture capitalists' assessment of probability of survival.

Research Design

Conjoint analysis is a strong tool for decision modeling research providing significant, structured insight into venture capitalists' decision criteria (Muzyka, Birley & Leleux, 1993; Zacharakis, 1995). Theoretical basis for this study's use of conjoint analysis is information integration theory (Anderson, 1981). In developing conjoint profiles, levels were chosen to represent variation that typically occurs in the decision environment of venture capitalists, thereby maintaining believability and response validity. Venture capitalists assess the probability of survival for a series of conjoint profiles which describe new ventures in terms of eight attributes. "Probability of Survival" is defined as " the probability that this venture will continue to participate in the market using a ten year time horizon". An eleven point scale was used and anchored by very high probability of survival and very low probability of survival. A profile is displayed in Appendix A.

The eight attributes and levels are detailed in Table 1. Discussions with venture capitalists, accountants and academics provided face validity for attribute levels.

Table 1: Factors, Levels and Definitions

Factors	Levels	Definition
Timing of Entry	Pioneer	enters a new industry first
	Late Follower	enters an industry late in the industry's stage of development
Key Success Factor	High	requirements necessary for success will not change radically during industry development
	Low	requirements necessary for success will change radically during industry development
Educational Capability	High	considerable resources and skills available to overcome market ignorance through education
	Low	few resources or skills available to overcome market ignorance

		through education
Lead Time	Long	an extended period of monopoly for the first entrant prior to competitors entering the industry
	Short	a minimal period of monopoly for the first entrant prior to competitors entering this industry
Competitive	High	intense competition among industry members during industry development
Rivalry	Low	little competition among industry members during industry development
Entry Wedge	High	considerable imitation of the mechanisms used by other firms to enter this, or any other industry, e.g., a franchisee
Mimicry	Low	minimal imitation of the mechanisms used by other firms to enter this, or any other industry, e.g., introducing a new product
Scope	Broad	a firm that spreads its resources across a wide spectrum of the market, e.g., many segments of the market
	Narrow	a firm that concentrates on intensively exploiting a small segment of the market, e.g., targeting a niche
Industry	High	venturer has considerable experience and knowledge with the industry, being entered on a related industry
Related		
Competence	Low	venturer has minimal experience and knowledge with the industry being entered or related industry

Each of the eight attributes is varied at two levels in an orthogonal fractional factorial design consisting of 16 profiles allowing each main effect and selected two way interactions to be investigated (Hahn & Shapiro, 1966). Two way interactions investigated are timing's interaction with each other factor, with the exception of industry related competence. Each of the 16 profiles were fully replicated to test for reliability of responses. These 32 profiles were randomly assigned to avoid order effects, with a further practice case and 6 hold out cases used. The practice case familiarized respondents with the task and the 6 hold out cases were used to test the models' predictive ability. Therefore the experiment presented 39 profiles.

Sixty six senior individual venture capitalists representing 47 Australian venture capital firms completed the survey. Two responses were unusable. To identify the factors which are statistically significant for venture capitalists at the aggregate-subject level, the t-statistics derived from OLS regression were aggregated to form a Z-statistic (Patell, 1976; Dechow, Huson & Sloan, 1994) [1]. The mean beta coefficient of

those main effect factors found to be significant were interpreted by the sign of the coefficient. To interpret the form of significant interactions, the individual means of factor level combinations were averaged.

Although two or more attributes may significantly affect the decision process, it is unlikely that those attributes will be of equal importance (Ettenson, 1993). Therefore the significance at the aggregate level of analysis is supplemented with a measure of relative importance. Hay's (1973) omega squared (w^2), which is a measure of explained variance, and is used to assess the relative importance of the eight factors and 2-way interactions. The mean corresponding to all main effects and selected 2-way interactions were calculated.

Predictive ability of individual and aggregate decision making models were tested using a Pearson R correlation between the observed score on six hold out cases and a predicted score calculated by the individual decision making model(s). Sixteen replicated profiles were used in a test retest measure with the original 16 cases using Pearson R correlations to test the consistency of responses.

Results

Table 2 (omitted) demonstrates the individual decision models of 64 venture capitalists including the beta coefficients for each factor and selected two way interactions as well as measures of explanatory and predictive ability of the model(s).

At the aggregate level of analysis, the Z scores indicate that industry related competence, timing, competitive rivalry, educational capability, key success factor stability, lead time, mimicry, timing-competitive rivalry interaction and timing-lead time interaction are significant in venture capitalists' assessment of probability of survival, i.e., their Z scores exceed 1.645. The sign for the mean regression coefficient for each significant main effect indicates the variable level venture capitalists associate with higher probability of survival. The variables level associated with higher probability of survival are high industry related competence, pioneering, low competitive rivalry, high educational capability, high key success factor stability, Iona lead time and high mimicry.

To interpret the form of the significant interactions, each individual's timing-competitive rivalry and timing-lead time interaction means were averaged. The form of the interaction for timing-competitive rivalry interaction is Mean low pioneer (6.1) > Mean high late (5.1) > Mean low late (5.0) > Mean high pioneer (4.5). The form of the interaction for timing-lead time is Mean long pioneer (5.6) > Mean long late (5.1) > Mean short late (5.0) > Mean short pioneer (4.9). On average, the most important criteria for venture capitalists in their assessment of probability of survival is industry related competence ($w^2 = 0.29$), second tier of ($w^2 = 0.10$), 2= importance is educational capability timing ($w^2 = 0.07$), competitive rivalry ($w^2 = 0.06$) and key success factor stability (0.05). The third tier of importance is both mimicry and scope ($w^2 = 0.02$). The fourth tier of importance contains all interactions ($w^2 = 0.01$). Table 3 displays the results in terms of this study's hypotheses. Reports of

reliability and explanatory and predictive ability of the models follow.

Table 3: Level of Support for Hypotheses

#	Hypothesis	Level of
1a	Level of key success factor stability affects venture capitalists' assessment of probability of survival.	Supported
1b	Venture capitalists' assessment of probability of survival is significantly higher for high key success factor stability than for low key success factor stability.	Supported
2a	Level of Educational Capability affects venture capitalists' assessment of probability of survival.	Supported
2b	Venture capitalists' assessment of probability of survival is significantly higher for high educational capability than for low educational capability.	Supported
3a	Length of Lead Time moderates venture capitalists' assessment of the relationship between timing of entry and probability of survival.	Supported
3b	Venture capitalists' assessment of probability of survival increases with later entry at a greater rate for short lead time than long lead time. For Pioneers, venture capitalists' assessment of probability of survival is higher for long Lead Times. For late followers venture capitalists' assessment of probability of survival is higher for short Lead Times.	Unsupported
4a	Level of Competitive Rivalry affects venture capitalists' assessment of probability of survival.	Supported
4b	Venture capitalists' assessment of probability of survival is significantly higher for low Competitive Rivalry than for high Competitive Rivalry.	Supported
5a	Level of Scope moderates venture capitalists assessment of the relationship between timing and probability of survival.	Unsupported
5b	For broad Scope, venture capitalists' assessment of probability of survival decreases with later entry but for narrow Scope venture capitalists' assessment of probability of survival increases with later entry.	Unsupported
6a	Level of entry wedge Mimicry affects venture capitalists' assessment of probability of	Supported

survival.

- | | | |
|----|---|-----------|
| 6b | Venture capitalists' assessment of probability of survival is significantly higher for high mimicry than low mimicry. | Supported |
| 7a | Level of industry related competence affects venture capitalists' assessment of probability of survival. | Supported |
| 7b | Venture capitalists' assessment of probability of survival is significantly higher for high Industry Related Competence than for low Industry Related Competence. | Supported |
| 8 | Industry Related Competence is the most important factor in venture capitalists' assessment of probability of survival. | Supported |

The predictive ability of an individual model with their respective six hold out cases was significant for 67% of the venture capitalists, with a mean R^2 of 0.76. The aggregate model also demonstrated predictive ability, significantly predicting the decision policy of 63% of the venture capitalists with a mean R^2 of 0.75. Ninety two percent of venture capitalists had significantly reliable responses. Mean test-retest correlation for the sample was 0.69 providing assurances the new venture decision making task was performed consistently by the participants.

Discussion

The findings provide support for Andrew's (1987) proposition that superior performance arises between the competencies of a venture and key success requirements of the industry. Where the key success factors are stable, all ventures, regardless of timing (if entry, are better able to find the "fit" between their competencies and the stable key success factor requirements. The findings also support studies that show that key success factor instability accelerates the decline of pioneering advantages as either a result of ineffective investment of research funds (Aaker and Day, 1986), using inappropriate methods (Nelson and Winter, 1982), and/or reluctance to withdraw from mature technologies that are highly profitable (Yip, 1982). The probability of survival for late followers is also negatively affected by key success factor instability.

Support was also found for: Tyebjee and Bruno's (1984) finding that "environmental threats" is a criterion venture capitalists consider in making their investment evaluation, Hisrich and Jankowitz's (1990) finding that venture capitalists typically investigate the continuity of the market, and Meyer, Zacharakis and DeCastro's (1993) finding that venture capitalists report external market conditions to be a major failure determinant.

If a new entrant faces the liability of newness, such as, a lack of links with key stakeholders (Stinchcombe, 1965), lack of customer trust, uncertainty arising from whether customers will substitute into the industry (Porter, 1980. Lambkin and Day, 1989), and/or customers lacking a frame of reference (Slater, 1993), then this study supports educational capability's ability

to reduce uncertainty and risk of failure by hastening customer substitution into the industry (Slater, 1993; Lambkin and Day, 1989) and having the skills to research and develop the market (Stinchcombe, 1965). The findings also support Dixon's (1991) findings that marketing skills of the entrepreneurial team are important venture capitalist considerations.

There is evidence that a Iona lead time can increase pioneering advantages (Schmalensee, 1982; Robinson and Fornell, 1985). While the findings provide support for a significant lead time-timing interaction there is little support for this study's hypothesis that a long lead time negatively affects survival chances of late followers, rather a long lead has a positive affect on venture capitalists' assessment for both late followers and pioneers. This support for a pioneer's long lead time, regardless of the timing of entry, could demonstrate an evaluation of the attractiveness of the industry, that is, an industry that produces a Iona lead time is likely to have high barriers to entry that will protect those that can enter and thereby increase the probability of survival.

This study's results support entrepreneurs belief that competition is a criteria venture capitalist use in deciding whether or not to invest (Bruno and Tyebjee, 1983). The findings also support studies that have found variables that relate to competitive rivalry are important in venture capitalists decision making, such as, industry profitability (Hall and Hofer, 1993), market/industry characteristics (Hutt and Thomas, 1985; Meyer, et al., 1993) and product differentiation (Hutt and Thomas, 1985). More specifically the findings support venture capitalists use of level of competition (Hutt and Thomas, 1985; Muzyka et al., 1996) in their investment assessment decisions. Venture capitalists in this study believed that competitive risk increases risk of business failure which supported Keeley, Knapp and Rothe's (1996) finding.

The findings, however, do not support previous new venture strategy studies that show narrow scope leads to superior performance either through avoiding direct competition (Broom et al., 1983), reducing strain on resources (Bantel, 1996) and/or growing incrementally (Van de Ven, Hudson & Schroder, 1984) so the venture can stage the risk and thereby increase the probability of survival. Nor is there support for Cooper's (1993) finding that dependence on narrow markets leads to unstable performance. Assuming rapidly increasingly sales are typical of an environment an early entrant faces (Miller, et al., 1987), there was no support for Romanelli's (1989) finding that when sales are increasing rapidly, broad scope strategies are more likely to survive than ventures using narrow scope strategies.

There was support for Bruderl et al.'s (1992) finding that there were no significant differences in survival chances between ventures pursuing broad or narrow strategies. The findings also support the lack of reference to scope in the venture capitalists' decision making research. Scope appears to be a factor that only a few venture capitalists use in their assessments of a new venture's probability of survival, and those that do, place little importance on scope relative to other entry strategy factors.

This study provides support for: Franquesa and Cooper's (1996)

finding that innovative strategies based on relatively unique products or services had lower survival rates; Carbone's (1989) finding that higher entry wedge mimicry ventures, such as franchisees, had a greater likelihood of survival; and Shane's (1996) finding that more complex franchise concepts are more likely to fail. It also provides support for those studies that found product differentiation, including product uniqueness, is used by venture capitalists in their evaluation of venture proposals (Tyebjee and Bruno, 1984; Muzyka et al., 1996) and more generally the characteristic of the product/service (MacMillan et al., 1985).

Assuming Shepherd, Crouch and Carsrud's (1997) proposition that lower industry related competence increases the newness of a venture, the findings support "liability of newness" studies that demonstrate the risk of failure increases with increased newness (Freeman et al., 1983). It appears that industry related competence has a positive influence on venture capitalists' assessment of survival chances through important industry contacts, credibility with buyers and/or other industry specific skills, experience and knowledge: The findings of this study support Bruderl et al. (1992) finding that human capital is a significant determinant of venture survival. This study's findings also provide support for Roure and Madique's (1986) finding that successful founders have previous industry experience.

Most venture capitalists' decision making studies find venture capitalists place importance on competence in their assessments of the viability of investment decisions (see, for example, Tyebjee & Bruno, 1981). This study builds on Gorman and Sahlman's (1986) finding that the cause of venture failure lies with senior management and Meyer et al. (1993) finding that management skill is a failure determinant. This study explored an aspect of senior management skill, that being industry related competence, which was found to be a significant and important criterion venture capitalists use in their assessment of probability of survival. Industry related competence could have been the major driver of Gorman and Sahlman's (1986) and Meyer, et al.'s (1993) results or may be just a contributor. This study and the above studies conflict with Hall and Hofer's (1993) finding that venture capitalists place little importance on the entrepreneur or the entrepreneurial team.

This study's results provide evidence that a model of venture capitalists' assessment of probability of survival involving key success factor stability, educational capability, lead time, competitive rivalry, scope, mimicry, timing, industry related competence, key success factor stability-timing interaction, educational capability-timing interaction, lead time-timing interaction, competitive rivalry-timing interaction, scope-timing interaction and mimicry-timing interaction, can significantly explain the probability of survival assessment decisions of most venture capitalists. At an individual and aggregate level, venture capitalist's probability of survival assessment decisions can be modeled and have predictive ability.

While on aggregate, timing-lead time interaction and timing-competitive rivalry interaction are significant in venture capitalists' decision making they are low in relative importance. These findings concur with social judgment theorists and decision making researchers such as Louviere (1988) who propose that, in

general, main effects often explain 80% of the variance, two-way interactions rarely exceed 6 to 8%, 3-way interactions rarely exceed more than 2 to 3% and higher order interactions account for minuscule proportions of variance. However, while the significant interactions were low in relative importance their importance may be high in an absolute sense because of the high cost of an incorrect assessment.

Could it be some venture capitalists are unable to conceptualize these more complex relationships? Are venture capitalists' decision policies optimal? Can venture capitalists decision making be improved? Venture capitalists may be able to learn from the contingent based theory proposed in this study. Zackarakis (1995) found venture capitalists have information processing limitations and that actuarial models improve venture capitalists' assessment decisions. The contingent theory of venture capitalists decision making proposed here may form the basis of an actuarial model. Further research needs to be performed in developing and empirically testing an actuarial model that involves the new venture entry strategy theory proposed in this study.

Footnote

1. The aggregation method is as follows:

$$Z = \frac{(1/\sqrt{N} \sum_{j=1}^N t_j / \sqrt{k_j/(k_j-2)})}{\sqrt{1-(N-1)r}}$$

where t_j = t-statistic for individual j ; k_j = degrees of freedom in regression for individual j ; N = number of firms in sample. The Z-statistic is distributed asymptotically as a standard normal variate (Anderson, 1971; Dechow, et al., 1994) and computed under the assumption of independence among individuals, that is, $r = 0$.

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Leveraging Resources Under Threat of Opportunism:
Predicting Networking in International Growth

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Abstract

This paper develops a set of hypotheses designed to predict the intensity of networking in the international growth of new, technology-based firms. The model draws on both the resource-based (or knowledge-based) and contractual views of the firm. The model is empirically tested with data from 86 new, technology-based firms in Finland. Mixed support for the model is found. Pointers for future research are discussed.

Introduction

During recent years, the resource-based view of the firm (e g, Penrose, 1959; Wernerfelt, 1984; Rumelt, 1984; Conner, 1991; Peteraf 1993; Conner & Prahalad, 1996) has emerged as a popular reference framework for studies in strategy and management. The resource-based view of the firm seeks to complement the contractual (Williamson, 1985; Grossman & Hart, 1986; Holmstrom & Tirole, 1989; Hart & Moore, 1990) views of the firm by emphasizing the importance of firm specific resources in the generation of economic profit. The resource-based view suggests that the firm is not merely a nexus of contracts (Fransman, 1994), but also a knowledge-bearing entity, a repository of knowledge and competencies. The competencies are stored in, e g, organizational routines and structures, in employees, and, for example, in the control and information systems of the firm. As knowledge and competencies are cumulative, and as it is more difficult to unlearn than it is to learn, knowledge and competence accumulation processes are essentially path dependent. This helps explain why firms are different, and may focus on exploiting their distinctive competencies.

One central point in the conversation between the resource-based and contractual views of the firm is whether or not notions such as opportunism and moral hazard constitute a necessary prerequisite in explaining the existence of firms. The proponents of the resource-based view argue that replacing these notions should at least sometimes be possible (Conner, 1991; Conner & Prahalad, 1996; Kogut & Zander, 1996). It is suggested,

for example, that there are factors that help offset opportunism without recourse to explicit contractual deterrents. Such factors include the cumulative competencies and knowledge carried by the firm, and the social context in which every firm and economic transaction is inevitably embedded. Sometimes the social control of economic behavior is so strong that opportunism is given little room to operate. A well known example of such a situation is the Dutch diamond market, where large (and sometimes possibly even uncertain, in terms of outcome) transactions are sealed with a handshake, and where opportunistic behavior is not present (Granovetter, 1985). Focusing on knowledge accumulation and substitution, Conner and Prahalad (1996) point out situations where the strict application of opportunism-based arguments and knowledge-based arguments may lead to opposite predictions regarding the organization of economic activity.

The consensus that seems to be emerging from the dialogue between the two views of the firm is that both views have much to offer, and that it may even be possible to develop a unifying theoretical framework (Conner & Prahalad, 1996). From the perspective of research on new, technology-based firms, both the resource-based (or knowledge-based) and contractual views certainly have a rich potential to offer, even though the potential areas of application may slightly differ from each other. In this regard, a useful differentiating aspect is pointed out by Conner (1991), who argued that the resource-based view focuses on reaching for the positive through the exploitation of the resources of the firm, whereas the contractual view focuses on preventing the negative, that is, guarding against opportunism.

In the present study, we seek to draw upon the potential offered by both views by developing and testing a model of the international growth of new, technology-based firms. We believe that the international growth of new, technology-based firms provides a research setting where each of the two views have potential strengths. In international growth, information asymmetries are often large, and the opportunism-moderating influence of a common social context often weak, because the transacting parties come from different countries. In international growth, the potential for opportunistic behavior should thus be particularly important. On the other hand, new, technology-based firms themselves are highly knowledge intensive. The business idea of new, technology-based firms is based on exploiting their core technological competencies. This core resource is also constantly upgraded during the normal activity of the firm, as the new, technology-based firm learns from previous projects. There are thus often high potential value to be derived from the innovative combination of this core resource with external complementary assets.

The international growth of new, technology-based firms thus provides an example of a resource-intensive growth logic (innovative combination of firm specific resources with external complementary assets) in a context where the potential for opportunistic behavior is important (international growth). We should thus have a case where both the resource-based view and the contractual view of the firm should be of relevance, and where a model drawing upon each of the two views could be developed.

In the following we will first review studies of the growth of

small firms, focusing on international growth in particular. Then, we will develop a set of propositions that are combined into a model of international growth of new, technology-based firms. The model will be tested with data that has been compiled previously for another study (Salonen, 1995).

Models of the Growth of New, Technology-Based Firms

In his dissertation, Feeser (1987, pp 53-78) found that there is no generally accepted framework explaining the growth of new, technology-based firms. While the literature abounds with studies associating different industry and firm variables with firm growth, most studies are highly empirical in their orientation, lacking a consistent theoretical basis. The lack of well developed theories of causal relationships has also been highlighted by Cooper (1993).

The models proposed for depicting the growth of small firms are typically linear stage models, in which emphasis is placed upon creating a fit between the configuration of the organization and the stage of growth (see, e g, Greiner (1972), Churchill and Lewis (1983), Kazanjian (1983), Kazanjian and Drazin (1990), Eggers, Leahy, and Churchill, 1994). These models draw upon organization theory, and direct references to established theories of the firm are largely missing. In most linear stage models, implicit references to industrial organization economics can be found, however. For example, almost all models view the limits to growth as being determined by the market, the external environment of the firm. Co-operation between firms is not given much consideration. Instead, the firm is viewed as operating atomistically, keeping customers and suppliers at arms length. Particularly in the earlier models, all firms were assumed to be growth oriented, and the absence of growth was interpreted as failure. Such growth assumptions reflect the influence of Baumolian growth economics (Baumol, 1959). Later growth models have increasingly recognized the fact that most small firms depict only low degrees of growth orientation, and that many small firms go through growth reversal phases, where the small firm oscillates back to a smaller size (Eggers, Leahy, and Churchill, 1994).

The general lack of explicit references to theories of the firm in small firm growth models is a natural reflection of the fact that microeconomic theories were not directly used in strategic management research until late 1970's. Even then, the dominating influences came from the Bain-Mason paradigm and from the oligopoly theory, which were used by Porter (1980) as a basis for the examination of structural forces in a firm's operating environment (Foss, Knudsen, and Montgomery, 1996). Studies drawing on Porter's framework dominated the small firm growth studies (together with psychological-sociological studies) during the 1980's. As the influence of microeconomic theories over strategic management research has increased from the mid-1980's onwards, this picture has become richer, with an increasing number of small business growth studies making explicit references to microeconomic theory frameworks.

Garnsey (1996) has proposed a resource-based growth model of small firms that explicitly draws on Penrose's (1959) theory of the growth of the firm. Also the growth model by Garnsey is a

stage model, but the stages are described in resource terms (e g, resource identification, resource mobilization, resource generation, resource maturity). The interesting point of Garnsey's model is that it uses systems theory to explain typical phenomena in the early growth of the firm, such as lock-in and growth reversal. Garnsey's model thus provides a good basis for linking the small firm to its environment through network relationships, a theme pursued by Autio, Garnsey, and Yli-Renko (1997). Garnsey's model does not address issues related to international growth, however. This may possibly be a reflection of the fact that Penrose herself did not consider that there was a need for a special theory to explain the expansion of firms outside their national boundaries (Penrose, 1985, pp 14-15).

Even though there are a number of studies that focus on the international growth of new, technology-based firms (e g, Cooper and Kleinschmidt (1985), Lee and Yang (1990), Tyebjee (1990), Lindqvist (1992), Czinkota and Ursic (1991), McDougall (1989), Bloodgood et alii (1995)), there seem to be no growth models that would have been explicitly developed for the international growth of technology intensive small firms. None of the growth models reviewed above addresses the problem of international growth. Also McDougall et alii (1994) point to a similar gap, noting that the existing theories of international expansion of the firm (monopolistic advantage theory, product cycle theory, stage theory, oligopolistic reaction theory, and internalization theory) are tailored to relatively large, established firms only. McDougall et alii proceed to suggest pointers for a more resource-based model of the international growth of new, technology based firms. In their discussion, resource-leveraging and co-operative relationships occupy a central position. The importance of the use of network relationships has also been emphasized by Coviello and Munro (1995).

To summarize, the existing models and studies on the growth of small firms in general, and the international growth of new, technology-based firms in particular, only rarely rely explicitly on some established theory of the firm. Such models have recently started to appear, however, and the number of such models can be expected to increase, as the theories develop and their predictive power increases. In the following, we will discuss both contractual and resource-based pointers for the development of a model for predicting the international growth of new, technology-based firms.

Network Model of the Growth of New, Technology-Based Firms

Premises

As a starting point for our model development, we need to address the special characteristics of new, technology-based firms. We define new, technology-based firms as small and medium sized firms operating in high-technology sectors, as proposed by, e g, Butchart (1987). It is typical for such firms that they base their business idea on exploiting their core technology resource. An important fraction of the personnel of such firms often has a degree in technology or in natural sciences (Rickne, 1996). This means that the core technology resource of new, technology-based firms is often largely carried by its employees, which makes this resource highly firm-specific and inalienable (Brynjolfsson, 1994).

This resource is also a cumulative one, as the new, technology-based firm learns from its previous customer projects. This process continuously increases the distinctiveness of its core technology resource.

The above arguments prompt us to state our first premise in view of developing the model of international growth of new, technology-based firms.

Premise 1

New, technology-based firms are a particularly resource-intensive type of business firms. Their core technology resource tends to dominate other characteristics of these firms.

New, technology-based firms are also characterized by a high degree of resource dependency (Child, 1974; Pfeffer & Salancik, 1978). They often need to access and control external complementary assets in order to generate profit (Teece, 1986). The time windows, during which new, technology-based firms need to succeed in commercializing their products and services, are often short. This further emphasizes the need to access external complementary assets, as the time compression diseconomies involved in generating the necessary complementary assets may be significant (Peteraf, 1993). New, technology-based firms also often operate in systemic environments, in the sense that their specialized technology outputs are integrated to a systemic product. Eisenhardt and Schoonhoven (1996) also provide a resource-based motivation for alliance formation by new, technology-based firms, stating that alliance formation offers a number of advantages, such as learning, creation of legitimacy, and fast market entry. The accessing of external complementary resources and the exploitation of dynamic complementarities between small and large firms thus seems a natural avenue for growth seeking new, technology-based firms. This approach, the seeking of profit through the innovative combination of internal resources with external complementary assets, is also something that Conner (1991) emphasizes in her review of the resource-based view of the firm.

The above arguments prompt us to state our second premise in view of developing the model of the international growth of new, technology-based firms.

Premise 2

Growth oriented new, technology-based firms need to enter into network relationships in order to access external complementary assets

Our third premise is a corollary of the first and second premises. As stated above, our reasoning holds that new, technology-based firms need to leverage their resources by seeking profitable resource combinations in order to grow. Thus, their growth is more of the 'resource-intensive' type, as opposed to market-intensive growth. Market-intensive growth takes place predominantly through the expansion of manufacturing capacity, and the products are then sold in a market. In resource-intensive growth, the growth takes place through the leveraging of firm-specific resources: the firm grows with the value creating system to which it is locked in.

Premise 3

The growth of new, technology-based firms tends to be 'resource-intensive'. This means that the growth is sought through the innovative combination of firm-specific technology resources with external complementary assets.

We need to state one more premise in view of building our model. We do not expect growth orientation to be an inherent characteristic of all new, technology-based firms. The resource-intensive logic, that we expect most new, technology-based firms to adhere to, can in fact be expected to generally favor profitability over growth as a key managerial goal (Autio, 1996).

Empirical evidence supporting such a conclusion is abundant, see, for example, Utterback & Reitberger, 1982; Cooper, 1982; Davidsson, 1989; Autio, 1994; Kamshad & Hay 1996. Davidsson attributes the assumption of universal growth orientation to the general assumption of rational profit maximizing behavior among economic actors.

Premise 4

Most new, technology-based firms are not growth oriented by nature.

Antecedents of Network Relationships

Having stated the premises underlying the model building, we now turn to formulating the model-specific hypotheses. As stated in the introduction, international growth provides an example of a situation in which agency problems can be particularly severe. The new, technology-based firm needs to rely on its foreign partners in its supply of information concerning the foreign market. Such a situation exposes the firm to both moral hazard and to adverse selection. Adverse selection may occur when opportunistic foreign partners provide misleading information about their true abilities (Eisenhardt, 1988. Shane, 1996). It may be advantageous for the foreign partner to maximize the number of suppliers in order to be able to maximize her opportunities for cherry picking. Moral hazard occurs when the new, technology-based firm cannot monitor her foreign partners closely enough to prevent shirking. The lack of a shared socio-cultural context makes it less likely that the possible complaints of the new, technology-based firm will tarnish the reputation of the foreign partner in her home country.

International expansion can thus be expected to present a much bigger challenge for NTBFs whose growth we expect to be more of the resource-intensive type, as opposed to market-intensive growth. In market-intensive expansion, direct and indirect exports can be relied upon as the main mechanism of international expansion. As the relationship is more arms-length in character in traditional export relationships, agency problems are less acute (Lassar and Kerr, 1996). The more important the mutual dependencies become, the more important it becomes to find the right combination of control and cost efficiency.

In Penrose's theory, the management of the firm is identified as

the key internal factor regulating the growth of the firm. She also identified opportunities for small firms to enter new 'interstices' (1959, p 224), citing the expansion of production investment by large firms as one rich source of such 'interstices'. However, the ability of the management to coordinate and control the activities of the firm is clearly put forward as the central growth regulating factor in Penrose's theory.

In small firms, we believe, the role of management is not as likely to be a growth constraining factor as it is to be a growth enabling factor. An experienced management is more likely to be able to set up collaborative relationships with other firms. This may be due to, for example, the higher social visibility of an experienced management, its higher trustworthiness, and its previous industry experience (Eisenhardt & Schoonhoven, 1996, pp 140-141). We therefore expect that:

Hypothesis 1a

The more experienced and skilled the company management, the greater the rate of alliance formation

Hypothesis 1b

The greater the size of the top management team, the greater the rate of alliance formation

Our data does not allow us to verify Eisenhardt & Schoonhoven's hypotheses that the number of previous industry employers and the level of previous jobs by management team members correlate positively with alliance formation.

New, technology-based firms are often defined by their core technology resource. The qualities of this core resource influence the degrees of freedom available for the firm, for example, in terms of pursuing alternative avenues for growth. The resource-based view suggests that valuable, rare, imperfectly imitable, and non-substitutable resources are ones which provide potential for creating sustainable competitive advantage (Barney, 1991, p 116). Such qualities may also make a new, technology-based firm more attractive as an alliance partner, both because they limit the partner's possibilities of accessing similar resources elsewhere, and because nonsubstitutability makes it less likely that competitors will get access to a similar resource (Sapienza et alii, 1997, p 12). From the perspective of the new, technology-based firm, imperfect imitability and non-substitutability are qualities that help decrease the risk of the core technology being copied by the foreign alliance partner. A higher degree of inimitability also enables the new, technology-based firm to concentrate on learning from the alliance partnership, which may further enhance this non-imitability. From the transaction cost perspective, a high degree of inimitability and non-substitutability also help the new, technology-based firm to offset the effect of information asymmetries that work to the advantage of the alliance partner. As the products and services of the new, technology-based firm may be highly specialized, idiosyncratic investments are often called for from the alliance partner in order to accommodate the product or service. Such investments increase the dependency of the alliance partner of the new, technology-based firm, helping

put the relationship on a more equal footing. Summarizing, we expect that:

Hypothesis 2

The greater the degree of appropriability of the core technology resource, the greater the rate of alliance formation

Above, we use the term 'appropriability' as a proxy for the joint effect of inimitability and non-substitutability.

The issue of growth orientation among new, technology-based firms was addressed above. New, technology-based firms often operate in information technology-intensive business environments where flexible specialization advantages are exploited. Such advantages often mean that rapid growth is not the most optimal avenue for developing the activities of new, technology-based firms. There are numerous reasons why profit maximization does not necessarily need to imply growth, and why the assumption of profit maximization itself does not necessarily hold for small firms (Sapienza et alii, 1997, pp 13-15). The owners of small firms may wish to remain independent, fear losing control, wish to avoid unnecessary risks, and simply value other managerial goals than rapid organic growth. The reasoning of Kogut & Zander (1996) suggests that the firm has intrinsic value for the entrepreneur, as it strengthens her identity. Letting in outside investors and entering into numerous alliances would mean ceding control and risking a loss of a part of the identity of the entrepreneur. For such reasons, we think it is important to control for growth orientation in growth models of small firms. Keeping in mind that we expect the growth of new, technology-based firms to be of the resource-intensive type, we posit:

Hypothesis 3

The greater the growth orientation of a new, technology-based firm, the greater the rate of alliance formation

The hypotheses are illustrated in figure 1 (omitted). The wording in figure 1 relates to the empirical data that we have. The dashed line between network relationships and international growth indicates our expectation that network relationships are linked to growth. Our available data does not allow us to rigorously test this expectation. Collection of new data is required to check this expectation.

Empirical Data

The model is tested using empirical data originally collected by Salonen (1995). Note that the empirical data was not collected for testing the model constructed here. The operationalization of some constructs, collaborative relationships and appropriability in particular, is not sufficient in this data. The data allows us only to explore, not rigorously test, the hypotheses.

The data was collected by a mailed questionnaire survey. The population was limited to independent electronics firms, founded in or after year 1970, and which were internationally involved in the spring of 1993 and based their business idea on exploiting advanced technologies.

Altogether, 139 firms met the criteria for inclusion in the population. The questionnaire was acceptably returned by 82 firms.

Secondary sources were used and demographic variables checked to assess possible bias in the sample (Binks and Jennings 1986, pp 4-5). The checks generated satisfactory confidence that the sample was representative and random enough. The basic statistics of the sample firms are shown in table 1.

Table 1 Basic statistics of the empirical sample

Characteristic	Mean	Median	St dev
Age at the time of the interview	11 years	8 years	6,7 years
Number of founders	2,9	3,0	1,8
Age at the time of going international	4.8 years	3.5 years	4.8 years
Number of employees at the time of going international	15,7	7,9	19,7
Annual international sales at the time of going international*	1,9	1,0	2,7
Total annual sales at the time of going international*	5,5	3,3	6,4
Number of employees at the time of the interview	21,7	10,0	26,5
Annual international sales at the time of the interview*	8,7	3,0	16,9
Total annual sales at the time of the interview*	15,7	7,5	23,2

* Millions of Finnish Markka; FIM 1 A USD 0,22

Variables in the Model

As a proxy for appropriability, we used statement-style questions:

- A1 We have developed our main technology product by ourselves
- A2 Our main technology product is unique in the world
- A3 Our main technology product is among the most technologically sophisticated on the market
- A4 It is difficult for competitors to imitate our main technology product

The Cronbach Alpha for the construct was 0.7372. We also used R&D intensity and service intensity as proxies for appropriability. If the R&D intensity of the firm is high, it is likely to have developed more of its technologies by itself, which should increase appropriability. If the service intensity of the firm is high, inalienable human skills are relatively more used in customer service. The R&D intensity was measured as the percentage of R&D of the total sales of technology products. The service intensity of the product of the firm was assessed with a statement-style question: "There is a considerable service component associated with our product, for example, design service."

The number and extent of the international collaborative

relationships of the firms was evaluated by asking the respondents to indicate whether their firm had co-operation with any of the following: small foreign firm, large foreign firm, foreign research organization, foreign university, potential foreign customer, foreign consultant, or foreign service organization. Regarding each of these partners, the respondents were asked to evaluate the extent of the cooperation on a Likert scale from 1 = no cooperation to 5 = extensive cooperation. The proxy used to indicate the total international collaborative relationships of the firm was calculated as the sum of the extent indicators for the different cooperation relationships.

Because nearly half of the firms did not indicate international collaboration as defined above, we also use a dichotomous dependent variable to distinguish between firms which had international collaborative relationships and firms which did not.

We also explored relationships between a number of variables and international growth. The rate of international growth was calculated as the value of international sales (S_n) divided by the number of years of international involvement (n): $SALGRW\#3 = S_n/n$. This variable indicates the absolute rate of international growth, and is thus likely to correlate positively with firm size.

As proxies of the managerial capability, we used the following variables

EDUIND	index of the weighted average education level of the founders and managers of the firm; weights ranging from 1 for a secondary school education to 7 for a doctoral degree
AVGANAL	index showing how extensively a firm had analyzed its foreign customers, competitors, and possible partners before going international
BRDCOMP	index of the competence of the board of directors in a firm, in the fields of general management and the management of international operations
PREEXMNT	index of the previous experience of the management team of a firm, in the fields of general management and the management of international operations
LANGUAGE	the total number of foreign languages the management team was able to use
MTEAM1	size of the management team when the firm went international

As a proxy of the growth orientation of the firms, we used replies to the following statement: "How important was it, at the beginning of internationalization, for the firm to reach a substantial size fast?"

Findings from the Exploratory Analysis

Table 2 shows the results from the logistic regression analysis, in which the dichotomous indicator of international co-operation was used as the dependent variable. In all analyses, collinearities

between independent variables, as well as the normality of residuals, were controlled. As can be observed, after backward elimination, only one of the proxies for inimitability and non-substitutability indicates significant influences on collaboration, when collaboration is used as a dichotomous variable. This proxy is the service intensity of the product offering of the firm. In addition, the amount of preparatory analysis undertaken before going international appears as an almost significant influence.

Table 2 Results of logistic regression, dichotomous indicator of collaboration as the dependent variable

Variable	B	S.E.	Wald	df	Sig	R	Exp(B)
Amount of analysis	.525	.294	3.188	1	.0742+	.112	1.691
Service intensity	.560	.222	6.380	1	.0115*	.215	1.751
Constant	-2.941	.244	5.604	1	.0179		

The variables not included in the equation were: R&D intensity, growth orientation, proxy for appropriability, previous management experience of the management team, education index of the management team, management team size, and the size of the firm at the time of the survey. Thus, hypothesis 1b and 3) are not supported by this analysis, and hypothesis 1a is given only limited support. The adjusted R square of the model is 65.2%.

The results of a multiple regression analysis are shown in table 3. In the multiple regression analysis, we used the continuous indicator of international co-operation as the dependent variable. The same independent variables were used in this run as in table 2. This time, also R&D intensity appears as a significant influence, in addition to the amount of preparatory analysis and service intensity.

Table 3 Results of multiple regression, continuous indicator of collaboration as the dependent variable

Variable	B	SEB	Beta	T	Sig T
R&D intensity	.025	.007	.345	3.502	.0008***
Amount of analysis	.810	.346	.230	2.344	.0216*
Service intensity	.660	.256	.253	2.568	.0122*
Constant	-2.23	1.36		1.660	.1009

The adjusted R square for the model is 0.25. The influences appear as more significant than in table 2. The hypothesis concerning the relationship between appropriability and international collaboration gets stronger support, even though the primary proxy does not appear in this model, either. Importantly, none of the size related variables is indicated a significant influence.

We also checked the influences on international growth. The results of this analysis are shown in table 4.

Table 4 Results of multiple regression analysis, absolute

international sales growth used as the dependent variable

Variable	B	SE B	Beta	T	Sig T
Previous industry experience	.057	.0266	.194	2.169	.0332*
Language proficiency	-.380	.207	-.179	-1.835	.0704+
Education index	.315	.158	.185	1.999	.0492*
Management team size	.380	.181	.224	2.094	.0396*
Firm size (employees)	.042	.009	.456	4.616	.0000***
(Constant)	-1.93	.923		-2.095	.0395

The variables not included in the equation include R&D intensity, growth orientation, amount of preparatory analysis, service intensity, sum proxy for appropriability, market proximity, and amount of international co-operation. Thus, our expectation, that intensity of international collaboration is related to international growth, is not supported by this data. On the other hand, variables relating to qualities of the management team appear as significant. The findings thus suggest that management indeed constitutes a growth enabling, factor. The strong influence of firm size is expected, as absolute international growth is used as the dependent variable.

Discussion

This paper has addressed the important topic of international growth of new, technology-based firms. This topic is particularly important for small open economies, such as Finland, where growth oriented technology-intensive firms have to start aiming at international markets at a fairly young age. Our data indeed shows, consistent with McDougall et al (1994), that the internationalization process of these firms was started early.

We have attempted to borrow from both the resource-based and contractual views of the firm in trying to predict the intensity of networking in the international growth of new, technology-based firms. Both views seem to have much to offer for understanding this phenomenon. The main thrust of the paper is in model development, and the model is tested with secondary data at this stage only. Our mixed support for H1 and H2 suggest that new, technology-based firms do try to leverage their strengths through alliances when they can, and that the appropriability of the core technology resource of the firm does influence this process. Although the support is mixed, all significant relationships are in the expected direction. As secondary data has been used, that was originally compiled for another purpose, we interpret the mixed support as satisfactory at this stage. Note that the operationalization of the extent of international collaboration was far from being an optimal one.

In this data, we could not support a relationship between growth orientation and collaboration. One possible explanation for this, in addition to the use of secondary data, may be that some firms collaborate in order to grow and some collaborate in order to avoid the necessity of growing to reach their targets. Further research is needed to check these alternative explanations.

We have just begun to understand the causes and effects of NTBF collaboration for internationalized ventures. Emerging work on

barriers to growth--especially resource-based and goal-related causes--are consistent with Penrose's original concepts and suggest that understanding firm growth requires a deep understanding of internal limits to growth. Further work on the use of collaborative relationships for growth and survival suggest a more complex relationship than originally imagined. This complexity is echoed here by the lack of a significant relationship between growth orientation and collaboration.

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The Role Of Different Theories In Explaining
Entrepreneurship

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Abstract

This paper addresses the questions why it is difficult to explain and predict entrepreneurship by approaching the questions from former theories. The paper suggests that development of an approach where the motivation, why entrepreneurs decide to start a new venture, should be highlighted and taken into account when choosing the theoretical framework. Motivation is thought to act as framework in different economic and social contexts.

Considering the former research it is suggested that small businesses and new ventures could be classified into different categories that possess different antecedent variables and environmental characteristics (e.g. Vesper, 1980, Gartner et. al., 1989). Different theories of entrepreneurship give us already now a rich background where from to proceed in empirical analysis but different theories and different methodologies should be chosen according to context of the study.

1. Introduction

A consistent universal theory does not exist in entrepreneurship, but rather it consists of several different approaches including psychology, sociology, anthropology, regional science and economics. No common theoretical framework, even if demanded for rigorously, exists to synthesize the different points of views.[1] Some trials to develop multidimensional approach to entrepreneurship study the problems also mainly from perspective of the above mentioned well-established disciplines (c.f. Johnson 1990).

In trying to combine economic and social context in the same multidimensional model we run into severe methodological difficulties. Many of these studies assume that all the entrepreneurs, including the owners of small businesses and high-growth innovative ventures, are similar. The problem in explaining and predicting the behavior of the group becomes from its large variability and heterogeneity that is difficult to measure and operationalize (e.g. Johnson 1990, Virtanen 1996, Koskinen 1996).

The diversity of entrepreneurial phenomena and new ventures should be taken into account in modeling entrepreneurship. Gartner et. al. (1989, 170) suggest that it would be desirable to look behind averages - there is no "average" entrepreneur and thus opportunity exploitation is more connected with doing things differently than following others (Gartner et. al. 1989, 184) - and not to overlook variation by classifying a wide range of

entrepreneurs into homogeneous classes. This would provide a better understanding of entrepreneurship. Vesper (1980) and Gartner et. al. (1989, 183) emphasize the diversity among entrepreneurs and entrepreneur types. They try to identify the differentiating characteristics among entrepreneurs by developing a taxonomy. However, they also conclude that no single taxonomy captures all of the important differentiating variables. But more accurate differentiation in categorizing entrepreneurs gives us the possibility to combine different traditions and theories in approaching multidimensional phenomenon of entrepreneurship.

This paper addresses these questions by developing an approach where the motivation why entrepreneurs decide to start a new venture is a starting point. This motivation is thought to act as framework in different economic and social contexts. Considering the former research it is suggested that small businesses and new ventures could be classified according to Vesper (1980) and Gartner et. al. (1989) into different categories which possess different antecedent variables and environmental characteristics.

1.1. Expectations, Goals And Objectives

Specifically the set of small businesses includes a wide variety of enterprises starting from self-employed and craftsmanship to innovative, high-tech oriented growth companies (e.g. Vesper 1980). These companies are vastly different even if they share some similar objectives. For a self-employed worker the main expectation and objective may be to employ him or herself and enjoy the decent level of income and standard of living. He or she is mostly interested in "participating the market" dimension, not in other dimensions of entrepreneurship. Her firm usually has no clear-cut growth objectives. Conversely, the main objective of an innovative growth-oriented company is, or should be, value creation, rather than growth directly as the attribute says. This value creation is achieved by combining skillful resources and building a successful management team to launch competitive innovation in a growing market. Thus, when the expectations and objectives of companies differ, so do the information and incentive structures and the decision problems.

The literature in new venture creation is descriptive and uses cases when examining the phenomenon from the viewpoint of the entrepreneur. It does not offer any theoretical background about why that kind of market exists nor what are the expectations and the decision criteria of an entrepreneur to participate the market. Demand-side analyses are mainly surveys and quantitative analyses of the relationship between actors in the market. For example this is described in venture capital market by Sapienza & Timmons 1989 and Sapienza 1992. Those companies acquiring venture capital have been presupposed to possess high growth aspirations. Lumme et. al. (1995) report that the growth-oriented companies are an efficient channel for creating new jobs.[2] Thus it is vitally important for society to develop the kind of infrastructure that supports effective, growth-oriented entrepreneurial activity. Understanding the expectations and behavior of entrepreneurs is necessary to develop the market. After all, the entrepreneur and his/her venture form the core of the entrepreneurial market. On the other hand, we should not forget the majority of small businesses that have different

aspiration levels. Koskinen (1996) concludes that only 15% of small businesses have growth objectives whereas the rest of the firms could be classified as stable, unstable or declining.

2. Psychological Theories And The Need For Achievement

Psychological theories such as those developed by McLelland pay attention to personal traits, motives and incentives of an individual and conclude that entrepreneurs have a strong need for achievement (McLelland & Winter, 1971). A similar focus is found in locus of control theories that conclude that an entrepreneur will probably have strong internal locus of control (Low & MacMillan 1988, 147, Amit et. al. 1993, 821). This means that an entrepreneur believes in his or her capabilities to commence and complete things and events through his or her own actions.

Brockhaus (1982, 42-45) suggests that an internal locus of control, even if it fails to distinguish entrepreneurs, may serve to distinguish the successful entrepreneur from the unsuccessful one. How do we measure success of entrepreneur? Success is a relative concept that can also be measured differently in different contexts. If success is measured in relation to the fulfillment of the goals and objectives of a particular entrepreneur, self-employed could also be classified as successful if their businesses generate continuously a satisfactory (in relation to their goals) level of living. On the other hand, high-growth ventures may be considered unsuccessful if they are not able to offer high enough ROI to their investors.

Davidsson (1989, 210-211) states that achievement motivation is the most important factor contributing in explaining variation of growth rates and entrepreneurship. Shaver & Scott (1991, 31) believe that achievement motivation is perhaps the only convincing personological variable associated with new venture creation. Why is it convincing? If the concept will be defined broadly as Murray (1938 "Explorations in Personality") it is no wonder, why Johnson (1990) found a relationship between achievement motivation and entrepreneurship in 20 of 23 studies. According to Shaver & Scott (1991, 31) Murray (1938) saw a need as a force "in the brain region" and the specific need for achievement was defined as:

"To accomplish something difficult. To master, manipulate, or organize physical objects, human beings, or ideas. To do this as rapidly, and as independently as possible. To overcome obstacles and attain a high standard. To excel one's self. To rival and surpass others. To increase self-regard by the successful exercise of talent"[3]

This definition compared with the others includes the most characteristics listed above.

- * Internal locus of control is included in "To master and manipulate physical objects, human beings, or ideas," in "To overcome obstacles and attain a high standard," and in "To excel one's self."
- * High risk-taking propensity is connected with "To overcome obstacles and attain a high standard."
- * Tolerance of ambiguity is associated with "To accomplish something difficult."

- * High needs for autonomy, dominance, and independence coincide with "To master, manipulate, or organize physical objects, human beings, or ideas..as independently as possible."
- * The capacity for endurance or capability for intense effort is parallel to "To overcome obstacles and attain a high standard," "To accomplish something difficult," "To rival and surpass others," "To do this as rapidly," and to "To excel one's self."

In addition to the above traits, the definition of need for achievement includes traits as competitive mind ("To rival and surpass others'), self-consciousness, and an itch to self development and learning ("To increase self-regard by the successful exercise of talent ") (c.f. Sexton & Bowman 1985,134, Low & MacMillan 1988, 147, Amit, et. al. 1993, 821).

In analyzing entrepreneurial behavior we should pay more attention to expectations, motives and incentives. "The forces in the brain region" (needs) foster expectations, motives and incentives to take some action. What kind of motives and incentives are required to enforce entrepreneurial activity? Why would someone start a new venture? The reasons, as well as the businesses, may differ from case to case. Thus, to systematically approach the question we should conceptualize the phenomenon into some controllable pieces and to define the concepts.

3. Definitions Of Entrepreneurship

In conceptualizing entrepreneurship we could differentiate between concepts 1) entrepreneur individual actor in the market, 2) entrepreneurial = behavior in the market, and 3) entrepreneurship = combines the actor (entrepreneur) and the behavior in the market 4) entrepreneurial process = combines time dimension and behavior in the market. No commonly accepted definitions of the entrepreneur, entrepreneurial or entrepreneurship exist.

3.1 Entrepreneur

Gartner (1989, 48) considers the search for definition in trait approaches to be unfruitful and suggests that we should use behavioral theories. Since a definition is important, we have reasons for not accepting simplistic statement that "the entrepreneur is the one who creates an organization." First, organizations are created all the time by people who are not entrepreneurs (e.g., political parties, associations and social groups). Second, when evaluating the ability to act as an entrepreneur, no signs suggest that creation of organization would be any kind of differentiating criteria. On the other hand, if certain traits imply and predict the behavior what difference does it make if we apply only behavioral theories. Traits and characteristics may be those intermediating variables that explain and predict entrepreneurial activity and behavior. Several contributors in entrepreneurship literature have tested the existence of personality traits concluding that the traits are common also to several other groups of people (Low & MacMillan 1988, 147). For example, Amit et. al. (1993, 821-822) report problems of these studies and suggest that observed traits could be the result of learning through experience. They conclude that the interpretation of the outcome is difficult since these psychological traits do not distinguish the entrepreneur from the manager.

My argument is that if trait theories - even if they do not predict entrepreneurship - present characteristics common to most entrepreneurs, those individuals who do not possess these characteristics could be excluded (c.f. Miller 1988). Gartner (1989) argues that trait approach seeks to answer the wrong question: "no is an entrepreneur?" He criticizes Carland et. al.'s (1984, 358) definition of entrepreneur: "An entrepreneur is an individual who establishes and manages a business for the principal purposes of profit and growth".

However, a closer look reveals that the question could actually be stated as: "Why does an entrepreneur start a venture?" - which was stated as a failure of trait theoretic approaches in Gartner (1989, 47). Since the principal purpose of a venture is to add value through profit and growth, it has to be innovative to gain the so-called abnormal profit or economic rent that may simultaneously be a necessary condition for growth.[4] Thus the answer to why question is clear-cut: an entrepreneur expects economic rents to be available in the future.[5]

Hebert & Link (1989, 47) conclude that entrepreneur is a person, not a team, committee or organization. Their view is that this person has some comparative advantage in decision-making either because he or she will have better information or different perception of events or opportunities. They also argue that entrepreneurial actions are performed in all societies by individuals whose judgment differs from the norm.

Pickle & Abrahamson (1990, 5,9) introduce a compact definition of an entrepreneur: "An entrepreneur is one who organizes and manages a business undertaking, assuming the risk or the sake of profit. The entrepreneur evaluates perceived opportunities and strives to make the decisions that will enable the firm to realize sustained growth.

The latter sentence emphasizes the decision-making ability and growth objective of an entrepreneur. However, Pickle & Abrahamson's definition does not include any process characteristics thought to be important at least in high growth ventures.

3.2 Entrepreneurial Mind

As the definition of entrepreneurial I would like to introduce Timmons (1994, 24) perception of entrepreneurial mind. He describes entrepreneurial mind, which means the attitudes and behavior of successful entrepreneurs, almost similarly as Murray (1938):

"They work hard and are driven by an intense commitment and determined perseverance; they see the cup half full, rather than half empty; they strive for integrity; they burn with competitive desire to excel and win; they are dissatisfied with the status quo and seek opportunities to improve almost any situation they encounter; they use failure as a tool for learning and eschew perfection in favor of effectiveness; and they believe they can personally make an enormous difference in the final outcome of their ventures and their life.

3.3 Entrepreneurship

From the viewpoint of growth-oriented innovative companies, one of the best definitions of entrepreneurship is found in Ronstadt (1984, 28):

"Entrepreneurship is the dynamic process of creating incremental wealth. The wealth is created by individuals who assume the major risks in terms of equity, time and/or career commitment or provide value for some product or service. The product or service may or may not be new or unique but value must somehow be infused by the entrepreneur by receiving and allocating the necessary skills and resources."

The most essential part of this definition is how it defines incremental wealth of value creation as a result or goal of the process. This result is also parallel to need for achievement. While Ronstadt's definition above includes such other trait theoretic characteristics of entrepreneurship as risk taking propensity and responsibility, a more complete view of these could be achieved by including the need for achievement as defined by Murray (1938) in the definition.

Thus, I will suggest the following multidimensional definition of entrepreneurship with specific emphasis on the entrepreneur as the main actor in the process: Entrepreneurship is a dynamic process created and managed by an individual (the entrepreneur), which strives to exploit economic innovation to create new value in the market. An entrepreneur is a person, who has entrepreneurial mind with a strong need for achievement defined as in Murray (1938).

The most interesting points of this definition are the purpose of value creation and the exploitation of economic innovation. The definitions of entrepreneurial process given below by Bygrave (1989) and by Bygrave & Hofer (1991) include some of the important characteristics, but lack perhaps the most important ones, namely the goal and purpose. Why does the entrepreneurial process take place? What is the purpose of entrepreneurial process or activity? I maintain that the goal of entrepreneurial activity is to create value. Creating value and exploiting innovation process-likely also implies the growth of a venture. Thus it should be emphasized that without any further attributes this definition does not suit for stable or declining companies.

It could be argued that Bygrave (1989, 9) supports the simple definition that "entrepreneurship is creating of organizations" by describing entrepreneurship as a dynamic rather than a static system, hence a process of becoming rather than a state of being, which includes nonlinear and unstable discontinuities. But he argues also that this process is a holistic one that cannot be analyzed partially by studying different pieces of the entity.[6] Thus when considering holistic process of entrepreneurship, we should be aware of that discontinuities do not happen all the time and able to identify discontinuous quantum jumps and their causes to understand entrepreneurship. Even if entrepreneurship were a science of turbulence and change, such would not necessarily mean continuous discontinuity. But compared with conceptual frameworks of institutional economics and transaction cost approaches, chaos and catastrophe theories emphasize characteristics of entrepreneurship. As Bagby (1988, 5) notes: "Entrepreneurs capitalize on change, or even create it." Instability, turbulence and change would suggest entrepreneurship to be rather becoming than existing. The importance of both aspects should be

pointed out in analyzing the entrepreneurial process.

3.4 Entrepreneurial Process And Event

Bygrave (1989, 28) and Bygrave & Hofer (1991, 14) define entrepreneurial process to involve "all the functions, activities, and actions associated with the perceiving of opportunities and the creation of organizations to pursue them." This process possesses the following characteristics:

- * It is a holistic, dynamic process initiated by an act of human volition and occurs at the level of the individual firm, it involves a change of state, numerous antecedent variables and a discontinuity, and its outcomes are extremely sensitive to the initial conditions of these variables.

Bygrave (1993, 257-258) and Bygrave & Hofer (1991, 14) emphasize the process character of entrepreneurship as well as discontinuity of the process. They define the characteristics of an entrepreneurial event almost similarly as entrepreneurial process but include also "creation of a new organization to pursue an opportunity" and an entrepreneur as "an individual who perceives the opportunity and creates an organization to pursue it.

Shapero & Sokol (1982, 77) use the entrepreneurial event as their unit of analysis to avoid tying the concept to a particular kind of individual. The entrepreneur who generates the action may be used as an independent variable in the analysis. Shapero & Sokol (1982, 78) define an entrepreneurial event to include initiative taking, consolidation, management, relative autonomy and risk-taking. This approach has its advantages but excludes the process character of entrepreneurship.

4. Entrepreneurship And Sociological Theories

To complement the definition of the entrepreneur the role of the entrepreneur could be described as Cantillon did (Murphy 1986, 255):

"The entrepreneur scouts around, he sniffs out potentially profitable ventures, he forms hunches, and he reacts quickly if his hunches prove incorrect - otherwise he goes out of business. He is the highly visible hand that ensures co-ordination between producers and consumers."

The characterization of an entrepreneur's role points out the meaning of environmental context (scouts around). This links different approaches to different environments that provide profit potential for different ventures. Thus the entrepreneur's role as the highly visible hand depends on the environmental (social) context. Johnson's (1990) study refers to the sociological perspective of entrepreneurship by proposing that a detailed description of the environmental context is required before achievement motivation research will make further progress.

Reynolds (1991, 61-62) states that the inability of trait theories to predict entrepreneurship could result from the ignorance of social context and choices confronting the individual when the decision is made. Thus describing situations where seizing the opportunity to be an entrepreneur takes place will be useful. In addition to sociological entrepreneurship

theories opportunity recognition could be described by anthropological theories. Anthropological entrepreneurship studies concentrate on social and cultural processes. The outcome, and the degree of entrepreneurial activity depend on opportunity structure. Opportunity structure consists of "both objective structure of economic opportunity and a structure of differential advantage in the capacity of the system's participants to perceive and act upon such opportunities." [7]

The main focus of sociological enterprise is to identify this social context. Reynolds (1991) differentiates with four social contexts in relation to entrepreneurial opportunity; (1) social networks, (2) life course stage, (3) ethnic identification and (4) population ecology stage. For the entrepreneur, involvement in casual informal networks may produce a major advantage (Reynolds, 1991, 63, c.f also Granovetter 1973). In contrast to the transaction cost approach, social network theories emphasize trust, not opportunism, as an integral part of the relationship (Larson, 1992, 90, Reynolds, 1991, 63). Social control and economic exchange factors interact closely in long term relationships. The life course context involves analyzing the life situations and characteristics of individuals who have decided to become entrepreneurs. Social context and life course stages associated with entrepreneurial behavior are unique and to some extent even predictable (Reynolds, 1991, 63).

Sociological theories that start from ethnic identification try to explain entrepreneurship as a process where the individual's sociological (disadvantageous) background is one of the decisive "Push" factors to become an entrepreneur. Low & MacMillan (1988, 149) suggest that current examples of technology clusters and high-tech companies offer contradictory evidence regarding disadvantageous backgrounds of entrepreneurs and no confident generalizations should be made about entrepreneurship being a response to inferior social conditions even though some cases exist. This conclusion, however, is applicable only in the category of special ventures that usually have high-growth and value added objectives and expectations.

The population ecology perspective is dynamic and process-oriented, thus might be a good analogy to describe the entrepreneurial process. In recent years, it has developed from a simplistic and deterministic metaphor to a rich theoretical framework capable of incorporating other theoretical perspectives (Low & MacMillan 1988, 145). Population ecology examines the survival of organizations in relation to environmental factors (c.f Amit et. al. 1990, 823). However, population ecology theory excludes the most important criterion used for example in venture capitalist's financing decisions: the entrepreneur and management team. If the entrepreneur and management team are the most important determinants of success in the minds of venture capitalists, then as Amit et. al. (1990, 823) asked: "Further, to what extent is success determined by the environment rather than the skill and ingenuity and decision of the entrepreneur?"

However, ecological models could be developed more in the direction of entrepreneurial ecology by making the entrepreneur rather than the organization as the unit of analysis. Boime (1976, 181) states that:

"If it is feasible to speak of an 'entrepreneurial psychology' it is also appropriate to speak of an 'entrepreneurial ecology. The entrepreneur, insofar as his activities transform the physical nature of the environment and thus the conditions of experience, creates what I call the entrepreneurial ecology. The term as I use it expresses the changing character of the contemporary world through material signs of modernity. Not only do entrepreneurs furnish conspicuous evidence of change, they are the first to call attention to it by their life-style."

This approach would not exclude the entrepreneur from the development process but in fact emphasizes his or her role in it. Boime highlights the reason why we believe entrepreneurial talents are crucially important: an entrepreneur's activities transform the physical nature of the environment. He introduces an interesting ingredient to roles of entrepreneurs (c.f Chandler & Jansen 1992): entrepreneurs may also act as early adopters on the consumer side.

5. Entrepreneurship and The Role of Innovations

What is the connection between a new and small business and entrepreneurship? The typology in the field of entrepreneurship and small business is slightly confusing. Drucker (1985, 19), Kirchoff (1991, 100) and Hornaday (1992, 19-20) state that not every new small business is entrepreneurial nor represents entrepreneurship. Their argument on representing entrepreneurship refers to the ability of new firms to create innovation. Gartner (1989) criticizes this kind of differentiating because he thinks that it answers to wrong question and does not consider behavioral aspects.

The following citation from Schumpeter (1943; 1987) addresses not only the economic factors of entrepreneurship but other important aspects from the viewpoint of an innovative, growth-oriented venture as well:

"In part it (bourgeois society) appeals to, and in part it creates, a schema of motives that is unsurpassed in simplicity and force. The promises of wealth and the threats of destitution that it holds out, it redeems with ruthless promptitude. Wherever the bourgeois way of life asserts itself sufficiently to dim the beacons of other social worlds, these promises are strong enough to attract the large majority of supernormal brains and to identify success with business success (p. 73). The fundamental impulse that sets and keeps the capitalist engine in motion comes from the new consumers' goods, the new methods of production or transportation. the new markets the new forms of industrial organization that capitalist enterprises create (p.83)."

This quotation emphasizes the creation of something new as an important function of an enterprise. These creation processes serve as impulses for the motion of market economy (capitalist engine). Schumpeter slips in an interesting, seldom-mentioned detail, namely the ability to attract supernormal brains. This is especially important for high-tech ventures. It should be highlighted that Schumpeter's (1943/1987, 83-84) definitions of entrepreneurship that describe it as a dynamic process of creative destruction as such deal mostly with the process of existing enterprises.[8] In contrast to Schumpeter, most

entrepreneurship models deal with the process of becoming an entrepreneur (i.e., Bygrave 1989, Huuskonen 1992, Koskinen 1995).

These process models include an implicit definition that entrepreneurship is an outcome of the process whereby someone decides to establish an enterprise. Simplifying this definition, we could define entrepreneurship to be the establishment of a new enterprise or organization as stated also by Gartner (1989, 62).[9]

5.1 Is The Entrepreneur An Innovator Or An Organizer?

Baumol (1993) concludes that, even if economics has been accused in ignoring entrepreneur and entrepreneurship from their models, theory of entrepreneurship does exist and it is powerful and illuminating. He distinguishes between a firm-organizing and an innovating entrepreneur: the former creates, organizes and operates a new business firm whereas the latter transforms ideas into economically viable entities. The innovating - not the firm-organizing - entrepreneur's behavior is difficult to describe and analyze systematically, and his or her role is excluded from standard models (Baumol 1993, 198-199).

Baumol introduces an important reason why the innovating entrepreneur has been barred from the formal economic theory of the firm: continuous change makes it difficult to provide general descriptions of his or her actions. Thus in the theory of the firm (in economics), there is no room for alertness of innovative entrepreneur nor for his reliance on hunch and instinct in the world, where every actor's move is assumed to be controlled rigidly by the dictates of sophisticated optimal calculations (Baumol 1993, 200). However, Baumol's (1993, 203) own analysis addresses these considerations quite artificially when he concludes that entrepreneurship exists in the models of the theory of the firm through its resource allocating nature. This analysis of different entrepreneurial types or activities, although very fruitful, is not consistent. Using Kirzner's (1979, 7) concepts Baumol starts with Misesian concepts of human action, and especially alertness to opportunities but turns to Robbinsian theory of resource allocation that applies after a person has been confronted with opportunities.

The reasoning, that an innovative entrepreneur would transfer his or her innovative talents to a field offering the potential to become rich and reward its actors, implicitly assumes the total separability of entrepreneurial talent from its basic possessor, the individual. This also suggests that the success of an innovation depends mainly on industry, where the resources are allocated, not the quality of resources, namely entrepreneurial skills and effort. By ignoring the attributes of the individual that make for an innovating entrepreneur, Baumol fails to catch the essence of innovative and creative ability. Innovativeness and creativity are bounded to the context. These characteristics and their results are dependent on the talents, education, training and experience of an individual. They are not evenly distributed across society and thus cannot be transferred without costs from one branch to another.

Baumol's approach confronts more problems if instead of the entrepreneur the venture is chosen as a unit of analysis. Timmons et al. (1977) argue that the success of entrepreneurship is a result of interaction of entrepreneurial team

characteristics and product and market characteristics. Dubini's (1989) analysis confirms this and suggests that different entrepreneurial team characteristics predict performance for different clusters. The capacity for sustained and intense effort is important for the ventures operating in established market. The ability of an entrepreneurial team to asses and manage risk is most important for ventures operating in turbulent environments, where predicting the industry evolution is difficult (Dubini 1989, 131).

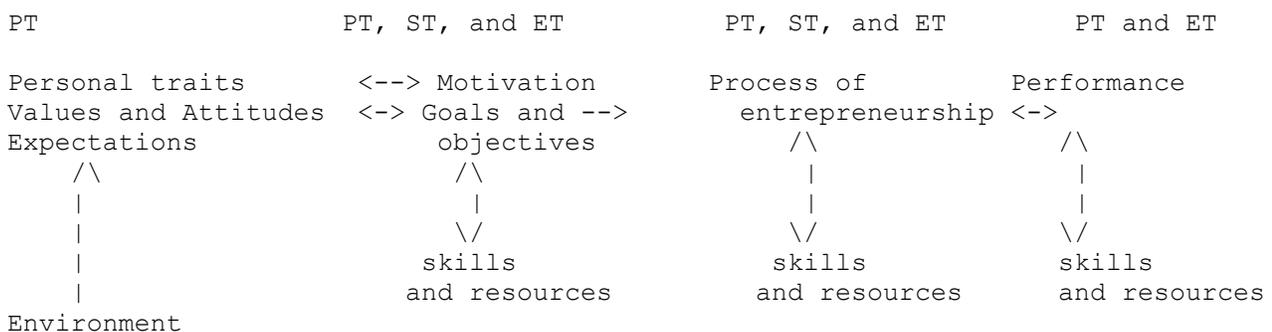
Even if individuals were transferable from branch to branch, would teams also be? How does dissolving the team affect success? Attracting the "supernormal brains" referred to by Schumpeter (1943) is a crucial element of the entrepreneurial firm. Do our education and training produce supernormal brains that are applicable from branch to branch?

6. Discussion And Conclusions

From the above discussion of different theories and definitions of entrepreneurship we may suggest the following description of the use of different theories in entrepreneurship research. Fast (1982) and Timmons (1994) use 2x2 matrix having levels of creativity and innovativeness as one scale, and management skill and business know-how the other scale, to depict the characteristics of entrepreneurs. Some characteristics may overlap but entrepreneurs tend to be more opportunity-driven than the other types identified in the matrix. Entrepreneurs are described to have high level of creativity and innovation combined with high level of management skills and business know-how. This description excludes other types of actors from the population of entrepreneurs. This may be justified if we deal only with growth-oriented ventures. However, if we try to generalize the results into a wider group including all small businesses and ventures the appropriateness of approach could be questioned.

In Figure 1 it is suggested that different theories are applicable in different phases of entrepreneurial development.[10] Studying of different groups of entrepreneurs should presuppose the identification of phase in entrepreneurial development as well as applicable theories.

Figure 1: Different theories in explaining entrepreneurship



ST and AT

PT = psychological theories

ST = sociological theories
ET = economic theories
AT = anthropological theories

It could be argued that for example in Figure 1 economic theories affect expectations and sociological or anthropological theories apply in evaluating performance. I agree that expectations could be described by economic theories but these applications have not been introduced in entrepreneurship, yet. As a conclusion I would argue that we have a rich and multidimensional group of entrepreneurship theories that could be used together to explain entrepreneurial phenomena. However, in empirical research we should be more accurate in identifying, collecting and combining data. Innovative growth-oriented entrepreneurs, unemployed or ethnic minorities who start their micro businesses may diverge considerably in personal traits, expectations, motivation, goals and objectives. Thus these characteristics of data should be taken into account when selecting theoretical framework as well as analyzing methods to study entrepreneurship. Different theories as well as different definitions should be used in different contexts.

Hornaday (1992) suggests the use of fuzzy set theory to describe entrepreneurial phenomena that is a brilliant idea since it allows us to take into account uncertainty, vagueness, uniqueness and other qualitative characteristics of entrepreneurial market. Moreover, all the above mentioned theories are applicable in fuzzy set context.

- [1] Bruno & Tyebjee (1982, 307), Low & MacMillan (1988), Johnson (1990). It has been said that entrepreneurship research is at pre-paradigmatic phase where typical features are theoretical dispersion, existence of many competitive theories and schools of thought, lack of common starting points and unconsciousness of selection of rational research problems. Huuskonen (1992, 12). U. Niiniluoto (1983, 13-14).
- [2] Lumme et. al. (1995) suggest that a high correlation exists between profit expectations and employment expectations of growth-oriented companies, which underscores the importance of studying growth-oriented companies.
- [3] Johnson (1990, 40), Shaver & Scott (1991, 31). Original reference from Murray (1938, 164).
- [4] Abnormal profit could be defined as Ricardian rents which are excess profits of the firm resulting from exploitation of unique competencies and the capability to overcome barriers which hinder the exploitation (Lumme et. al. 1995, 2). Moreover, growth and profit expectations rather than actual quantities are decisive.
- [5] Sexton & Bowman (1985, 136) state that "The planned approach towards growth and profit is essentially strategic management practices coupled with innovative approaches to marketplace and the firm."
- [6] Bygrave (1989), p. 15 suggests that "A world of patterns within patterns, lagged edges, unpredicted behavior, sudden leaps, where the whole is more important than the

constituents" to be a good metaphor for entrepreneurship.

- [7] In Stewart (1991), p. 77 from original source Glade, W. P. (1967). "Approaches to a theory of entrepreneurial formation." *Explorations in Entrepreneurial History*, 4, p. 251.
- [8] When giving this interpretation I am well aware that Schumpeter (1936) also argued that "Everyone is an entrepreneur when he actually "carries out new combinations", and loses that character as soon as he has built up his business, when he settles down to running it as other people run their businesses". In Bull & Willard (1993, 185). However, this does not contradict the argument that emphasizing creative destruction Schumpeter actually speaks about existing innovative ventures.
- [9] Gartner (1989, 62) does not offer his statement as a definition but as an attempt to change a viewpoint in the field of entrepreneurship.
- [10] Figure 1 is applied from Herron, L. & Robinson, R. B. Jr. 1993.

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A Hotel Of Small Firms - An Oddity Of SME-Networking

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Abstract

This paper deals with a special case of virtual organisation and SME-networking a hotel of small firms. This kind of network organisation represents the latest stage of development in business where different kinds of resources and activities are scattered in separate units, i.e. firms, and on the other hand where these small units endeavour to function in intensive cooperation with each other. The main objective of this paper is to discuss the special characteristics of a hotel of small firms as one type of virtual organisation. The implications of the supporting of small business networks.

Introduction

Today, interfirm cooperation among small- and medium-sized firms (SMEs) goes beyond simple modes of networking. The entrepreneurial search for new advantages through cooperation has resulted in many new hybrid forms of organisation. This paper deals with a special case of virtual organisation and SME-networking a hotel of small firms. This kind of network organisation represents the latest development stage in business, virtual organisation, where different kinds of resources and activities are scattered in separate units, i.e. firms, and on the other hand where these small units endeavour to function in intensive cooperation with each other[1].

Long before the term 'virtual organisation' was introduced, the significance of flexible specialisation was brought up for discussion by Piore and Sabel (1984). Further, Johnston and Lawrence (1988) provided evidence from both a large drug company and an Italian industrial partnership', referring to the value-chain of production. Johannisson (1989) ended up with similar results by presenting insights into flexible networks that enhance the external growth of small firms. The trend of development led to creating the term 'virtual organisation', which was introduced to the wide public by Davidow and Malone (1992), after which Byrne (1993) popularised the term further. The emergence of a new mode of organising, at least in theory, has probably been one of the most interesting topics within organisation theory in the last ten years.

Virtual organisaiton is a temporary network of companies where potential partners are kept in reserve and then come together quickly to exploit fast-changing opportunities (see e.g. Davidow and Malone 1992; Byrne 1993; Barnatt 1995; Davis and Darling 1995). In virtual organisation, single firms have sourced out their extra resources and skills, and concentrated on core competencies. In the current literature the term dynamic network (see Miles and Snow 1992) can be seen to be used interchangeably

with virtual organisation. Here the term 'virtual corporation' refers to an organisation consisting of dynamic cooperative relationships. The networking organisation challenges the older types of organisation in many ways that force researchers to reconsider their theories about the concept of organisation and the prerequisites of organisational functioning.

Correspondingly, in a hotel of small firms all the firms operate in the same building having very close subcontracting relationships. Moreover, the participating firms share the view of a common business, and operate at least partly under a common image/cover. A certain product or process which a hotel of small firms has concentrated on, has been divided into different stages in value chain, and each small firm takes care of one stage, one firm being the leader and contractor for the other's customer as well as competitors, because several firms may be located at the same stage of the value chain. Although the cooperation between the firms in a hotel is obviously very close in regard to strategic intensity, the degree of formalisation is not on the same level, i.e. no ownership-based ties exist (cf. Murto-Koivisto, Routamaa and Vesalainen 1996).

These two types of organising, virtual organisation and a hotel of small firms, are special cases of networking and doing business generally. Maybe the most remarkable difference between these types is that cooperation in a hotel of small firms is more stabilised and long-term compared with virtual organisation. Both of them, however, call in question the definitions of a firm and its boundaries. These two types of organising have implications for many current theories of the firm, but for three in particular. Transaction cost theory, the resource-based view of the firm and networking theory all have to face the new challenge. All these theories provide descriptions concerning what a firm looks like and how firms relate to each other.

The objective of this paper is twofold: firstly, the paper reviews briefly the above-mentioned theories and derives some tentative clauses regarding the functioning of virtual organisation and networking. Secondly, by means of the clauses the paper aims to discuss the special characteristics of a hotel of small firms as one type of virtual organisation. This discussion is based on one empirical case. In addition to these aims, the discussion will focus on the practical implications of the supporting of small business networks.

[1] Barnatt (1995:87) has used the term 'hotelling' in a totally different sense. In his approach the employees do not have any permanent desks in their parent company but use clients' facilities like a hotel.

Organizational Inhibitions:
Perceptual Barriers To Opportunity Emergence

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Abstract

Understanding what inhibits innovative activity requires understanding how intentions toward a prospective course of action are constructed. Mental models of what we intend reflect why we intend an action. Based on well-developed theory and robust empirical evidence, we propose a cognitive infrastructure model of the intent to innovate, incorporating perceptions of personal desirability, social norms, self-efficacy, and collective efficacy. We discuss how this model can serve to integrate past findings and guide future research.

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Introduction

Conventional wisdom generally portrays organizational pursuit of innovation (e.g., corporate ventures) as an unalloyed positive, that organizations and their members should perceive innovative activity as a significant opportunity. Yet, efforts to improve innovation often disappoint.

Something inhibits the organizational pursuit of innovation. Based on well-developed theory and robust empirical evidence, we propose that organization members' perceptions, channeled through intentions, can inhibit the pursuit of innovation. This analysis proposes a model of the intention to innovate and offers suggestions how to develop an innovation-friendly cognitive, infrastructure.

If we want to understand how corporate ventures and other innovative activities emerge, we need to understand how opportunities emerge. Organizations do not innovate; individuals within those organizations innovate. As Shapero argued, we can increase an organization's entrepreneurial potential by increasing the quality and quantity of potential entrepreneurs within that organization. In turn, we do that by increasing the quality and quantity of opportunities perceived by organization members (Shapero, 1982, 1985; Krueger & Brazeal, 1994). Any theory of venturing should consider the process by which individuals identify credible opportunities and the important role of perceptions in that process.

An inadequate level of innovative activity may reflect an inadequate supply of opportunities perceived by organization

members, not enough 'entrepreneurial thinking.' We have identified a useful firm-level measure, entrepreneurial orientation (Covin & Slevin, 1991; Lumpkin & Dess, 1996), but from whence does EO arise? For example, a key dimension of entrepreneurial orientation is being proactive, but how do organization members decide to act?

'Corporate entrepreneurship' may take many forms - new ventures, new product development, strategic reorientation. However, the common theme is innovation, broadly defined. One thing that we know about innovative activity is that the adoption of an innovation entails some sort of supporting infrastructure, both tangible and intangible. For example, individuals need to perceive the innovation not just as positive, but as a credible opportunity. The intangible aspects of this infrastructure can inhibit innovation to a surprising degree (Brown, 1981).

"Thinking Entrepreneurially": Cognition-Based Models

The centrality of perceptions argues for taking a cognitive approach for insights into the nature of innovative activity and how to nurture it. Social psychology offers the construct of intentions as a consistently useful device to integrate past findings from a theory-driven, empirically-robust vantage (Ajzen, 1987; Tubbs & Ekeberg, 1991). Research sorely needs a framework solidly grounded in well-established theory (Van de Ven & Rogers, 1988; Macmillan & Katz, 1992; Jelinek & Litterer, 1994). Intentions models provide us a comprehensive theory-driven conceptual framework. This allows to explain why (and how) phenomena such as champions operate. We need models that reflect how individuals actually make decisions and take action; these models include scripts and schemata (Lord & Maher, 1990). Intentions models do so. Moreover, they have proven consistently robust both in explanatory power and in predictive validity (Ajzen, 1987; Tubbs & Ekeberg, 1991). We also draw upon strong parallels in other literatures: opportunity recognition, entrepreneurship, and innovation-diffusion. Each offers support for a cognitive perspective on innovation. We then consider specific possibilities for overcoming organizational inhibitions to the pursuit of innovation. We conclude with a set of testable research propositions and implications for practice, teaching and research.

Strategic Intent, or Why We Should Care

Hamel and Prahalad (1989) argue that organizations have (or should have) some degree of "strategic intent" that reflects the "core competencies" of that organization. Identifying these core competencies permit an organization to formulate a coherent strategic intent to explore and guide future strategic action. We also know that building new competencies are a critical antecedent of capturing rents from innovation (McGrath, Tsai, Venkataraman & MacMillan, 1996).

However, what influences an organization's readiness for change? Underlying new competencies are what Senge calls "mental models": Managers' and employees' internalized cognitive schemata which guide much of their daily activity. We need multiple schemata to adapt to a changing world, requiring that we learn multiple mental models and that we learn how to learn them (Senge, 1992).

For example, the schema for an individual entrepreneur differs sizably from a novice's schema (Mitchell, 1996). Research suggests that readiness for change reflects intentions and their antecedent attitudes and beliefs (Armenakis, Harris & Mossholder, 1993).

Perceived competencies are only one component of intentions, whether we look at behavioral intentions in general or at specific types of work-related behavior. Martin Fishbein and Icek Ajzen have developed a theoretically sound, empirically robust framework for understanding intentions that appears applicable to most planned behaviors, specific or general, proximal or distal. At the strategic level, intentions also reflect the strategic vision of an organization; what actions do its members believe it will take? Intentions reflect initial conditions for a newly formulated strategy. The organizational consequences of initial decisions are surprisingly persistent even in turbulent, high-innovation industries such as semiconductors (Eisenhardt & Schoonhoven, 1990). Models of intentions appear useful and potentially enlightening in understanding how to understand and how to increase an organization's potential for innovation.

Let us examine the nature of intentions and their antecedents more closely. To apply this model successfully requires a better understanding of the key conceptual and empirical issues.

The Nature of Intentions

Absent intention, action is unlikely. Intentions represent the belief that I will perform a certain behavior, the belief I will act. Logically, intent thus precedes action. In other words, innovation usually entails taking significant action. Action requires effort; if we are to try, we must first intend to try. We all have mental models of what we intend to do (and, by extension, what we do not intend). At a deeper level, these mental models reflect why we intend a given action. If we can better understand why, we can better understand what.

The theoretical underpinnings for intentions models are reviewed in Ajzen (1987) and reflect a teleological approach to change (Van de Ven & Poole, 1995). Ajzen argues persuasively that intentions-based models capture how individuals actually think. The process in Figure 1(not provided) shows how the intentions framework serves as a conduit to channel our interpretations of events into action. This implies that intentions are constructed, even where they appear to arise spontaneously.

The latest version of this framework, Ajzen's 'theory of planned behavior' posits that intentions toward a given target behavior depend on certain fundamental underlying attitudes. These specific attitudes reflect decision makers' attributions about a potential course of action. One attitude corresponds to Hamel & Prahalad: 'perceived behavioral control' (perceived controllability), a conceptual overlap with perceptions of competence. Decision makers should also perceive the course of action as both personally desirable and consonant with social norms.

Barriers to any component can represent a substantive inhibition to an organization's intent to innovate. If we inhibit the intent to innovate, so too do we inhibit innovation.

Critical Attitudes: The theory of planned behavior argues that perceptions of desirability and feasibility explain (and predict) intentions significantly. Intentions are driven by perceptions that outcomes from the behavior are personally desirable and that they are socially desirable. Figure 2(not provided) shows that intentions toward innovation are best predicted by three critical perceptions: that the innovative activity (e.g., a new venture) is (A) personally desirable, (B) supported by social norms, and is feasible.

Exogenous Factors: How do intentions models handle other variables, those that are exogenous to the attitude-intention-behavior process? Exogenous factors such as individual differences and purely situational influences operate indirectly on intentions (and thus behavior) by changing these antecedents, not by directly affecting intentions. That is, a change in objective circumstances would thus change intentions only if the change altered a decision maker's attitudes. Path analyses using meta-analysis results clearly support the causal linkage from attitudes to intentions to behavior (Kim & Hunter, 1993).

Precipitating Factors: Research also suggests that certain exogenous variables can serve to facilitate or 'precipitate' the realization of intentions into behavior (Shapiro, 1982; Krueger & Brazeal, 1994; Stopford & Baden-Fuller, 1994).

The Robustness of Intentions Models

Empirically, meta-analyses demonstrate clearly that this framework is remarkably robust with very large effect sizes. While designed to predict specific, proximal behaviors, this class of models appears to apply equally well to behaviors that are distal or less specific (Kim & Hunter, 1993). Again, this permits us to apply this model to relatively broad (innovation in general) or to relatively narrow phenomena (a specific innovation).

These meta-analyses examined a simpler, earlier version of this model, Ajzen & Fishbein's theory of reasoned action that includes only personal attitude and social norms. Nonetheless, Kim and Hunter (1993) found that 76% of the variance in intentions was explained by these two antecedents, while intentions explained 67% of the variance in behavior (after adjusting for statistical artifacts). Ajzen (1991) found that adding the perceived feasibility measure explains an additional 10% of variance in intentions. Such findings compare rather favorably with the 10% of variance typically explained by traits or other dispositional measures (Ajzen, 1987). More important, the model held in virtually every study, even where researchers took considerable liberties with model specification or measurement. That is, path analysis confirms that the correlation between attitudes and behavior is fully explained by the attitude-intention and intention-behavior links (Kim & Hunter, 1993). Moreover, formal intentions models have already been applied successfully to entrepreneurial behavior (e.g., Krueger & Brazeal, 1994).

Finally, intentions obviously need not be realized. Intentions can change; we often have conflicting intentions. Also, theory and empirical research have begun to explore the role of personal and situational factors that facilitate, precipitate, or inhibit

the link between intentions and action (Shapero, 1982; Ajzen, 1987). However, cognitive barriers are less well understood. Applying the intentions framework to work motivation proved enlightening (Tubbs & Ekeberg, 1993), so should research applying intentions to the processes of corporate venturing.

Antecedents Of Intentions Perceived Desirability-Personal Attitude

In the Ajzen-Fishbein framework, personal attitude depends on perceptions of the consequences of outcomes from performing the target behavior: their likelihood as well as magnitude, negative consequences as well as positive, and especially intrinsic rewards as well as extrinsic (in short, an expectancy framework). However, the model also argues that these perceptions are learned. Thus, organizations influence perceptions, often indirectly and often unintentionally. For example, a successful innovation might lead to a promotion from R&D into management; this need not be perceived as positive (e.g., it might entail a transfer to another location). To increase attitude, increase expectancies by raising perceptions of positive outcomes (or their likelihood) or lowering perceptions of negative events (or their likelihood). Exposure to multiple perspectives (e.g., multiple mentors) and diverse life experiences (developmental experiences) will help individuals to recognize a broader range of desirable options. Empirically, personal attitude should be significantly associated with expectancies about possible relevant outcomes from that behavior, thus providing a measure of construct validity. Measuring personal attitude requires identifying the salient consequences (e.g., using a focus group).

Perceived Desirability-Social Norms

Social norms represent perhaps the most interesting component of the Ajzen-Fishbein framework. This measure is a function of perceived normative beliefs of significant others (e.g., family, friends, co-workers) weighted by the individual's motive to comply with each normative belief. Social norms often reflect the influence of organizational culture. That is, the impact of climate and culture on intent operates by its impact on perceptions of desirability (and perhaps feasibility as well). For example, work group relationships do influence individual innovation (Scott & Bruce, 1994). Organizational culture as a whole is difficult to change (e.g., Kuratko, et al., 1990; Shapero, 1985). However, it appears easier to change perceptions within smaller groups as in teams or in relationships between mentors and protégés. Highly visible 'champions' for innovation should also enhance perceptions of supportive social norms.

Empirically, measures of social norms are often highly correlated with personal attitude. Also, in certain circumstances (e.g., a highly internal locus of control), social norms need not explain any additional variance. Measuring social norms requires we identify appropriate reference groups. A potential innovator's reference group may not be family and friends, rather the perceived beliefs of top management and their colleagues (including those who have already started a venture). Measuring organizational culture is hardly simple, but one possibility is a set of scales by Kuratko, Montagnano & Hornsby (1991) to address perceptions of work environments looking at an organization's

overt and covert encouragement (and discouragement) of innovative activity: work discretion/decision autonomy, incentives for entrepreneurial activity, time availability, management support, and ease of crossing department boundaries for team formation.

Perceptions of Feasibility: Self-Efficacy

Albert Bandura and associates have developed and elaborated a social-cognitive model of human agency (e.g., Bandura, 1986, 1995). Here, taking action requires consideration of not just outcome expectancies (i.e., desirability) but also perceived self-efficacy (i.e., feasibility). This becomes particularly critical with significant strategic change (e.g., a new venture).

Bandura defines self-efficacy as an individual's perceived ability to execute some target behavior. Thus, it reflects the perception of a personal capability to do a particular job or set of tasks. Measuring perceived efficacy is relatively straightforward, using simple self-report measures (Bandura, 1986; Eden, 1992).

Self-efficacy perceptions play a powerful role in career-related behavior. Bandura (1986) reports correlations ranging from .3 to .6 between perceived self-efficacy and career preferences or intentions. For instance, gender and ethnicity differences in work interest and performance can often be traced to differences in self-efficacy, supporting self-efficacy's role in the empowerment of organization members. High self-efficacy leads to increased initiative and persistence and thus performance; low self-efficacy reduces effort and thus performance (Eden, 1992).

Increasing self-efficacy requires more than just teaching competencies; students and trainees must fully internalize the competencies. Also, psychological and emotional support from management and peers reinforces perceptions of increased self-efficacy. In a novel situation, self-efficacy perceptions are anchored by initial salient cues, such as whether setbacks represent a learning experience or a failure. Thus, it is easier to increase self-efficacy if we can frame a situation as novel; similarly, we must be careful not to inadvertently provide a salient, but contradictory cue. One common mechanism is to provide credible models of key behaviors through mentors and champions. Even better are developmental experiences that provide opportunities for individuals to experience mastery at those competencies (McCall, 1992; Senge, 1992). Exposure to diverse life and work experiences tends to increase an individual's evoked set of feasible alternatives.

Perceptions of Feasibility: Collective Efficacy

However, perceptions of personal competence need not translate into perceptions of organizational competence. If fellow organization members are needed to support an intention to innovate, perceptions of collective efficacy are likely to be very important (Bandura, 1986). This is crucial: Even if organization members are perfectly capable of promoting innovation and even if their self-efficacy beliefs are high perceptions that collective efficacy is low may inhibit organizational innovation. Empowerment thus rests on beliefs about both personal and collective efficacy, just as perceived

desirability has personal and social components.

Exogenous Factors

Research most often examines variables other than attitudes and intentions, but intentions models posit that these exogenous variables operate indirectly on intentions (and thus behavior). As the model suggests, most exogenous factors influence intentions (and behavior) through influencing one or more critical attitudes. The various literatures on innovation management and entrepreneurship offer numerous examples of exogenous factors logically related to innovative or entrepreneurial activity, though often with disappointing results. If effects are actually indirect, then applying this framework may strengthen the findings. For example, the presence of role models need not increase entrepreneurial behavior, only if the role models actually change a key attitude such as self-efficacy (Krueger & Brazeal, 1994).

As Figure 1(not provided) suggests, exogenous factors may also influence the intention- behavior relationship by precipitating, or facilitating the realization of intentions. One such factor may be perceptions of resource availability (Triandis, 1967). Another might be a personal propensity to act on opportunities (Shapiro, 1982). As noted, this area is not well understood and innovation research is likely to shed some new light.

Perceived Barriers: Organizational Inhibitions

Inhibition: "the blocking or holding back of one psychological process by another" (Random House, p. 685, definition 3)

The model in Figure 1(not provided) incorporates the critical elements discussed above. Any psychological process that weakens one or more components of this model thus strengthens an inhibition to pursuing innovation. Conversely, any psychological process that strengthens one or more components thus weakens such an inhibition (e.g., enhancing efficacy perceptions). Tangible barriers may serve to prevent an intention from coming to fruition, but the subtleness of cognitive barriers can present even greater obstacles.

Another useful metaphor might be that of the antenna. We are much more likely to notice (and take seriously) signals from directions we are already looking. Intentions contribute to how an organization's antennae are 'tuned.' We are less likely to notice opportunities from directions that do not appear desirable and feasible.

If we examine existing inventories that measure barriers to innovation we find that many items directly reflect perceptions of personal desirability, social norms, personal efficacy and collective efficacy, as well as possible precipitating or inhibiting factors (MacMillan, Block & Narasimha, 1986; Kuratko, Montagno & Hornsby, 1990; Scott & Bruce, 1994). This suggests that the exploratory research that generated these inventories implicitly captured the intentional nature of innovative activity.

Related literatures provide significant theoretical and empirical evidence to support the intentions framework: opportunity

identification, entrepreneurship, and innovation-diffusion. Let us examine these briefly.

Opportunity Identification: What Can We Learn?

Perhaps the most critical antecedent of organizational action is the categorization of strategic issues into opportunities and threats. As with intentions, opportunities are constructed, not found (Mintzberg, 1994; Dutton & Jackson, 1987; Dutton, 1993). An organization that wishes to promote innovation must establish conditions where its members see the prospect of innovation (and the uncertainty associated with it) as an opportunity, not as a threat. Again, individuals (not organizations) construct opportunities.

The process by which we identify opportunities appears to have many parallels to the intentions models suggested above, especially in terms of critical antecedents. Dutton and associates (Dutton & Jackson, 1987; Jackson & Dutton, 1988; Dutton, 1993) demonstrate clearly that individuals' perceptions of opportunity depend on their perceptions that the situation is both positive (desirable) and controllable (feasible). As with intentions models, perceptions are central, social influences are important, and information is distributed asymmetrically (different people can have greatly different perceptions in the same situation, thus different conclusions).

When key decision makers perceive a strategic issue as negative or relatively uncontrollable, we find significant barriers to perceptions of opportunity, thus barriers to accepting opportunity. Perceptions of self-efficacy are central to opportunity identification (Krueger & Dickson, 1994); perceptions of feasibility increase the attractiveness of potential opportunities (Dutton, 1993). Research into opportunity identification also teaches us that organizations and individuals must adapt skillfully to changing environments; categorizing events into threats and opportunities is an ongoing, continuous process (Dutton, 1993).

Entrepreneurial Activity: What Can We Learn?

Entrepreneurs, particularly corporate entrepreneurs, are highly visible exemplars of innovative activity writ large (e.g., Guth & Ginsberg, 1990). If an organization wishes to instill the "entrepreneurial spirit" in its members (Kuratko, et al., 1990; Shaper, 1985), who better to look to than entrepreneurs? Venturing, too, is a long-term, ongoing process of adapting to changing environments. A review of literatures on entrepreneurship and corporate venturing finds strong arguments for intentionality (Katz & Gartner, 1988) and the few existing applications of intentions models or self-efficacy have shown consistent support (Krueger & Brazeal, 1994).

For instance, intentions-based models have been successfully applied to the intent to engage in entrepreneurial activity with considerable empirical success. The intentions of potential entrepreneurs are most strongly associated with perceived self-efficacy and thus perceived feasibility, though more weakly associated with social norms (Krueger & Brazeal, 1994). As already noted, role models encourage entrepreneurship by

increasing self-efficacy.

Innovation Diffusion: Centrality of Cognitive Infrastructure

The dominant models of innovation diffusion also assume the centrality of perceptions (and thus information) and significant roles for social influences and for individual decision making. In fact, Bagozzi and associates propose a useful variant on this theme, a theory of technological learning and usage (Bagozzi, Davis & Warshaw, 1992) roughly homologous to the theory of planned behavior. It includes measures comparable to perceived desirability and perceived feasibility (e.g., 'perceived ease of use' for new technology). This literature teaches us that information is important, but the impact of that information is even more important.

The best-known model of innovation-diffusion was developed by Everett Rogers who argued for a two-stage process wherein most adopters of an innovation learn about it from early adopters. The process is facilitated if early adopters are highly credible sources, what Rogers calls 'opinion leaders.' Rogers's model fits the intentions paradigm. Early adopters provide evidence for both the desirability of a given innovation and its feasibility. The credibility of an opinion leader should enhance these cues. Indeed, Van de Ven and Rogers (1988) call for increased consideration of process in innovation research.

Empirically, it has often been difficult to identify individuals who are consistent early adopters; situational factors must also be considered. Brown's (1981) spatial model of innovation diffusion argues persuasively that the diffusion of innovation requires the pre-existence of whatever infrastructure is needed to adopt the innovation. For instance, widespread adoption of the automobile requires the existence of roads. If the intent to innovate is to be diffused through an organization, this model suggests that organization members must first perceive a supportive infrastructure that enhances perceived feasibility.

However, an objectively supportive infrastructure is not enough; organization members must perceive it as supportive. Brazeal and Weaver found that supportive reward systems and supportive top management need not be seen as such (1990). No matter how supportive an organization may be objectively (e.g., in terms of reward systems), the perceived supportiveness appears crucial. Activities that make an objectively supportive infrastructure seem non-supportive may create significant inhibitions toward innovation. Innovative organizations appear to provide a cognitive infrastructure (Brazeal, 1993; Krueger & Brazeal, 1994).

This cognitive infrastructure should serve to enhance perceptions in organization members that innovation is personally and socially desirable and that members are personally and collectively competent to pursue innovation. Such a cognitive infrastructure would provide the empowerment needed to promote innovative activity.

Let us now turn the discussion in a more practical direction. Not everyone accepts the role of subjective elements (e.g., Weick, 1979), but if we accept the notion of intentions and their antecedents, how might an organization promote an appropriate

cognitive infrastructure?

Building a Supportive Cognitive Infrastructure

Shapero (1982, 1985) argues that for an organization to maintain a reasonable supply of innovative individuals first requires that organization must provide a congenial environment from the perspective of the prospective innovators. As with entrepreneurs, innovators enact a favorable personal environment but require a learning-supportive cognitive infrastructure. On the other hand, innovative activity (especially where disruptive of existing products and markets) will generally lack legitimacy with the rest of the organization (Dougherty, 1994). We thus need to set explicit, credible organizational policies that increase both the perceived feasibility and the perceived desirability of innovative activity.

To promote feasibility perceptions, we can increase perceptions of personal and collective efficacy. Perceived feasibility entails perceptions that obstacles are surmountable and that resources are available. Promoting perceived efficacy is relatively straightforward and reasonably well-understood; we already know how to do this (Eden, 1992). Yet, empowering employees to promote organizationally-illegitimate activities will meet, understandable resistance (Dougherty, 1994), thus collective efficacy remains important.

However, desirability perceptions may require more complex interventions. Increasing perceived desirability requires individuals perceive mostly positive outcomes for their innovative activity, including intrinsic rewards such as supportive peers. For example, objectively supportive reward systems need not be perceived as such by the rewardee. If innovation is its own reward, extrinsic rewards can interfere with intrinsic motivation. (Some innovators even enjoy being 'illegitimate.')

The most skillfully-designed formal reward system may be overridden by informal punishments. We would recommend examining the entire set of rewards (and punishments), both intrinsic and extrinsic, formal and informal. Most important, reward systems must be viewed from the perspective of potential innovators, not those far removed from the trenches.

One contrary perspective argues that organizations should not focus on trying to dramatically change the attitudes of organization members. Instead, we should focus on selecting individuals who already perceive high desirability and feasibility, then emphasize removing barriers as they surface. That is, get the right people, then provide the right environment. If we accept that innovators' intrinsic motivation provides them with perceptions of desirability, then perceived feasibility becomes even more important. Thus, the key to the 'right environment' is information that enhances perceived feasibility.

Shapero (1985) proposed that organizations seeking to innovate should provide what he called a 'nutrient-rich' environment for potential innovators. This 'seedbed' would provide 'nutrients' such as credible information, credible role models, and emotional/psychological support as well as more tangible resources. McGrath (1995) points out organizations need to

support its members in learning from adversity. Organizations should provide opportunities to attempt innovative things at relatively low risk (i.e., trying and failing is not career-threatening).

Potential Mechanisms

The literature offers some interesting prescriptions that we might consider: clear signals from top management, the role of teams, the role of mentors and champions (including multiple mentors), and providing explicit developmental experiences.

Explicit Cues: One of the most common recommendations one finds is that top management give clear, unambiguous signals of support for key elements of innovative activity (Guth & Ginsberg, 1990). For instance, senior management should visibly encourage the risk taking associated with the pursuit of new opportunities with clear cues that setbacks can be learning experiences (Shapiro, 1985). Many are familiar with the legendary Jack Welch who describe his role as a cheerleader and facilitator. Welch clearly seems bent on promoting the perceived desirability of seeking new opportunities and promoting perceptions of feasibility, removing cognitive as well as more tangible barriers. Hoskisson, Hitt & Hill (1993) show that an organization's control mechanisms exert considerable influence over the intensity of R&D spending. Long-term strategic controls do much better than short-term financial controls (i.e., reward the seeking of new opportunities); it might be interesting to observe the impact of organization members' perceptions of strategic controls.

Teams: Teams represent an especially useful means for promoting perceptions of feasibility and desirability. Objectively, teams provide tangible resources for innovation. Teams also provide the multiple perspectives and schemata offered by different team members, thus teams, not 'lone wolves,' are the best source of feasible ideas. Teams also provide a cognitive and emotional buffer from the rest of the organization. In the extreme, organizations have chosen to physically separate innovative groups from the rest of the organization (e.g., the 'skunkworks' concept). Such separation has symbolic as well as tangible implications for reducing inhibitions toward innovation. The social reinforcement of one's team can promote perceptions of collective efficacy and supportive social norms without the perception of negative reinforcements by the bureaucracy. Encouragement and support from team members can also promote perceptions of personal desirability and of personal efficacy. Most important, a well-constructed team is best suited to help innovators actually implement an idea. A supportive team does not ask "Can we do this?", rather it asks "How do we do this?" The diversity of perspectives in a good team helps defuse the potential negative ramifications that might arise from the innovation.

Mentors and Champions: Mentoring is often promoted as vital for management development in general and for innovation development in specific. One specific variation on the mentoring process is the concept of 'champions' or 'change masters,' yet another common prescription for promoting innovation (Roberts, 1988; Kanter & Richardson, 1991; Day, 1994; Shane, 1994). The

existence of a 'champion,' someone who will fight for an innovation, sends a clear signal that the organization at least tolerates innovative activity. That signal alone should increase perceptions of supportive social norms. However, recall that mentors and roles affect entrepreneurial intentions only insofar as they first affect key attitudes such as self-efficacy. We should expect that a skillful champion would contribute to stronger perceptions among organization members of an innovation's desirability and feasibility.

Multiple Mentors: Let us propose a notion founded in the practices of Academe, that of multiple mentors. Multiple mentors can provide multiple perspectives and multiple schemata that should broaden proteges' perceptions of desirability and feasibility. Multiple influences (particularly those that enhance self-efficacy) are also associated with entrepreneurship (Krueger & Brazeal, 1994). The multiple mentors should include one or more successful innovators. As in the Academy, multiple mentors are likely to cross functional boundaries and even organizational boundaries. Successful innovators typically engage in considerable boundary-spanning, proactively seeking such multiple influences (Shapiro, 1985).

An organization may wish to tangibly and visibly encourage successful innovators to mentor others. For example, recent evidence suggests that successful innovators are committed to both their profession and to their organization. "Serving two masters" is actually associated with high performance, contrary to many organization's norms (Baugh & Roberts, 1994).

Developmental Experiences: Any organization can profit by providing its members with a diverse range of developmental experiences (McCall, 1992). Here, experiences can provide explicit cues that the organization supports innovation and members can internalize those into appropriate attitudes, thus intentions. The more that organizational members are exposed to innovation and the more they understand its nature, the more likely they are to see innovation as feasible and desirable.

One example is the Enter-Prize Program at Ohio Bell (Kanter & Richardson, 1991) which allows fledgling intrapreneurs to test the waters. This program encourages employees to develop "newstreams" of new products or services that compete for funding by top management. If the "newstream" is successful, its developers participate in the profits, sending the clear message that Ohio Bell values innovation and innovators (and that innovation is both feasible and desirable.)

Moreover, promoting the ability of organization members to identify a broader range of alternatives as desirable and feasible yields an increased ability to learn new mental models. This ability to learn offers value beyond any particular innovation in question, helping organization members perceive the ability to learn and implement new competences (Senge, 1992). Organizations should consider such development as an integral part of their strategy (McCall, 1992) and thus provide the right kind of cognitive infrastructure.

Conclusions and Overall Implications

The robust empirical track record of intentions models and their firm theoretical grounding both argue that we do have a sound grasp of the critical antecedents of the intention to innovate. Moreover, we also know how to overcome inhibitions to the intent to innovate by influencing these critical antecedents. The perception-driven nature of intentions implies that a healthy cognitive infrastructure will change as circumstances (and our perceptions) change. Thus, there are no specific universal prescriptions. Instead we must continually maintain a healthy cognitive infrastructure by keeping a close eye on the perceptions of organization members. An organization that wishes to innovate must accept that it needs to empower its members then minimize activities that inhibit innovation-seeking.

Implications for Research

The model proposed in Figure 1(not provided) suggests testable propositions for future researchers. These in turn suggest additional considerations for researchers, educators, and practitioners.

Testable Research Propositions

- P1. Intention to innovate will increase propensity to innovate.
- P2. Perceptions that innovation is desirable will increase intention to innovate.
- P2a. Perceptions that innovation is personally desirable for organization members increases intentions to innovate.
- P2b. Perceptions that organizational social norms are supportive of innovation will increase intentions to innovate.
- P3. Perceptions that innovation is feasible will increase intent to innovate.
- P3a. Perceptions of personal competence at innovation by organization members will increase intentions to innovate.
- P3b. Perceptions of collective competence at innovation by organization members will increase intentions to innovate.
- P4. Exogenous factors operate indirectly through attitudes, not directly on intentions.
- P5. Precipitating factors (e.g., propensity to act), will increase the relationship between intentions to innovate and innovative behavior.

Some Unanswered Questions

We have argued that we need to focus on differences among organizational members' intentions toward innovation. The literature often prescribes perfusing the entire organization with a supportive corporate culture, but what if we must can work with only one group-who should it be? Do we need to influence the intentions of the rank and file? Middle managers? Top managers? Perhaps the role of leadership (as with Jack Welch) here is to promote a desired cognitive infrastructure, not just with internal stakeholders, but also with external stakeholders?

Can the study of innovative activity contribute to our understanding of intentions? Mintzberg observes that the implemented emergent strategy may prove quite different from the one that was originally intended. We know surprisingly little about changing intentions- the study of innovative activity might thus contribute to our overall knowledge about intentions. We

might gain a better understanding of how we re-categorize strategic issues, how we cognitively convert threats into opportunities (an activity that we often prescribe to students and trainees). For another example, social cues may prove more important for perceived feasibility (through effects on collective and personal efficacy) than for perceived desirability. If so, this represents a useful contribution to the overall literature on intentions.

What catalyst serves to crystallize beliefs and attitudes into a salient intention? Shapero suggested the existence of some sort of personal propensity to act. However, does this propensity help attitudes coalesce into intentions or facilitate the realization of intentions? This would also contribute to a broader understanding of intentions in general. Similarly, we may want a better look at possible precipitating or facilitating factors that trigger the taking of action. Do high levels of strategic momentum inhibit intent to innovate in new directions? Exploring questions such as these should prove both useful and interesting.

Integrating Past Research: One useful exercise might be to test these propositions by examining past research efforts that have explored the dimensions of successful (and unsuccessful) innovation. For instance, we already noted that the work of Eisenhardt and Schoonhoven (1990) illustrates the importance of initial decisions, a prime characteristic of intentional behavior. We might examine the specific activities of leaders such as Welch to assess their impact on perceptions of desirability and feasibility. We can see how initial strategies and intentions depend upon perceptions of desirability and feasibility in other well-executed studies of the innovative process (e.g., Tushman, Newman & Romanelli, 1988; von Hippel, 1988; Jelinek & Schoonhoven, 1993; Utterback, 1994). We can explore how existing inventories of barriers to innovation or corporate venturing reflect (or not) perceptions of desirability and feasibility (MacMillan et al., 1986; Kuratko et al., 1990).

We can also test existing successful constructs to identify whether the intentions model explains their success. We can test whether successful champions influence attitudes and intentions. We can test the precipitating factors proposed by Shapero (1982, 1985) and Stopford and Baden-Fuller (1994). We can test whether the critical success factors of learning organizations (e.g., Senge, 1992) influence attitudes and intentions.

Guiding Future Research: Intentions models such as the theory of planned behavior are already widely used in many settings, including intentions toward starting a business. Explicit formal quantitative tests thus appear both feasible and desirable. The intentions approach tells us that the effects of exogenous factors such as individual differences are indirect. This knowledge might help us identify stronger, more consistent effects from exogenous factors.

Intentions-based models also merit a formal qualitative test. One specific approach would be action research to identify whether influencing attitudes does indeed influence intentions (and thus behavior). Another might be to explore links between an organization's entrepreneurial orientation (Lumpkin & Dess,

1996) and the attitudes and intentions of organization members.

We should also explore the limits of this type of model. Does the scope of its applicability extend, for instance, to 'really new' products? We may find even more valuable insights from applying other models of human cognition (e.g., Lord & Maher, 1990; Jelinek & Litterer, 1994).

Implications for Practice and Teaching

If we accept the model, the most obvious implication is that enhancing its components should pay off in a higher level of innovative activity. However, the model also suggests the absence of panaceas; we must not assume that we fully understand how the perceptions of organization members change. We must avoid creating new dysfunctions such as replacing one blind spot with another (e.g., Zahra & Chaples, 1993). We might also risk being too successful. We might generate an obsession with innovation (Miller, 1990). We might generate overoptimistic perceptions of feasibility and desirability, setting the organization up for a rude awakening. The 'can-do' spirit is a two-edged sword: the very spirit that facilitates change could lead an organization and its members to take needless risks.

However, this same process gives us ample evidence to consider inverting the usual process of environmental analysis (e.g., SWOT). If perceptions of feasibility are critical, they can bias an organization's information search. Almost by definition, needs assessments are likely to anchor perceptions of feasibility. Intentionality argues that strategy formulation should be driven as much by external issues as it is by perceived capabilities, by learning and exploration as much as by existing capabilities. Hamel and Prahalad (1989) may argue for a focus on core competencies, but this focus must not constrain an organization from envisioning radical new opportunities. Both Senge (1992) and Mintzberg (1994) would argue that strategic planning must fully incorporate learning. To do so may require an appropriate cognitive infrastructure.

Understanding what inhibits innovative activity requires understanding how intentions toward a prospective course of action are constructed. Mental models of what we intend reflect why we intend an action. Intentions-based models capture how individuals really formulate mental models. Based on well-developed theory and robust empirical evidence, we have proposed a social psychological model of the intent to innovate. Perceptions of desirability (personal and social) and perceptions of feasibility (personal and organizational) are critical to the construction of intentions toward important behaviors. An organization's cognitive infrastructure should support enhancement of these critical perceptions. The pursuit of innovation appears quite amenable to the use of such models in teaching and practice as well as research. We look forward to testing the model and its components.

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From Entrepreneurship to Entreprenology

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Abstract

This paper presents a summary of research on entrepreneurs and discusses the trends in the development of the field. It begins by introducing the pioneers of the domain, Cantillon, Say and Schumpeter. The contribution of economists such as Knight, Hayek, Penrose, Kirzner and Casson are mentioned. A second section presents the contributions of the behaviorists and the characteristics most commonly attributed to entrepreneurs. From the 1980s onwards, the field of entrepreneurship exploded and was assimilated into almost every soft science discipline. Two separate trends - one applied, the other theory-based - began to emerge. Thus, the paper postulates that the field is in the process of dividing into two separate entities: entrepreneurship, the applied aspect, and entreprenology, the theoretical aspect.

Introduction

More than 1000 publications now appear annually in the field of entrepreneurship, at more than 50 conferences and in 25 specialized journals. This paper does not attempt to cover all the components of the field of entrepreneurship. Its goal is to describe and discuss the core elements of current knowledge on entrepreneurs and to suggest some trends. It presents a summary of a more detailed text on the subject (Julien, 1997, chapter 4).

The World of the Entrepreneur

People working in the field of entrepreneurship are convinced that there is a remarkable level of confusion surrounding the definition of the entrepreneur. We prefer the term "difference". Researchers tend to perceive and define entrepreneurs using the premises of their own disciplines. Taken from this standpoint, the confusion is perhaps not as great as people would have us believe, because similarities in the perception of the entrepreneur emerge within each discipline. For example, the economists have associated entrepreneurs with innovation, whereas the behaviorists have concentrated on the creative and intuitive characteristics of entrepreneurs. We will look more closely at these two standpoints in the following sections.

The Economists

First, we must qualify the popular belief that entrepreneurship originated from the science of economics alone. A careful reading of the first two authors usually identified as the pioneers of the field - Cantillon (1755) and Say (1803; 1815; 1816; 1839) - reveals that they were interested not only in the economy but also in the managerial aspects of enterprises, business development and business management. Cantillon was basically a banker who, today, would be described as a venture capitalist. His writings reveal a man seeking business opportunities, with a concern for shrewd, economic management and obtaining optimal yields on invested capital.

Verin (1982) examined the origin and development of the term "entrepreneur" revealing that it acquired its current meaning in the 17th century. Although the term was used before Cantillon, it is clear, as Schumpeter (1954: 222) pointed out, that Cantillon was the first to offer a clear conception of the entrepreneurial function as a whole.

Jean-Baptiste Say was the second author to take an interest in entrepreneurs. He regarded economic development as the result of venture creation, and hoped the English Industrial Revolution would spread to France (Say, 1815, 1816). Cantillon and Say regarded entrepreneurs as risk-takers basically because they invested their own money. In Cantillon's view, entrepreneurs bought a raw material - often a farm product - at a certain price, in order to process it and resell it at an uncertain price. Entrepreneurs were therefore people who seized opportunities with a view to making profits, and assumed the inherent risks. Say drew a distinction between the entrepreneur and the capitalist, and between their profits (Say, 1803; 1827: 295; 1815; 1816: 28-29; Schumpeter, 1954: 555). In doing so, he associated entrepreneurs with innovation. He viewed entrepreneurs as change agents. He himself was an entrepreneur, and became the first to define the boundaries of what an entrepreneur, in the modern sense of the term, actually is. Schumpeter (1954) admitted that a major part of his own contribution was to ten the Anglo-Saxon community about the world of the entrepreneur as described in the writings of Jean-Baptiste Say. As Say was the first to lay a foundation for the field, we have described him as the father of entrepreneurship (Filion, 1988).

It is perhaps interesting to note that what Say did was basically to draw together two major trends of thought of his time: that of the physiocrats and that of the Industrial Revolution in Great Britain. He was a great admirer of Adam Smith (1776), whose ideas he brought to France, and of the English Industrial Revolution (Say, 1816). In fact, he tried to establish a framework of thought that would enable the Industrial Revolution to move across the Channel to France. He applied the liberal thinking proposed by Quesnay, Mercier de La Riviere, Mirabeau, Condorcet, Turgot and other physiocrats as a means of developing farming, to the entrepreneur.

However, it was Schumpeter who really launched the field of entrepreneurship, by associating it clearly with innovation.

"The essence of entrepreneurship lies in the perception and exploitation of new opportunities in the realm of business ... it always has to do with bringing about a different use of national resources in that they are withdrawn from their traditional employ and subjected to new combinations." (Schumpeter, 1928)

Not only did Schumpeter associate entrepreneurs with innovation, but his imposing work shows the importance of entrepreneurs in explaining economic development.

In fact, he was not the only one to associate entrepreneurship with innovation. Clark (1899) had done so quite clearly some time before, and Higgins (1959), Baumol (1968), Schloss (1968), Leibenstein (1978) and most of the economists who took an interest in entrepreneurship after him also did the same. The

economists were mainly interested in understanding the role played by the entrepreneur as the motor of the economic system (Smith, 1776; Mill, 1848; Knight, 1921; Innis, 1930, 1956; Baumol, 1968; Broehl, 1978; Leff, 1978, 1979; Kent, Sexton et al., 1982). From this standpoint, the economists viewed entrepreneurs as "detectors" of business opportunities (Higgins, 1959; Penrose, 1959; Kirzner, 1976), creators of enterprises (Ely and Hess, 1893; Oxenfeldt, 1943; Schloss, 1968) and risk-takers (Leibenstein, 1968; Kihlstrom and Laffont, 1979; Buchanan and Di Pierro, 1980). Hayek (1993) 7; 1959) showed that the role of entrepreneurs was to inform the market of new elements. Knight (1921) showed that entrepreneurs assumed a risk because of the state of uncertainty in which they worked, and that they were rewarded accordingly by the profits they made from the activities they initiated. Hoselitz (1952, 1968) spoke of a higher level of tolerance that enabled entrepreneurs to work in conditions of ambiguity and uncertainty. Casson (1982) made an interesting attempt to develop a theory linking entrepreneurs with economic development. He emphasized the aspect of resource coordination and decision-making. Leibenstein (1979) had already established a model to measure the level of efficiency and inefficiency in the use of resources by entrepreneurs.

Entrepreneurs are mentioned in economics, but they appear very little - and sometimes not at all - in the classical models of economic development. Where they are present, they are represented by a function. The economists who took an interest in entrepreneurs were usually marginals, as was the case in other disciplines. If we were to summarize the main economic trends of thought on entrepreneurship, we would probably accept the standpoint of Baumol (1993), who proposed two categories of entrepreneurs: the entrepreneur-business organizer and the entrepreneur-innovator. The former includes the classical entrepreneur described by Say (1803), Knight (1921) and Kirzner (1983), and the latter the entrepreneur described by Schumpeter (1934).

It is never easy to introduce elements of rationality into the complex behavior of entrepreneurs. One of the criticisms that can be levelled at the economists is that they have not been able to make economic science evolve. They have also been unable to create a science of the economic behavior of entrepreneurs. Casson (1982) went as far as it was possible to go in terms of what is quantifiable and acceptable in economic science. The economists' refusal to accept non-quantifiable models clearly demonstrates the limits of this science in entrepreneurship. In fact, it was one of the elements that led the world of entrepreneurship to turn to the behaviorists for more in-depth knowledge of the entrepreneur's behavior.

The Behaviorists

For the purposes of this paper, the term "behaviorists" includes the psychologists, psychoanalysts, sociologists and other specialists of human behavior. One of the first authors from this group to show an interest in entrepreneurs was Max Weber (1930). He identified the value system as a fundamental element in explaining entrepreneurial behavior. He viewed entrepreneurs as innovators, independent people whose role as business leaders conveyed a source of formal authority. However, the author who really launched the contribution of the behavioral sciences to

entrepreneurship was undoubtedly David C. McClelland.

McClelland did not define entrepreneurs in the same way as the rest of the literature. His definition was as follows:

"An entrepreneur is someone who exercises control over production that is not just for his personal consumption. According to my definition, for example, an executive in a steel-producing unit in the USSR is an entrepreneur." (McClelland, 1971; see also 1961: 65)

In fact, McClelland's (1971) work concentrated on managers of large organizations. Although he is strongly associated with the field of entrepreneurship, a careful reading of his writings shows that he never made a connection between the need for achievement and the decision to launch, own or even manage a business (Brockhaus, 1982: 41). McClelland also identified the need for power, but he paid less attention to this aspect in his later work, and it is less well-known. A number of researchers have studied need for achievement, but nobody seems to have obtained conclusive results that associate it with entrepreneurial success (Durand and Shea, 1974; Hundall, 1971; Schrage, 1965; Singh and Singh, 1972).

After McClelland, the behaviorists dominated the field of entrepreneurship for 20 years, until the early 1980s. Their goal was to define entrepreneurs and their characteristics. The behavioral sciences were expanding rapidly, and there was more consensus than in other disciplines on the most valid and reliable research methodologies. The movement was reflected in research on a number of subjects, including entrepreneurs. Thousands of publications described a whole series of entrepreneurial characteristics. The most common are shown in Table 1 below.

Table 1
Characteristics most often attributed to entrepreneurs
by behaviorists

Innovators	Need for achievement
Leaders	Self-awareness
Moderate risk-takers	Self-confidence
Independent	Long-term involvement
Creators	Tolerance of ambiguity and uncertainty
Energetic	Initiative
Tenacious	Learning
Original	Use of resources
Optimistic	Sensitivity to others
Results-oriented	Aggressive
Flexible	Tendency to trust people
Resourceful	Money as a measure of performance

Blawatt, 1995
Hornaday, 1982
Meredith, Nelson et al., 1982
Timmons, 1978

All this research produced highly variable and often contradictory results. So far, it has not been possible to establish an absolute scientific psychological profile of the entrepreneur.

In reality, one of the conclusions to be drawn with respect to the characteristics of entrepreneurs can be summarized as the social being. Human beings are products of their environment. A number of authors have shown that entrepreneurs reflect the characteristics of the period and the place in which they live (Ellis, 1983; Fillion, 1991; Gibb and Ritchie, 1981; Julien and Marchesnay, 1996; McGuire, 1964, 1976; Newman, 1981; Toulouse, 1979). Seen from the standpoint of entrepreneurial behavior, entrepreneurship seems first and foremost to be a regional phenomenon.

To conclude this section on the research of the behaviorists in the field of entrepreneurship, it is clear that we have not yet established a scientific profile that allows us to identify potential entrepreneurs with any certainty. However, we know enough about entrepreneurial characteristics to enable would-be entrepreneurs to situate themselves. In fact, the scope of the term "behavior" has been extended, and it is no longer the exclusive province of the behaviorists. Research is tending to move towards other spheres, such as the skills and competencies required for a person to function well as an entrepreneur, and the personal and organizational learning methods required to adjust properly to changes in the activities related to the entrepreneurial trade.

The Explosion of the Field of Entrepreneurship

In the 1980s, the field of entrepreneurship exploded and spilled over into almost all the soft sciences and management sciences. The transition was marked by two events: the publication of the first-ever encyclopedia containing the state of the art in the field (Kent, Sexton et al, 1982), and the first major annual conference (the Babson conference) dedicated to research in the new field.

Table 2
Main Themes of Entrepreneurship Research

- * Behavioural characteristics of entrepreneurs
- * Economic and demographic characteristics of small business
- * Entrepreneurship and small business in developing country
- * The managerial characteristics of entrepreneurs
- * The entrepreneurial process
- * Venture creation
- * Business development
- * Risk capital and small business financing
- * Business management, recovery and acquisition
- * High technology firms
- * Strategy and growth of the entrepreneurial company
- * Strategic alliances
- * Corporate entrepreneurship or intrapreneurship
- * Family business
- * Self-employment
- * Incubators and entrepreneurship support systems
- * Networks
- * Factors influencing venture creation and development
- * Government policies and venture creation
- * Women, minorities, ethnic groups and entrepreneurship
- * Entrepreneurship education

- * Entrepreneurship research
- * Comparative cultural studies
- * Entrepreneurship and society
- * Franchises

The tables of contents of the proceedings of annual conferences such as the Babson conference, entitled *Frontiers of Entrepreneurship Research*, and the ICSB (International Council for Small Business) conference provide some interesting information on the themes most often discussed (see Table 2). Table 2 shows the 25 dominant themes in the field of entrepreneurship. In one of the most complete bibliographies published on this subject, Harold P. Welsch (1992) identified 27 in all.

It is interesting to note that the development of entrepreneurship as a discipline did not follow the same pattern as other disciplines. In fact, large numbers of researchers, each using a culture, logic and methodology established to varying degrees in their own fields, began to take an interest and work in the field of entrepreneurship. The first doctoral graduates in entrepreneurship and small business appeared in the 1980s. Nevertheless, the vast majority of those interested in the field were from disciplines other than entrepreneurship, and the study of entrepreneurship was not their main field of activity. Now, however, more people are devoting time and effort exclusively to entrepreneurship. The number of venture creations is growing, and the share of GNP attributable to small business in all countries is increasing every year. To follow the evolution and needs of their students and clients, many professors are having to learn more about entrepreneurship and small business. Thus, the assimilation and integration of entrepreneurship into the other disciplines, especially the soft sciences and management sciences, is unique as a phenomenon, and has never before occurred to such an extent in the paradigmatic construction of a soft science discipline.

Table 3 shows the main blocks of entrepreneurship research.

Table 3
Entrepreneurship Research

Clients	Subjects	Specialists	Methodologies
Political system	Government policies Regional development	Economists Sociologists	Quantitative
Entrepreneurs Potential entrepreneurs Educators	Entrepreneurial characteristics Entrepreneurial environment	Behaviorists Sociologists Anthropologists	Quantitative and qualitative
Entrepreneurs Potential entrepreneurs Educators Consultants	Business practice Management activities Financing Leadership Strategic thinking	Management specialists	Quantitative Qualitative

It is often said that confusion reigns in the field of entrepreneurship because there is no consensus on the definition of the entrepreneur and the boundaries of the paradigm. However, the reverse may also be true - entrepreneurship is one of the rare subjects that attracts specialists from such a wide range of disciplines, leading them to discuss and observe what others are doing in related disciplines and question how they are doing it. In fact, the confusion seems greatest if we compare the definitions of the entrepreneur between disciplines (Filion, 1988). On the other hand, if we compare the definitions produced by specialists within the same field, we find a quite astonishing consensus. The economists tend to agree that entrepreneurs are associated with innovation, and are seen as the driving forces of development. The behaviorists ascribe the characteristics of creativity, persistence, locus of control and leadership to entrepreneurs. Engineers and operations management specialists see entrepreneurs as good distributors and coordinators of resources. Finance specialists define entrepreneurs as people able to measure risk. For management specialists, entrepreneurs are resourceful and good organizers, develop guidelines or visions around which they organize their activities, and excel at organizing and using resources. Marketing specialists define entrepreneurs as people who identify opportunities, differentiate themselves and adopt customer-oriented thinking. For students of venture creation, the best elements for predicting the future success of an entrepreneur are the value, diversity and depth of experience and the skills acquired by the would-be entrepreneur in the sector in which he or she intends to operate.

The field of entrepreneurship has attracted the interest of specialists from almost all the soft science disciplines in the last decade. The apparent confusion basically reflects the differing logic and cultures of these disciplines. It seems likely that, in the coming decade, entrepreneurship will become one of the main gathering points of the soft sciences, because it is one of the rare subjects that has attracted such a large number of specialists from such a wide range of disciplines.

Trends for Theory Building

In every discipline, there is a desire to understand trends and formulate universal laws around which knowledge can be structured. The fields of entrepreneurship and small business are no exception to this. We have reached a point where many people are calling for a robust theory based on universal axioms, such as that which exists in physics, for example. The theory would be based on rigorous quantitative models and would be obtained by means of wide-ranging quantitative research that would incontestably prove the nature of the entrepreneur, entrepreneurial activity and its effects on economic development. At the same time, thousands of teachers are faced every day with the need to produce material to train entrepreneurs for entrepreneurial practice. To do this, they use qualitative methods to develop models and tools that will help actual and potential entrepreneurs to practise their profession competently. This tension between academics who write for other academics on the one hand, and academics who write for practitioners on the other, is strong enough in the field to deserve attention here. This may be the starting point of two complementary disciplines: entrepreneurship, i.e. research where the client is a

practitioner, and entreprenology, i.e. research where the client is another researcher.

Many attempts at theorizing have been made. The most frequently quoted include: Amit, Glosten et al. (1993), Baumol (1993), Bull and Willard (1993), Bull, Thomas et al. (1995), Bygrave (1989a and b), Casson (1982), Collins and Moore (1970), Covin and Slevin (1991), Gartner (1985, 1990), Gartner, Carland et al. (1988), Hebert and Link (1982), Hofer and Bygrave (1992), Leibenstein (1968), Low and MacMillan (1988), Peterson and Ainslie (1988), Reynold (1991), Sombart (1928), and Stevenson and Jarillo (1990). Wortman and Birkenholz (1991) summarized and attempted to classify many of these studies. When we look at all these theory-building efforts in the field of entrepreneurship, it becomes clear, as Mulholland (1994) pointed out, that the link established by Schumpeter (1928, 1934) between the entrepreneur and innovation has remained a dominant feature of the discipline, especially among the economists. In an earlier section of this paper we considered the explosion of the field of entrepreneurship and the appropriation of relevant elements by the various soft science disciplines. It is this situation that led to the emergence of such a wide variety of definitions and methods of addressing the subject. For the economists, the innovation-based definition and approach developed by Schumpeter to explain the entrepreneur are sufficient to develop a theory of entrepreneurship (Kirchhoff, 1992, 1994). Julien (1989) has already pointed out the difficulty of aligning economics with the other soft sciences. In fact, when we compare the standpoints of Baumol (1990, 1993) and Casson (1982), the fundamental differences existing even between the economists themselves become obvious.

In the following paragraphs, will examine the work of some of the authors who have thought about structure and theory in the field of entrepreneurship. Cunningham and Lischeron (1991) suggested that the field of entrepreneurship is being structured around six points: the "great man" school, the psychological characteristics school, the classical (innovation) school, the management school, the leadership school and the intrapreneurship school. Blawatt (1995), using these and other characteristics, proposed that a conceptual model of entrepreneurship should include the performance criterion. He observed that most of the models proposed by the school of personality and others are generally static. He aligned himself with authors who have studied entrepreneurs in the field, and observed that entrepreneurs work in an evolving context where activities and roles change gradually. Entrepreneurs learn from what they do (Collins and Moore, 1970; Fillion, 1996), and because the nature of what they do changes, they too must change. They therefore have to learn to play different roles as their business evolves.

Bygrave suggested that what we need most is qualitative field research to understand what entrepreneurs do (1989a). He then (1989b) proposed the chaos theory in physics as an interesting basis for a theory of entrepreneurship, but nevertheless warned that chaos is "no more than a mathematical metaphor because the accuracy of measurements necessary ... are unattainable in process" (1993).

Dery and Toulouse (1996) analyzed the themes addressed and the

references used in one of the most frequently-quoted journals in the field of entrepreneurship, the Journal of Business Venturing. They observed that more than half the references were books. They made a similar research in the field of strategy, based on an analysis of quotations in the Strategic Management Journal. It showed that more than half the references were academic papers. This seems to suggest that the field of strategy is now mature enough for researchers to have reached a certain consensus. In entrepreneurship, according to Dery and Toulouse, we are still in a developing paradigm where no consensus has yet been reached as regards the theoretical construction of the discipline. It may also be that the field of entrepreneurship is being structured in a different way from the other soft sciences, including strategy. While psychology emerged from philosophy (Miller, 1962), and psychoanalysis from medicine and psychology, the field of entrepreneurship is rooted in practically all the soft sciences and management sciences. Entrepreneurship research addresses both theoretical and practical elements. It would therefore not be surprising if theories were to emerge from sets of applied research. The soft sciences are composed mainly of flexible interpretative models. Any theory of entrepreneurship must be flexible and multidimensional to reflect its multidisciplinary roots.

Conclusion

We have seen that entrepreneurship was first identified by the economists as a useful element for understanding development. Subsequently, the behaviorists tried to understand the entrepreneur as a person. However, the field is currently in the midst of an explosion, in that it is spreading into almost every other soft science discipline.

We agree with Mulholland (1994) and Rosa and Bowes (1990) that the field is still dominated by the positivist-functionalists, and that there is an urgent need to open up new perspectives in order to understand what entrepreneurs are and what they do. In light of the above, the field of entrepreneurship can be defined as the field that studies entrepreneurs. It examines their activities, characteristics, economic and social effects and the support methods used to facilitate the expression of entrepreneurial activity. No academic field can allow itself to neglect theory. However, to create a theory of the entrepreneur, it will probably be necessary to separate applied research from theoretical research by establishing a new science, entrepreneurology. This new science could create a theoretical corpus composed of the convergent elements of theoretical studies of entrepreneurs by entrepreneurologists in the various disciplines. Entrepreneurship itself would continue as an applied research field, producing results of interest to practising and potential entrepreneurs. However, several thousand more publications will be published, and perhaps a few more decades will have elapsed, before we finally reach this point.

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Cognition As A Research Object
In The Scientific Literature
On Small Business And Entrepreneurship

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Abstract

The aim of this study is to highlight the characteristics of research on cognitive objects in the scientific literature on small business and entrepreneurship. The study covered the period January 1987 to August 1994, and involved identifying and analyzing records from the ABI/INFORM database, together with the papers to which the records referred. The conceptual framework used to classify cognitive studies emphasized four categories of cognitive objects: processes, products, predispositions and props. The aspects analyzed were the journals in which the papers appeared, the specific cognitive objects studied, the samples used, the data collection and analysis techniques employed and the disciplines involved. In all, 156 papers published in 28 different scientific journals were analyzed.

Introduction

In recent years, interest in research on small business and entrepreneurship has grown considerably. The types of papers published in the traditional administrative science journals provide ample proof of this. Moreover, the number of journals devoted exclusively to these areas is increasing, and the journals themselves are gaining recognition within the scientific community (e.g. JBV, ETB and, in French, the Revue internationale PME). The same comments apply to scientific conferences and conventions. Some of these scientific gatherings have engendered major publications on small business and entrepreneurship (e.g. Frontiers of Entrepreneurship Research). In view of the special features of small businesses - which are not "small" large firms (Dandridge, 1979; Welsh & White, 1981) - most people would agree on the need to develop specific small business theories (d'Amboise & Muldowney, 1988).

As a result of all this intense activity, a number of leading researchers have proposed ideas and directions related to theory building in the field of small business and entrepreneurship. They include Churchill & Lewis (1986), Wortman (1986, 1987), Ireland & Van Auken (1987), Bygrave (1989, 1993), Stevenson & Harmeling (1990), Herron et al. (1991, 1992), Bygrave & Hofer (1991), Hofer & Bygrave (1992) and MacMillan & Katz (1992). Most of them, with the notable exception of Bull & Willard (1993), do not use cognition, i.e. the actors' thinking, as a key concept. Yet, the cognitive aspect is considered by a growing body within the scientific community as essential in explaining or understanding how organizations function. It has been the subject of some widely disseminated research publications, such as Mapping Strategic Thought (Huff, 1990) and The Thinking Organization (Sims & Gioia, 1986). Some leading scientific journals have also published special issues on cognition in administrative science - for example, the August 1994 special issue of Organization Science, and the special issues of the Journal of Management Studies in May 1992 and July 1989. In

organization studies, cognition is attracting a steady and apparently growing interest. And there is nothing to suggest that its relevance is limited to the corporate sector.

In the field of small business and entrepreneurship, the place occupied by cognition in knowledge production is much less obvious. In fact, we know very little about the importance and characteristics of cognitive studies in that field. This research aims to fill the gap. More specifically, it aims to highlight the characteristics of research on cognitive objects in the scientific literature on small business and entrepreneurship. The intended contribution is essentially to stimulate reflection and debate among academics in our field. The description and analysis of cognitive studies will raise questions and issues relevant for the development of small business and entrepreneurship theory. In this paper, we will begin by briefly examining the notion of cognition, before presenting the conceptual framework used here to organize cognitive studies in the scientific literature on small business and entrepreneurship. We will then describe the main elements of the operational framework, showing that the study is based on an analysis of documents drawn from the ABI/INFORM databank, i.e. data records and the papers to which they referred. Finally, the results will be presented and discussed.

The Notion Of Cognition

The notion of cognition is difficult to handle. To begin with, no nomenclature of cognitive terms has been created, and no consensus seems to exist as to what is "cognitive" and what is not (Meindl et al., 1994). A brief look at the main terms associated with cognition by different authors in the publication directed by Andler (1992) following a major convention on cognitive science at the International Cultural Centre in Cerisy-la-Salle (France) clearly illustrates the ambiguity of the notion. The terms used include language, reason, perception, planning, information processing, assimilation, storage, and accommodation of new information, directed action, conceptual organization, learning, communication, aptitudes, propensities and abilities of the human brain, mental entities such as mental processes and states (intentions, beliefs, desires, etc.), mental representations (e.g. beliefs, intentions, preferences) and public representations (e.g. signals, statements, speech, texts). Cognitive-type research objects seem to be numerous, varied and unclassified, although cognition always appears to be strongly related to the study of thinking.

To capture different dimensions of that notion in organization studies, some conceptual frame works have been proposed. Meindl et al. (1994) suggested that organizational research centred on cognition could be classified into two broad categories, depending on whether it was concerned with the processes or structures of thought: "Emphasizing processes meant studying how information and beliefs are combined and used in forming judgments and making decisions. Emphasizing structure meant describing knowledge and its inherent organization" (p.291). They noted that very little research had so far done both. Moreover, they mentioned work on the "cognitive aids" used or established to shape or represent the thoughts of organizational actors, including decision support systems and information systems. In

another study, Schneider & Angelmar (1993) noted that "regardless of which paradigm is applied in management research, there seems to be convergence on the core properties of cognition" (p. 349) and, accordingly, proposed a framework composed of three elements to organize research on cognition in management/organizational literature: cognitive structures (schema, beliefs, scripts, etc.), i.e. knowledge acquisition models or epistemological structures; cognitive processes, or the specific way in which knowledge is selected, organized, transformed, stored and used; and lastly, cognitive styles, which after to the individual, collective and organizational differences in how information is processed. Such classification schemes suggest that the study of cognition in an organizational context can be said to include processes, products, predispositions and props. This conceptual framework will be discussed in more detail in the next section.

Cognitive Processes, Products, Predispositions And Props

Research on cognition in organizations may fall into one or more of four categories, depending on the object under study: cognitive processes, cognitive products, cognitive predispositions or cognitive props. The first two categories were present in the frameworks described above; however, some precisions are needed on the concept of "process", and cognitive "products" will not be limited here to cognitive "structures". The third category is close to Schneider & Angelmar's cognitive style category, although it is broader in scope. Cognitive props seem to resemble what Meindl et al. called "cognitive aids".

Cognitive process research looks at the operations, mechanisms, tasks and activities that reveal the mind's functioning, and having to do with the acquisition, processing, storage, recovery, transformation and use of information or knowledge. They are basically aimed at showing how the objects of thought (individual, collective or organizational) are formed, maintained and changed. It is important that this be made very clear: the study of a process is the study of the passage from one cognitive state (or product) to another. The focus is therefore on what happens between a cognitive state at time a and a cognitive state (of the same type or not) at time b. A cognitive process is basically dynamic or progressive in nature.

Research on cognitive products is concerned with the content of the mind rather than its functioning. It may, for example, consider the characteristics of thought, seen as the result of a prior process, but a relationally unstable result existing at a given time. Cognitive products may be mental structures, such as implicit theories, scripts or schemes; that is, the referential systems that guide individuals in their interventions, forecasts and interpretation of events. However, such products will not necessarily be general knowledge acquisition models. They may be cognitive entities such as significations, perceptions, interpretations, reasons, anticipations, motives or intentions related to given situations.

Some researchers have addressed the question of individual cognitive predispositions, i.e. the personal characteristics often of interest to psychologists. This category clearly includes cognitive styles, and also basic values or attitudes existing prior to the situation under investigation, and any

other general disposition closely related to personality or individual difference (tolerance of ambiguity, cognitive complexity, etc.). As Schneider & Angelmar (1993) suggest for cognitive styles, it should be remembered that groups and organizations also possess "cognitive predispositions". It has to be noted that values and attitudes may in fact be cognitive products, depending on how the authors treat them. For example, if attitudes are treated as the general tendencies characterizing personality and are measured by means of a uniform test, they would be cognitive predispositions. On the other hand, if the term is used to denote a state of mind constructed and directly associated with a specific situation occurring in a given spatial and temporal context (e.g. a favourable or unfavourable attitude to exporting), then attitude would be a cognitive product, rather like a perception or an intention.

The final category is cognitive props. These are the means, tools, methods and procedures likely to help a given actor (researcher, consultant subject, etc.) in formulating or representing cognitive products or processes. Research on cognitive props is concerned with how these elements help direct or describe thought, and is therefore basically instrumental or methodological in nature. This category usually includes individual or collective decision-making support systems, especially the problem formulation aspect. It also includes studies where cognitive mapping plays a leading role, whether as a support for communication with self or others, or as an analysis tool, as well as research on artificial intelligence and, more particularly, knowledge engineering, whose most spectacular results take the form of expert systems development.

The objective of this study, derived from these four major categories, was to highlight the characteristics of research in the scientific literature on small business and entrepreneurship aimed at least partially at investigating cognitive processes, products, predispositions or props. The following section describes the main elements of the operational framework used.

Operational Framework

The operational framework is concerned with the methodological aspects of the research. In our study, it was divided into two parts: (1) the identification and selection of records from the ABI/INFORM databank; and (2) the presentation and analysis of the papers to which the selected records referred. First however, some information is needed on the database itself. According to the ABI/INFORM Ondisc User's Guide (1990), the ABI/INFORM database contains information on papers published in more than 800 English language periodicals, 75% of which are American. The periodicals, which include professional and scientific journals, cover all the major management and business fields.

Identification and Selection of the Records

The computerized search on CD-ROMs containing the ABI/INFORM data was restricted to papers published between January 1987 and August 1994. First, the precise terms for the search had to be established. On one hand, "small business" and "entrepreneurship" were both retained. The two concepts should not be confused, and they have in fact sometimes produced

completely separate research (Wortman 4 1986, 1987). Research on corporate entrepreneurship or "intrapreneurship" was not considered, unless it made reference to intrapreneurship in small business (see especially Carrier, 1994). The same applied to entrepreneurship in government and non-profit organizations. On the other hand, as mentioned above, some terms were considered representative of the type of vocabulary likely to be used by researchers investigating cognitive processes, products, predispositions and props within organizations. These were: cognition, representation, interpretation, scheme, construction symbol, vision, perception, attribution, belief, intuition, thinking, meaning, making sense, receptivity, intention, objective, motive, frame, reason, sense making, ideology, decision, problem solving, expectation, preference, anticipation, attitude, value, opinion, information, knowledge, image, interest, goal, script, language, attention, memory, categorization and artificial intelligence. Truncating (e.g. cognit?- schem?) was used to locate words sharing the same root. Clearly, the list should not be viewed as an exhaustive inventory of all the concepts used in cognitive studies; as we said earlier, there is no nomenclature of cognitive terms. However, it may be difficult to find an article in organization studies that could be said to be "cognitive" while not containing at least one of the terms of the Est, regardless of paradigms, perspectives or approaches.

Search statement was formulated using these terms, as follows: (small business or entrepreneur?) and (cognit? or represent? or ... or artificial intelligence). The aim was to locate all records containing at least one of the terms from each of the two sets, in the title, keywords, summary or elsewhere. In view of the limits imposed by the computer hardware, the statement was broken down into several parts. More than 30,000 records were read onscreen. Clearly, many of the records identified by this procedure had to be rejected simply because the truncated terms often produced records that had nothing to do with cognition (for example, the term "perce?" produced a number of references containing the words "percentage" or "percent").

We also had to determine whether the papers identified had been published in a journal aimed mainly at the scientific community (e.g. JSBM, or if they contained opinions, reflections, analyses or other personal viewpoints published in a vehicle aimed mainly at practitioners (e.g. D&B Reports). Since the research was concerned with the production of knowledge intended to make a conceptual or theoretical contribution to the field of small business and entrepreneurship, only publications in the former category were retained. Publications in journals aimed explicitly at both groups (e.g. Management International Review) were also retained. The decision to assign a record to a particular category was based on information from Cabell's Directory of Publishing Opportunities in Business and Economics or from the journals themselves.

The final task was to ensure that the sole or partial objective of the paper included at least one cognitive process, product, predisposition or prop. A simple allusion was not sufficient. Similarly, a record was rejected if it clearly stated that the paper simply described or "generalized" knowledge from previous research or was composed mainly of the comments and reflections

of practitioners. This was often the case for papers published in journals aimed at both academics and practitioners. Records in which one or more cognitive terms were used solely to interpret or comment on the results of research on a non-cognitive issue were also rejected. In other words, the research had to attempt to make a scientific contribution and focus at least partly on one or more of the four cognitive aspects.

The decision to retain or reject a record was therefore based on a content analysis. The title of the paper was often an excellent source of information here. Similarly, if the list of keywords contained at least one cognitive term or if the summary contained a number of cognitive terms or repeated occurrences of one term, this suggested that cognition played an important role in the research. Finally, in all except thirteen cases, the papers to which the records refer red were also consulted (in the case of the thirteen, it proved impossible to locate the journal concerned, despite extensive efforts). The process was somewhat fastidious, but yielded important and sometimes essential information for the subsequent description and analysis of the papers.

Description and Analysis of the Papers

A table of papers retained was drawn up, although space restrictions prevent us from including it here (the table appears in its entirety in Cossette, 1995, p. 508-524). It contains information on references, cognitive objects, samples, data collection techniques, data analysis techniques and disciplines. The analysis and subsequent interpretation were guided by the following questions:

Reference: Are there many references? Has their number decreased, remained stable or increased since 1987? To which journals do they refer? Are they specialized small business or entrepreneurship journals? Do the papers appear mainly in academic journals or in those aimed at both academics and practitioners? Are they mainly "conceptual" or "empirical" in nature, and has this ratio remained basically unchanged since 1987?

Cognitive object: Does the paper investigate cognitive processes, products, predispositions or props? Which is the most common type within each category? How can they be characterized?

Sample: Is the sample usually composed of individuals, groups, organizations or industries? What size is it? Were the subjects who took part in the research very varied? Data collection technique(s): What techniques are used most frequently? Do they vary? Have some techniques tended to be used more or less over the years? To what extent are the techniques obtrusive?

Data analysis technique(s): What techniques are used most frequently.? Do they vary.? Have some techniques tended to be used more or less over the years? How sophisticated are the techniques? Do they mainly involve so-called quantitative or qualitative methods?

Discipline(s): Which discipline(s) or sub-fields of administrative science are involved? More specifically, based mainly on the information contained in the CODE heading of the records, into which of the following nine areas does the research fall:

strategy, organizational behaviour, finance/accounting, human resources management, management training, marketing, operations./production management, economics, management information systems?

Results

Between January 1987 and August 1994, a total of 156 scientific papers were identified as being concerned at least partly with a cognitive process, product, predisposition or prop within the framework of research on small business or entrepreneurship. Some people may find this interest in cognition to be rather more significant than they would have believed, and might wonder why cognition has not been considered more clearly as a key factor in the development of small business and entrepreneurship theory. The remainder of this section will describe the analysis of these 156 papers under the six headings described above.

Reference

Table 1 shows the number of papers published in each journal between January 1987 and August 1994. Most of the papers (119 out of 156, or 76%) appeared in the only three journals in the table specialized in small business and entrepreneurship, i.e. (in order) JSBM JBV and ETP. However, it is also worth noting the large overall number of journals - 28 - in which the papers were published. Moreover, the number of papers remained remarkably stable over the years, except for 1987 and 1994 (in the latter case, if the trend was maintained in the last four months of the year, there would have been a significant decrease). It has to be noted that the 21 "conceptual" papers appeared in six journals: ETP (10 [7 since 1992], or nearly half the 23 papers published in ETP), JSBM (4, all before 1990), JEBO (3), AMR (2), JBV (1) and DSS (1). In all, more than half of all the conceptual papers were published after 1992, and none appeared in a journal aimed at both academics and practitioners. A third of the conceptual papers were published in journals outside the field of small business or entrepreneurship.

Number of Papers Published by Journal, 1987-1994

Journals

Academy of Management Executive (AME)* 1988:1, Total:1

Academy of Management Review (AMR) 1988:2, Total:2

Accounting and Business Research (ABR) 1990:1, 1991:1, Total:2

Administrative Science Quarterly (ASQ) 1990:1. Total:1

Akron Business and Economic Review (ABER) 1990:1, 1991:1, Total:2

Decision Support Systems (DSS) 1991:1, Total:1

Entrepreneurship Theory and Practice (ETP) (previously American

Journal of Small Business) 1987:1, 1988:4, 1989:2, 1990:2, 1991:3, 1992:5, 1993:3, 1994 jan-aug.:3, Total:23

Industrial marketing Management (IMM)* 1991:1, Total:1

Information Age (IA)* 1990:1, Total:1

Journal of Applied Business Research (JABR) 1991:1, 1992:1, Total:2

Journal of Banking and Finance(JBF)* 1991:1, Total:1

Journal of Business Communication (JBC) 1989:1, Total:1

Journal of Business Ethics 1990:1, 1992:1, Total: 2

Journal of Business Finance and Accounting (JBFA) 1993:1, Total:1

Journal of Business Venturing (JBV) 1988:4, 1989:5, 1990:8, 1991:2, 199;6, 1993:7, 1994 jan-aug.:2, Total:34

Journal of Economic Behavior and Organization (JEBO) 1987:1, 1992:1, 1993:1, 1994 jan-aug.:1, Total:4

Journal of Economic Psychology (JEP) 1991:1, Total:1

Journal of Management Studies (JMS) 1990:1, 1992:1, Total:2

Journal of Occupational Psychology (JOP) 1989:1, Total:1

Journal of Small Business Management (JSBM) 1987:8, 1988:7, 1989:9, 1990;8, 1991:9, 1992:8, 1993:10, 1994 jan-aug.:3, Total:62

Journal of the Operational Research Society (JORS)* 1988:1, Total:1

Journal of Travel Research (JTR) 1991:1, Total:1

Management International Review (MIR)* 1989:1, Total:1

Managerial Finance (MF) 1993:1, Total:1

MIS Quarterly (MISQ) 1993:1, Total:1

Organizational Dynamics (OD) 1988:2, Total:2

Strategic Management Journal 1989:1, Total:1

Technovation (T)* 1991:2, Total:2

1987	1988	1989	1990	1991	1992	1993	1994	TOTAL
10	21	20	24	24	23	24	10 jan-aug.	156

*Journals aimed at both academics and practitioners.

Cognitive Object

As Table 2 shows, cognitive products clearly attract the most interest among researchers. The number of papers published varied very little within the categories over the years, although a little more attention seems to have been paid to cognitive predispositions since 1991.

TABLE 2

Number of Papers Published by Category of Cognitive Object
1987 - 1994

	1987	1988	1989	1990	1991	1992	1993	1994	Total
Processes	1	3		2	1	4			11
Products	6	17	14	21	17	15	20	9	119
Predispositions	1	1	2	2	4	3	3	1	17
Props	2		4	1	2	1	1		11
	10	21	20	26*	24	23	24	10	

* This number differs from the number shown in Table 1, because two of the 1990 papers each addressed two cognitive objects.

The specific cognitive objects studied within each category tended to vary, although some appeared more frequently than others. For example, research on cognitive processes tended to describe the cognitive process that occurred during decision-making or problem-solving. Research on cognitive predispositions was concerned mainly with identifying the basic values or attitudes of entrepreneurs or students, or decision-making or problem-solving "style". Research on cognitive props was often prescriptive in nature, showing how a model or technique could help to "think", generally within a decision-making framework, and in different fields (STRAT, MRK MIS, etc.). However, cognitive products attracted by far the most attention, and were the focus of attention in three studies out of four. The most "researched" cognitive products included the reasons or motives given for venture start-up, the criteria or factors considered to be important in decision-making and, more particularly, perceptions (the importance of information sources, the environment, the company's problems, barriers to exporting, etc.).

Sample

The size of the sample varied from one paper to the next, but it rarely fell below 50 individuals, and frequently exceeded 100. Research focused almost exclusively on the individual aspect. Cognition at the collective, organizational and even industrial levels, which cannot be described as the result of a simple accumulation of individual thought (Schneider & Angelmar, 1993), seemed to be of little interest to researchers in the fields of small business and entrepreneurship. The variety of subjects within the samples was quite remarkable. Although owner-managers were the most sought-after, many other people were willing to serve the cause of knowledge, including managers, employees, investors, lenders, clients, teachers, students and many others, by agreeing to become subjects in cognition research in the fields of small business and entrepreneurship. The subjects were drawn from a wide variety of companies. Most business sectors were represented and the research had been performed in at least fifteen different countries.

Data collection technique(s)

The tool used most frequently was the mail questionnaire. If we accept the idea that cognition is fundamentally idiosyncratic in nature (see, among others, Cossette & Audet, 1992), the use of

this structuring technique, combined with the fact that the data is gathered in an impersonal context, is somewhat worrying, especially if we consider that the questions asked are usually "directive". Evaluation (Likert scale) or multiple choice questions provide a reference framework that belongs to the researcher and not to the subject. To give more weight to the reference systems of the subject, researchers would have to make more use of techniques such as in-depth interviews.

Data analysis technique(s)

In view of the data collection techniques and the samples, it should come as no surprise that the researchers made massive use of statistics to analyze their data. In fact, content analysis was used on only a few occasions. Most of the research contained "descriptive" statistics, using graphical methods (e.g. histograms) or numerical calculation methods to provide position or dispersion indicators (e.g. mean). Some multivariate techniques also "describe". The use of these more complex techniques, which include discriminant analysis, factorial analysis and cluster analysis, is increasing steadily in cognition-related research in small business. Between 1992 and August 1994, they were used 23 times, compared with 21 in the preceding five years. Factorial analysis is the most popular of these techniques; it was used on 27 occasions, whereas discriminant analysis and cluster analysis were used only 9 and 8 times respectively.

The use of "explanatory" statistics - in other words, those concerned with statistical inference - increased in the period up to 1991 (25 in that year), and has been decreasing ever since. However, the differences are not significant enough to suggest a change of paradigm. Besides, the use of multivariate techniques aimed at "explaining" (regression analysis and variance analysis) has increased since 1991. The same trend was observed in the use of descriptive multivariate techniques. Data analysis techniques are therefore becoming more sophisticated, as Wortman (1986) hoped, but contrary to Bygrave's (1989) suggestion. More recently, Bygrave & Hofer (1991) proposed that regression analysis should no longer be used: "[...] regression analysis is reductionist, while entrepreneurship is holistic [... it) assumes stable models built with relatively few variables, rather than unstable models with many variables" (p.20).

Discipline

The study of cognition in small business is dominated by the "organizational behaviour" sub-field, but is by no means its exclusive province. Interestingly, 26 papers related to the field of finance and accounting. This was the second largest group after organizational behaviour; clearly, figures are not independent of the representations we associate with them. At least ten papers related to each of the following fields: STRAT, MRK and MIS.

Discussion And Conclusion

The aim of this study was to highlight the characteristics of research on cognitive objects in the scientific literature on small business and entrepreneurship. Results have shown that such research is perhaps best characterized by its diversity.

This diversity could be seen in the journals in which the papers were published, the cognitive objects studied, the samples used, the data collection and analysis techniques employed and the disciplines concerned. Sometimes the relationships between the elements, especially the research objects, were so tenuous that they created an impression of fragmentation. Churchill & Lewis (1986) made a similar observation ten years ago with respect to entrepreneurship research: "[...] research directions are fragmented, creative and diverse" (p.334). Naturally, the results of this study suggest some avenues for future research. First, however, some comments are needed on the "limits" of the study.

The documentary research was performed using a single database, the standard version of ABI/INFORM. Although it is recognized as an excellent directory of scientific papers in administrative science, in its present form it excludes some 100 journals that are included in its more costly, "global" version, among which the International Small Business Journal. Also, our study did not consider research published in books, book chapters or in the reports or proceedings of scientific conferences. Finally, the cognitive terms used in our search statements were established "intuitively", given the absence of a nomenclature of cognitive terms. Although the terms selected seem to constitute a fairly exhaustive list of those used in administrative science, other researchers may not agree with all of them. This highlights the need to develop models or typologies that would enrich research on cognition in organizations of all sizes.

A possible avenue for future research would be to compare the interest in cognitive objects shown by researchers with that shown by practitioners. The concerns of researchers do not necessarily accurately reflect the concerns of practitioners, especially in the small business field (on this subject, see Ireland and Van Auken, 1987 and Brockhaus, 1987). A number of questions could be answered by comparing papers from academic journals with those from publications aimed specifically at practitioners. For example: Is one type more numerous than the other? Do both types address the same cognitive objects (processes, products, predispositions, props)? Does the interest in the various cognitive objects expressed in academic journals precede or emerge out of the interest expressed in professional publications?

But the most important conclusion for the development of small business and entrepreneurship theory may well be that almost all the work on cognitive objects analysed during the research has been carried out using what we could call an "objectivist" viewpoint. Researchers seem to presume that all reality - including cognitive reality - can be studied neutrally, to identify regularities or laws that enable predictions to be made - the ultimate objective of science in the wake of positivism. From a methodological point of view, the nomothetic approach is favoured: ideally, it is believed that the sample should be large and statistically representative of a given, clearly specified population; results should be classified in predetermined categories and analyzed using quantitative techniques. This is the approach suggested in 1987 by Sexton, who emphasized the importance of examining the causal relationships between events, ensuring that results can be reproduced, sampling properly and then generalizing result, using valid measurement instruments and

performing sophisticated mathematical analyses. Other authors have proposed similar approaches. For example, Low & MacMillan (1988) said that causality should be the main focus of researchers in the field of entrepreneurship, and deplored the approach used so far: "The lack of experimental research is a further indication of slow progress in developing entrepreneurship theory" (p. 154). Yet, in 1987, Vesper noted that progress in entrepreneurship research was difficult to assess and criteria such as the predictive value associated with the generation and testing of hypotheses was perhaps inappropriate in social research, including entrepreneurship. He observed that progress often demanded a rejection of dominant paradigms. However, if recent research is any indication, his remarks have not had the hoped-for impact. Similarly, Bygrave (1989) deplored the fact that most entrepreneurship research uses methods and theories borrowed from other sciences, notably the "hard" sciences, a situation he explained by the lack of progress in entrepreneurship theory (and also, in part, by the fact that many of his fellow researchers were former engineers or mathematicians). The conclusions of Bygrave & Hofer (1991) and Stevenson & Harmeling (1990) support this view.

Generally speaking, the traditional viewpoint associated with the orthodox knowledge production model has often been criticized in recent years, in particular because it presupposes object stability and subject exteriority, two untenable characteristics in social research (Audet et al., 1986). Within this viewpoint, where, as the latter authors observed, knowledge is considered to be definitive and cumulative, emphasis is placed on the search for a hidden truth rather than the pursuit of meaning. Given the limits of this traditional and objectivist viewpoint, it is difficult to understand why it is overrepresented in cognition - related research in the scientific literature on small business and entrepreneurship. Any approach has its limitations. But the "subjectivist" viewpoint is an alternative that should not be discarded (see, among others, Cossette, 1994) in the development of small business and entrepreneurship theory. In such a perspective, the initial precept is that the cognitive structure of subjects guides them in apprehending reality, that they are active in their relationships with the environment, and that they do not simply "passively capture" or "perceive" an outside world that is imposed on them. The focus here is on how subjects subjectively construct reality -in other words, how they divide it up - and on the links they establish between the different elements produced by that division. The aim is therefore to understand realities that are basically unique and in constant evolution, calling on the representations or schemes of the subjects. The researcher does not look for generalizability of facts based on the identification of so-called laws of nature, but for generalizability of insight that helps to achieve a better understanding of given situations in other contexts or organizations (Morgan, 1985). Methodologically, this type of viewpoint is best addressed using an idiographic approach. The research strategy selected should allow the subjects to express, or even construct, their own conceptions, which usually requires the use of techniques such as in-depth interviews, participative observation and content analysis. Following a subjectivist stance, we cannot understand an organization, whatever its size, without knowing what the people concerned think and how they think. The production of more knowledge from a subjectivist

perspective might be the most crucial issue facing the development of small business and entrepreneurship theory.

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New Venture Survival: Ignorance, External Shocks
and Risk Reduction Strategies

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Abstract

Mortality risk for the new venture is a function of the ignorance prevailing in consumption, production and management technologies. Mortality risk declines over time as ignorance decays due to information search and dissemination processes. Risk reduction strategies can be utilized to shift the mortality risk curve of the new venture to a lower level and external shocks can also affect the new ventures survival chances.

Introduction

Starting new business ventures is generally acknowledged to be a high risk activity. The risk of failure for new ventures have been estimated at 40% in the first year and rising to 90% over ten years (Timmons, 1990). But, as often pointed out, such failure rates may be overstated, perhaps including disappearances of new firms' trading names through mergers, takeovers, or the simple adoption of a new trading name. Indeed a new business might well disappear within a few years as a direct consequence of the entrepreneur's plan to harvest the venture within that period, which has been called "death by success".[1]

Whatever the definition of new venture failure, the mortality rate of new ventures is expected to be higher than that for established (older) businesses.[2] Stinchcombe (1965) introduced the concept of 'liability of newness' whereby young organizations face greater risk of mortality than do established firms. Stinchcombe argues that greater mortality risk arises from the costs of learning new tasks, the necessity to invent new roles and the conflicts such roles present, the absence of formal structures, and the lack of stable links with customers.

Lack of organizational inertia (Hannan & Freeman, 1984) and the lack of organizational stability to engender customer trust (Hannan & Freeman 1989) are also cited as reasons for the greater mortality risk of new businesses. The tendency for mortality risk to decline as the business ages has also been supported by Carroll and Delacroix (1982), Carroll (1987), and Halliday, Powell & Granfors (1987). The liability of newness was separated

from the 'liability of smallness' by Freeman, Carroll & Hannan (1983), and Bruderl & Schussler (1990) distinguish between the liability of newness and the liability of adolescence.[3]

The recent 'population ecology' approach to new venture failures, espoused by writers such as Hannan & Freeman (1984, 1989), postulates that new ventures enter a Darwinian world to which they cannot adapt if they are unsuited to their business environment. In this view, new firms which "begin wrongly" are most likely to perish despite their attempts to change their course of action or behavior. When viewed from a distance and in aggregate it may certainly appear that organizations are subject to these natural laws, but closer scrutiny also reveals they are continuously making decisions which modify performance outcomes.

Strategic management must take the close-up view, and should consider not the existence of choice but the conditions that enlarge or restrict the breadth of choice. Even if organizations must follow these natural paths, they are extremely broad and allow the organization discretion in the direction and the speed of progress (Mintzberg, 1990). Van de Ven (1979), Astley (1984), Taylor (1982) and others argue that new firms can indeed make significant strategic choices (to adapt to their business environment) which significantly improve their chances of survival, and this presumption underlies the present paper.

Sandberg (1986) notes that there is an "...obvious stake and potential profit in understanding why new ventures fail, why they succeed, and how their performance can be improved..." and that "...the prediction of failure has been approached through the analysis of advance symptoms rather than of causes." This paper addresses Sandberg's call by seeking to understand why new ventures fail in terms of root causes.

We begin by establishing our definition of mortality risk, and what is meant by new venture failure. Second, we argue that the liability of newness is largely dependent on the degree of novelty of the new venture's product or service[4]. Novelty is viewed in three different dimensions, viz: to the market, to the technology of production, and to the managers. We argue that mortality risk increases with the degree of novelty in each dimension and with the number of dimensions in which the new venture is novel.

Third, we postulate that mortality risk of a new venture typically declines over time (if the venture does not fail), whatever its initial risk rating, as its novelty in each of the three novelty dimensions is eroded by information search and dissemination processes, allowing the firm to evolve into an established small or growth business. In effect, novelty declines as ignorance (which prevails in the minds of potential consumers, producers and managers) decays over time.

Fourth, we argue that the (typically) monotonic decline in mortality risk for a new venture can be disrupted by reversals in the decay of ignorance, by environmental shocks, and by the failure of the new venture managers to make smooth transitions through specific stages of the firm's growth and maturation process.

Fifth, we argue that risk reduction strategies can be employed, most of which impact on one or more of the determinants of mortality risk in order to reduce the firm's mortality risk. A series of risk reduction strategies are enumerated and their impact on the determinants of mortality risk is considered.

Sixth, we specify the arguments in a mortality risk function and show schematically that mortality risk depends on several determinants of risk (including novelty in three technology dimensions) and that these in turn depend on risk reduction strategies which impact upon one or more of the determinants of risk.

Finally, conclusions are drawn. The framework developed here is compared with the 'Stinchcombe' approach, and found to represent a significant advance to the literature on the determinants of new venture mortality (or the liability of newness).

Mortality Risk

In the context of new business ventures, we define mortality risk to mean the a priori probability that a firm will become insolvent and be unable to recover from that insolvency before being bankrupted or taken over by another firm such that the initial management team loses control of the venture. Thus new venture mortality refers to the involuntary departure of the venture team (not necessarily the business entity) from the market for reasons of insolvency. Conversely, we would not regard as a mortality the situation where a temporarily insolvent firm is able, in the nick of time, to gain additional funding from new investors and thus survive, albeit with diluted ownership shares for the original owners, as long as the original management team is still in control.

Mortality risk for firms is similar to mortality risk for humans. New firms begin life and proceed with a basic expectation that they will survive, while continually subject to the risk that an unanticipated event or combination of events will extinguish that life. Some environments harbor more threats to life than do others. Within the same general environment, some paths are more hazardous than others. Some new venture teams are less well-equipped than others to deal with life-threatening events that do materialize.

A new venture would not begin its life expecting to fail. Its business plan should show expected revenues exceeding expected costs, and the timing of the revenues (including loan and equity funding) and costs is such that the firm does not expect to become insolvent at any time. New firms may begin life with a positive expected net present value (ENPV) while simultaneously recognizing that some combinations of circumstances would result in negative ENPV and thus insolvency. In effect, this new venture is 'going with the odds' and gambling that the worst outcome(s) will not occur.

If all potential outcomes can be foreseen with known probabilities of occurring, the future of a new firm can be arrayed in a decision tree format (see, for example, Douglas, 1992). Some terminal branches may exhibit negative outcomes, these typically being combinations which involve the worst outcomes in one or more years. The sum of the probabilities of

the terminal branches with negative ENPV outcomes is the venture's mortality risk, if all potential outcomes can be foreseen with known probabilities of occurring.

But mortality risk also arises due to business uncertainty. That is, not all potential outcomes can be foreseen with known probabilities of occurring. The demand and cost estimates and projections which underlie the cost and revenue figures in the new venture's financial budgets may be predicted with greater or lesser degrees of accuracy. If some adverse outcomes are not foreseen, or were not expected to be as bad, or not expected to happen as soon as they in fact did happen, they could force the new venture into insolvency and mortality.

Rapid growth of the new venture brings with it enormous risk of insolvency. This is particularly so where payments for materials and labor must be made concurrently while receipts for sales may lag by 30-90 days. If sales are increasing exponentially, the new venture might quickly find itself in need of bridging funds and/or new investors. If unable to gain such additional financing at short notice, the venture is prone to fail. Business mortality simply requires that, at any time, an unexpected fall in revenues and/or an unexpected rise in expenses be of such magnitude(s) that the firm becomes insolvent at that point of time and is unable to attract new debt, equity, or any other funding (including the tolerance of creditors) such that it cannot continue to operate as essentially the same business entity.[5]

Mortality Risk Depends On Novelty

"New! New! New!" shout the advertisements. But how novel is it? The latest model of a particular automobile, for example, may be hardly novel at all, apart from modifications to sheet metal and the introduction of components which have been previously demonstrated effective in motor racing or on another model higher up the product line. It is useful for analytical purposes to consider the newness, or novelty, of the new venture's product or service in three separate dimensions, viz: novelty to the market, novelty in production, and novelty to management.

Novelty in Consumption

Novelty to the market concerns the degree to which the 'consumption technology' of the new product is similar to that for any prior product known to consumers. Do potential customers know if the product exists, where it can be purchased, what it will cost to purchase and to operate, what it claims to be able to do for them, how it is used or consumed, why they may benefit from its use, and so on? For example, the personal computer was highly novel to the market when it was first introduced. Potential customers did not know how to use it, nor did they fully appreciate how it would serve their needs, and indeed many would have been unsure whether they had any needs which it could serve at all (better than did existing products). Even if they recognize that the new product might serve their needs, consumers may exhibit 'quality risk aversion,' and stay with known products rather than risk their money on the new product which may not actually live up to their quality expectations or to the quality

claims made by suppliers.[6] Similarly, 'switching' costs may deter product adoption if the extent of the future benefits of product use are not sufficiently clear to potential consumers.

Stigler (1961) introduced 'search' to describe the process by which consumers seek information about product availability, quality, and prices. He noted that advertising by sellers is equivalent to a vast amount of information search activity on the part of buyers. Even in established markets, ongoing advertising is required because information previously obtained (about seller identity, location, quality and price) becomes obsolete, and new consumers continue to enter that particular market in a more or less ignorant state.

For totally new products there is no existing stock of customer information about the product, and hence no (word-of-mouth) customer-to-customer information flow that moderates the need for advertising. To remove customer ignorance about such products will require extraordinary expenditure on informative advertising and other promotional support. More importantly for mortality risk, there is likely to be a relatively large variance around the expected value of that expenditure, since until the depths of ignorance have been plumbed, management may not have a solid idea of the magnitudes involved.

Mortality risk is expected to increase with increased novelty in consumption. Potential customers are less likely to adopt a product for which they do not see a clear need, or which does not seem to offer a satisfactory solution to their known needs, or which seems to involve quality risk and/or switching costs. The innovator must foresee expenditures on advertising to inform and persuade potential consumers that this new product does indeed serve their needs. Note that a product is less novel to the market if it is readily seen to be a satisfactory solution to a long felt need, despite this need never having been served previously.

Novelty in Production

Novelty in production concerns the extent to which the production technology of the new product or service is similar to existing production technologies. The difficulty of manufacturing the new product, relative to making other products, is a major indicator of the novelty in production. For example, car windscreens in which two layers of glass 'sandwich' a layer of plastic, were quite novel in production compared to the previous plate glass technology. Similarly, lightweight plastic components to replace machine parts which have traditionally been made of metal, are novel in production. One might anticipate relatively high costs of retooling, operator training, prototype development and durability testing for such novel products, as well as unanticipated budget over-runs due to problems with the new product's durability, longevity, aesthetics, and so on.

Mortality risk increases with the novelty of the new product in production because novelty will probably require greater expenditures on prototype development and testing to ensure that the product works in the ways intended. Changes in materials or processes, as compared with similar products/processes in the past, each bring with them additional developmental expenditures

and a relatively large variance (both anticipated and unanticipated) around planned budgets. Expected savings of production time and/or materials may well provoke and justify pursuit of such innovations, of course, quite apart from the demand impact of the new technology. That is, an innovation which is expected to reduce production costs without changing the nature of the product at all, is novel in production but not novel in consumption.

Novelty to Management

Novelty to management concerns the extent to which managers of the firm have prior knowledge and experience in the management technology for this (or any similar) product. Management technology refers to the way in which human and financial resources are managed to maximize the efficiency of producing and marketing the product. Management 'best practice' would define the state-of-the-art management technology.

Novelty to management is the absence of management competency in the context of this particular new product. It is the antithesis of 'stick to your knitting' and is exemplified by management trying to manage a production process and the marketing of a product in which they have little or no prior experience or expertise. Note that the same product may not be as novel to some managers as it is to others. We are concerned with the relationship between the new product or service and the prior knowledge and experience of those particular managers who will be responsible for managing that new product's manufacture and marketing.

When the new product or service is novel to management, managers will be more likely to waste resources, follow false leads, and otherwise make mistakes in the management of its production, financing, and marketing. Thus the cost of producing, financing, and marketing the new product will have a greater expected value and a greater variance for novice managers than it would have with managers who are more knowledgeable and experienced in the management technology of this particular (type of) product. Thus, mortality risk increases with novelty of the new product to management.

Management competency must include financial management competency. Since the failure of so many new ventures is attributed to insufficient funding (because costs were higher, or revenues lower, than expected) it is almost axiomatic to advise new ventures to begin with substantially more capital funding than they think they will need. This is particularly so when the firm is subject to rapid growth pressures. Good advice might be to fund for the worst scenario, after re-thinking that scenario to ensure that it includes all of the things that could go wrong, including negative shocks, actually going wrong.

New ventures should thus begin with access to a line of credit substantially larger than they expect to need for the most likely scenario. Similarly, they should organize access to funds well before they expect to need the funds, since last-minute desperation for funds (in response to an unexpected negative shock, for example) may make those funds harder to obtain. 'Over-funded' and 'ready too early' in this way, they are then

more likely to survive unanticipated financial setbacks. Such foresight is an integral component of management competency. Conversely, the lack of this information (as to when and how much funding will be required) to management must contribute materially to mortality risk.

Other pertinent aspects of financial management competency may include the decision to lease rather than buy productive assets, which tends to conserve what funding the venture does have for a longer period, and thus more likely allow the firm to overcome any unanticipated revenue setbacks or cost over-runs. It is similarly cash conserving to hire consultants rather than to employ specialists if the services of the full-time employee would be under-utilized when the firm is first new. It may also be sound financial management to initially operate from a 'home office' or to share a 'serviced' office. Taking out insurance against the worst outcomes may also indicate sound financial management, assuming it reflects an assessment of the information on the costs and risks involved.

The information required to manage competently must be expected to vary with the complexity of the industry and with the competitiveness of the market. Some production processes are no doubt harder to manage than others, due to greater (or lesser) regulation and legislation impacting on that industry. Further, the technical difficulty of some production process is greater than others, and the vulnerability to expensive mistakes will be greater in some industries. Similarly, more competitive markets will require managers to seek more information about customers, competitors, suppliers, employees and stockholders than they need to in less competitive markets.

Thus, there is no absolute quantum of information required by managers in order for them to be regarded as 'competent' managers. Greater information is needed in some industries and in some markets to achieve the same degree of competency, or to reduce novelty to management by the same amount as in a less complex and less competitive market. Accordingly, mortality risk depends indirectly on the particular industry and market in which the firm operates, but this dependence enters the mortality risk framework through the additional requirement it places on the need for management information.

Risk Declines Over Time for Each Category

Building upon the preceding section, we now argue that the mortality risk of new ventures declines over time because consumers, producers, and managers learn the new technology of consumption, production, and management, respectively. Thus, mortality risk declines from its initial level over time as consumers gather information and learn how to benefit from purchase of the product, and as producers learn how to best manufacture the product at desired quality levels, and as managers learn how to best manage the marketing and production processes (and the associated human and financial resources).

The decay of ignorance can be represented by a 'learning curve' for each technology. The learning curve for managers might be steeper than the learning curve for producers, for example, if the managers can learn the new management technology faster than

the producers can learn the new production technology. We should perhaps expect both these to be steeper than the learning curve for consumers, who are typically more numerous and fragmented, and thus do not benefit from the interchange of information to the same degree that teams of producers or managers might.

In Figure 1 (Omitted) we show a learning curves which represents each dimension for a hypothetical new product. The curve indicates the decline in ignorance due to the accumulation of information and experience in one or more of the three technologies, as time passes, other things being equal. Movement along the curve is expected to take place as the parties gradually accrue information and experience about their particular technologies. This learning process is a passive, osmotic, learning by doing process, rather than the result of deliberate strategies to accelerate the learning process.[8]

The decline in the mortality risk for a new venture is some composite function of the learning which has occurred in each technology dimension. The 'mortality risk curve' for each new venture is thus negatively sloped with respect to time. In Figure 2 (Omitted) we show a series of mortality risk curves for several new ventures with various initial degrees of novelty in consumption, production, and management. We might call these the 'pure' mortality risk curves unadulterated by risk reduction strategies or external shocks.[9] It is this 'pure' mortality risk curve that is offered by the 'population ecologists', with little explanation of the causes of mortality risk and its decline and no opportunity through strategy to alter a 'firm's' course.

We should expect pure mortality risk to decline to approach some minimum level over time, other things being equal. In principle, this benchmark level would be the mortality risk of the most-secure established firm with a similar product in the same or similar industry and market context. This benchmark level of risk should be understood to be a moving target, shifting as macroeconomic and other environmental conditions change. The pure mortality risk curve for a new venture with a low degree of novelty in each technology dimension might be expected to begin at a lower risk level (than it would for a more novel product, other things equal) and exhibit a generally flatter slope which nonetheless presumably approaches the benchmark level sooner than do the mortality risk curves of new ventures with more novel products. The risk curves for more novel products would, in general, lie above and be steeper, such that they also converge on the minimum mortality risk level for the most secure established firms in that industry and in that particular market, other things being equal.

Reversals and Shocks to Mortality Risk

Although we suggest a continuing decline in mortality risk as time passes, our analysis also suggests several potential reasons for an increase in the mortality risk of a new venture as it ages. First, with regard to the technology of consumption, consumers may learn something unfavorable about the product which 'turns them off'. Learning that a new product is carcinogenic or has otherwise undesirable effects in consumption would certainly inhibit customer demand, perhaps to the point of bankrupting the

business.

Unexpected external shocks to consumption, such as negative publicity about the country of origin, such as followed France's nuclear testing, may lead to a boycott of that country's wines, for example. Similarly, the Chernobyl incident generated a negative shock for European wines and a positive shock for Australian wines, including wines which had only recently ventured into the European market.

As producers learn the technology of production they may undertake exploratory variations in the production process in search of lower materials costs, faster production speed, higher output quality, and so on. If the change in the production process produces a significant and unintended negative variation in product quality, the market reaction may be so strongly adverse as to threaten the venture's continued survival. As an example, in markets for food, health, and medical products, a negative variation in product quality may be life threatening, and the market may lose confidence in the new venture's ability to avoid such mistakes in the future.

Concerning the technology of management, the firm may suffer a reversal with the loss of a particular manager or other employee, such that the business needs to rediscover some trade secrets or other information critical for the management, marketing, or production process. Alternatively, actions of a manager may be so bizarre or unethical that the market may lose the market's confidence in the firm's ability to prevent that manager or another manager acting in a similar way in the future. In banking, for example, one can envision clients withdrawing their deposits because of an action taken by the bank (or by bank personnel) which would threaten the security of one's deposits if it were allowed to happen again.

New ventures pass through a series of stages as they grow and over time, and may be unable to negotiate smoothly through the transitional periods. In the worst outcome the venture would fail, for example, due to the inability of the entrepreneur to change leadership styles from the hands-on style which is necessary in the start-up phase, to the more detached and delegative style needed as the firm grows to become a larger more complex business entity. In our terms, such managers have failed to learn the technology of management which is necessary to take the firm safely through the various stages of growth of the new venture. By failing to delegate responsibilities, for example, they increase the mortality risk of the business, because the business has growth to the point where the old style of centralized management is no longer appropriate.

Risk Reduction Strategies

In effect, risk reduction strategies allow the new venture to shift its mortality risk curve to a lower curve, at a given point in time. It would then move along that lower curve as time passes and the consumption, production, and management technologies become better understood by the process of information diffusion in each technology dimension. In Figure 3 (Omitted) we show a mortality risk curve which illustrates several step-downs as risk reduction strategies are employed at

particular points in time.[10]

The vertical distance between the pure mortality risk curve (that would result if the firm undertook no risk reduction strategies), and the `strategic' mortality risk curve that results from invoking risk reduction strategies, demonstrates the reduction in mortality risk which has been achieved by strategic action. When we consider that a new firm must borrow funds at a risk premium that is equal to its risk of default on the loan, then the vertical distance between the curves at any point in time is an indication of the reduction in the new firm's cost of capital.[11]

A risk reduction strategy may either provide new information to consumers, producers or managers, which abruptly reduces their ignorance, or it may serve as a catalyst to accelerate the rate of decay of ignorance in one or more of the technologies. Thus, risk reduction strategies are expected to reduce the variability of potential cost and revenue outcomes, and perhaps also increases the expected value of profits. While the cost of risk reduction strategies will typically reduce the firm's margins (or `upside' risk), the main point of a risk reduction strategy is to truncate the `downside' risk and consequently avoid the financial failure of the firm.

Risk reduction strategies include insurance, advertising and promotion, education and training, poaching experienced and educated employees from other firms, overcapitalizing, raising funds too early, licensing rather than manufacturing, leasing rather than buying assets, refusing to grow too quickly, forcing marketing agreements with established firms, buying a franchise rather than starting an independent business, hiring consultants when needed (rather than full-time accountants, lawyers and other specialists), casual rather than permanent staff operating from home or sharing office expenses to keep overheads down, and so on. We shall briefly consider some of these under headings relating to how they reduce risk by impacting upon the novelty in consumption, production, and/or management.

Risk Reduction Strategies Impacting on Consumer Ignorance

Attempting to break into a market with a new product bearing a new brand name confers additional mortality risks, as compared to an established firm broadening its product line to include the same new product. Informative advertising, and perhaps personal selling, must be undertaken to disseminate information. Persuasive advertising must be undertaken to overcome the reluctance of potential customers to bear quality risk or switching costs. Thus, information dissemination to potential customers can be seen as risk reduction activity because it serves to better inform them about the technology of consumption.

An alternative (or concurrent) risk reduction strategy may be to seek a marketing agreement with an existing firm, which would market the product either under their brand name or under their corporate umbrella more generally. Existing brand names and corporate logos confer information about the probable quality of the product, the quality of the service and/or warranty associated with the product, and so on. Marketing a new product under the brand name and/or corporate logo of an existing and well-respected firm will thus serve to reduce ignorance in the

market place, and allow the new venture to avoid substantial marketing costs. Thus, the new venture may seek a marketing agreement with a firm which has an appropriate 'gap' in its product line, and simply manufacture and sell the product to that other company which in turn packages and markets the product as if it held all rights to it. This should serve to assure the consumer (to some extent) that the product is probably worth a trial because an established firm would not be expected to risk loss of equity in its brand name by endorsing an inferior product.

Licensing the intellectual property to an existing firm (rather than the new firm manufacturing and marketing the product itself) also serves to minimize the mortality risk consequences of consumer ignorance, since the greater part of the financial risk is shifted to the licensee, who must invest in the advertising outlays to inform and persuade the market that the new product serves their needs.

Risk Reduction Strategies Impacting on Producer Ignorance

The manufacturing process which culminates in the production of the new product or service will require the prior assembly of raw materials, productive assets, personnel, and information, which cost money to purchase, hire, lease, rent or otherwise acquire. Much of this outlay may need to be made 'up front' which exposes the new venture an increased risk of financial failure if some cost and revenues are incorrectly anticipated. Licensing production rights to, or contracting for manufacture by, an established firm (rather than attempting to manufacture the product itself) is a means by which the new venture can reduce mortality risk. This strategy will avoid most of the major outlays (including learning expenses) which are necessary with a manufacturing strategy, and thus insulates the new venture from financial ruin to some large extent, other things being equal.

Education and training programs for production personnel, and hiring (or poaching from other firms) experienced technologists, will also reduce producer ignorance, as well as catalyze the learning process in that technology dimension.

Risk Reduction Strategies Impacting on Management Ignorance

Management education and training, and/or the poaching of managers with required skills and experience from other firms, will directly diminish ignorance of best practice management technology. Successful entrepreneurs typically display management and business skills which include the ability to recognize market opportunities, the ability to mobilize people and resources, other leadership and people skills, and expertise in manufacturing, marketing, human resource development, and financial management. Such skills can be learned and/or further developed via formal business education programs or short courses. To the extent that managers learn something new and pertinent to the situation at hand, management ignorance is reduced, which should in turn allow the downside risk of profit outcomes to be reduced, which in turn causes a downward shift of the mortality risk curve.

Insurance and cash conservation were discussed earlier in the context of financial management competency. These are, of

course, mortality risk reduction strategies which may obviate financial ruin in the aftermath of unexpected cost and revenue shocks. We treat the decisions to conserve cash and to insure against external shocks as having their impact upon mortality risk via the risk reduction strategy of management education rather than as a direct risk reduction strategy that is independent of management information. Such decisions certainly require information (albeit estimates) of future costs and revenues, with particular reference to their expected magnitudes, variances, and timing. On the basis of such information received, competent financial managers will either insure and conserve cash balances, or not.

Licensing or contracting manufacture to an established firm shifts the consequences of management ignorance to the licensee, and avoids the new firm having to learn much of the management technology.

Combination Risk Reduction Strategies

It is obvious from the above that some strategies reduce mortality risk by avoiding the consequences of ignorance in more than one technology. Allowing another firm to manufacture and market under license, for example, obviates the need to know how to produce, market, or manage the production and marketing of, the new product, as far as the new venture is concerned.

Determinants of Mortality Risk

Based on the foregoing, we propose that mortality risk depends positively on the degree of novelty in the technology of consumption, production, and management. In turn, novelty in these three technology dimensions depends negatively on the passage of time, due to passive diffusion of information, or learning by doing, in each dimension. The rate at which information diffuses should be expected to differ in consumption, production, and management, so the mortality risk function should have separate terms relating to the osmotic learning rate in each of the technology dimensions. Novelty in each dimension will also be impacted negatively by risk reduction strategies, and may be positively or negatively impacted by unexpected shocks in any of the technology dimensions.

We also expect that mortality risk depends on the technological complexity of the particular industry into which the new venture enters. It may be more risky, other things being equal, to start a new venture in the health or medical field, than it would be to start a new venture in electronic consumer durable goods, for example, due to the profusion of legislative and regulatory obstacles in the former. We also expect it to be more risky to enter a 'more-competitive' market (i.e., where at least some firms already know the management technology and competitive pressures serve to keep margins low and induce highly competitive marketing behavior) as compared to a less-competitive market. Thus, for a given industry, a new venture may face more stringent competition from incumbent businesses in one geographic region, or product niche, than it would in another. These considerations enter the mortality risk function via the additional demands they place upon management technology in more complex industries and more competitive markets.

The proposed concept of new venture mortality risk and its determinants can be expressed in general terms as follows:

$$R = f (Nc, Np, Nm, ESnn) \quad (1)$$

where

R	=	mortality risk;
Nc	=	novelty in consumption (+);
Np	=	novelty in production (+);
Nm	=	novelty in management (+);
ESnn	=	external shocks that do not impact by reducing novelty (+/-).

and the signs in brackets represent the expected direction of impact on mortality risk given an increase in that specific independent variable.

In turn, novelty in each of the technology dimensions can be expressed as

$$Nc = f (C, Lc, RSc, IC, MC, ESc) \quad (2)$$

$$Np = f (P, Lp, RSp, IC, MC, ESp) \quad (3)$$

$$Nm = f (M, Lm, RSm, IC, MC, ESm) \quad (4)$$

where

C	=	the initial state of novelty to consumers (+);
P	=	the initial state of novelty to producers (+);
M	=	the initial state of novelty to managers (+);

Lc, Up, Lm	=	the learning rate at which ignorance decays in each dimension (-);
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RSc, RSp, RSm	=	risk reduction strategies which actively reduce novelty in each of the technology dimensions (-);
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IC	=	industry complexity (+);
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MC	=	market competitiveness (+); and
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ESc, ESp, ESm	=	external shocks to each of the technology dimensions
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The specific form of these functions is an empirical question. The terms might be additive and/or multiplicative in their impact on mortality risk. We should probably expect that some risk reduction strategies, such as entrepreneurial education, would have a direct effect on reducing the ignorance of managers, plus an indirect (perhaps multiplicative) impact on the learning rate in each dimension, as education acts as a catalyst to the learning process. There is much scope for future research.

Conclusion

This paper has extended the literature on the 'liability of newness' and entrepreneurial risk by explaining mortality risk in terms of the novelty of the new venture in three pertinent dimensions. The analysis allows us to explain why mortality risk declines over time in a coherent framework, as distinct from the ad hoc explanation provided by prior authors. Indeed, the main reasons for the liability of newness enunciated by prior authors appear to fit within the novelty dimensions introduced in this paper. Stinchcombe's (1965) first three reasons (new roles, conflicts, and social interactions among relative strangers) are problems which arise due to novelty to management, and his fourth

reason (lack of stable links to customers) arises due to novelty in the market. Hannan & Freeman (1989) cite the absence of trust placed by customers, which is a problem due to novelty to the market. Hannan & Freeman's (1984) contribution that organizational inertia reduces mortality risk because routines become increasingly established and 'follow a learning curve' (see Bruderl and Schussler (1990) p. 531) clearly concerns novelty to management.

Our framework not only includes these earlier explanations, but admits a wider range of determinants of the liability of newness by starting from an examination of what is meant by 'new'. Our framework is more complete and provides additional analytical power. It would seem it is able to house the entire range of risk reduction strategies, and is also robust enough to explain why mortality risk sometimes rises against the downward trend.

The framework also suggests answers to recurring questions, such as "Why do new ventures fail?" They fail because of ignorance in one or more of the three technology dimensions which is not, or perhaps cannot be, removed in a timely manner by risk reduction strategies. Is all entrepreneurship equally risky? No, it is more risky if the venture is more novel in consumption, production, and/or management, if the passive learning rates are slower, if fewer and/or less-effective risk reduction strategies are utilized, if the industry is more complex, if the market is more competitive, and/or if negative shocks cannot be insured against. Is mortality risk negatively related to return for new ventures? Not necessarily - an entrepreneurial venture with a product that is highly novel to the market, but utilizing appropriate risk reduction strategies, may be less risky than a 'copy-cat' business venture where the consumption, production, and management technologies are each well known, and yet the rate of return to the entrepreneurial venture may be higher. Similarly, a copy-cat new business, where the principal has neither the requisite management abilities nor sufficiently positive entrepreneurial attitudes to make a total success of the new venture, may face a higher risk of mortality than would a well-prepared entrepreneur with a product which is highly novel in both consumption and production.

This framework allows us to argue that an entrepreneur with extraordinary entrepreneurial abilities and attitudes may capture a 'rent' (extraordinary profit), as a result of those abilities. First, an entrepreneur with an exceptionally high tolerance for risk bearing might take up profit opportunities that are too risky for other investors due to their higher degree of risk aversion (risk-return trade-off). Put another way, the more risk-averse would decline the investment opportunity because it does not promise a rate of return sufficiently high to induce them to undertake mortality risk of the magnitude involved in that new venture.

Finally, to the extent that the exceptional entrepreneur can reduce mortality risk further than can any other potential manager (by virtue of his/her extraordinary entrepreneurial abilities and attitudes) he/she could reduce risk to a level which is acceptable to him/her but unacceptable to all other potential exploiters of the new venture opportunity. Alternatively, he/she would be prepared to pay more for the right

to exploit the intellectual property than would any other potential exploiter.

Footnotes

1 See Carroll & Delacroix (1982), p. 170.

2 Old and established firms also undertake new ventures, of course. Indeed it is fundamental to strategic marketing that firms constantly seek out and exploit new business opportunities. We believe the concepts introduced in this paper may also be applicable to new ventures undertaken by older firms.

3 The 'liability of adolescence' concept notes that there is an initial period during which new firms have a virtually zero risk of failure, since their owners have committed startup funds to market research, prototype development, and other information gathering activity, and the firm cannot fail (go bankrupt) until this initial funding is used up. See Footman & Levinthal (1988), Bruderl & Schussler (1990) and Shepherd, Crouch & Carsrud (1997). We will not address the liability of adolescence in this paper.

4 Throughout this paper 'product' should be taken to mean the output of a production process, and thus refers equally to a physical product or an intangible service, as applicable.

5 Note that mortality risk is quite different from business risk or investment risk. It is concerned only with survival, not the variance of profits around expected levels, except insofar as this would jeopardize solvency. For a discussion of various measures of risk, see Balzar (1994).

6 To the extent that the product's price is relatively low, quality risk is less important, because the consumer can ascertain the true quality at relatively low cost by buying the product. Quality risk becomes a more significant barrier to adoption of a new product at higher price levels. See Schmalensee (1982).

7 An issue related to 'novelty to management' is novelty to competitors. By definition, first movers will be introducing a product which is novel to the market and novel to management, but it may not be novel in production for other firms if they were also developing a similar product. Second and subsequent movers (including imitators) will face one or more entrenched rivals who have already learned much of the necessary 'management technology' for that product in that market, and should expect to experience a more hostile competitive environment upon entry than did the first mover. Offsetting this to some degree is the likelihood that the target market will better understand the consumption technology of the second and subsequent movers' products, thanks to the educational impact of the first mover's promotional efforts. In this paper we will subsume this element of novelty under 'novelty to management', since dealing with competitive actions and reactions is part of the technology of management.

8 These curves assume the absence of external shocks, information setbacks, and risk reduction strategies, which will be discussed later.

9 Note that the pure mortality risk curve may decline smoothly, or alternatively it may change gradient abruptly if rates of learning differ among the technologies and/or if learning is lumpy not continuous, and depending on the timing of the revelations which occur to consumers, producers, and managers.

10 Note that positive shocks would have an impact similar to a risk reduction strategy, while negative shocks would cause the mortality risk function to shift upward.

11 The new firm's cost of capital may also include an interest rate premium extracted by a lender who is able to monopolistically exploit the new firm inability to source more than one offer of funding. This is conceptually separate from the risk premium.

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ON THE LOGIC OF COMPOSITION IN WRITING
BUSINESS PLANS:
TEACHING ARGUMENT STRUCTURE

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Abstract

Effective business plans do not live by their topics alone: how well the analysis of those topics persuades is at least as important. Analytical writing draws conclusions by investigating and synthesizing facts and conjectures. Synthesizing facts and conjectures into sound arguments requires deductive logic. Thus, deductive logic provides a set of rules to help people write effective business plans.

Introduction

Effective business plans are so important to small business management and entrepreneurship that the topics to be included in them have received a great deal of attention from such researchers as Brown (1996), Fry (1993), and Timmons (1994). Effective business plans, however, are not a function of the topics alone. The structure of the written plan is at least equally important. Bygrave (1990; 137), for example, complains that "Entrepreneurs often get bogged down in the actual mechanics of writing. The material often comes out too conceptual or disorganized, and they don't know how to fix it. " Merely listing the important topics in a business plan guarantees neither the effective organization nor the clear, cogent writing demanded by the readers and needed by the writer.

Effective business plans are the outcome not only of covering all the bases but also of covering them well. Analytical writing draws conclusions from the investigation and synthesis of facts and conjectures, or both (Popper, 1989). Similarly, business plans draw conclusions regarding the general feasibility of starting a business, establishing milestones and performance goals, assessing the safety of the business for lenders, and so on. The general issue here concerns the structure of persuasive, analytical writing.

Composition. Just as spelling dictates the rules for the construction of words and grammar dictates the rules for the construction of sentences, composition concerns the arrangement of sentences to form a larger structure of argument. That is, composition refers to the assembly of sentences into paragraphs, paragraphs into chapters, and so on to longer and longer entities.

Good composition is rather like pornography: it's impossible to define, but we know it when we see it. As it has no agreed upon set of rules, composition is enormously time-consuming and expensive to teach well (Capaldi, 1966; Johnson, 1982). Poor composition often produces grammatically perfect documents that are utterly unpersuasive, or even incoherent. In business plans, composition is crucial: companies often fail when they fail to persuade. Consequently, those who write business plans would benefit from rules to guide them toward meaningful documents. For rules to work, they first must be defined.

Analytic and synthetic statements. Statements may be classified as to whether an external fact must be cited to establish the truth of the statement (Kant, 1787). Analytic statements are true by definition and do not require the confirmation of external facts. Often they are definitions. For example, stating that "the goal of my firm is to achieve 20% growth in sales each year" does not require external evidence to establish truth. The goal is being defined by the writer/owner, and the reader may assume its truth. Synthetic statements, conversely, may be true only if external facts support the statement. To say "this is a feasible new venture" requires more than an assertion to make it true; new ventures are not feasible by definition, so the statement is only as "true" as the argument presented to support it is true, or in business, as true as the argument persuades readers.

The analytic/synthetic dichotomy applies as well to entire documents. Business plans are inherently synthetic, requiring a synthesis of external facts to support the plan's validity. The rules for synthesizing facts use deductive logic to create sound arguments. Deductive logic, then, provides a set of rules to help teach people to write effective business plans.

Arguments. Arguments are the means by which a writer persuades the reader (Beene and Douglas, 1989). Writing is persuasive largely to the degree that the writer's logic is sound, where soundness is defined as an argument in which the premises are true and the conclusion follows necessarily from the premises. As premises are typically declarative statements, arguments typically comprise a conclusion and two or more premises. The basic structure of an argument is illustrated in the syllogism (See Appendix A).

Syllogism. A syllogism is argument in its simplest form: a major premise, a minor premise, and a conclusion (Hurley, 1982). The major premise is a statement of the general rule to be used in drawing a conclusion. The minor premise is a statement of fact, an observation or example, which falls within the domain of the general rule. The conclusion is the synthesis of the major and minor premises: applying the general rule to the specific case. For example, to persuade the reader that a firm is solvent the writer may construct the following argument:

Major premise: Solvency may be determined by current ratio (current assets divided by current liabilities), which, if greater than one, indicates that the firm can pay liabilities coming due within one year with assets that may be turned into cash within one year.

Minor premise: For this new venture, the current ratio is 1.2.

Conclusion: Thus, the firm is solvent.

The conclusion, "the firm is solvent," is a synthetic statement made persuasive by the major and minor premises. It is important to note that the relative order in which the premises and conclusion are written has no effect on the logic of the argument, and may be rearranged to suit the author's abilities. Alternate sequences are presented in the following example:

Argument type 1: Classical order, with the conclusion at the end

Premise (major): Solvency may be determined by a current ratio greater than 1.

Premise (minor): This firm has a current ratio of 1:2.

Conclusion: For this venture, the firm is solvent.

Argument type II: Conclusion between premises

Premise (major): Solvency may be determined by a current ratio greater than 1.

Conclusion: For this venture, the firm is solvent.

Premise (minor): This firm has a current ratio of 1:2.

Argument type III: Conclusion at the beginning

Conclusion: For this venture, the firm is solvent.

Premise (major): Solvency may be determined by a current ratio greater than 1.

Premise (minor): This firm has a current ratio of 1:2.

Argument type IV: Extending beyond the syllogism

Conclusion: For this venture, the firm is solvent.

Premise(major): Solvency may be determined by a current ratio greater than 1.

Premise (minor): This firm has a current ratio of 1:2.

Premise (a): This firm's ratio for 1996 was 1:1.7.

Premise (b): This firm's ratio for 1995 was 1:1.7.

Premise (c): This firm's ratio for 1994 was 1:1.1.

Premise (d): This firm's ratio for 1993 was 1:1.4.

Premise (e): This firm's ratio for 1992 was 1:1.1.

Argument IV illustrates that while there are exactly two premises in a syllogism (one major and one minor), a sound argument may include an indefinite number of minor premises, overkill for syllogisms but sometimes necessary for persuasion. Further, the minor premises may be arguments themselves. Multiple premises, and arguments within arguments, are important in business plans,

given that the goal of a business plan cannot typically be explained with a single syllogism. Reducing the plan to a single argument may be technically valid, but not likely to persuade. For example, a business feasibility analysis may be written as:

Major Premise: A feasible business earns profits sufficient to cover its cost of capital.

Minor premise 1: The projected cost of capital for this firm is 15%.

Minor premise 2: The projected return on assets for this firm is 25%.

Conclusion: This is a feasible business.

If the premises are true, this syllogism provides a sound argument. Even so, it is probably not in itself sufficient to persuade the reader, or even to be useful to the entrepreneur. Consequently, additional arguments are necessary. Incorporating multiple arguments allows the plan to be more precise in explaining the performance of the firm, more persuasive as a consequence, and thus more likely to succeed.

Individual arguments/syllogisms are building blocks for good business plans. Assembling the blocks is guided by the topic outline (blueprint). The outline, in turn, is guided by the goal of the plan (vision?). A plan is constructed to organize a task. Tasks in new venture formation may include creating a feasibility analysis, specific goals for subsequent organizational control, and a prospectus for external investors, among others. Because business plans vary as greatly as the businesses they describe, no single structure suits all plans. To focus further discussion, however, a generic business plan outline is provided in Appendix B.

The first argumentative questions regarding the structure of business plans are conceptual: What are the major topics? Why are these particular topics discussed? The generic business plan presented here, includes three major topics. The first, The New Venture, is predominately a set of analytic statements defining the business to be analyzed in the plan. The rest of the plan is predominantly synthetic and is divided into discussions of two influences on the firm's performance: the External Environment, for which the venture has little or no control; and the Internal Environment, over which the firm has some discretion. The overall conclusion to be drawn from the external environment is an assessment of the new firm's survival requirements. The overall conclusion to be drawn from the internal environment is an assessment of the new firm's performance that results from the manner of its operation. Note, however, that the overall conclusion of the internal environment depends partially on the conclusion drawn from the external environment. That is, a "competitive" firm is one which produces a product or service differentiated from or produced at a lower cost than that of the competition (Porter, 1980). In either case, an assessment of competitiveness can only be conducted by synthesizing conjectures on the capabilities of the firm with the assessment of the competitive environment.

TOPIC 1 (THE BUSINESS PLAN)

Argument 1 (The New Venture)

Premise 1 (major): To be "competitive" a firm must produce a product or service differentiated from or produced at a lower cost than that of the competition. Either way, to be profitable a firm must possess a unique capability. This business plan will assess the competitiveness of the proposed new venture by describing the business concept, assessing the competitive environment, and assessing the internal capabilities of the firm.

Premise 1 (minor): The proposed venture will help entrepreneurs to write logically sound business plans. While several consulting firms help entrepreneurs write business plans, none specializes in writing them logically.

Conclusion 1: Thus, the unique capability of this venture is that of creating superior business plans by making them formally and informally logical.

Argument 2 (The External Environment)

Premise 2 (major): The market price of business plan writing assistance is constrained by the price of close-substitute services offered in the market.

Premise 2 (minor): In this market, three firms currently offer assistance in writing business plans. The firms charge \$495.00-\$499.00 for the same, approximate level of service to be provided by our proposed firm. However, our service will produce superior results by adding sound, logical arguments to business plans.

Conclusion 2: Thus, the market price for our business plan writing assistance will be equal to, or slightly higher than the competition's. Conservatively estimating performance, the firm will set an initial price equal to the competition's upper boundary: \$499.00.

Argument 3 (The Internal Environment)

Premise 3 (major): To be profitable, the firm must be structured to provide customer service at a total cost per unit sold of less than \$499.00.

Premise 3 (major): Further, the return to the owners must exceed the opportunity salary cost to the owners.

Premise 3 (minor): The proposed firm structure will provide a per unit cost of \$99.00 at the projected sales volume level of ten units a week, producing net profits of \$4,000 a week.

Premise 3 (minor): The salary opportunity cost to the owners is \$3,000 a week.

Conclusion: (for Argument 3 & the topic). Thus, this is a feasible new venture.

In general, such sequential dependence between arguments is common (Capaldi, 1966) (See Appendix C).

We are not done. A conclusion from one topic may derive from independent arguments for other topics. This is a compound argument. Further, a premise for an argument on one level of analysis may be composed of an argument, or arguments, of a lower level, and so on. In the following example, a compound argument is used to express the solvency of a new venture as a function of cash flow analysis: three independent arguments.

ARGUMENT I (TOTAL CASH FLOW)

Premise (major): A positive total cash flow is necessary for the survival of the new venture. Total cash flow is a function of three sources of cash: operations, investing, and financing. In the short run, one source may off-set negative cash flow from another source. Still, the long-run feasibility of the business requires positive cash flow from operations because investing and financing activities alone cannot generate cash indefinitely.

Argument 1 (Cash flow from operations)

Premise 1 (major): Positive operating cash flow indicates the new venture is generating cash in its on-going operations.

Premise 1 (minor): Projected cash flow from operations is \$10,000.

Conclusion 1: Thus, this new venture is projected to generate cash from operations.

Argument 2 (Cash flow from investing)

Premise 2 (major): Positive cash flow from investing indicates the new venture is Generating cash by selling assets, such as plant and equipment.

Premise 2 (minor): Projected cash flow from investing is \$ -20,000.

Conclusion 2: Thus, this new venture is projected to consume cash from investing by purchasing assets for the new venture.

Argument 3 (Cash flow from financing)

Premise 2 (major): Positive cash flow from financing indicates the new venture is generating cash by selling equity, or incurring debt.

Premise 2 (major): Projected cash flow from financing is \$15,000.

Conclusion 2: Thus, this new venture is projected to generate cash from financing by selling equity, or incurring debt.

Summary and conclusion:

Premise (minor) 1: Operating activity is projected to

generate \$10,000

Premise (minor) 2: Investing activity is projected to consume \$20,000

Premise (minor) 3: Financing activity is projected to generate \$15,000

Conclusion for this topic: This new venture is projected to achieve a positive overall cash flow of \$5,000. Thus, the firm is projected to be solvent for the period analyzed. Also, cash flow from operations is positive, indicating a feasible business.

Finally, arguments are complex if they comprise premises that, in turn, comprise both compound arguments and sequence dependent arguments. The examples provided here have shown that business plans are typically based on complex arguments: multiple arguments are required to justify the overall conclusion, and the individual arguments are integrated in both sequence dependent and compound structures (See Appendix E). The intricacies of writing sound complex arguments help explain why entrepreneurs have great difficulty composing meaningful business plans, and why training in the composition of sound arguments might make business plans more effective.

How many arguments are necessary for a persuasive and complete business plan? As many as necessary and not one more. Viewers of Sunday morning political-discussion shows will recognize that there the number of arguments is limitless. Business, however, must recognize limits. As a general principle, Mach (1919) argues that the best explanation is that which is most economical in use of concepts and complex relationships. Then there is Henry David Thoreau's version of Occam's Razor: Simplify. Simplify. Obeying both, this paper closes by summarizing: good arguments are essential to good business plans.

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Appendix A
On the Structure of Analytical Writing
The Syllogism

Argument type 1: Classical order, with the conclusion at the end

Premise (major): The general rule for success

Premise (minor): A specific case or example of the general rule

Conclusion: The example indicates (future) success failure

Argument type II: Conclusion between premises

Premise (major): The general rule for success

Conclusion: The example indicates (future) success failure

Premise (minor): A specific case or example of the general rule

Argument type III: Conclusion at the beginning

Conclusion: The example indicates (future) success/failure

Premise (major): The general rule for success

Premise (minor): A specific case or example of the general rule

Argument type IV: Extending beyond the syllogism

Conclusion: The example indicates (future) success/failure

Premise (major): The general rule for success

Premise (minor): A specific case or example of the general rule

Premise (a): A specific point or example in the case

Premise (b): A specific point or example in the case

Premise (c): A specific point or example in the case

Premise (d): A specific point or example in the case

Premise (e): ... etc.

Appendix B
BUSINESS PLAN

THE NEW VENTURE

Business concept

Description of the product or service
Description of unique value added

Mission/goals

Describe the focus of the firm in terms of unique resources and capabilities.
Identify/describe the major stakeholders and corresponding firm goals

Performance projections

Profitability
Liquidity
Leverage

EXTERNAL ANALYSIS

Industry

Primary industry defined
Segment analysis

Industry structure

Buyer power assessment
Rivalry assessment
Substitute industry segment(s) assessment
Entry barrier assessment
Supplier power assessment

INTERNAL ANALYSIS

Marketing Strategy

Market penetration strategy (plan of entry)
Market development strategy (plan for expansion)
Product development strategy (plan for new product development)
Diversification strategy (plan for expansion into unrelated markets)

Operating Strategy

Process design
Continuous improvement strategy
Risk management

Organization structure

Ownership structure
Governance structure

Government/legal requirements

Business license/permits
DBA (doing business as/fictitious name)
Zoning ordinances

Earnings assessment (financial statements)

Income statement
Balance sheet
Statement of cash flows
Strategic performance assessment

Appendix C

On the Structure of Analytical Writing
Sequence Dependent Arguments

TOPIC I

Argument 1

Premise 1 (major): Introduce the topic and discuss the general rule.

Premise 1 (minor): A specific case or example of the general rule.

Conclusion 1: Thus, this example indicates...

Argument 2

Premise 2 (major): The general rule, encompassing the conclusion of premise 1.

Premise 2 (minor): A specific case or example of the general rule.

Conclusion 2: Thus, this example indicates...

Argument 3

Premise 3 (major): The general rule, encompassing the conclusion of premise 2.

Premise 3 (minor): A specific case or example of the general rule.

Conclusion: (for Argument 3 & the topic): Thus, this example indicates...

Appendix D

On the Structure of Analytical Writing
Writing Compound Arguments

ARGUMENT I (TOPIC 1)

Premise I (major): The (major) premises 1, 2, and 3 are necessary to draw a conclusion (the topic is a function of premises 1, 2 and 3). This introduction should establish the framework for the analysis which follows, and establish the basis for drawing an overall conclusion at the end of the discussion on this topic.

Argument 1

Premise 1 (major): The general rule

Premise 1 (minor): A specific case or example of the general rule

Conclusion 1: Thus, this example indicates...

Argument 2

Premise 2 (major): The General rule

Premise 2 (minor): A specific case or example of the General rule

Conclusion 2: Thus, this example indicates...

Argument 3

Premise 3 (major): The general rule

Premise 3 (minor): A specific case or example of the general rule

Conclusion 3: Thus, this example indicates...

Summary and conclusion:

Premise (minor) 1: (The conclusion of argument 1)
Premise (minor) 2: (The conclusion of argument 2)
Premise (minor) 3: (The conclusion of argument 3)

Conclusion for this topic: Thus, in this case...

Appendix E
On the Structure of Analytical Writing
Writing Complex Arguments

ARGUMENT I (TOPIC 1)

Premise (major): Topic 1 is a (compound) function of arguments 1 and 2.

Argument 1

Argument 1a

Premise (major): The general rule.
Premise (minor): A specific case of the general rule.
Conclusion: Thus, this example indicates...

Argument 1b

Premise (major): The general rule, encompassing the conclusion of premise 1.
Premise (minor): A specific case of the general rule.
Conclusion (for 1b & Argument 1): Thus, this case indicates...

Argument 2

Argument 2a

Premise 1 (major): The general rule.
Premise 1 (minor): A specific case of the general rule.
Conclusion 1: Thus, this example indicates...

Argument 2b

Premise 2 (major): The general rule, encompassing the conclusion of premise 1.
Premise 2 (minor): A specific case of the general rule.
Conclusion (for 2b & Argument 2): Thus, this case indicates...

Summary and conclusion:

Premise (minor): (The conclusion of Argument 1)
Premise (minor): (The conclusion of Argument 2)

Conclusion for topic 1: Thus, in this case...

WHERE DO WE LEARN THAT ENTREPRENEURSHIP
IS FEASIBLE, DESIRABLE AND/OR PROFITABLE?

- a look at the processes leading to entrepreneurial potential

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ABSTRACT

Examinations of new venture creation in a prospective fashion are rather new. In this paper, the processes leading to entrepreneurial potential are investigated. The key argument is that behavioral potential, which is at the cognitive level, is influenced by the individuals perceptions or key attitudes toward venturing. Four key attitudes are of particular importance in this process: perceived feasibility, perceived desirability, perceived social norms, and perceived profitability. Personal, sociological and environmental variables are linked to decision making through these perceptions. In the empirical part of the paper, it is tested to what extent direct and indirect experiences, role modeling and education influence these perceptions or key attitudes toward venturing. The results indicate that different kinds of learning influence the key attitudes differently, and that it is easier to learn that entrepreneurship is feasible than to learn that it is desirable or profitable. Implications for future research are discussed.

INTRODUCTION

In the early research into entrepreneurship, interest was often focused on the psychological characteristics of the entrepreneurs, even though this research was not closely linked to contemporary developments in psychology. A trait approach was often employed, and long lists of entrepreneurial traits were produced. But in the end this research was unable to provide more than a small part of the answer to the question "What really makes people found new firms?". During the last decade the entire psychological perspective on entrepreneurship has come under heavy criticism (Carsrud and Krueger 1995). Some authors suggest psychology has been either badly utilized or has no utility at all in the study of entrepreneurship (Carsrud et al. 1986; Carsrud and Johnson 1989). Others have been more positive in their views (Shaver and Scott 1991). A response to the limited success of the trait approach has been to view firm creation in context, for example by applying an aggregate level of analysis and looking for regional or national level variables that can explain variations in the rate of new firm formation. This approach have been relatively successful, and strong and generalisable relationships have been established (cf. Reynolds et al. 1994; Spilling, 1996).

But there is still a need for disaggregate level understanding of the processes leading to new firm formation. Researchers have tried to develop integrated explanatory models that take into account domain-specific attitudes, personal background and

situational variables (Bird 1993; Shapero and Sokol 1982; Shaver and Scott 1991). A particular branch of this approach focuses on the pre-decision stage (i.e. interest, entrepreneurial career preference, characteristics of nascent entrepreneurs, cf. Bullvag, 1996; Carter et al. 1996; Knudsen and McTavish 1988; Kolvereid, 1996a, b; Krueger 1993, 1995; Krueger and Brazeal 1994; Krueger and Carsrud 1993; Krueger et al. 1995; Matthews and Moser 1996; Scherer et al. 1989; 1990, 1991). Examinations of new venture creation in a prospective fashion are rather new. Recent theoretical pieces provide further impetus to move ahead with research in this area (Krueger and Carsrud 1993; Carsrud and Krueger 1995). The purpose of this paper is to develop this line of research further, by looking at processes leading to entrepreneurial potential. Since the sample is based solely on young people (16-31 yrs.), it will provide some suggestions on how to stimulate the long-term entrepreneurial potential of young people. Few research studies have conceptualized or measured entrepreneurial potential. Although this has been suggested as a direction for future research (cf. Learned 1992; Gartner et al. 1992), empirical evidence is still minimal.

THEORETICAL BACKGROUND

Entrepreneurship and the entrepreneur defined

While there are many different ways that entrepreneurship might be defined (cf. Gartner 1990), one plausible view of the nature of entrepreneurship is to see it as an organizational phenomenon: the process of organization creation. Gartner (1989) pictured entrepreneurship as the creation of organizations, and recently Gartner et al. (1992) suggested that entrepreneurship is the process of emergence. Organization creation separates entrepreneurship from other disciplines. A definition that fits into this framework is the following: "an entrepreneurial event involves the creation of a new organization to pursue an opportunity". As a consequence, it is possible to define an entrepreneur as the creator and founder of a new organization. In Gartner's (1989) words: "what differentiates entrepreneurs from non-entrepreneurs is that entrepreneurs create organizations, while non-entrepreneurs do not". Thus in this paper the following definition is given: "an entrepreneur is someone who has created an organization to pursue a venture opportunity".[1]

Entrepreneurial potential

Not all individuals have the potential to form an organization (Learned 1992). Shapero (1981) introduced the notion of entrepreneurial potential. According to him, potential entrepreneurs surface and take the initiative when an attractive opportunity presents itself. Individuals perceive opportunities. For an opportunity to be seized, someone must first recognize it as a personally viable opportunity. When potential entrepreneurs and opportunities coincide, entrepreneurial behavior may take place, and a new firm can be founded. Thus, the joint occurrence of two events is critical for the creation of a new firm. The first is the presence of an opportunity suited for a new firm, the second is a person who is able and willing to take advantage of an entrepreneurial opportunity. Hence, before there can be entrepreneurship, there must be the potential for

entrepreneurship, whether in a community seeking to develop or in a large organization seeking to innovate (Krueger and Brazeal 1994).

Measures of entrepreneurial potential appear to remain wedded to various ad-hoc profiles of personality and demographic characteristics with minimal predictive validity (e.g. Carsrud et al. 1993). It is surprisingly difficult to distinguish entrepreneurs from non-entrepreneurs. It is even more difficult to differentiate the potential entrepreneur, if we rely on personality or demographic data. Recently, it has been argued that we can identify the potential entrepreneur through the examination of key attitudes and intentions (Carsrud and Krueger 1995; Krueger and Brazeal 1994; Krueger 1995). Empirical studies show that intentions is the single best predictor of human behavior (Ajzen 1991; Kim and Hunter 1993), and some argue that launching a new venture should be regarded as intentional as well (Katz and Gartner 1988; Krueger and Carsrud 1993). Because intentions and the attitudes behind them appear consistent across cultures (McGrath and MacMillan 1992), formal models of intentions should be applicable to the study of how people come to see themselves as entrepreneurs.

However, while intentions certainly seems to play an important role in some emerging ventures, it is clear that many highly motivated individuals living in favorable entrepreneurial environments will not initiate an entrepreneurial career unless they find a viable venture opportunity, and then are able to take the necessary steps regarding venture start-up. Bhave (1994) distinguishes between externally and internally stimulated opportunity recognition. In the case of external stimulation the intention to start a new venture precedes opportunity recognition, while in the case of internal stimulation opportunity recognition precedes the intention. Hence, both entrepreneurial intentions and opportunity recognition appear important in the emerging ID process. Reitan (1997) has shown empirically that while some might intend to venture without any clear perception of a venture opportunity, others might perceive one or several opportunities without a high intention-level. Still others may both aspire and perceive a viable venture opportunity, but have not taken any steps regarding venture start-up (yet).

An entrepreneur is someone who perceives an opportunity and creates an organization to pursue it. A potential entrepreneur should therefore be a person with the potential to create a new organization. Thus, this person perceives one or several opportunities, but has not yet started an effort of creating an organization. Moreover, this person might intend to start a new venture, but have not yet found a viable new venture opportunity. Hence in this paper the following definition is given: "a potential entrepreneur is a person that perceives a venture opportunity and/or intends to start a new venture, but has not (yet) taken any steps regarding venture start-up". The argument is that opportunity recognition and entrepreneurial intentions are key characteristics of potential entrepreneurs, separating them from the general population.

Processes leading to entrepreneurial potential

We know that entrepreneurial potential have critical antecedents. The next task is to examine how these antecedents arise and how we might apply our knowledge to help communities promote entrepreneurial behavior. In other words; what are the processes leading to entrepreneurial potential? Generally, decisions (such as the decision to attempt to start a new venture), are made through the perception or "cognitive map" of the person and therefore intimately linked to sense making (Weick 1979). The forming of preferences, identities, expectations, etc. all involve the making of sense out of a confusing world (March 1996), and individuals make sense of their pasts, their natures, and their futures (Fiske and Taylor 1984).

Moreover, conceptual models such as Ajzen's theory of planned behavior (1991) and Shapero's model of the entrepreneurial event (Shapero 1981, 1984) and subsequent empirical work utilizing these models (Krueger and Carsrud 1993; Kolvereid 1996a; Reitan 1996) argue that there are at least three perceptions critical in the forming of entrepreneurial potential: a) "Can I make it?", b) "Do I want to make it?", and c) "Will others approve of it?" In Ajzen's theory of planned behavior (TPB), "attitude toward the act", "social norms", and "perceived behavioral control" explain up to 60% of the variance in intentions. Intentions successfully predict 30% or more of variance in the target behavior (e.g. Ajzen 1991). Krueger (1993), based on Shapero's model of the entrepreneurial event (MEE), found that perceived credibility (desirability and feasibility) and propensity to act explain well over 50% of the variance in intentions toward entrepreneurship, with perceptions of new venture feasibility explaining the most. Krueger et al. (1995) tested both these models on the same sample, and arrived at the conclusion that Shapero's model explained most of the variation in entrepreneurial aspirations. Reitan (1996) combined these two models and added situational factors as proposed by for example Bird (1993) and Davidsson (1995). His model accounted for 63% of the variations in entrepreneurial intentions. The most important antecedents were perceived personal desirability, perceived social desirability and perceived feasibility.

In his later work, based on a factor-analytic approach, Reitan (1997) has found a fourth key attitude: perceived profitability of venturing. While this factor is less important than the three others in explaining entrepreneurial potential in the overall model, it appear to be very important when differentiating between short- and long-term intentions to venture, between genders, and between types of intended ventures. Generally, perceptions of profitability increases in importance as the behavior comes closer, is more important for understanding the entrepreneurial potential of women than men, and more important for understanding intentions to start innovative businesses than other kinds of businesses. Moreover, Reitan (1997) has found that opportunity recognition has some of the same antecedents as entrepreneurial intentions. Perceptions of desirability and feasibility are strong predictors of both, while perceived social norms and perceived profitability are important for understanding entrepreneurial intentions only. Hence, to stimulate the entrepreneurial potential it is vital to stimulate favorable perceptions of new venture desirability (including social norms), feasibility, and profitability. The key argument here is that is the way in which the potential founder thinks about reality, not

the external reality itself, that determines the outcome. Thus, it is the perceptions of the reality, or the individual's subjective reality, that is of importance.

The role of entrepreneurial learning

Nonetheless, the question remains: where do we learn that entrepreneurship is feasible, desirable and/or profitable? Generally, life experiences are strong predictors of vocational preference (Smart 1989). By examining the individual learning process we can come closer to understanding how people generate from their experience the attitudes that guide their behavior in new situations. This process is both active and passive, concrete and abstract. It can be conceived of as a four-stage cycle (Kolb et al. 1995): 1) concrete experience is followed by 2) observation and reflection, which lead to 3) the formation of abstract concepts and generalizations, which lead to 4) hypotheses to be tested in future action, which in turn lead to new experiences.

There are many ways of learning. It is a widely held, but untested, consensus that past work experience is a better predictor of decisions, performance, and behavior than education (Bird 1993). The popular opinion is based on a common-sense notion that the "school of hard knocks" prepares one better than colleges, universities, seminars, and books. Thus, the most powerful way of learning should be through direct experience of the subject matter (Kolb et al. 1995). Apparently, venture creation becomes easier with experience, and presumably from learning from that experience (Ronstadt 1984). Typically, one out of five entrepreneurs has had direct venture experience prior to the current enterprise (Hornaday and Aboud 1971). Carroll and Mosakowski (1987) found that the probability of a person entering into self-employment at any stage in the life cycle is heavily dependent upon prior engagement in self- or family employment. It is therefore proposed that one might learn that entrepreneurship is desirable, feasible and profitable from the concrete experience of working in one's own firm. On the other hand, negative experiences from new venture start-ups, such as unsuccessful attempts at venturing, might influence the perceptions of venturing negatively. Negative or disconfirming information from the environment has in general proven to act as a detriment (Learned 1992). However, some studies have suggested that failures of previous attempts of venturing need not be an impediment to starting again (Shapiro and Sokol 1982).

Proposition 1a: Work experience from one's own firm will influence individuals' perception of new venture feasibility, desirability and profitability.

Proposition 1b: Unsuccessful venture attempts will influence an individuals' perception of new, venture feasibility, desirability and profitability.

Another way of learning is through indirect experience, for example through work experience from other businesses than one's own. Previous work experiences are described as formative by Goss (1991) and may encourage entrepreneurial behavior. The skills gained through formative experience may be managerial, financial, attitudinal or a combination of these, and may build

business competence--highlighting opportunities for the individual.

Proposition 2a: General work-experience will influence an individuals' perception of new venture feasibility, desirability and profitability.

Small businesses have been suggested as incubators for future entrepreneurs. Donckels and Dupont (1987) and Cromie (1987) found that individuals having worked for a firm employing less than 10 personnel are over-represented as entrepreneurs. Although small business experience can be viewed as formative, it can also be viewed as a reactive experience, due to the fact that the organizational environment may be unstable and job prospects are limited, as are rewards. Stanworth and Curran (1979) suggested that people who begin their working life within small businesses will tend to be relatively poorly qualified and therefore are unlikely to be employed by larger organizations. They are therefore "trapped in the secondary labour market" with few alternative career options than to start up their own businesses.

Proposition 2b: Work experience from an SME will influence an individuals' perception of new venture feasibility, desirability and profitability.

Katz (1992) argues especially that the family firm should shape children's career plans. The typical entrepreneur indeed has a self-employed parent, though not all entrepreneurial offspring choose self-employment. Parental impact may lie in the transfer of human capital related to starting or running a business (Lentz and Laband 1990). These findings are supported by Carroll and Mosakowski (1987).

Proposition 2c: Work experience from a family business will influence an individuals' perception of new venture feasibility, desirability and profitability.

A third way of learning is through the observation of behavior in others, referred to as role models (Bandura 1986). Thus, even limited experience with entrepreneurial activity could substantially influence how one thinks about entrepreneurship (Scherer et al. 1990). The inheritance of enterprise culture through role modeling has grown to become a popular field of research. Curran and Bowans (1988) research in the UK found that 5% of small business owners had come from a family background of self-employment, compared with 20% for all employees. Studies by Scherer et al. (1989,1991), Krueger (1993), Davidsson (1995) and Kolvereid (1996) all support these findings. Peers in general can also be very important in the decision to form a company. An area with an entrepreneurially pool and meeting place where entrepreneurs and potential entrepreneurs can discuss ideas, problems, and solutions spawns more new companies than an area where these are not available (Johannisson, 1993).

Proposition 3: The observation of a role model will influence an individuals' perception of new venture feasibility, desirability and profitability.

A final way of learning is through formal education. Prior

mental programming in the form of formal education repeatedly appears as correlated in generally positive ways with success in studies of start-ups (Vesper 1990). There are conflicting evidence however on this point. Curran and Burrows (1988) found that proportionally few business owners had formal qualifications to degree level and these findings were supported by Campbell (1992). In the latter study this was explained by opportunity cost arguments for more highly educated individuals, relating to increased chances of success as employees by those who possess higher qualifications. On the other hand, samples from business schools find that this kind of education enhances the entrepreneurial interest of the students (Vesper 1990). Therefore, it is assumed that different types of education might influence entrepreneurial attitudes differently.

Proposition 4a: Education will influence an individuals' perception of new venture feasibility, desirability and profitability.

Proposition 4b: Different types of education will influence on individuals' perception of new venture feasibility, desirability and profitability differently.

The focus of this study is the extent to which ways of "entrepreneurial learning" are associated with key entrepreneurial attitudes. If measures of entrepreneurial learning explain significant amounts of variance of entrepreneurial attitudes, then entrepreneurial learning may be of some incremental value in understanding entrepreneurial attitudes and entrepreneurial potential. Thus:

Proposition 5: Entrepreneurial learning will explain a significant amount of the variation in entrepreneurial attitudes.

METHODS

Sample and procedure

A sample of 3,600 people in three Norwegian counties was selected from the National Register of Norway. Each person was mailed an eight-page questionnaire concerning attitudes and intentions toward entrepreneurship. 1,633 people responded to the survey, yielding a response rate of 45.3%. In the analysis reported here all individuals already self-employed were excluded, leaving us with 1,562 cases. All respondents are between 16 and 31 years of age, with an average of 23.6 years. 46.2% are men, 62.3% are singles. 41.5% of the subjects are active workers, 41.4% are students, 5.1% unemployed, 3.3% homemakers, and 1.8% in the military services. The rest (6.8%) have other occupational statuses.

Measures

21 seven-point rating scales measuring the individuals key attitudes toward venturing were included in the questionnaire. The 21 variables were derived from earlier studies in the same area (Krueger 1993; Krueger and Brazeal 1994; Davidsson 1995; Kolvereid 1996a; Bullvag 1996). As in Kolvereid's (1996a) study, perceived social norms were computed as a product of 1) the individuals belief of whether others would approve of venturing

or not, and 2) motivation to comply with their approval or not. The first question may serve as an illustration of the format used:

I believe that my closest friends think that I should start my own firm	1	2	3	4	5	6	7	I believe that my closest friends think that I should be an employee

The two other items concerned the respondent's belief of "my closest family" and "important others". Motivation to comply was measured by three items referring to each of the belief questions. For example, the first of these questions was: "To what extent do you care about what your closest friends think when you are to decide whether to start a new firm or not?" The responses were given on a 7-point scale from 1 = "I do not care at all" to 7 = "I care very much". The belief items were recoded into a bipolar scale (1 = +3 to 7 = -3), multiplied by the respective motivation-to-comply item. The resulting three items were entered into the factor analysis along with the others.

Four factors were derived from the factor analysis (cf. Reitan 1997), which explained 58.2% of the variance. The first factor was named perceived feasibility of venturing. It consists of seven items and taps perceptions of whether it would be possible and easy to start a new firm, whether the chances of success are high, whether the person has sufficient knowledge and resources to start a new firm and whether the person has "the right qualities" to start a new firm. The scores on the seven items were averaged to obtain an overall measure of perceived feasibility (Cronbach's alpha = 0.83). The second factor--perceived social norms--consists of three items tapping the norms toward venturing of family, friends, and significant others. The scores on the three items were averaged to obtain an overall measure of perceived social norms (Cronbach's alpha = 0.88). The third factor resulting from the analysis was named perceived desirability of venturing, and taps perceptions of whether the individual would prefer venturing to employment, whether venturing is perceived as desirable, and whether the individual would like the situation of being self-employed. The scores on the three items were averaged to obtain an overall measure of perceived desirability (Cronbach's alpha = 0.83).

A fourth factor, consisting of four items, was derived tapping perceptions of whether venturing is of economic advantage, a suitable alternative for supporting oneself, risky, and if it will require a lot of effort or not to achieve it. It was named perceived profitability of venturing. The four items were averaged to obtain an overall measure of perceived profitability (Cronbach's alpha = 0.57). Although the reliability of this index is not as high as the other three, it is satisfactory and included in the analysis due to its theoretical importance.

Work experience was measured by the number of years the subject had worked in the relevant type of business. The data are used in two ways. First, they are used to create dichotomous variables, indicating whether the individual has the relevant work experience or not. Second, three-point ordinal-scale variables are created, indicating the amount of work experience

in question, divided into 1) none, 2) 0.5-2 years, and 3) more than 2 years. Education was measured as the number of years of post-secondary education. It has been differentiated between different kinds of education. The subsequent data is used to create dichotomous variables indicating whether the subject has the relevant type of education or not, as well as ordinal-scale variables indicating the amount of education in question. For total amount of post-secondary education, the scale is divided into 1) below 3 years, 2) 3-6 years, and 3) over 6 years. For the different kinds of education, the scale is divided into 1) none, 2) 0.5-2 years, and 3) more than 2 years. Role model was measured by a dichotomous variable indicating whether the subject had a parent, other relatives or a friend currently self-employed.

Test procedures

Two kinds of analysis are performed in this paper: one-way analysis of variance (ANOVA) and multiple linear regression. When performing the ANOVAs based on the dichotomous variables, the F-ratio is reported, while the Scheffe test is chosen when performing ANOVAs based on the ordinal-scale variables. The Scheffe test is the most conservative in the sense that it is least likely to find significant differences between groups. A significance level of .05 is chosen for all ANOVAs. In the regression analysis, the stepwise procedure has been used. The final models are all checked for multicollinearity and heteroskedasticity. No serious problems were detected.

RESULTS

Descriptives for the four key attitudes are given in Table 1a. A score of 1 indicates a very unfavorable perception of venturing while a score of 7 indicates a very favorable perception of venturing. Overall, entrepreneurship is perceived as more desirable than feasible, while the perception of profitability of venturing is more unfavorable than both perceptions of desirability and feasibility. The social norms toward entrepreneurship are perceived as more negative than positive. Importantly, none of the measures seem to be heavily skewed, and no efforts are made to transform them in the analysis.

Table 1a
Descriptive statistics for dependent variables

	Mean	SD	Range	Skewness	N
Perceived desirability	4.19	1.62	1.00-7.00	-0.08	1499
Perceived feasibility	3.67	1.13	1.00-7.00	0.14	1506
Perceived social norms	-2.10	5.37	-21.00-21.00	-0.32	1548
Perceived profitability	3.38	0.99	1.00-7.00	-0.08	1528

Means and standard deviations for the independent variables are reported in Table 1b. From table 1b we see that 62% of the subjects have got a role model and 2% have experienced unsuccessful attempts at venturing. The average amount of work

experience is 3.38 years, and the average amount of post-secondary education is 3.67 years.

Table 1b
Descriptive statistics for independent variables

	Mean	SD	Range
Experience own business (yrs.)	0.09	0.73	0-15
Unsuccessful attempt at venturing	0.02	0.15	0-1
Experience overall (yrs.)	3.38	3.68	0-16
Experience family business (yrs.)	0.36	1.54	0-16
Experience SME (yrs.)	1.10	2.29	0-14
Role model	0.62	0.49	0-1
Education overall (yrs.)	3.67	2.30	0-11.5
Agricultural education (yrs.)	0.12	0.53	0-7
Higher education, other (yrs.)	0.58	1.31	0-8.5
Higher technical education (yrs.)	0.12	0.62	0-5.5
Higher business education (yrs.)	0.13	0.62	0-5

To further examine the effects of experiences and education on key entrepreneurial attitudes, a series of one-way ANOVAs were performed and the cell means examined to determine the direction of the effects. See Table 2 (omitted) for the results of the dichotomous variables, and Table 3 (omitted) for the ordinal variables. It is evident that subjects with direct experience from venturing perceive it as more feasible and desirable, both personally and socially, than subjects without such experience. The strongest relations is shown for perceptions of feasibility. For perceptions of profitability the effect is minimal. As seen from Table 3 (omitted), it is not evident that the more direct experience a subject has from venturing, the more feasible and desirable it is perceived. Rather, a curvilinear effect is suggested, but not supported statistically. For perceptions of profitability, there is a significant difference between those with some venture experience (up to 2 years) and those without. However, those with more than 2 years of venture experience perceive venturing as less profitable than those without.

Further, unsuccessful venture attempts do not give more negative perceptions of new venture feasibility, desirability or profitability. Rather, those having made unsuccessful venture attempts clearly perceive venturing as more feasible, profitable and personally desirable than those who have not. Moreover, the effects are stronger than for previous venture experience. Overall, while direct experience appear to be related to key entrepreneurial attitudes, the causality is hard to determine. We do not know whether previous experience or unsuccessful attempt at venturing has affected the attitudes in a favorable or unfavorable manner. Further research is needed to ascertain whether propositions 1a and 1b can be supported. On the other hand, the results reported do indeed suggest that the key attitudes are related to entrepreneurial behavior.

Subjects with work experience perceive venturing as more feasible, but not more desirable or profitable than subjects without such experience. Thus, proposition 2a is supported for feasibility only. Furthermore, the more general work experience a subject has, the more feasible venturing is perceived. In

fact, this is the variable showing the clearest linear relationship with any of the key attitudes (cf. Table 3, omitted). Work experience from an SME positively influences all four key attitudes, but there is no evidence that the amount of work experience from an SME has any influence. Thus, proposition 2b is supported. Proposition 2c is clearly supported: work experience from a family business positively influences perceptions of new venture feasibility, desirability and profitability. However, there is no evidence that the more work experience from a family business a subject has, the more feasible, desirable and profitable venturing is perceived. Overall, experience from a family business has a stronger influence than general experience and experience from SMEs. Vicarious learning clearly has a strong effect on perceptions of new venture feasibility and desirability, but only moderate effects on perceptions of profitability. Proposition 3 is supported.

The amount of education an individual has clearly influences perceptions of new venture feasibility ($F=21.8, p<.001$). Support is given by the Scheffe-test. The amount of education do not influence any of the other key attitudes however. Thus, proposition 4a is supported for feasibility only. Moreover, as seen in Table 2 (omitted), individuals with higher education perceive venturing as more feasible than subjects without higher education, and the more higher education a subject has, the more feasible venturing is perceived. In the long run higher education appears to have a negative effect on perceptions of the social and personal desirability and profitability of venturing. This is not supported statistically however. Business education makes the subjects perceive venturing as more feasible and personally desirable. However, business education does not affect perceptions of social desirability or profitability. Consistent with these findings, we also find that the more business education a subject has, the more feasible venturing is perceived. However, there is no evidence suggesting that venturing is perceived as more desirable or profitable with more business education.

Also technical education is related to higher perceptions of feasibility, but none of the other key attitudes. Regarding the amount of technical education, we find a curvilinear relation: subjects with no technical education or more than two years of technical education find venturing less feasible than those with only some technical education (0.5-2 years).

This also applies for perceptions of personal and social desirability, and profitability, although not significant at the .05 level. Finally, agricultural education shows consistently the strongest relation to favorable perceptions of venturing on all key attitudes.

To test proposition 5, which predicted that measures of entrepreneurial learning would explain significant amounts of variance in entrepreneurial intentions, a multiple regression analysis was performed. For the experience and education measures, the dichotomous variables have been entered into the regression rather than the ordinal variables. The results of the regression analysis are displayed in Table 4 (omitted).

The only two variables included for all the four key attitudes are experience from a family business and agricultural education. Role modeling is included in all but for perceived profitability, while unsuccessful venture attempt is included in all but for perceived social norms. The only negative relation included in any model is between total amount of work experience and perceived social norms. Overall, education (apart from agricultural education) appear to influence perceptions of feasibility only. One minor exception is a positive relation between business education and perceived personal desirability. Summing up, the learning measures employed in this study explain much more of the variance in feasibility than desirability and profitability. The model is significant for all four attitude measures, thus supporting proposition 5.

Overall, the measures of entrepreneurial learning account for from only 2% of the variance in perceived feasibility of venturing. For perceived personal desirability and social norms 4% of the variance is explained by the model.

Discussion

Recently, a large amount of research has shown that to provide a reasonable supply of entrepreneurs there must be environment congenial to creating potential entrepreneurs. If we want more potential entrepreneurs, we need to identify and establish policies that increase both their perceived feasibility, their perceived desirability (both personally and socially), and their perceived profitability (Krueger 1993; Krueger and Carsrud 1993; Krueger and Brazeal 1994; Krueger et al. 1995; Kolvereid 1996a; Reitan 1996, 1997). The questions that need to be answered to enable this are: "Who are these potential entrepreneurs?" and "How do we increase their perceived feasibility, profitability and/or desirability?" This paper has shedded more light on the second of these questions. Later research must look further into both questions.

In this paper we have shown that entrepreneurial learning clearly influences perceptions of new venture feasibility, desirability, and profitability. However, different kinds of learning influence these key attitudes differently. Learning through direct experience is related to all four measures of attitudes, and explains a significant amount of the variance in entrepreneurial attitudes. The causality is difficult to determine however, and the relations are not as strong as for some to the other learning measures. Contrary to expectations, individuals with unsuccessful attempts at venturing still perceive venturing as more feasible, profitable, and personally desirable than others. We can therefore conclude that the four key attitudes are clearly related to entrepreneurial behavior can only be determined through longitudinal investigations.

Learning through indirect experience also influences all the four measures of entrepreneurial attitudes, however, this applies consistently for experience from family business only. Total amount of experience explains only a minor amount of the perceptions of social desirability of venturing, and the relation is negative. This is not surprising since work experience from SMEs, family businesses and own businesses are controlled for in the regression. The "remaining" experience is gained from large

businesses and/or the public sector. While this kind of experience is positively related to perceived feasibility, it is negatively related to both measures of perceived desirability. Vicarious learning significantly explains an amount of the variance in all attitudes but perceived profitability. While agricultural education appear to be consistently related to all forms of entrepreneurial attitudes, other kinds of education appear to influence perceptions of feasibility only.

Overall the results indicate that it is easier to learn that entrepreneurship is feasible through direct and indirect experiences, through vicarious learning and through education than to learn that it is desirable. On the one hand, this is disappointing news, especially for the education system, which appears to be unsuccessful in stimulating an entrepreneurial potential in young people. This is especially true for the stimulation of perceived desirability and profitability of venturing. On the other hand, more individuals perceive venturing as desirable than feasible (cf. Table 1a), and hence, it appears to be more important to stimulate the perceived feasibility of venturing. To some extent, this can successfully be done via experiences, role modeling and education. Moreover, the education system has a unique chance of providing all of these requirements, for example by emphasizing more action-based learning, building relations to local SMEs and entrepreneurs, and so on.

The explanatory power of the regressions show that there is still a large amount of variance to be explained. Perhaps the nature of the learning process is more important for the key attitudes, especially perceptions of desirability and profitability, and that the experience in itself does not matter so much? (cf. Elder et al. 1991; Erikson 1980). In other words; what do we learn from the experiences?; are the experiences negative or positive?; what are the lessons learned from them? Scherer et al. (1991) found that the performance of the role model was the influencing factor, not having a role model per se. As stated by Krueger (1995), to encourage personal desirability, we must examine rewards as potential entrepreneurs perceive them. What are these rewards? Importantly, other factors need to be incorporated into the analysis, such as personality traits, situational variables, demographics, and other background variables. Aspiring or intending to start a new firm is only a first step in the emerging process (Katz 1990); but it is an important one. While key attitudes might be the most important variables to understand why someone jumps the first hurdle, other variables need to be included to understand why they jump (or do not jump) the second hurdle (attempt to start a new firm) and the third (successful start-up).

This present research suggests many avenues of future research. Future studies should look more closely at the determinants of key entrepreneurial attitudes and incorporate other groups of variables as suggested above. Moreover, the moderating effect of age and gender deserves investigation. Future studies should examine the different ways of learning and especially what the individuals are learning and how this influences entrepreneurial attitudes. Another interesting research avenue is how our experiences influence preferences for types of new businesses, i.e. a progressive business, an innovative business, a part-time

business etc. Longitudinal research is needed to ascertain to what extent entrepreneurial attitudes and intentions influence subsequent behavior, and what other variables that must be included to fully understand new venture creation. Finally, other methodological approaches are welcome, including longitudinal case studies.

This present research has some limitations. The snapshot survey methodology is not without its limitations and its critics. Despite attempts to provide a logical and thorough survey of entrepreneurial interest and potential, the methodology can be questioned on several counts. First, the survey sample only comprises persons ranging from 16 to 31 years of age. It remains to be seen if the results are robust among the general population. Second, the survey has been carried out in three Norwegian counties only. It remains to be seen if the results show variations among counties and countries. Third, a better response rate could have been achieved had a direct face-to-face personal survey approach been adopted. This would, however, only have been feasible with a smaller sample. Finally, the reliability of the perceived profitability measure is below a satisfactory level. A better measure should be developed in future studies.

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Footnote

[1] It is acknowledged that this definition is certainly not unquestionable. Gartner (1990) provides an overview of some dimensions often included in definitions of entrepreneurs and entrepreneurship, including innovativeness and growth.

THE TRAINING AND DEVELOPMENT NEEDS OF
OWNER-MANAGERS OF SMALL BUSINESSES WITH
EXPORT POTENTIAL

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Abstract

Very few small firms in Quebec are considering the challenge of exporting, even in a context where competition has increased as a result of the new open markets. Research has shown that the decision of an owner-manager to move into a foreign market is conditioned basically by his or her personal attitude to exporting. A number of organizations currently offer export information and training services to small firms, but these services do not seem to meet the needs of entrepreneurs, since they are not widely used. The aim of this study was to identify the export training and development needs of small business owner-managers. It took the form of exploratory research using a sample of 15 small business owner-managers in Quebec. It highlights their representations of their own strengths and weaknesses as regards exporting, the areas of competence in which training was thought to offer possibilities for improvement, and the type of training and teaching personnel preferred.

1. Introduction and Problem Definition

Quebec's small businesses are currently facing the challenge of increased competition as a result of the new open markets, and especially the recent free trade agreement between Canada and the United States. In such a context, the ability to export is becoming a critical factor in the development and long-term survival of many small and medium-sized firms. As Joyal, Julien and Deshaies (1993) pointed out, this element is particularly crucial for the more vulnerable firms. These authors identified a number of key factors for determining vulnerability, including size, industry sector, investment potential and the quality of available computerized production equipment.

The results obtained by Joyal, Julien and Deshaies (1993) showed that nearly 53% of small and medium-sized firms did not export and were not contemplating the possibility in the short- or medium-term. This high percentage is somewhat worrying in the present competitive context. In June 1992, Quebec's Minister of International Affairs, John Ciaccia, deplored the fact that only 13% of all Quebec's small businesses exported their products, when nearly 50% of the province's economy depended on them[1]. Moreover, the share of exports in Quebec's manufacturing sector seems to have fallen slightly in general terms since the early 1980s (Farah-Lajoie, 1992).

Observations such as these have led to a number of studies aimed at discovering why small business owner-managers do not consider exporting. The results have shown that small firms face certain obstacles to exporting, including lack of information on opportunities and markets (Phillippe, 1990; Ali and Swiercz, 1991; Dichtl, Koeglmaier and Mueller, 1990; Brooks and Rosson, 1982), poor knowledge of the distribution and marketing tools required (Kedia and Chokkar, 1986; Kulhavy et al., 1986; Ograrn, 1982; Kathawala et al., 1989) and lack of the financial resources

required to face up to the complexities of exporting (Nelson, 1984; Chenier and Michael, 1990; Cannon, 1980).

Beyond these more technical and situational factors, however, it was also found that one of the most important obstacles is basically the unwillingness of small business owner-managers to consider exporting (Nevin and Cavusgil, 1981; Chenier and Prince, 1990; Sandberg and Hofer, 1987). Amesse and Zaccour (1991) observed that the decision of small firms to export or not is profoundly influenced by the owner-manager, and in particular by his or her perceptions and attitudes. Miesenbrock (1988) supported these findings, stating that the main decision-maker in the management of a small business becomes the key variable in the internationalization process. A number of other authors have also identified clear differences between the owner-managers of exporting and non-exporting firms, in terms of their perception of the risks and difficulties associated with the export process and their personal orientation with regard to international trade (Sharkey, Lim and Kim, 1989; O'Rourke, 1985; Axinn, 1988; Cavusgil and Naor, 1987; Daniels and Goyburo, 1976; Ogram, 1982). Finally, Leo, Monnoyer-Longe and Philippe (1992) emphasized the importance of the owner-manager's determination to take the firm onto the export market.

Given the considerable impact of the owner-manager's personal attitude on the firm's decision to export, it is relevant to consider the various paths available to help owner-managers overcome barriers to exporting and support the development of a more internationally-oriented business behaviour. In this respect, training and development may offer a potentially interesting solution. As Joyal (1993) pointed out, one of the elements frequently mentioned by respondents in his research with Julien and Deshaies (1993) was the need for training to better satisfy requests from outside markets. Both the business community and the government and parapublic sector are aware of the need to intervene at the level of executive paradigms regarding internationalization, through training and export support programs. In fact, a number of seminars and other forms of coaching or training are already available on the market.

However, these various interventions do not seem to be producing the expected results. The formulae currently offered are shunned by many of Quebec's entrepreneurs, who do not see them as a real answer to their problems (Joyal, 1993). This phenomenon is not confined to Quebec, According to Julien and Gregoire (1994), researchers are more or less unanimous in stating that the services offered by support programs do not adequately meet the needs of small exporting firms. The programs are generally perceived very negatively by owner-managers. Moreover, very few researchers have made suggestions or proposed operational methods to solve this problem.

Considerations such as this led us to wonder about the relevance of this type of intervention, which often seems to have been developed by specialists working for different bodies, without input from the firms themselves with respect to either the content or the teaching and promotional approach used. Given that owner-managers are the key elements in the decision to export, as stated earlier, it is vital that awareness and training interventions should concentrate on their perceptions,

weaknesses and development needs. It is also important to know which intervention methods the owner-managers prefer, and the information and teaching formulae most likely to encourage them to take up the activity. The low attendance rate at export workshops, seminars and clinics provides evidence of our current failure to meet the expectations of owner-managers.

Based on these observations, exploratory research was undertaken to examine the export training and development needs of small business owner-managers. More specifically, participants were asked to express their personal representations of the following objects:

- * their attitude to exporting;
- * the factors that prevented them from exporting (obstacles and perceived weaknesses);
- * the areas in which training was thought to offer possibilities for improvement;
- * the types of intervention required, and their content;
- * the preferred teaching formula and the trainers considered credible.

2. Methodology

The approach used obviously called for a sample composed of a small number of subjects with in-depth documentation of their representations. The research was therefore carried out with a sample of 15 small business owner-managers, most of whom operated in sectors identified as vulnerable by Joyal, Julien and Deshaies (1993). None had exported in the past, although some were considering the possibility when the research was carried out. We deliberately opted for a group of firms that had reached the same stage of their export decision process. Research has shown that support and training needs differ according to the firm's stage of commitment to the export process (Seringhaus, 1987; Julien, Joyal and Deshaies, 1994; Denis and Depelteau, 1985). Participants were recruited on a voluntary basis, by telephone.

The data were collected by means of in-depth interviews with the 15 owner-managers, lasting between one-and-a-half and three hours. The interviews were conducted using a standard questionnaire containing only open questions. No answers were suggested by the interviewer. The questionnaire included questions on the following themes: descriptive and contextual variables, general attitude to exporting, perceived obstacles, strengths and weaknesses, the possibilities for improvement through training, and the preferred content and teaching approach. All interviews were recorded and transcribed to facilitate analysis.

Content analysis was then performed on the data, using what Bardin (1989) referred to as "structural deciphering", which is considered to be a "discussion by discussion" method. The main purpose of the analysis was heuristic, since its goal was to explore and identify the subjects' personal representations of the objects. The categories used in the analysis were established at the questionnaire design stage. The research was therefore carried out from a basically interpretative stance (Burrell and Morgan, 1979), since its aim was to reveal the idiosyncratic perceptions of the owner-managers rather than to

obtain confirmation or denial of a set of training needs previously identified by researchers in the field.

3. Results

Before addressing the results themselves, it is interesting to consider the contextual and descriptive details of the 15 firms that took part in the research. Table 3.1 shows their main characteristics.

Table 3.1

Contextual and Descriptive Variables

Firm	Age of firm	Activity sector	Turnover	Number of employees
1	20	Furniture	\$1.5 million	17
2	20	Furniture	\$700,000	12
3	3	Upholstery	\$175 - \$200,000	4
4	8	Furniture	\$250,000	4
5	27	Furniture	\$5 - \$7 million	5
6	6	Natural products	\$150,000	5
7	8	Clothing	\$500,000	14
8	39	Fur clothing	\$200,000	5
9	16	Furniture	\$300,000	4
10	41	Hydraulics	\$2.3 million	13
11	46	Mattresses (manuf.)	\$500,000	4
12	30	Clothing (outdoor)	\$700,000	35
13	10	Outdoor recreational equipment	---	15
14	25	Specialized construction	\$4 million	30
15	49	Furniture	\$1 million	20

As the Table shows, all the firms were small, with between four and 35 employees. Nearly two-thirds operated in sectors identified as vulnerable by Julien, Joyal and Deshaies (1994), i.e. the clothing and furniture sectors. None was in its start-up or stabilization phase; the youngest firm was three years old, and the oldest nearly 50 years old. None of the firms had begun exporting when first contacted for the research, although two were doing so by the time the interviews were conducted. Nearly three-quarters of the firms had grown in the last three years, and intended to pursue their growth in the coming years.

3.1 General Attitude to Exporting

In the first question, respondents were asked to describe how they viewed exporting for a small firm such as theirs. Most (more than 80%) perceived exporting as a necessity or a necessary evil that they would have to face at one time or another. Many regarded exporting as the ultimate way of increasing their current market, compensating for saturation of the local market or countering a reduction in their trading margin. Strikingly, despite the perceived potential benefits, exporting was by no means regarded initially as an attractive opportunity, but remained a forced longer-term choice. To use a military analogy, the respondents tended to resemble inexperienced soldiers anxiously awaiting call-up, rather than true conquerors who considered the new open markets to be a formidable opportunity.

Respondents who were not at all convinced of the importance of exporting gave as their main reasons the impression that they could continue to survive for some time with a more local market, the desire to develop their skills with their current customers before attempting to move onto foreign markets, and the fear that they would be unable to satisfy the demand and thus lose control of their current everyday operations.

In the second question, respondents were asked to describe the export-related practices of their competitors. Although some said they knew very little about this, most had the impression that all the firms in their sector were fairly weak as regards exporting. However, they admitted that exporting was generally underused, and that they would all have to face the need to export at some time during the coming decade, to varying degrees.

3.2 Export-Related Obstacles, Strengths and Weaknesses

Exploratory research such as this, which considers the training and development required to generate a favourable attitude and specific export skills, would be incomplete without an analysis of the obstacles to exporting as perceived by the entrepreneurs concerned. Respondents were asked to list the factors that prevented them from exporting, in decreasing order of importance. Table 3.2 presents the three most important obstacles identified by each entrepreneur.

Table 3.2
The Three Obstacles to Exporting Considered to be Most Important

Firm	Factors (in decreasing order of importance)
1	<ol style="list-style-type: none"> 1. Lack of information on the process to be followed 2. Language barrier 3. Lack of funding
2	<ol style="list-style-type: none"> 1. Poor knowledge of foreign markets 2. Fear of transportation logistics problems 3. Poor knowledge of legislation and payment methods
3	<ol style="list-style-type: none"> 1. Lack of information on the process 2. Poor knowledge of payment methods 3. Language difficulties

- 4
1. Lack of money
 2. Lack of knowledge about the process
 3. Financial risk
- 5
1. Poor knowledge of foreign markets
 2. Poor knowledge of distributors
 3. Lack of information about transportation
- 6
1. Not yet well enough known in the sector
 2. Lack of money
 3. Lack of funding (credit problems)
- 7
1. Poor knowledge of foreign distributors and agents
 2. Poor knowledge of markets
 3. Worries about the administrative paperwork required
- 8
1. Lack of money
 2. Lack of foreign contacts
 3. Language problems
- 9
1. Lack of time
 2. Lack of money
 3. Fear of not being paid by foreigners
- 10
1. Lack of contacts
 2. Poor knowledge of foreign countries
 3. Language problems
- 11
1. Does not know where to begin
 2. Lack of time
 3. Lack of marketing tools
- 12
1. Not automated enough to compete abroad
 2. Very weak marketing function
 3. Lack of specialized manpower
- 13
1. Lack of foreign contacts
 2. Lack of money
 3. Lack of time
- 14
1. Local market not saturated
 2. Not known abroad
 3. Insufficient equipment to compete
- 15
1. Fear of not being paid for exports
 2. Does not know where to sell products
 3. Lack of foreign contacts

The main problem lay in the lack of foreign contacts, which seemed to constitute a major obstacle to exporting. In-depth questioning revealed that respondents did not seem to know where to begin, or who to ask for help. The export process itself was perceived to be highly complex, full of pitfalls and with a frightening level of inherent risk. The issue of distribution was of particular concern. Respondents did not know where to find the agents they needed in order to move onto foreign markets, and they had the impression that simply identifying distribution agents would require a significant financial investment. These concerns generated a tremendous amount of uncertainty and prevented many of the respondents from adopting a

more aggressive approach to international trade.

A second major source of perceived difficulty lay in the general lack of knowledge of potentially interesting foreign markets in the firm's sector. Many respondents did not know which countries or regions they should consider, how their products should be adapted to the specific requirements of those markets, or the efforts required to make the necessary changes or additions. They had no idea where to begin gathering information, and were not inclined to commit themselves to the process, given the high level of uncertainty regarding possible penetration of foreign markets.

Third, the technical aspects of export payment methods were also perceived to be a major difficulty by many respondents. Most expressed considerable concern about this factor. Exporting was perceived as a business activity with a high risk of non-payment due to a number of factors, the most common of which were the distance between the parties and the consequent control problems. Closely related to this set of obstacles was the fear of financial difficulty as a result of the risk.

Many respondents also mentioned lack of time and money. However, in-depth questioning revealed that this was simply the result of the concerns described above. Because the entrepreneurs knew little about the export process, possible distribution networks and potential markets, and because they also had the impression that they would be running a considerable financial risk, they also thought they would have to invest a lot of time and money before they would be ready to venture into the foreign trade jungle. Finally, language constituted a significant obstacle for at least a quarter of all respondents. Those who mentioned this problem deplored their flagrant lack of knowledge of the English language, or admitted a level of difficulty such that they felt unable to undertake trade negotiations in English.

Respondents were asked to list the current strengths and weaknesses of their firms with respect to exporting, once again with the goal of identifying future training needs. Many of the weaknesses described were concerned with the obstacles listed previously. To avoid repetition, they have therefore been excluded from Table 3.3, which sets out the strengths and weaknesses mentioned most frequently by respondents.

Table 3.3
Perceived Export-Related Strengths and Weaknesses*

Strengths	Weaknesses
Specific or avant-garde design (4)	Firm not well-known outside local market (5)
	All-consuming everyday management (6)
Product quality (top of range) (5)	No financial room to manoeuvre (4)
Flexibility and speed of adaptation (4)	Limited production capacity (3)

Unique product	(1)		
		Lack of specialized manpower	(3)
Product innovation	(3)		
		Insufficient automation and/ or outdated equipment	(4)
Good production capacity	(3)		
		Poor knowledge of foreign languages (especially English)	(4)
Special expertise	(2)		
		Lack of trained export staff	(5)
Open-minded attitude of management	(1)		
		Transportation problems	(1)
Production flexibility	(2)		

* The number in brackets alongside each strength or weakness indicates the number of times the element was mentioned by respondents.

Three strengths emerged very clearly, and were mentioned by nearly a third of respondents. First, the quality and/or originality of the product design was perceived to be a significant advantage, especially in a context where consumers tend to seek personalized products that meet their own specifications. The quality of the product and its special characteristics ranked second. The entrepreneurs who identified this as one of their strengths felt that the fact of specializing in a high quality product increased their chances of success in foreign markets. Finally, many respondents mentioned their firm's flexibility and speed of adaptation, due in particular to its small size and the speed of its decision-making and direct action processes. This strength was repeated at a more technical level, with two respondents also identifying the flexibility of their production process as a major competitive advantage.

Export-related weaknesses were perceived more intensely than strengths. The most frequently-mentioned weakness was all-consuming everyday management, which left entrepreneurs with very little time to think about and plan major strategic shifts such as foreign trade. Respondents said they held two or more positions in their firms, and that "operational" tasks left them with very little additional flexibility to think about future directions for the firm. A second weakness identified by one-third of respondents was a corollary of this: the lack of trained and specialized technical staff familiar with the ins and outs of the export process (including the logistic, legal, commercial, financial and other aspects). As several respondents pointed out, the time required to explore the possibility of exporting is only one side of the coin, because the firm would still subsequently need the expertise to engage in an export process.

Other concerns raised by the respondents included production problems and the lack of sufficient specialized staff. Although they perceived their products as having certain advantages in terms of design and differentiation, they were nevertheless aware that automation and more advanced technologies would eventually become necessary, both to be able to compete abroad, and to produce more quickly and in larger quantities for the additional customers obtained through internationalization. Finally, the low level of cash flow available to take up the export challenge seemed to be closely related to the above concerns. Respondents thought it would be necessary to make major financial investments in order to increase the size of the management team, so as to have more time for strategic concerns, hire technical staff for everyday export-related operations, and improve the performance of production equipment, while at the same time training staff to satisfy the new demands.

3.3 Possibilities for Improvement Through Training

In the preceding section, we considered the perceived export-related obstacles and weaknesses. However, the owner-managers interviewed did not necessarily think these deficiencies could be countered or improved by training or development. They were therefore asked to identify the areas where they felt improvement was possible, to make good both their own deficiencies and those of their employees and the firm as a whole. More specifically, they were asked to list five main training and/or development themes that they thought would improve their export trade skills. Table 3.4 (omitted) shows the themes identified in response to this question. Most participants were unable to find five themes, and the table therefore lists only the first four.

The reader will note that we have not changed the theme statements. They are shown in the Table as they were formulated by the respondents. It quickly becomes clear from a more in-depth analysis that several of the statements, although formulated differently, in fact reflect the same need. For example, the phrases "collection of accounts and financing", "collection and export credit", "financing and payment methods", "how to get paid", and so on, are simply different ways of expressing the same concern. It is important to remember that no responses were suggested, and that the main goal was to obtain the respondents' own representations of the issues addressed in the questionnaire. It is thus somewhat surprising to find such a consensus and so many similarities in the type of training needs identified, especially since the respondent companies were not all from the same sector.

The training theme most commonly identified covered export financing in general, and export credit and collection methods in particular. In fact, 80% of respondents expressed this need. The interviews clearly showed that the contractual financial relationship with a foreign buyer generated much concern and hesitation for owner-managers. Some said they had already experienced problems in collecting customer accounts at a strictly local level, especially in the current difficult economic context. They perceived distance and the more impersonal nature of export contacts as factors that would increase the probability of collection difficulties, and said they were unable to accept the level of risk that this implied.

Two other main areas for training were also mentioned by more than half the respondents. First, a number of statements can be grouped together under the heading "international marketing concerns". Respondents wondered about how to identify the needs of foreign markets, the level of product adaptability required to satisfy those needs, how to hire a marketing agent or distributor, and how to obtain information on specific aspects of foreign cultures. Another group of statements can be brought together into a broader classification: the processes (logistics, transportation, customs) and legal aspects of international trade. However, one concern shared by the majority (nearly 75%) of respondents does not appear directly in Table 3.4. In fact, most respondents agreed that if training activities were eventually proposed for the themes identified, they should be composed of elements specific to a given sector. For example, they seemed to think that practices differed significantly in the furniture and clothing sectors.

Finally, only two respondents mentioned the need for training directly related to more sophisticated production techniques. This suggests that most respondents thought this area could not be improved by training or development. In fact, the preceding section shows that many of the owner-managers interviewed were afraid of being unable to satisfy the increased demand resulting from their international activities, because of their current production methods, while others doubted their capacity to compete abroad, also because of the production technology used.

3.4 Types of Training and Teaching Staff

It is not enough to know more about the training themes preferred by entrepreneurs still at the stage of "considering" international activity. As mentioned earlier, a number of support programs, training sessions and courses are already available, but very few of the small firms considering exporting actually take part. It therefore seemed to us to be important to ask the sample owner-managers to specify the type of training they required, in terms of both the teaching formula and the people who should teach and give support to participants.

Our main finding from analysis of the responses to this question is that none of the respondents considered traditional lectures, as given in most colleges and universities, to be of much use. They felt that courses such as these were generally much too long, because they often had to comply with certain standards in order to provide participants with educational credits. Respondents believed that such courses were almost always required to include between 30 and 45 hours of teaching, and that they were spread over too long a period of time. Finally, respondents also criticized the size of the groups, which in their view reduced the possibility for individualized training. One respondent said, "Institutions offer courses designed to suit everyone, but in reality they suit no-one in particular."

More than 80% of respondents said they would prefer a more active formula that allowed them to ask questions, discuss issues with other participants and the course leader, and test some of the know-how skills associated with the export process. They suggested a combination of conferences and workshops together

with practical case studies, discussion workshops with experienced entrepreneurs and ad-hoc seminars on specific themes. Again, they emphasized the need to orient training content towards a specific sector.

Nearly 50% of respondents also mentioned coaching as a teaching approach that would satisfy their more specific requirements. For example, mentors could be appointed to support them in the process of deciding whether or not to export, and also during their first venture into exporting where applicable. The mentors could be experienced entrepreneurs from their own industrial sector, or specialists in a given skill, culture or practice. Respondents also raised the possibility of creating clubs for "future exporters", to be responsible for organizing training activities and "clinics" on common problems.

Some respondents also suggested the preparation of videos on specific cultures, methods of introduction, challenges and critical success factors for firms wishing to move into those countries, or at least sell their products there. Videos containing testimonies by successful entrepreneurs were also proposed as a source of information and stimulation for entrepreneurs in the same sector.

The teaching personnel considered by respondents to be the most credible were trainers with concrete experience in exporting, and specialists in specific areas - for example, customs brokers, international transport brokers and lawyers. However - and this is interesting - most respondents said that trainers such as these should be supervised and supported by university professors and specialists from Quebec's Industrial Research Council (known by its French acronym CRIQ), the provincial Department of Trade and Industry and the Federal Development Bank. In fact, respondents seemed to trust these experts, had confidence in their knowledge, but considered them to be too formal, theoretical and lecture-oriented in their interventions unless they worked jointly with practitioners.

4. Discussion and Conclusion

First, we will look at some of the limits of this research. Its major limit may well be the small number of respondents (15), which prevents the kind of generalization traditionally sought in more objectivist studies. However, the main goal of the research was to explore in depth the personal representations of the people concerned, and not to attempt to define the perceived training and development needs of all small firms with export potential. Moreover, the subjectivist approach used meant from the outset that we had to confine ourselves to a limited number of subjects, so that each respondent could express his or her perception of the problem and consider all aspects of the question raised.

Second, the sample entrepreneurs were not all from the same sector, although most operated in the furniture or clothing sectors. In any case, the results show that there is very little difference between the difficulties, expectations and needs of these two groups of subjects. Notwithstanding this latter observation, it would certainly be preferable for studies of this type to be carried out using samples of entrepreneurs from the

same sector, or at least from the same industry. It would also be interesting to do a similar study with groups of small business owner-managers from the service sector - provided, of course, that the service could eventually be offered internationally. This would be the case, for example, of some engineering firms, management consulting services, training services, computer development or consulting services, and so on.

The results of this study should be used as a basis for subsequent, more extensive research with a much broader sample of subjects who are considering exporting but are not yet actively involved in it. For such a project, a more positivist stance would be required, using a questionnaire comprising only closed questions where subjects would be asked to choose from a set of responses determined in advance by the researcher. We intend to do this, provided the necessary funding can be obtained in the next year.

As the results show, the sample entrepreneurs already view exporting as a necessity, or at least as a necessary evil that they will have to face at one time or another. The weaknesses and obstacles elicited, the training themes identified, and the expectations expressed with respect to preferred types of training are extremely important, and could serve as guidelines for the type of information and learning, activities to be offered to small business owner-managers in order to give them greater confidence in their own potential to take up the challenge of international trade. As already mentioned in a previous section, an owner-manager's decision to engage in export activities is largely conditioned by his or her personal attitude to exporting. From this point of view, this research has highlighted some of the perceived difficulties and needs of the people directly concerned by future export training. Ultimately, it may help define the training themes, objects and approaches most likely to relieve the apprehensions of the people facing the stimulating but agonizing challenge of internationalization.

[1] Source: La Presse, Montreal, Tuesday June 2, 1992, p.2.

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