Research at the Marketing/Entrepreneurship Interface

Fabian Eggers
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Editors

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Dedicated to

my wife Patricia

my wonderful grandchildren, Abigail, Matthew and Joseph Gerald
CONTENTS

MANUSCRIPTS

BUILDING CONFIDENCE IN ENTREPRENEURIAL SKILLS: THE USE OF SIMULATION-BASED PEDAGOGY
Jeannette Monaco, Nicole Kirpalani .........................................................8

AN INTEGRATIVE RESEARCH MODEL OF INTERNATIONAL ENTREPRENEURSHIP
Anisur Rahman Faroque, Sussie C. Morrish .............................................15

TAKING THE ENGINEERING PATH TO BUSINESS LEADERSHIP AND ENTREPRENEURIAL SUCCESS IN CANADA AND USA
Emeric Solymossy, James Chowhan, Andrew Gross ....................................28

Audrey Gilmore, Andrew McAuley, Damian Gallagher, Philippe Massiera ..................38

ENTREPRENEURS AT THE MARKETING INTERFACE: ARE SERIAL ENTREPRENEURS DIFFERENT?
Vincent J. Pascal, Maria Honicke ............................................................48

BOUNDARY SPANNING IN THE ENTREPRENEURIAL FIRM: EFFECTS ON INNOVATION AND FIRM PERFORMANCE
Laurel F. Ofsstein, Rod Shrader, Maija Renko ...........................................64

BUSINESS GROWTH BY ‘TALKING’: AN EXPLORATORY SOCIO-LINGUISTIC INVESTIGATION
Jonathan H. Deacon, Jackie Harris, Emma Parker .........................................80

STRATEGIC PLANNING AND FIRM PERFORMANCE: A MULTI-COUNTRY STUDY OF ENTREPRENEURIAL FIRMS AT THE INTERFACE
Vincent J. Pascal, Robert G. Schwartz, Jonathan Deacon ..................................93

ABSTRACTS

BEYOND THE DESTRUCTION: ENTREPRENEURIAL STRATEGIES AND INITIATIVES POST THE CHRISTCHURCH EARTHQUAKES
Sussie C. Morrish, Morgan P. Miles ............................................................109

AN EXAMINATION OF THE INVERSE CREATIVE DESTRUCTION EFFECT: DO NATURAL DISASTERS CREATE OPPORTUNITIES FOR INNOVATION?
Nezih Altay, Javier Monllor ...........................................................................111

DO PSYCHOTICS MAKE THE BEST ENTREPRENEURS? A STUDY OF DOPAMINE’S POSSIBLE EFFECTS ON ENTREPRENEURIAL OPPORTUNITY RECOGNITION
Javier Monllor ...............................................................................................113

ENTREPRENEURIAL ORIENTATION AND FIRM PERFORMANCE: A MULTI-COUNTRY STUDY IN THE RHINE VALLEY REGION OF AUSTRIA, SWITZERLAND AND LIECHTENSTEIN
Matthias Filser, Fabian Eggers .................................................................115
SOME THOUGHTS ON CUSTOMER DEVELOPMENT, LEAN STARTUP, AND DISRUPTIVE INNOVATION
Joe Giglierano .................................................................116

FROM HYPERCYCLES TO EFFECTUAL MARKETING PLANNING: HOW THE MARKETING AND ENTREPRENEURSHIP SYMPOSIUM HELPED TRANSFORM AN EARLY STAGE IDEA INTO A PUBLICATION
Peter S. Whalen, Sam S. Holloway .................................................................117

THE IMPACT OF INNOVATION AND MARKET ORIENTATION ON NASCENT VENTURES’ SALES REVENUES: EVIDENCE FROM THE PSED2 DATA SET
Jeremy A. Woods .........................................................................................118
BUILDING CONFIDENCE IN ENTREPRENEURIAL SKILLS: THE USE OF SIMULATION-BASED PEDAGOGY

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ABSTRACT

Purpose: The research sought to explore to what extent a simulation-based game can help increase students’ confidence levels in entrepreneurial skills.

Methodology: Students in entrepreneurship and marketing capstone classes were recruited to participate in the research. Their perceived confidence in their entrepreneurial skills (before and after completing the simulation) was assessed using the entrepreneurial self-efficacy scale (McGee et al., 2009).

Findings: Study results suggest that students’ entrepreneurial self-efficacy significantly increased after completing the entrepreneurial simulation game. This finding holds true for students in both entrepreneurship and marketing capstone courses. Students expressed most confidence in their ability to come up with the idea for a new product or service, while they felt least confident about the financial aspects of running a business.

Implications: The findings extend previous research on the effectiveness of simulation games in entrepreneurial education. Originality/value: The research suggests that simulation games can be effective tools for increasing students’ confidence in their entrepreneurial skills. In turn, students with generally high levels of confidence in their skills may be more likely to start a new business.

INTRODUCTION

Entrepreneurship education has received increased attention in recent years. Formal courses in entrepreneurship can use a variety of pedagogical approaches to foster students’ skills in entrepreneurship. Case studies, research projects, client-sponsored projects, etc. are all examples of ways to enhance students’ entrepreneurial skills. Many marketing curricula include entrepreneurial objectives as well, for example the development of marketing plans for new business ideas or ventures.

Entrepreneurship skills are unique in that they are very complex and inter-related with many other business functions. By learning entrepreneurial skills students will be able to develop proficiency in key functions of a business such as finance, marketing, operations management, human resources, etc.

Research has examined how students can best develop entrepreneurial skills in the classroom. The use of simulation has gained increased interest in recent years. For example, Wolfe (1997) found that the use of simulations can be superior to the use of case studies when the complexities of entrepreneurial tasks are considered (Wolfe, 1997).

The purpose of the current research is to explore whether simulation-based pedagogy can increase students’ confidence in their entrepreneurial skills. Previous research has shown that higher confidence in entrepreneurial skills is positively related to the likelihood of starting a new business (Townsend et al., 2010). After completing an entrepreneurial simulation game, are students more confident in their ability to understand complex business interrelationships and to make entrepreneurial business decisions? Are they more likely to start a new business of their own? This question is relevant in light of the growing importance of entrepreneurship education in higher education institutions.

BACKGROUND

The Use of Simulations as Learning Tools

What are the best approaches for teaching entrepreneurship? Neck and Green (2011, p. 55) recommend teaching entrepreneurship as a method (“a way of thinking and acting”) in order to give students the opportunity to practice entrepreneurial decision-making. Existing research suggests that gaming simulations can affect student learning outcomes
positively. Huebscher and Lendner (2010) found that participants in simulation game seminars generate “high learning effects” among students. A study conducted by Wolfe (1997) concluded that simulations were generally superior to case studies in terms of demonstrated learning outcomes. Related research has also identified a link between entrepreneurial intentions and higher levels of perceived learning from simulation exercises (e.g., Litz et al., 2010). In other words, students who have already formulated the intention to start a new business may benefit to a greater extent from simulation games than students with lower levels of entrepreneurial intent.

**Simulation Design and Goals**

The focus of the current research is the assessment of students’ perceived confidence levels to master entrepreneurial tasks before and after the completion of an entrepreneurship simulation game. The simulation game was used in entrepreneurship courses as well as marketing capstone courses. The rationale for including the simulation game in both of these courses stems from the realization that entrepreneurial activities are vitally important in today’s business world and should therefore be incorporated in marketing pedagogy (Hultman and Hills, 2011). While the basic simulation objectives for these two courses were similar, the entrepreneurship course focused more on a holistic business perspective of entrepreneurship (including decision-making in financial matters and human resources); whereas the marketing capstone focused more on the marketing perspectives of starting and operating the new venture.

The goal of the simulation game is to teach students how to make complex, interrelated businesses decisions in a competitive environment. Teams of 4 - 5 students compete against their peers in starting and running a new business for eight business quarters, over the course of one semester.

The simulation is introduced to students using several methods, including lecture, video, classroom discussion, and small group interaction. Students are given an overview of the goals of the simulation, learning outcomes, assessment rubrics, and best practices for success. They are also provided with specific instructions on the decisions they will need to make as a team for each quarter of the simulation. Finally, they are provided with information on the logistics of using the simulation, access to “Help” tips, and the simulation Tech Support phone number.

The students are also introduced to the possible roles and responsibilities they can play in running “their” company over the course of the eight quarters of play. The students are asked to choose one of the following roles based on their preference and perceived strengths:

- President
- VP of Marketing
- VP of Market Research
- VP of Manufacturing
- VP of Sales
- VP of Finance

Depending on group size, students may take one or two roles within the team. In a five-person team the roles of marketing and market research are usually combined. In a four-person team the president will take on an additional role.

Casual observation suggests that students initially feel relatively confident in their specific roles. As the game progresses students typically begin to see the complexity and interrelationships inherent in running an entrepreneurial business.

**Simulation Learning Outcomes**

Students learning outcomes in the simulation game were measured using several tools:

1. A quarterly executive briefing describing business strategies, tactics and outcomes
2. A business plan pitch to gain venture capital from potential investors
3. A board of directors report to summarize successes and failures as well as strategies for the future
4. An overall score based on their financial success in the market (vs. their competitors)
These assessments are typically helpful in providing students with feedback on their mastery of specific entrepreneurial skills, whether they are in an entrepreneurship course or a more advanced marketing capstone course. However, these tools do not measure whether students’ confidence levels in entrepreneurial skills have increased as a result of completing the simulation. In the following, this question will be investigated in more detail.

**Entrepreneurial Self-Efficacy**

Perceived confidence level was assessed using the construct of entrepreneurial self-efficacy (ESE; see Boyd and Vozikis, 1994; Chen et al., 1998; Krueger and Brazeal, 1994). While general self-efficacy (GSE) refers to an individual’s belief in his/her capability to accomplish a job or a specific set of tasks (Bandura, 1977; cf. McGee et al., 2009), entrepreneurial self-efficacy (ESE) refers to a person’s efficacy related to new ventures (McGee et al., 2009). The entrepreneurial self-efficacy scale includes several constructs related to confidence levels in the following areas: searching for new business idea, planning for a new business, marshaling for a new business, implementing human resources related tasks, implementing financial tasks, and their general attitude towards starting a new venture.

**RESEARCH OBJECTIVES**

The research sought to explore two key questions in relation to the effect of a simulation game on entrepreneurial skills. The first objective of the research was to test the assumption that students will be able to gain confidence in their entrepreneurial skills after completing an entrepreneurial simulation game. The second object related to the “focus” of the entrepreneurial simulation game, that is, whether the game was included as part of an entrepreneurship course or a marketing capstone course. Both objectives are important in our understanding of the effectiveness of entrepreneurial simulation games in entrepreneurship and marketing pedagogy.

With these objectives in mind, the following key research questions were developed:

a. Is there a significant improvement of entrepreneurial self-efficacy after completion of an entrepreneurial simulation game?

b. Do entrepreneurial self-efficacy levels differ, depending on whether the simulation is presented as part of an entrepreneurship course or a marketing capstone course?

In the following, the methodology, results, and implications for the current research will be discussed.

**METHODOLOGY**

The research consists of two studies; a pilot study and the main study. The pilot study was designed to establish basic measures in relation to the research objectives. The main study was designed to replicate initial findings with a larger sample size and to test for potential differences between students from entrepreneurship classes and marketing capstone classes.

**Participants**

Participants for the main study were recruited from two entrepreneurship and two marketing capstone courses at a small urban college. Students who completed the simulation game were asked to take part in the research. They were offered the chance to enter a drawing to win a gift certificate for a coffee bar. Participants were full-time undergraduate students with an average age of 21 years. A total of 52 participants completed the main study anonymously. 30 participants were part of two entrepreneurship courses. 22 participants were enrolled in marketing capstone courses.

**Design and Procedure**

The study was designed as a pen-and-paper survey. The survey instrument included the entrepreneurial self-efficacy scale (ESE; McGee et al., 2009) as well as additional items related to demographic information and family business backgrounds. The ESE scale asked participants to rate their confidence levels related to various entrepreneurial tasks (e.g., estimating demand for a new product or service, delegating tasks, managing financial assets, etc.) on a 5-point Likert
scale ranging from 1 = very little (confidence) to 5 = very much (confidence). Please see the Appendix for details on the specific constructs of the ESE scale.

Participants were asked to rate their confidence levels before and after completing the entrepreneurship simulation game. Lastly, an open-ended question asked participants to write down additional comments about their learning experiences in the course (both entrepreneurship courses and marketing capstone courses).

RESULTS

Entrepreneurial Background and Intentions

Fifty-two participants completed the main study. 35 out of 52 participants (67%) indicated that they had an idea for a new business in mind. 4 out of 52 participants (8%) indicated that they already own a business. 29 out of 52 participants (56%) have a family business background (parents or close family who are business owners).

Participants were also asked to indicate how likely they are to start their own business in the future. On a scale from 1 (not likely) to 5 (very likely) the mean likelihood of the study sample was M = 3.42.

Entrepreneurial Self-Efficacy Scale Constructs

The entrepreneurial self-efficacy scale (McGee et al., 2009) was used to assess participants’ levels of self-confidence related to various areas of entrepreneurship. The scale items for each of the five ESE constructs were generally found to be reliable. The Chronbach alpha levels were mostly in line with McGee et al., 2009 and were as follows: 1) Confidence in searching: \( \alpha = .75 \) (before the simulation), \( \alpha = .84 \) (after); 2) Confidence in planning: \( \alpha = .77 \) (before), \( \alpha = .81 \) (after); 3) Confidence in marshaling: \( \alpha = .46 \) (before), \( \alpha = .67 \) (after); 4) Confidence in people implementation: \( \alpha = .85 \) (before), \( \alpha = .84 \) (after); 5) Confidence in financial implementation: \( \alpha = .84 \) (before); \( \alpha = .86 \) (after).

Four out of the five entrepreneurial self-efficacy constructs show satisfactory reliability levels. The fifth construct, marshaling, is very specific in terms a person’s ability to communicate the business idea to others and to convince them that the idea has merit. This particular construct may therefore have limited relevance to a student who does not yet have a specific idea for a new business in mind.

Entrepreneurial Self-Efficacy: Before and After the Simulation

Entrepreneurial self-efficacy was measured on a five-point scale, from 1 indicating “very little” to 5 indicating “very much” confidence to engage in the listed entrepreneurial tasks. A significant difference was found for entrepreneurial self-efficacy before vs. after completing the entrepreneurial simulation game (Mbefore = 3.44; Mafter = 4.14, \( t(51) = 9.175, p = .003 \)).

This difference also held when examining students’ self-efficacy in entrepreneurship and marketing capstone courses separately. (For entrepreneurship: Mbefore = 3.28; Mafter = 4.08, \( t(29) = 6.860, p = .000 \); for marketing capstone: Mbefore = 3.64; Mafter = 4.23, \( t(21) = 6.683, p = .000 \)).

Significant differences in self-confidence before and after the simulation were also found in each of the five constructs of the entrepreneurial self-efficacy scale (searching, planning, marshaling, people implementation, and financial implementation). Details will be discussed next.

Entrepreneurial Self-Efficacy: Differences by Construct

Out of the five constructs of the entrepreneurial self-efficacy scale, participants reported the highest level of confidence (after completing the simulation game) in the “searching” aspect of entrepreneurship (M = 4.33 on a 5-point scale). The searching construct measures confidence related to the ability to brainstorm, the ability to identify the need for a new business, and the ability to design a product or service that will satisfy customer needs and wants.
The lowest level of confidence M = 3.63) was reported in financial implementation, which relates to the ability to organize and maintain financial records of the business, manage the financial assets of the business, and the ability to read and interpret financial statements.

The other three self-efficacy constructs ranked somewhere in-between (confidence in planning: M = 4.0; confidence in marshaling: M = 4.31; confidence in people implementation: M = 4.31), but all of the entrepreneurial self-confidence skill dimensions were remarkably high after students completed the simulation game.

No significant differences were found in the five entrepreneurial self-efficacy constructs when students in entrepreneurship and marketing capstone courses were compared.

**Qualitative Comments**

In addition to assessing students’ confidence levels in their entrepreneurial skills the researchers were also interested in learning more about the students’ perceptions of the simulation and the course overall. The survey included the following open-ended question: “Please add additional comments about your learning in the course.”

Many of the qualitative responses mirrored the quantitative results discussed earlier. Student responses, overall, demonstrated an increased confidence in their ability to understand complex business relationships and to make entrepreneurial business decisions. A few of the student responses illustrate this point:

- “It [the simulation] really put into perspective all of the different aspects of running a business. I like learning about how all the different parts of things fit together to make something work, so it was interesting to explore that in a business sense.” (Student in Entrepreneurship)
- “I gained a lot of knowledge on how a business is run and the steps to run it. If taken seriously, as I did, this class can be very helpful and handy for any future interest in pursuing your own business” (Student in Entrepreneurship)
- “I have learned that to be an entrepreneur one must really examine & study all aspects of business, have a firm understanding of the market & be there for the company with new ideas at all times.” (Student in Entrepreneurship)
- “It truly takes real-life experiences to understand how to start a business.” (Student in Marketing Capstone)
- “I have always wanted to run my own company. This course has helped me realize how I should run my own company. I have also learned there is so much more to having your own company besides the service or products you’re selling/creating.” (Student in Marketing Capstone)
- “Through Entrepreneurship I learned a lot about market research, start-ups and business plans. This class taught me how to actually do it or make it possible to make your own business a success.” (Student in Marketing Capstone)

**DISCUSSION**

Previous research has shown that confidence in one’s abilities regarding a new business is an important factor in the decision to start a new business (Townsend et al., 2010). Improving students’ confidence in their entrepreneurial skills therefore represents a key topic in business education.

Results stemming from the current research suggest that students’ confidence in entrepreneurial tasks increased as a result of the simulation. Students in both entrepreneurship and marketing capstone courses showed a significant increase in their levels of entrepreneurial self-efficacy.

Interestingly, students who completed the marketing capstone course showed higher confidence levels in their entrepreneurial skills compared to students completing the simulation as part of an entrepreneurship course. A possible explanation for this finding may lie in the holistic nature of this culminating capstone course. In addition, seniors who are about to graduate may have a higher maturity level and more self-confidence than the sophomores and juniors in the entrepreneurship course.
In general, students seem to enjoy the simulation format and are engaged in the process. They see it as a challenge to compete with other teams. Many students reported that they did not realize the level of complexity of owning one’s business until they were tasked with making a variety of entrepreneurial decisions as part of the simulation game.

The simulation seems to be particularly relevant for students who already have a business idea, who have high intentions of starting a new business, or who have a family business background. From a pedagogical point of view, a simulation game seems to provide a good substitute for “real-world” entrepreneurial challenges that provide opportunities for complex decision-making.

While the reported results are promising, the present research also has its limitations. The sample sizes for both the pilot study and the main study were limited. Further research is needed to substantiate the findings. More research is planned to better understand changes in confidence levels in specific skill areas (e.g., marketing, financial decision-making, managing staff). In addition, future research will investigate whether a student’s previous practical exposure to entrepreneurship (e.g., as measured by a family business background) will influence his/her confidence in relation to entrepreneurial skills. Previous intentions of starting a new business may also serve as predictors of higher levels of entrepreneurial self-efficacy.

REFERENCES


APPENDIX

Entrepreneurial Self-Efficacy Scale Constructs (McGee et al., 2009)

Searching:

1. How much confidence do you have in your ability to brainstorm (come up with) a new idea for a product or service?
2. How much confidence do you have in your ability to identify the need for a new product or service?
3. How much confidence do you have in your ability to design a product or service that will satisfy customer needs and wants?

Planning:

4. How much confidence do you have in your ability to estimate customer demand for a new product or service?
5. How much confidence do you have in your ability to determine a competitive price for a new product or service?
6. How much confidence do you have in your ability to estimate the amount of start-up funds and working capital necessary to start your business?
7. How much confidence do you have in your ability to design an effective marketing/advertising campaign for a new product or service?

Marshaling:

8. How much confidence do you have in your ability to get others to identify with and believe in your vision and plans for a new business?
9. How much confidence do you have in your ability to network – i.e., make contact with and exchange information with others?
10. How much confidence do you have in your ability to clearly and concisely explain verbally/in writing your business idea in everyday terms?

Implementing—People:

11. How much confidence do you have in your ability to supervise employees?
12. How much confidence do you have in your ability to recruit and hire new employees?
13. How much confidence do you have in your ability to delegate tasks and responsibilities to employees in your business?
14. How much confidence do you have in your ability to deal effectively with day-to-day problems and crises?
15. How much confidence do you have in your ability to inspire, encourage, and motivate your employees?
16. How much confidence do you have in your ability to train employees?

Implementing—Financial:

17. How much confidence do you have in your ability to organize and maintain the financial records of your business?
18. How much confidence do you have in your ability to manage the financial assets of your business?
19. How much confidence do you have in your ability to read and interpret financial statements?
AN INTEGRATIVE RESEARCH MODEL OF INTERNATIONAL ENTREPRENEURSHIP

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ABSTRACT

Purpose: The purpose of this article is to review the existing literature in entrepreneurship and international entrepreneurship (IE) and propose an integrative research model of IE.

Design/methodology/approach: In this conceptual paper the authors first present a comparative analysis of common research themes in entrepreneurship and IE. Based on research gaps in both fields and the extent to which core concepts of entrepreneurship is adopted in IE the authors then propose a unifying framework for IE research.

Findings: From a comparative literature review we found IE acknowledges the importance of the core concepts and perspectives from entrepreneurship, but empirical investigation embracing them is minimal. Therefore, the core concepts of entrepreneurship, and in particular, entrepreneurs’ capabilities and skills, entrepreneurial orientation (EO) and opportunity recognition (OR) need to be addressed in IE. Furthermore, IE as a socially embedded activity necessitates investigation from a network perspective.

Originality/value: Building on findings from entrepreneurship and their implications for IE we propose a model contributing to entrepreneurship in general and IE in particular, as well as internationalization and network literatures. This paper integrates both process and outcome-oriented network perspectives which is uncommon in both fields. The paper provides a starting point for further theoretical and empirical refinement and advancement in IE by borrowing concepts from ‘hard core’ entrepreneurship and IB literatures simultaneously.

INTRODUCTION

The contribution of entrepreneurial activities to the world economy has always interested researchers from around the world and has been the focus of many research scholars over the past few decades (Chandler and Lyon, 2001; Ireland et al., 2005; Rauch et al., 2009). The increasing globalization and availability of information and communication technologies have facilitated the way for local entrepreneurs to become global entities. The increasing importance of entrepreneurship in international business (IB) has also introduced the new academic field of international entrepreneurship (IE) (McDougall, 1989) with initial emphasis on a particular type of international firms, known as Born Globals (BGs) or International New Ventures (INVs).

BGs are firms that internationalise soon after inception or within three years. Studies on BGs confirm that such firms possess a strong entrepreneurial orientation (EO) characterised by pro-activeness, risk taking, and innovativeness (Freeman et al., 2006). It is appropriate to examine internationalisation of BGs or traditional firms by using a number of concepts from entrepreneurship. Johanson and Vahlne (2009) also acknowledge that ‘internationalization has much in common with entrepreneurship’ (p. 1423). However, with an overwhelming focus on IB, IE researchers have not integrated entrepreneurship theory into their frameworks. While IE’s explicit focus on the role of the entrepreneur supplements the research on export behaviour and internationalisation process of firms, little is known about the entrepreneurial process of internationalisation. In doing so, the core concepts of entrepreneurship, especially entrepreneurs’ capabilities and skills, entrepreneurial orientation (EO) and opportunity recognition (OR) need to be addressed in IE. Furthermore, IE as a socially embedded activity should be studied from a network perspective.

In this paper we intend to contribute to the development of IE theory by integrating the most influential concepts and perspectives from entrepreneurship literature where network is at the core. We present a comparative analysis of the common research themes in entrepreneurship and IE fields by addressing the research gaps then propose a unifying framework by combining antecedent factors and performance outcomes of network in the IE context. We then discuss the research gaps and future research directions for the IE field.
Entrepreneurship involves the nexus of two phenomena: the presence of lucrative opportunities and the presence of enterprising individuals (Venkataraman, 1997) who recognize and realize these opportunities through resources whether at their disposal or not to establish a new firm (Delmar, 2005). Therefore, three components of entrepreneurship theory have been identified: the characteristics of the entrepreneur, the opportunities, and the resources to exploit opportunities (Elfring and Hulsink, 2003). These components have often been analyzed from a network perspective which assumes that entrepreneurs or entrepreneurial firms being embedded in a social network essentially maintain relationships with and receive information, ideas and knowledge from their network partners, which help them recognize and exploit opportunities to establish new firms. Thus network approach has become a dominant theoretical perspective in entrepreneurship. IE also recognizes the importance of these three components and theoretical perspectives in entrepreneurship but to what extent still remains a big question. In the following sections we shall try to uncover this first by analyzing the core concepts and dominant perspectives in entrepreneurship and then by investigating their extent of adoption in IE.

**Individual Approach to Entrepreneurship: The Entrepreneur**

*Entrepreneurship literature*

Entrepreneur is the main actor in the entrepreneurial process and firm formation. Entrepreneurship literature has a long tradition of research that focuses on entrepreneur’s personality traits. In trait approaches an entrepreneur is seen as a set of personality traits and characteristics (Gartner, 1989).

Entrepreneur characteristics, including demographic and personality factors play important roles in new venture creation (Shook et al., 2003) and influence the outcomes of the firm (Hambrick and Mason, 1984). There is significant relationship between personality traits and start-up formation, survival and success (for a meta-analytic review please see Rauch and Frese, 2007). This personality traits-performance relationship was also found to be mediated by EO (Poon et al., 2006). In addition, personality traits were found to be related with network relationships (Lee and Tsang, 2001) and EO (Poon et al., 2006).

Some authors feel comfortable to use ‘human capital’ (HC) as an umbrella concept instead of personality traits or behaviors alone because of its absorptive capacity to accommodate a large spectrum of variables. There exists significant relationship between HC and entrepreneurial success (for a meta-analytic review please see Unger et al., 2011). In addition, the relationships between HC and OR (Arenius and Clercq, 2005; Ko and Butler, 2004), HC and network relationships (Brudel and Preisendorfer, 1998; Donckels and Lambrecht, 1997) as well as between HC and EO (Birley and Westhead, 1994) were also found.

*IE literature*

The ability of entrepreneur to create and develop an international firm has become an important research focus in IE (Rasmussen and Madsen, 2002). The characteristics of entrepreneur are often cited in the literature as a key factor individualizing BGs from non-BGs (Madsen and Servais, 1997). The background and characteristics of the founder has a large influence on the speed of learning, internationalization and development of BGs (Madsen and Servais, 1997; Oviatt and McDougall, 1997). The entrepreneur’s international experience is a source of prior knowledge that helps her identify overseas market opportunities and exploit them optimistically (Evangelista, 2005).

Despite entrepreneurial behavior is the common denominator of the entrepreneurial approach to internationalization in IE (Onetti et al., 2008), research investigating the role and characteristics of individual entrepreneur is not comprehensive (Andersson and Evangelista, 2006; Wright et al., 2007). The entrepreneur characteristics that attracted researchers are only few (such as prior international and industry experience, extensive international social and business networks) which cannot typify the BG or other international entrepreneurs. Therefore, further investigation is needed to more fully recognize and understand the role and characteristics of the entrepreneur in IE (Mort and Weerawardena, 2006).
Firm Level Approach to Entrepreneurship: Entrepreneurial Orientation (EO)

Entrepreneurship literature

Although individual approach to entrepreneurship has dominated the field for several decades, recently a group of scholars has proposed firm level orientation of entrepreneurship research (e.g., Covin and Slevin, 1991; Lumpkin and Dess, 1996; Miller, 1983; Wiklund, 1999). This concept of organizational level entrepreneurship is called entrepreneurial orientation or EO. EO is a combination of three dimensions: innovativeness, proactiveness, and risk-taking. EO has received a considerable amount of theoretical and empirical attention and become a central concept in entrepreneurship. In a meta-analytic review Rauch et al. (2009) found strong support for EO-performance relationship. The relationship between EO and firm performance was found to be moderated by firm size, industry and national culture (Rauch et al., 2004), firm strategy (Wang, 2008), strategic processes (Covin et al., 2006), knowledge of suppliers and regulatory agencies (Griffith et al., 2006), network capability (Walter et al., 2006), inter-organizational networks (Walter et al., 2006), intra and extra-industry networks (Stam and Elfring, 2008) and external environment (Covin and Slevin, 1989; Zahra and Covin, 1995).

While EO-performance literature is large, there is relatively little that deals with the question of mediation, some notable exceptions aside. A few researchers attempted to establish indirect relationships between EO and firm performance through information acquisition and utilization (Keh et al., 2007), learning orientation (Wang, 2008), and knowledge creation process (Li et al., 2009).

IE literature

The relationship between international EO and firm performance has only been explored to a limited extent. There are a limited number of empirical studies that have investigated EO using all three widely accepted dimensions in an international setting (Ibeh and Young, 2001; Lyon et al., 2000; Mostafa et al., 2006; Yeoh and Jeong, 1995). Hence, more attention should be paid to EO construct development in international milieu. Ibeh (2003), McAuley (1999) and Robertson and Chetty (2000) found that EO-performance relationship exist even in low technology industries challenging the current convention towards high-tech and knowledge-intensive firms in IE literature. In their conceptual model, Yeoh and Jeong (1995) recognize the importance of contextual variables, i.e. external environment and export channel structure which have moderating effect on the relationship between a firm’s EO and export performance.

Opportunity Based Approach to Entrepreneurship: Opportunity Recognition (OR)

Entrepreneurship literature

The discovery of opportunities is the core issue of entrepreneurship. The classical school of entrepreneurship discusses the properties of opportunity recognition which is the first step of entrepreneurial process. Christensen et al. (1989) defined opportunity recognition as, “either a) perceiving a possibility to create new businesses, or b) significantly improving the position of an existing business, in both cases resulting in new profit potential (P. 3)”.

From a content analysis Faroque and Takahashi (2011) found that empirical research in entrepreneurship investigated three different perspectives of OR: ‘quality’, ‘quantity’, and ‘process’. First, OR is conceptualized as the number of opportunities identified and exploited. Second, the nature of the opportunities that are explored and exploited has been studied. Finally, the process of OR has been studied in which OR is presented as a sequence of several stages. All these perspectives have often been interrelated and sometimes showed to have influence on venture or firm performance.

IE literature

Although OR has received much attention in mainstream entrepreneurship literature, researchers in IE have ironically failed to include this important issue in their research (Zahra and George, 2002). As a result, IE as a field of study is still in its infancy (Muzychenko (2008).

Several models of entrepreneurial internationalization have been proposed by scholars. Yet none has deliberately considered OR in the proposed framework. For example, Madsen and Servais (1997) proposed a model of BGs which
include entrepreneur, firm, and environmental aspects, while ignoring OR. Likewise, Jones and Coviello (2005) have proposed a conceptual entrepreneurial process model for empirical testing which comprises entrepreneur, firm, internationalization behavior, and performance. While they name it 'entrepreneurial process model', this does not house the critical first step of entrepreneurial process: OR. Among few researches, Chandra et al. (2009) found that networks can assist in discovering first time international opportunities in international markets.

Since IE involves opportunity recognition and exploitation in international markets (Zahra et al., 2005), future IE research incorporating entrepreneurial opportunity might help researchers gain insights into how entrepreneurial firms search, discover, evaluate, and exploit international opportunities (Dimitratos and Jones, 2005).

Resource Based View: Knowledge

Entrepreneurship literature

Entrepreneurship literature is dominated by new technology-based (NTBFs) and knowledge-intensive firms (NKIFs). Since NTBFs deal with technology, knowledge is a critical component for such firms to develop new technologies or to capitalize on already existing technologies. Therefore, knowledge has been in the forefront of entrepreneurship research recently investigating new technology-based firms (NTBFs). Knowledge is particularly important to recognize technology- and knowledge-based opportunities in the market. Shane and Venkataraman (2000) emphasized the importance of entrepreneur’s knowledge base in the opportunity recognition process. Kor et al. (2007) advocate that entrepreneurial knowledge often originates from entrepreneurs’ experiences in the firm, the management team, and the industry. Such knowledge can profile a firm’s productive opportunity set. In addition, Oakey (2003) recognizes that a complex mix of both managerial and technical know-how is necessary for the success and subsequent growth of high-tech firms.

Empirical research in entrepreneurship investigated the relationship between prior knowledge (of markets, ways to serve markets, and customer problems) and OR (Ardichvili et al., 2003; Shane, 2000; Ko and Butler, 2004), knowledge (of customers, competitors, suppliers, and regulatory agencies) and market responsiveness (Griffith et al., 2006), market and technological knowledge (applicable to OR) and firm performance (Wiklund and Shepherd, 2003). The moderating influence of EO between market and technological knowledge and firm performance (Wiklund and Shepherd, 2003) was also found.

IE literature

Knowledge- or technology-based BGs dominate the field of IE research. They ideally possess an intangible knowledge-based advantage which help them establish in foreign markets in a relatively short time (Kuivalainen et al., 2007). Knowledge plays an important role in both the ‘stage’ theory (Johanson and Vahlne, 1977) and BG theory of internationalization (Autio et al., 2000). While ‘stage’ theory gives emphasizes market knowledge, BG theory accentuates knowledge-intensity (Faroque and Takahashi, 2012). However, Yli-Renko et al. (2002) found that both types of knowledge are important in internationalization of technology-based BGs which would definitely soothe the tension between the two theories. Zhou (2007) also argues that the apparent tension in regard to the role of foreign market knowledge between the ‘stage’ and BG theories can be resolved by understanding the source of the knowledge. For BG firms, foreign market knowledge tends to emanate from the innovative and proactive pursuit of entrepreneurial opportunities across national borders, rather than from incremental accumulation of experience in foreign markets that happens in the traditional gradually internationalizing firms.

Empirical research in IE explored the relationship between network and the acquisition and creation of knowledge (Yli-Renko et al., 2002), knowledge (knowledge intensity and market knowledge) and growth of technology-based BGs (Yli-Renko et al., 2002), knowledge acquired from networks and international performance of low-tech BGs (Faroque and Takahashi, 2012; Presutti et al., 2007), knowledge intensity and growth of high-tech BGs (Autio et al., 2000) and foreign market knowledge and BG internationalization (Zhou, 2007). In addition, the relationship between foreign market knowledge and export performance is mediated by international commitment (Faroque and Takahashi, 2012); the relationship between internationalization experiential knowledge and international performance is mediated by network experiential knowledge (Blomstermo et al., 2004). The mediating role of foreign market knowledge in the relationship between EO and BG internationalization was also found (Zhou, 2007).
Network Approach to Entrepreneurship

Entrepreneurship literature

Studying entrepreneurship through the lens of social networks offers a fruitful perspective on entrepreneurship (Greve, 1995). Research into entrepreneurial networks falls into two principal categories: inter-organizational network and the entrepreneur’s personal or social network (O’Donnell et al., 2001). Networking is not only an entrepreneur’s activity; rather it can also become part of a company’s activity and structure (Dubini and Aldrich, 1991) especially at a later stage of firm formation.

In the literature network has been used as either independent or dependent variable, lacking an integration of both process- and outcome-oriented research (Hoang and Antoncic, 2003). Research integrating network as an independent variable tried to show how networks affect the entrepreneurial process and outcomes. By contrast, network as a dependent variable focused on how network development is facilitated by entrepreneurial processes. For a review of network research in entrepreneurship please see Slotte-Kock and Coviello (2010), Hoang and Antoncic (2003), and O’Donnell et al. (2001).

IE literature

Network analysis has recently emerged as a powerful framework in IE research (McDougall and Oviatt, 2003). The importance of networks in IE, especially in BGs, has been emphasized by Andersson and Wictor (2003), McDougall and Oviatt (2003), and Sharma and Blomstermo (2003). Networks in IE are also identified as either social or inter-organizational.

Past research in IE explored direct relationship between industry networks and market entry (Moen et al., 2004); social networks and strategy, market knowledge and market access (Harris and Wheeler, 2005); networks and firm performance (Yli-Renko et al., 2002); networks (with government and non-government entities) and BG export performance (Faroque and Takahashi, 2012); entrepreneur and network development (Andersson and Wictor, 2003; Rasmussen et al., 2001).

From the preceding discussion it seems that IE acknowledges the importance of the core concepts and perspectives from entrepreneurship literature, but empirical investigation embracing them is minimal. Entrepreneurship literature has come a long way to establish itself as a fruitful and legitimate academic pursuit through recurring trial and error. It is anticipated that IE would not take longer to make much headway in the academia because it can heavily draw upon already established core concepts and theoretical underpinnings in entrepreneurship literature. However, such process of interaction and integration is observed as rather slow in IE (Dimitratos and Jones, 2005; Keupp and Gassmann, 2009). Unless IE adopts the core concepts from entrepreneurship literature as key constructs linked to international business, it would remain as an ‘academic vagabond’ in the world of academia.

CONCEPTUAL FRAMEWORK

To answer the most important question in entrepreneurship research raised by Rumelt (1987): ‘Where do new businesses come from?’ we lend to entrepreneur (the main actor in the entrepreneurial process) and networks (in which complementary actors reside) because we found that these two are the most important factors in any entrepreneurial activities. From entrepreneurship literature we have also adopted EO and OR. In addition, from IB literature we have borrowed two most influential concepts- foreign market knowledge/knowledge intensity and internationalization. Entrepreneurship literature discusses the knowledge of domestic markets, ways to serve those markets, and customer problems (Ardichvili et al., 2003) whereas IB involves knowledge intensity for high-tech firms as well as foreign market knowledge which comprises foreign institutional knowledge, foreign business knowledge and internationalization knowledge (Eriksson et al., 1997). Internationalization is the most used performance measurement in IB and IE (Keupp and Gassmann, 2009).

Our proposed framework (Figure 1) includes entrepreneur related factors because research suggests that the entrepreneurs, embedded in their businesses and in the external environment, are the actual composers of the network elements (Donckels and Lambrecht, 1997). Entrepreneur’s skills and capabilities help recognize international opportunities to achieve international performance. According to Kirzner (1973), entrepreneurs are “able to perceive opportunities for
entrepreneurial profits” (p. 14). This indicates that opportunities bring profits for entrepreneur. Moreover, these opportunities derive from imperfect knowledge, i.e., exactly from the subjective differences in knowledge of time and place (Hayek, 1945). Entrepreneurs also influence EO especially in small firms (Zahra, 1993; Birley and Westhead, 1994). EO represents an organizational culture which fosters network development, market knowledge and firm internationalization (Frishammar and Andersson, 2009; Zhou, 2007; Zhou et al., 2010).

IE as a socially embedded activity requires interaction with different network partners at home and abroad. Scholars in IE have suggested several theories to understand the internationalization, competitive advantage and how this advantage is turned into business performance. Network perspective has positioned itself as the single most important theoretical framework in IE (Gassmann and Keupp, 2007; Sharma and Blomstermo, 2003). The importance of network lies in its ability to integrate all other fragmented components of IE. For example, opportunities are created within and among existing organizations as a product of ongoing network relationships (Low and MacMillan, 1988). Furthermore, entrepreneurial process itself is embedded in networks that facilitate linkages between entrepreneurs, resources (market knowledge) and opportunities (Aldrich and Zimmer, 1986). In addition, market knowledge as an important facilitator of internationalization essentially originates from knowledge-sharing networks (Casillas et al., 2009). Thus network gulfs the bridge between and among all the uncoupled elements involved in IE for the ultimate purpose of achieving entrepreneurial success. Entrepreneurial success in IE is conventionally measured in terms of firm or venture export performance and used as dependent variable (Keupp and Gassmann, 2009). We also posit that performance is the best indicator of success which can be achieved by entrepreneurial capabilities and activities. We suggest that researchers use some non-financial measures of international performance too.

Network research in entrepreneurship and IE has serious and similar gaps. Integration of process- and outcome-oriented network research is scarce in entrepreneurship (Hoang and Antoncic, 2003) as well as in IE despite its high potential to advance theory development in both fields. Past research in IE also failed to examine networking activity in a unifying framework incorporating antecedent factors and performance outcomes (Mort and Weerawardena, 2006). Our proposed model which includes both can contribute to fulfill this serious gap in IE. We have also included social and inter-organizational networks whereas most entrepreneurship and IE research focused on only either of them.

Theoretical reasoning and empirical enquiry suggest moderating and mediating influences on the relationship between entrepreneurial phenomena that are inherent in our model. The mediation is evident in the framework with some moderating factors. We could not include all the moderators in the framework because it would make the picture more complex. Different moderators are involved in different relationships. For example, the relationship between EO and network is moderated by firm size whereas price competitiveness moderates the relationship between foreign market knowledge and international performance (Zhou et al., 2010). Therefore, researchers should consider specific moderators while investigating their own research of interest.

The lack of control variables is a weakness of recent research in IE; therefore our model suggests using some control variables (e.g., firm size, industry type, technology and environmental dynamism, international experience, etc.) to produce stronger results. These variables reflect both organizational and foreign market characteristics that are conceptually related to organizational knowledge, network and entrepreneurial activities (Sapienza et al., 2006) – thus underlying the international growth and survival of firms and offering a more valid examination of the proposed research (Zhou et al., 2010).

Our proposed model is an attempt to represent the ‘entrepreneurial process of internationalization’ (Keupp and Gassmann, 2009; p. 613). Such a complex process can only be captured by multiple-level analyses which recognize causal associations among entrepreneurs’ social behavior, the provision of resources, firm capabilities, and entrepreneurial success (Gassmann and Keupp, 2007). These multi-level causal relations have been well-reflected at individual, network and firm levels in our framework.
CONCLUSION

The purpose of this article is to review the existing literature on several important building blocks of entrepreneurship theory and their adoption in IE. Building on findings from entrepreneurship and their implications in IE we propose a model of IE, contributing to entrepreneurship in general and IE in particular, as well as internationalization and network literatures. This paper integrates both process and outcome-oriented perspectives on entrepreneurial network relationships and deciphers the ambiguities in IE regarding this phenomenon. The nexus of entrepreneurship-internationalization and entrepreneurship-IE hold substantial promise for future enquiry. This paper provides a starting point for further theoretical and empirical refinement and advancement into that direction by borrowing concepts from main-stream entrepreneurship and IB literatures simultaneously.

The model in Figure 1 incorporates six most important components which, in combination, offer a broad and integrative entrepreneurial perspective by which IE can be understood. We don’t claim that this model integrates all the necessary components involved in IE. However, we assert that this model includes the most influential and important concepts without which IE is impossible both for researchers and practitioners. Such a complex model brings opportunities for individual researchers. Those who are interested in OR can only consider relevant components that suit their research interests. Likewise, the researchers interested in EO or in networks can eventually focus on their individual interests ignoring others. Thus this model can be positioned as an umbrella within which other precise models fall and fit (Slotte-Kock and Coviello, 2010).

Much room of opportunities is left with future IE researchers. For example, general entrepreneurship literature exhibits that networks foster EO (Manev et al., 2005; Ripolles and Blesa, 2005) whereas IE shows that EO influences networks (Zhou et al., 2010). This difference can be explained by the differences between domestic entrepreneurship and IE. In the absence of unique or new resources, young firms with high level of international EO are often more inclined and active to build and upgrade their network relationships than their domestic counterparts. Such interesting investigation and comparative findings can benefit IE to be a unique field of research.
REFERENCES


ABSTRACT

Purpose: Our primary objective here is to demonstrate that engineering education and technical experience constitute a suitable path in succeeding at middle and high-level managerial tasks, including entrepreneurial ventures, in North America. A secondary goal is to investigate the dual ladder or parallel path of advancement in organizations.

Design/methodology/approach: We combine much evidence from Canada and USA, including findings from primary research conducted over four decades and a thorough literature review that includes unpublished theses and results from government studies. Ours is a cross-sectional longitudinal approach that encompasses interviews with three cohorts of engineering graduates in Canada in both 1965 and 2007.

Findings: We demonstrate that engineering education and experience is suitable for high-level executive positions and for entrepreneurship based on ample evidence from both Canada and USA. In a historical context and in the current climate of emphasis on technology, engineering is truly an appropriate background for both innovation and for corporate leadership. Engineers have become adept at leading small and large companies.

Research limitations/implications: Engineering graduates show basic satisfaction with their education and experience, but recognize that technical skills can and do erode and that industry often pays lip service to the dual ladder or parallel path of advancement. Improvements are needed in utilization of skills and in corporate promotion practices.

Practical implications: Organizations recognize more clearly that engineering training works well in a variety of managerial and executive assignments with current emphasis on innovation, flexible processes, new products, and knowledge management.

Originality/value: The paper brings together findings from two large nations and from primary research over several decades coupled with an in-depth literature review.

HISTORY AND OVERVIEW

Engineering is as ancient as humanity; the evidence can be seen in the early tools such as the lever, the pulley, and the wheel. The term “engineer” can be traced back to the user of an engine and the term “ingenium” i.e. a clever invention. Development of engineering in North America can be traced back several centuries to the indigenous population; then came waves of immigrants who offered more skills. The key issues early on were means for survival, shelter, food; next came concern with building harbors and fortresses and; later on canals, roads, railways, and basic utilities. Most recently, electrical and computer engineering have taken center stage, but the emphasis on infrastructure remains in this region and worldwide (Petroski 1997, 2010; Rae and Volti, 1993; Wilson, 1998).

Scientists invent and discover; engineers apply and innovate. Venture capitalists provide financing, entrepreneurs seek new products to markets; commercialization is at the heart of such linkage. Engineers bring skills to this process via problem-solving, analytical thinking, and design-orientation. Yet engineering has not had the recognition that other professions enjoyed, though there were early battles for recognition, status, and legal standing (Ball, 1987, Millard, 1988). Few if any Canadian and American engineers are recalled by name, unlike in other countries, and the profession itself has not had much promotion or publicity (Petroski, 2010) But associations are now starting to take a more aggressive role and federation of engineering consultancies are emphasizing their appeal to young professionals (FIDIC, 2012; CCPE, 2006).

In the sections below, we take a brief look at engineering education, at the labor market for engineers, and then at the career paths taken by graduates. While industry for many years called for dual ladder or parallel path of advancement, engineers found that this was often not feasible, so many moved into management for higher remuneration and job satisfaction. This trend was reinforced by reports that some technical skills were not utilized, while others have become obsolete. However, engineers’ analytical, problem-solving skills serve them well as they execute managerial tasks. We have conducted both primary and secondary research on this topic, including a major cross-sectional longitudinal study of
Canadian engineering graduates with three distinct cohorts followed for 45 to 55 years. We now offer the results from these surveys as well as complementary findings from various U.S. reports. Our key finding is that engineering training is a solid foundation for business leadership and entrepreneurial positions.

ENGINEERING EDUCATION

Engineering courses and degrees were developed in the USA in the 1830s (U of Virginia, RPI, US Military Academy) and in Canada in the 1850s (U of New Brunswick was first). Today there are thousands of engineering programs across North America with numerous tracks of specialization as well as advanced degrees. To assess the nature, quality and impact of such training, one could look at achievement of the graduates or assess how engineering education matches up with national or corporate needs, but both techniques are fraught with complex measuring problems (Wolfle, 1954; Boyd and Gross, 1973; Katz, 2004). A third way is to consider how satisfied engineers are with course offerings and utilization of such training on the job. This was carried out some time ago by one of the authors for Canada, USA, and UK; about three-fourths of the graduates expressed satisfaction with coverage of their undergraduate programs at the time (Gross, 1969a). Utilization rates were higher for USA and attributed to a larger economy allowing more specialization. We now revisit this issue in more detail with data from our 2009 survey.

Debates continue to this day about what a “proper” engineering curriculum should look like at the undergraduate (and graduate) level. Associations, government agencies, and other groups go back and forth in their emphasis on the role of science, design, and craftsmanship courses with no clear resolution (White 2002; Wilson, 1998). In recent decades, two other topics came to the forefront, women’s enrollment and dropout rates. These two issues are on their way to resolution. With concerted efforts, both Canadian and U.S. universities increased the share of females to the 12%-24% range and at some schools the figures are now much higher (Frize, 1999; Zywno et al., 2000). As for the drop-out rates, “engineering programs retain just as many students as others do and women are just as likely to stick around as their male counterparts” according to report using a database of 70,000 students maintained at Purdue University (Venere, 2009).

THE LABOR MARKET FOR ENGINEERS

For many decades in Canada, and USA, government agencies, engineering associations, as well as scholars, analyzed the labor market for various occupations and specifically professions. After the launching of satellites and humans into space by the USSR during 1957-1961, debate ensued about the so-called shortage of scientists and engineers. One of the authors was directly involved in this discussion under the sponsorship of the Science Council of Canada (Boyd & Gross, 1973). The key conclusions that emerged were these: significant exchange prevails among scientific and technical occupations; those with dual (a major plus a minor) background do better in the labor market; flexible training and lifetime learning benefit individuals, organizations, and national economies.

In recent years, still more studies have been carried out on this topic, including those sponsored by the National Science Foundation (US) and the Economic Council of Canada with many calling for assistance to universities. But the definitive work on the labor market for engineers is a rigorous analysis that arrived at similar conclusions to those noted above. Two authors developed a dynamic model of occupational choice and applied it to the engineering profession (Ryoo & Rosen, 2004). They found that demand responds well to wage levels and “demand-shifters,” while supply (university enrollment) is quite responsive to career prospects. Shortages seldom exist and “hence subsidies to build technical talent ahead of demand are misplaced.” This is a notable conclusion.

An underlying sub-theme in this domain is one of immigration and emigration by engineers, not just between Canada and USA, but also between North America and other regions. Accrediting associations in the two nations, at the provincial and state level, have been reluctant to consider training gained outside the respective country as equivalent to those gained domestically. As a result, immigrants must often repeat courses and/or have to take jobs unrelated to their engineering training (Boyd & Thomas, 2001; CCPE, 2006). Even when the numbers balance between emigrating and immigrating engineers, some claim that this is an uneven situation or “brain drain” as quality may differ and “foreign entrants must be acclimated” (DeVoretz, 2000). We think this is an overstatement.
PRIMARY SURVEYS, CANADA, 1965 AND 2009

Scope and Methodology

In 1965, one of the authors has undertaken his doctoral dissertation on the topic of engineering manpower in Canada; results were then reported in various refereed journals (Gross, 1969a and 1969b). The study involved three cohorts of all electrical engineering graduates—those from 1954, 1959, and 1964—from all Canadian universities. Database consisted of 1177 individuals with names obtained from the alumni associations of the 19 universities. There were 819 respondents for a truly high response rate of 70 percent. The survey forms (pre-tested in five companies in Ontario) were mailed out with a cover letter signed by the author—a “fellow engineer” from the University of Saskatchewan.

In 2009, this author revisited those nine universities that had graduates in each of the three cohort years (however, two French-language universities exempted themselves). This procedure allowed following all three cohorts through the years. Despite a much shorter survey form, the response rate in 2009 was much lower, coming in at 26 percent, with 220 alumni responding from a potential pool of 838. This was not unexpected as some graduates have retired, died, or had no postal addresses. In both surveys, names and addresses came from university alumni associations. In the more recent case, these associations—partly to keep control of names—sent out the survey form themselves.

In 1965, the five-page survey focused on demographics, education, positions held, function, mobility, income, plus satisfaction and utilization pertaining to both education and the current job. In 2009 a short survey form omitted questions on demographics, degrees, and income, but otherwise focused on identical aspects. Together, the surveys provide a good cross-sectional follow-up and a longitudinal view in the aggregate figures (since we did not match up individuals between the two surveys). The data consist of two different time frames for the graduates, at the start of their careers and over four decades later, at the end of their careers. Our techniques include descriptive statistics, correlation analysis, and hypothesis testing; here we offer simple tables showing the highlights. The emphasis throughout is on comparing the three cohorts and the two time frames. We shall cite related findings as well from other studies conducted in Canada and USA.

Context and Highlights

During the 1965-2009 period several broad trends converged that had a strong impact on the three cohorts. First, the Canadian economy evolved from a mining-manufacturing mode into a broader mix with services coming to the fore. Computer and communication technology has seen rapid advances. Second, the nature of skill sets required by various industry sectors lined up well with reforms in engineering education. The evolving curriculum both reflected and influenced the notion that technical and managerial skills will be in demand throughout one’s career. Third, career stability took on new meaning: graduates seldom stayed with one employer for decades; instead, they were ready to cross industry and functional boundaries in an expanding economy. Such mobility was strongly influenced by the demolition of the myth of dual ladder or parallel path of advancement. To gain higher salary and recognition, the move to managerial positions gained strength.

Education

As the three cohorts of electrical engineering graduates look back on their university education, they express highly positive views as shown in Table 1. Over two-third would elect the same undergraduate major (electrical engineering or EE) again and an even greater proportion would recommend it to those entering universities.
Table 1: Canadian Engineering Graduates Look Back on Their Education

Question #1: Would you choose the same major (EE) again?! Percent saying yes

<table>
<thead>
<tr>
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<th>Class of 1954</th>
<th>Class of 1959</th>
<th>Class of 1964</th>
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<tbody>
<tr>
<td>1965 survey</td>
<td>61%</td>
<td>69%</td>
<td>74%</td>
</tr>
<tr>
<td>2009 survey</td>
<td>87%</td>
<td>75%</td>
<td>70%</td>
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</tbody>
</table>

Question #2: Would you recommend this major (EE) to others? Percent saying yes

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<th>Class of 1954</th>
<th>Class of 1959</th>
<th>Class of 1964</th>
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<tbody>
<tr>
<td>1965 survey</td>
<td>86%</td>
<td>83%</td>
<td>78%</td>
</tr>
<tr>
<td>2009 survey</td>
<td>91%</td>
<td>88%</td>
<td>87%</td>
</tr>
</tbody>
</table>

Comments on this facet include approval of their program: (1) “learned to analyze problems, both technical and non-technical”; (2) “the training was logical, organized”; (3) “technology did advance, but we are prepared for that”; (4) “the EE degree proved to be essential for my career, even helped me to move into management.”

Education and Jobs

Members of the three cohorts were also asked to rate the interface between their EE program and their current position which, of course, referred to a job near the start and a job near the end of their professional career in the respective 1965 and 2009 survey. Along with this, we asked them to rate their satisfaction with the current job, using the same scale, in both 1965 and 2009. Results are shown in Table 2.

Table 2: Canadian Engineering Graduates Look at the Education-Job Interface

Question #1: Please rate, on a 1 to 100 scale, the match between your (EE) undergraduate education and your current (or last) position

<table>
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<th>Class of 1954</th>
<th>Class of 1959</th>
<th>Class of 1964</th>
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<tbody>
<tr>
<td>1965 survey</td>
<td>55</td>
<td>52</td>
<td>47</td>
</tr>
<tr>
<td>2009 survey</td>
<td>58</td>
<td>56</td>
<td>58</td>
</tr>
</tbody>
</table>

Question #2: Please rate, on a 1 to 100 scale, your satisfaction with your current (or last) position at work

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<th>Class of 1954</th>
<th>Class of 1959</th>
<th>Class of 1964</th>
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<tbody>
<tr>
<td>1965 survey</td>
<td>80</td>
<td>80</td>
<td>75</td>
</tr>
<tr>
<td>2009 survey</td>
<td>82</td>
<td>82</td>
<td>83</td>
</tr>
</tbody>
</table>

Here we note a divergence between the two questions. There is some hesitancy to say that the EE training was “just the right match for this position”, but coupled with other answers, there is still clear approval. The graduates are highly satisfied both early on and near the end of their career with the current (or last) position they hold or held. We found no significant difference, at the 95% confidence level, between satisfaction rates and year of graduation or university attended. Findings here underline the value of their education and, more importantly, demonstrate high levels of satisfaction and good adjustment.

Career as a Whole

Members of all three cohorts are now nearing or are at the end of their careers. We did not ask them about this facet in 1965, but we did probe the education-career interface and career satisfaction in 2009. Results are shown in Table 3.
Table 3: Canadian Engineering Graduates Look at their Whole Careers

Question #1: Please rate, on a 1 to 100 scale, the role your engineering education played in your career

<table>
<thead>
<tr>
<th>Class of 1954</th>
<th>Class of 1959</th>
<th>Class of 1964</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009 survey</td>
<td>68</td>
<td>64</td>
</tr>
</tbody>
</table>

Question #2: Please rate your overall satisfaction, on a 1 to 100 scale, for all the positions you held over your career

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<tr>
<th>Class of 1954</th>
<th>Class of 1959</th>
<th>Class of 1964</th>
</tr>
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<tbody>
<tr>
<td>2009 survey</td>
<td>86</td>
<td>84</td>
</tr>
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</table>

About two-third f respondents think that their EE program was appropriate and over four-fifth are highly satisfied with their careers as a whole. We probed further and found no differences in these two “satisfaction scores” across major industry sectors.

Function/Leadership

In what functions did the graduates find themselves early on and near or at the end of their careers? The revealing results are shown in Table 4.

Table 4: Canadian Engineering Graduates by Job Function/Key Activity

<table>
<thead>
<tr>
<th>Function/Activity</th>
<th>Class of 1954</th>
<th>Class of 1959</th>
<th>Class of 1964</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical/Engnrng</td>
<td>61.3%</td>
<td>26.8%</td>
<td>59.6%</td>
</tr>
<tr>
<td>Other High Level</td>
<td>11.8%</td>
<td>16.7%</td>
<td>18.5%</td>
</tr>
<tr>
<td>Executive/Administ</td>
<td>6.2%</td>
<td>55.0%</td>
<td>8.2%</td>
</tr>
<tr>
<td>All Other</td>
<td>20.7%</td>
<td>1.5%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Total</td>
<td>100.</td>
<td>100.</td>
<td>100.</td>
</tr>
</tbody>
</table>

The statistics in Table 4 clearly indicate that there were significant shifts in all three cohorts during their long careers. Many did move away from engineering or related technical work; some have taken on other high level work (defined here as: teaching, research, or consultancy); and, there was strong movement toward posts in executive-administrative ranks. Even more significantly, we found that as of 2009, 21.4% of the class of 1964, 24.6% of the class of 1959, and 30.1% of the class of 1964 held a top level, leadership role in 2009 with one of the following titles: owner; managing director; chairman; executive vice-president; or president. We estimate that one-fourth of these worked in small to medium-size firms lending credence to an entrepreneurial bent. Our work is in line also with results reported elsewhere, in Canada and USA, namely that a high percentage of chief executives hold an engineering degree.

COMPARATIVE FINDINGS FROM OTHER SURVEYS, CANADA AND USA

Since the 1950s, select Government of Canada agencies and a few academics, primarily at Queen’s U, U of Ottawa, and HEC Montreal conducted work regarding the education-job interface of technology graduates. The path runs from a survey of 1954 engineering graduates by the Department of Labour to the more recent, every fifth-year census called National Graduates Survey by Statistics Canada (2012 results are not yet available). The titles range from “Is it worth doing a science or technology degree in Canada?” to “Determinants of desired career paths among Canadian engineers” (Kitchell, 1997; Lavoie & Finnie, 1997, 1999; Tremblay et al., 1998, 2007).

These findings show that the career ladder for engineering graduates is diverse. Some do stay with engineering, some move into project-based careers, but the move to management now occurs as early as 3 to 5 years after graduation.
Regardless of when a technical career is left behind, the undergraduate engineering degree is seen as valuable. Autonomy was seen as an important element in professional development; career success appears strongly related to one’s views on professional and organization values. In several surveys an entrepreneurial orientation clearly revealed itself, with about 10% of the engineers hoping to launch their own business (Tremblay et al., 1998, 2007).

In the USA, during the past two decades, both the scholarly and business press articles examined background, qualification, experience, and tenure of chief executives. The groups included the S&P 500, the Fortune 500, or a similar set of medium and large companies. Most of the studies provide cross-sectional analysis in a given year, but some are carried out on an annual basis and some reached back several decades in history. In looking at “the last degrees” of corporate executives, 1936-2003, Frydman showed that engineering degrees have declined, while business degrees have increased. She attributes this to general skills being more in demand as executives now cross industry lines (Frydman, 2005). On the other hand, Gurke argues that much like in the 1940s, engineers currently make great business leaders, because they are “tech-savvy, analytical, meticulous, taking risks, but calculated ones” (Gurke, 2011). She also notes approvingly that engineers are often leaders of small and start-up companies.

The developmental background of S&P 500 chief executives has been followed in much detail via annual reports, all of them titled “Route to the Top,” by Spencer Stuart, an executive search firm. The results from the 2004 to 2008 studies show engineering as the top undergraduate degree at 20% to 22%, followed by economics at 11% to 15%, and business administration at 13% to 15% (Spencer Stuart, 2008 etc.). Paralleling the above, in the case of Fortune 500 –firms much larger than the S&P 500- about 20% of the chief executives had an undergraduate degree in engineering (Martelli & Abels, 2010). This fact is often publicized by many engineering schools as well as engineering associations.

Several other articles we reviewed in this regard take an analytical approach to the qualifications of corporate leaders, reporting an ebb and tide in the background of chief executives. Some argue that globalization and supply chain considerations will promote the importance of bachelor (or master) degrees in business; others think that engineering degrees will remain important due to overriding technical and operations issues (Claes et al., 2010; Ocasio & Kim, 1999). Engineering educators keep calling for much more entrepreneurial content in the curriculum (Eisenstein, 2010). Others claim that the liberal arts can serve equally well for entrepreneurship even in technical areas (Wadhwa, 2012).

**ENGINEERING CONSULTANCIES –GLOBAL AND LOCAL**

One particular route, engineering consultancies seem to offer a “natural” route for engineer entrepreneurs. Such consultants engage in the design and management of projects, feasibility studies, procurement, installation services (but not construction), and evaluation of completed projects. In such professional firms, most staff members have degrees in engineering and even professional licenses. Associations and state/provincial licensing boards play a major role. However, the question of whether professionalism resides with the individual or the consultancy is still strongly debated and will not be soon resolved. As a general rule, small firms and associations advocate the former, large firms the latter; the specific role that licensing should play is under discussion.

Many books, articles, and theses have been written about this sector, focusing on how to launch a consultancy, how to bid on projects, and how to expand domestically and abroad; handbooks give guidance on staffing, cost control, marketing, and strategy (see Kaye, 1998, Osegowitsch, 2003, Rowson and Wright, 2004). Solid information on engineering consultancies on a nation-by-nation basis is hard to come by, but a new global survey is now under way (FIDIC, 2012). According to one private report, global engineering services had a turnover of $515 billion in 2011, achieved by 480,000 firms with a total of 2.9 million staff members with growth forecast at 3.5% per annum. (IBISworld, 2012). Based on this, mean revenue per firm is currently about $1.1 million or $183,000 per staff. This report says little, however, about the various national markets.

These and other data indicate that the typical engineering firm is small, operating with a total staff of one to ten persons. Industry concentration is low, with top 10 firms having less than a 12% market share globally; in the US, only 5% of firms employ 100 or more staff. There is consolidation and competition with entry barriers rated medium and rising because “existing players hold secure contracts.” There are, however, also ample opportunities in emerging markets and in energy, utilities, and building construction. Even in the mature regions, namely North America and Europe, specialized expertise is still much in demand and allows for entrepreneurial undertaking.
CONCLUSIONS, RECOMMENDATIONS, LIMITATIONS

In this report, we demonstrated that engineering education and experience offer a suitable path to high-level careers. The engineering programs offered in North America constitute rigorous training, assist in developing analytical skills, and encourage taking risks. In the labor market, ample opportunities remain to stay in technical areas, but those who opt for other high-level activities (consulting, teaching, research) and management or administrative work will be rewarded in terms of satisfaction and remuneration.

We conducted cross-sectional and semi-longitudinal surveys of three cohorts of Canadian electrical engineering (EE) graduates. The mail surveys were administered in 1965 and 2009 to those who received their bachelor’s degree in 1954, 1959, and 1964, yielding an unusual opportunity to get an evaluation at the start and at the end of their careers. These EE graduates rated their undergraduate education valuable earlier as well as just now; majority would recommend the program to young university entrants; and there is much satisfaction with both the education-job interface at the current job as well as over all the positions held during their long careers. The statistics and comments (of which we could quote only a few) reveal that those EE graduates can and did move into executive positions and a sizable proportion, 21% to 30%, achieved top ranks. We then offered related, supporting evidence on this topic by other authors in both Canada and USA. A positive situation exists between supply and demand in the labor market for engineering talent. Engineering consultancy, with its many small firms, is an attractive global sector for combining technical and managerial work and for displaying entrepreneurial talent.

Our primary study was limited to three specific cohorts and a given engineering degree. The two survey forms were not identical and the study was longitudinal in the aggregates only as we could not match up respondents on an individual basis. At some future date, ambitious researchers, possibly with collaboration of alumni offices, may be able to do that. Until then, national graduate surveys in Canada and similar undertakings in other nations can serve as benchmark studies for those looking at education and jobs.

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ABSTRACT

This study focuses on how SMEs have been researched in the first 12 years of the new millennium and published in JRME between 2000 and 2011. There have been many studies on how SME owner/managers do business, their decision making processes and ways of delivering marketing activities, and many different methodologies have been used.

Within the context of a wider study of fourteen international journals on small business and entrepreneurship, the papers published in JRME from 2000-2011 were analysed in relation to the SME definitions used, methodology employed, geographical coverage, business sectors covered and the overall research focus of papers.

This paper presents the findings that have emerged. How SMEs do business and their impact on the economic environment has been studied in many different locations and many different ways. This has added richness and depth to our understanding of SMEs over the years. This study provides some findings in relation to the variety of studies carried out and the research presented in the JRME over a twelve year period.

INTRODUCTION

Globally SMEs account for up to 99% of all businesses depending on what statistics are used and how the recording is done. Generally they are acknowledged to be a vibrant and innovative source of new ideas in economies and have been the main source of new employment growth in many advanced economies for some time, as pressures on MNEs have increased.

SMEs are often defined by the limitations inherent in their smallness and lack of resources compared to larger companies (Carson and Gilmore, 2000; Stokes and Wilson, 2006). Both practitioners and academic researchers recognise that SMEs operate and do business in a different way from large organisations (Hansen and Eggers, 2010; Gilmore and Carson 2007; Carson and Gilmore, 2000). Many SMEs are started up by entrepreneurially minded people and may develop in an unconventional and/or sporadic manner unlike larger firms operating within a hierarchical structure of key functional managers (Gilmore, 2011).

While there is a general recognition of the importance of the SME in many global economies, when it comes to defining an SME there is less agreement (McAuley and Gilmore, 2010). There are many definitions available. Google, for example lists many definitions for SMEs which vary from country to country. While occasionally issues of ownership and control (family owned, access to external capital) are used to define them, others use turnover figures, but most official statistics focus on numbers of people employed.

Therefore it is possible to look at a range of international statistics that illustrate a large variation in how an SME size is defined. This may be the major variation in what researchers use but there is diversity in other parameters too, including the sectors studied, geographical locations, sample sizes and the methods used to study SMEs. It is argued that having an overview of such fundamentals will enhance our understanding of what we have achieved in research terms and also pave the way for creating a future research agenda (McAuley and Gilmore, 2010).
RESEARCH IN SME MARKETING

Although researchers have been studying SMEs and how they are different from large businesses for many years, there is no universal approach to defining and researching these firms and their owners and managers. Research has focused on many aspects of SMEs. For example, how SMEs are created, grow, become successful or fail, and how entrepreneurially they behave.

Defining SMEs is not simple. Measurements often rely on such factors as number of employees, sales turnover, profitability and net worth (Storey, 1994; Deakins and Freel, 2006). In the UK, the most widely accepted definition is that based on the findings of the Bolton Committee Report (1971) which defines a small firm as an independent business, managed by its owner or part-owners and having a small market share. However, the difficulty with using these terms as a basis for definition is that they are not always appropriate as they can be affected by regional variations (Hill, 2001). In the U.S a small business is defined as being an independent business having fewer than 500 employees. However firms wishing to be designated a small business for government programs such as contracting must meet size standards which vary by industry. So even after many years of research, there is no uniform definition of an SME in the literature that is internationally used.

The most recent definition of an SME in the UK can be found in the Companies Act 2006. This government definition specifies that an SME is either a ‘company and is not a member of a large group’ or a business that although not an actual company ‘would be a SME company’ if it were to be a company. It elaborates by noting that a Small company is one with no more than 50 employees, turnover of $\leq 5.6$m and a balance sheet total of $\leq 2.8$m; whereas, a Medium company is one with no more than 250 employees, turnover of $\leq 22.8$m and a balance sheet total of $\leq 11.4$m.

Similarly, recent EU definitions specify that a Small company is one with no more than 50 employees, turnover of $\leq 10$m and / or a balance sheet total of $\leq 10$m; a Medium company is one with no more than 250 employees, turnover of $\leq 50$m and / or a balance sheet total of $\leq 43$m; it further specifies a Micro company as one with no more than 10 employees, turnover of $\leq 2$m and / or a balance sheet of $\leq 2$m.

Studies of SMEs have been carried out for many years. Economically SMEs contribute to job creation, value creation, investment and exporting. Academically, research focusing on SMEs has attracted growing interest over the last 30 years. This is illustrated in the growth in academic journals focusing on research in SMEs since the early 1980s (Torres 1997).

The Investigation and review of the scope and nature of research in any field is useful at many different levels. It illustrates the distinctiveness of the field in relation to the wider more generic area of business research. It helps to identify the fragmentation and range of theoretical approaches and methodologies used to investigate the field (Torres 1997). It can also be useful in illustrating the diversity of research topics within the research area (Lesage and Wechler 2010).

Understanding how, when and why past research has been conducted will be crucial to the improvement of the overall quality of the research process and progression in any given field (Boissin et al 2011). A review of past studies allows missing information to be highlighted, such as the nature of respondents or the precise mention of the time frame of the research. Investigating the range of methodologies used to study SMEs over time, in different situations, the respondents used and contexts used for past research will also shed light on the overall contribution to the field.

Given the very individual nature of many SMEs, it is important to take account of the context of how and what has been researched. For example the theoretical framework that underpins a research project, the overall conclusions drawn from a study, the geographical and business sector in which the SME operate are clearly important. It can illustrate extremes by looking at unique situations in case studies, and by carrying out comparisons of different situations (for example, in different market sectors or geographical locations). These will all set the context for a study of how SMEs are defined in different studies throughout the world and the methodologies chosen to research SMEs.
METHODOLOGY

Stage one of this research was to select leading SME and Entrepreneurship Journals from Europe, North America and Australasia and conduct a systematic content review of the parameters of the empirical studies reported in each journal. The journals represent a significant body of output where researchers working at the marketing-entrepreneurship interface place their work. Fourteen journals were selected and these are being investigated in a longitudinal study. The selection of journals is shown in Appendix 1.

The long-term research project aims to analyse all empirical papers included in the journals between 2000 and 2011 and to create a comprehensive table of what academics in the area have been studying and how they have been approaching such studies conceptually and empirically.

This paper reports on the findings derived from the analysis of the journal closely associated with the AM Entrepreneurial and Small Business SIG and the UIC Marketing Entrepreneurship Interface SIG Group, the Journal of Research in Marketing and Entrepreneurship. These findings will summarise the different definitions and methodologies used to investigate SMEs between 2000 and 2011.

There were 94 papers published in the JRME between 2000 and 2011. In order to objectively study and measure the nature of this work, content analysis using QSR Nvivo9 was conducted in order to explore, compare, understand and describe the main areas with which the study was eventually concerned (Stemler, 2001; Sprott and Miyazaki, 2002).

The use of content analysis presented the authors with many advantages including the opportunity to carefully and systematically examine and condense a vast amount of information presented over a long period of time into manageable categories that would have otherwise been impossible to analyse. It also allowed for a visual and descriptive presentation of the findings of the research.

FINDINGS & ANALYSIS

This research sought to provide an overview of the nature of the research carried out and published in JRME between 2000 and 2011. The findings are presented in relation to: SME definitions used, methodology employed, geographical coverage, business sectors covered and overall research focus of papers.

SME Definitions

The vast majority of the 94 papers published in the JRME between 2000 and 2011 did not include a definition of a SME or precisely define the size of the companies they studied (see Figure 1); they were simply referred to generically as SMEs. Whilst 60 of these were specifically focused upon either SMEs (28 papers) or the SME-Entrepreneurship interface (32 papers), it should be noted that it was not to be expected to find an SME definition in 34 of the papers as their specific focus was not upon SMEs; rather they were specifically examining the area of entrepreneurship (30 papers), social entrepreneurship (1 paper) or an area beyond SME-Entrepreneurship (3 papers) such as the statistical theory and reporting of data.
Only eight papers included any kind of definition of the SMEs they studied. These included five papers where the definition referred only to the number of employees; one study, with no defined region, considered SMEs as being those with between 10 and 200 employees; a study in China of those being companies with 500 or fewer employees; a study in the UK (specifically Northern Ireland) of those being companies with 10-250 employees; a conceptual study, with no defined region, of those being with between 10-200 employees; a cross or multi-country study (across England-Wales-Northern Ireland-Scotland) which examined micro SMEs as those being one- to two-person businesses; and a cross or multi-country study (UK-Canada-Global) which examined micro and small firms under 50 employees.

The definition in the other three papers also referred to the number of employees but also included ownership and income as part of their SME definition. These included a study in the USA that loosely defined an SME as being a 75+ employee subsidiary corporation of a large 400,000+ employee based parent company and a micro-SME as having 1-10 employees; an Australian study of those being with less than 200 employees and turnover of more than AUD$250,000 but with no single customer accounting for more than 50% of a total turnover; and a Canadian study as those being greater than 5 and less than 250 employees but regarded as being stand-alone enterprises.

Research Methodologies Employed

A review of the methodologies employed in the 94 papers published in the JRME between 2000 and 2011 (see Figure 2) identified that 45 papers (48%) were conceptual in nature. Thirty seven of these conceptual papers were based solely upon personal comment or opinion of the author(s). However, there were 7 conceptual papers that were based on research in a range of areas, for example a study of the clock Industry in the USA, a study of veterinary services and a product supply firm in Australia.
The empirical methodology employed by the remaining 49 papers (52%) published during this time period was split fairly evenly between the use of a quantitative (23 papers) and qualitative methodologies (22 papers); a mixed methodology was employed in a further 4 papers.

Quantitative Studies

The 23 papers that employed a quantitative methodology between 2000 and 2011, concerned studies that were conducted across a range of countries; with the USA (8) and UK (4) accounting for just over half (52%) of them.

Only one quantitative study used a regression analysis of published data as its basis, the remaining 22 studies used data collected across a range of questionnaire surveys. Not unexpectedly, it was found that the use of Postal surveys (6) was the predominant survey method between 2000-2006 and more recently this has been superseded by the use of Online surveys (5) from 2007-2011. Whilst in 4 of the studies it was not possible to identify the actual survey method used, the remaining studies used the full range of survey methods available i.e. three Self-completion and one Face-to-Face, Telephone/ Fax and Panel surveys respectively; one further study used analysis of a range of published secondary data surveys (multi-study) to generate its own primary data findings. The sample sizes of these quantitative studies ranged from as low as 24 to as high as 794; with the average sample size of 175.

Qualitative Studies

The 22 papers in the JRME between 2000 and 2011 that employed a qualitative methodology also concerned studies across a range of other countries and again the UK (9) and USA (3) – albeit with an almost inverse proportion to the use of a quantitative methodology – accounted for just over half (54.5%) of them.

In-depth interviewing (11) was the most predominant qualitative method used; accounting for 50% of these studies. The sample sizes of these In-depth interviews ranged from as low as 5 to as high as 60; with the average sample size of 24. With the exception of Focus Group method (which was only used in conjunction with other methodologies and methods), the remaining studies used the full range of qualitative methods including Case studies (4) in the Health, Real Estate, Music and Technology sectors; various types of Content Analyses (5); as well as one Observation study to identify management beliefs and practices, skills, education, and patterns of behaviour that appears to be associated with entrepreneurial success in the USA and one study that combined both In-depth Interviewing and a series of Focus Groups with a Content Analysis to develop a conceptual model of the processes of marketing as undertaken by entrepreneurs.
Mixed Method Studies

The four empirical papers that employed a mixed-method methodology all used survey questionnaires; two studies, based in UK and USA, used sample sizes of 320 and 142 survey questionnaires with Focus Groups of 3 and 5 respectively and the other two studies, based in Australia and UK, used sample sizes of 21 and 100 survey questionnaires with In-depth Interviews of 21 and 2 respectively. Not only was the use of mixed-methods the least used methodology in the JRME 2000-11, it was also the only methodology that has not been used since 2007; rather than seeing any increase in its use it appears that researchers publishing in this journal are tending to increasing use a mono-method approach to their work.

Geographical Coverage

An initial assessment of the geographic coverage of the 94 papers published in the JRME between 2000 and 2011 identified that the issue of their geographic area was not relevant (as they were based on individual opinions on a range of issues) in 36 of these studies. The remaining 58 papers were predominantly concerned with studies either in the UK or USA, nineteen papers (33%) were based in the UK and fourteen (24%) were based in the USA.

The remaining twenty five papers covered a wide range of geographic areas (see Fig. 3). Seven papers (12%) were based in Europe; two were specifically based in the Republic of Ireland and one in each in Greece, Italy, Germany, France and Finland. Six papers (10%) were based in the Australasia area; four in Australia and two in New Zealand. Two papers were based in Canada and one each in Africa and China.

A further eight papers (14%) were based upon cross or multi-country analyses. Four involved studies with the UK; one had a UK-USA focus, one had a UK-Caribbean focus, one had a UK-Canada-Global focus and one was a study within the UK but across England-Wales-Northern Ireland-Scotland. Of the other remaining four papers one had a US-Turkey-Spain focus; one had a Norway-France-Portugal focus; and the other two were classed as inherently having a global focus as one was concerned with global conceptual studies and the other was based upon an online community / virtual meeting place for respondents across range of countries.

![Figure 3: Geographic Coverage of JRME Papers 2000-11](image)

Business sectors researched

The majority of papers (57.5%) published in the JRME between 2000 and 2011 were studies concerned with either academic research (31) i.e. model development or advancement of Marketing-Entrepreneurial thought (only one of these had one single geographic area as its focus – UK; the other 30 did not have a specific geographic focus) or involved Cross-sector analysis (23).
The cross sector analyses were predominated by studies in both UK (9) and USA (8) with the remainder being single studies based in a range of specific geographic countries; only one study used both a cross-sector and cross-country analysis as its basis (see Figure 4).

**Figure 4: Sector coverage of JRME papers 2000-11**

A wide variety of topics featured in the 94 papers in the JRME between 2000 and 2011 (see Figure 5). These ranged from those that were concerned solely with the SME marketing/entrepreneurial interface (37); to those focusing solely on specific aspects of either marketing as applied to specific companies (28) or entrepreneurship / specific aspects of managing and running business (16); to those concerned with research methodology issues (7) or specifically of use in an educational or pedagogic setting (5). Furthermore, there was a single paper that was classified as being a definitional or positional piece.

**Figure 5: Research focus of JRME papers 2000-11**
Specific aspects of the SME marketing/entrepreneurship interface

These 37 papers illustrated a wide variety of topics such as studies of different entrepreneurial firms, the use of networking to improve sales performance, opportunity recognition, life experiences and cultural influences on entrepreneurial activity, entrepreneurial partnerships in franchising, creative thinking, innovation capabilities and technology for competitive advantage.

Specific aspects of marketing applied to a specific company

These 28 papers focused solely on specific aspects of marketing as applied to specific companies and whilst the value and use of knowledge and experience of marketing, as well as being marketing orientated, were regular recurrent themes, they included a wide range of topics such as competitive activity for SMEs; co-operation between firms; relationship marketing versus sales driven activity; cost driven firms; how exporting SMEs overcome hurdles; CRM for SMEs; branding for SMES; adoption of e-marketing by SMEs; as well as a number of papers based on how to improve dissemination of knowledge.

Entrepreneurship / Specific aspects of managing and running business

These 16 papers focused on a wide range of aspects such as the difficulties and challenges of running a business over time; entrepreneurial/managerial types; business strategies and the importance of entrepreneurial/organisational leadership. As well as specific papers about how to improve business; how to improve business performance; identifying the characteristics of high growth organisations; dealing with the high risk nature of business especially for microbusinesses; and how to deal with business failure. There were also papers on nature of marketing orientation and how it can be defined and is different or similar to entrepreneurial orientation. While in more recent years there appears to be a growth of interest in social entrepreneurship as a subject area and how this can be used to benefit different communities; this was not noticeably reflected in the JRME between 2000-11, with only one paper (out of the 94) overtly concerned with this topic.

Research Methodology Issues

These 7 papers were predominantly conceptual in nature (5) covering a range of thoughts and opinions on the range and use of methodologies including the role of science and statistical theory, as well as indications or pointers on future research direction and priorities. The other 2 papers were quantitative in their focus and were concerned with either employing a factor analysis in a USA study in the technology sector or the development of scale measurement in a cross sector study in China.

Educational/Pedagogic Issues

These 5 papers were also predominantly conceptual in nature (4) with 2 being written case studies for use in a class room setting and the others on encouraging student reflection and the use of Web 2.0 in entrepreneurship education. There was also a single paper that examined how amendments should be made to the UK higher education teaching curriculum in light of a study based upon qualitative data.

CONCLUSION

Based on this initial part of a much larger study, it is evident that SME/Entrepreneurial marketing researchers are interested in a very wide range of topics, with many different themes in a very complex arena of national and international business.

The main contribution of this paper is to highlight the research carried out within a twelve year period in the early life of JRME. It considered how authors during this period of time defined the SMEs they were studying and the methodologies used. Regarding the brief overview of the papers published in JRME over the past twelve years, it is evident that researchers in this field are much more focused on the phenomenon they are studying and less so on the need to define them.
However we are at a very early stage of research analysis and further research and analysis will allow us to point to the implications for SME research. The purpose of this will enable us to say where we have been, how we have gone about it and to point to opportunities for a future research agenda.

REFERENCES


APPENDIX

The journals selected for study are:

Europe
Journal of Small Business and Enterprise Development (UK)
International Journal of Entrepreneurial Behaviour and Research (UK)
International Small Business Journal (UK)
International Journal of Globalisation and Small Business (Ed in Germany).
Journal of Research in Marketing and Entrepreneurship (UK)

North America
Journal of Small Business Management (USA)
Journal of Business Venturing (USA)
Entrepreneurship: Theory and Practice (USA)
International Journal of Entrepreneurship and Small Business (USA)
Journal of Small Business and Entrepreneurship (Canada)
Journal of Small Business Strategy (USA)
Small Business Economics

Australasia
Australasian Marketing Journal (Aus)
Journal of Entrepreneurship (India)
ENTREPRENEURS AT THE MARKETING INTERFACE: ARE SERIAL ENTREPRENEURS DIFFERENT?

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ABSTRACT

This exploratory study investigates the relationship between serial and novice entrepreneurs with respect to three variables of interest to entrepreneurship and marketing researchers: entrepreneurial orientation, market orientation, and opportunity recognition. For many regions, promoting entrepreneurship has become the focal strategy for stimulating economic growth and developing regional competitive advantage. It has been argued that differences should exist between entrepreneurs who start multiple businesses (serial entrepreneurs) and entrepreneurs who have been associated with only one business endeavor (novice entrepreneurs). This study seeks to empirically test whether differences exist between the entrepreneur types on these variables of interest. Although preliminary, results suggest that serial entrepreneurs do exhibit a higher level of entrepreneurial orientation and a greater propensity for opportunity recognition than do novice entrepreneurs but that serial and novice entrepreneurs are more similar to each other with respect to market orientation. Implications for entrepreneurship are discussed and areas for future research are proposed.

INTRODUCTION

Entrepreneurs are important contributors to economic development and are a key to technological innovations as well as job growth. They help their communities by providing new jobs, invest in projects within communities, participating in business locally and giving back to charities. As such, they do not just help with economic development but also with social development. In today’s economic situation entrepreneurs are especially needed to help motivate economic growth. Many communities and governments realize the benefits derived from entrepreneurial activity and thus are fomenting strategies to enable entrepreneurial activity within their community and state. Any research undertaken that serves to illuminate our understanding of entrepreneurship and the entrepreneur would serve both practical and theoretical ends.

Defining entrepreneurship is rather difficult as there is no universal consensus regarding its definition. For the purposes of this study we adopt Venkataraman’s (1997) definition. According to Venkataraman entrepreneurship means “…how, by whom, and with what effects opportunities are created for future goods and services and how they are discovered, evaluated and exploited” (Shane and Venkataraman, 2000, p. 218) Whereas early research has focused on entrepreneurship in general, more recent research has increasingly focused on understanding entrepreneurial actions and entrepreneurial individuals (Westhead and Wright 1998a). Studies have shown that entrepreneurs cannot be seen as a homogenous group (Woo, Cooper, and Dunkelberg, 1991). For instance entrepreneur motivations, characteristics, behavior and performance differ from entrepreneur to entrepreneur. As such, studies distinguish between different types of entrepreneurs (Westhead and Wright, 1998a). Westhead and Wright (1998a) show that entrepreneurs can be distinguished based on their experience. In their characterization of the entrepreneur they identify two types - novice entrepreneurs who arrive with no previous entrepreneurial/business experience and habitual entrepreneurs who engage in multiple entrepreneurship/business activities, often simultaneously. Ucbeasan, Wright, Westhead, and Busenitz (2003) have shown that novice and habitual entrepreneurs think differently and process information differently. Based on these findings, that entrepreneur types differ, it would be useful to our understanding of entrepreneurs to see if they also differ by type with regards to market orientation, entrepreneurial orientation and opportunity recognition for these are three constructs that the research has been shown associated with business success. For the purposes of this paper, Market orientation is defined as

“…the organization wide generation of market intelligence pertaining to current and future needs of customers, dissemination of intelligence horizontally and vertically within the organization, and organization wide action or responsiveness to market intelligence” (Jaworski and Kohli, 1993, p. 54).

That is, market orientation concerns the internal and external environments of entrepreneurs’ firm and identifies the market environment in which the entrepreneur conducts his or her business. Entrepreneurial oriented firms are …
“… firms with entrepreneurial postures, that are risk taking, innovative, and proactive. They are willing to take on high-risk projects with chances of very high returns, and are bold and aggressive in pursuing opportunities. Entrepreneurial organizations often initiate actions to which competitors then respond, and are frequently first-to-market with new product offerings. In support of this strategic orientation, entrepreneurial firms characteristically emphasize technological leadership and research and development (Khandwalla, 1977)” (cited in Covin and Slevin, 1991, p. 7-8).

Opportunity recognition looks at how an entrepreneur identifies and acts upon identified opportunities. Entrepreneurial opportunities have been defined as “those situations in which new goods, services, raw materials, and organizing methods can be introduced and sold at greater than their cost of production (Casson, 1982)” (cited in Shane and Venkataraman, 2000, p. 220).

There has been no research undertaken thus far, that compares all three characteristics by entrepreneur type (e.g., novice and serial entrepreneurs). This paper investigates whether differences might exist between two types of entrepreneurs (serial versus novice) regarding three important variables of interest to our understanding of entrepreneurship: entrepreneurial orientation, market orientation and opportunity recognition. In the following sections the extant research is reviewed with regards to entrepreneurship entrepreneurial orientation, market orientation and opportunity recognition with hypotheses proposed. The research methodology used to test the hypotheses is presented with results found from the analysis of the data. Lastly, a discussion of the results ensues with implications from the research offered.

BACKGROUND

Entrepreneurship and entrepreneurs

We can describe entrepreneurship research to date as being somewhat fragmented and quite varied. There appears to be limited consensus of what entrepreneurship really is and what the field itself constitutes (Gartner, 1990; Ucbasaran, Westhead, and Wright, 2001). In this study, we adopt Venkataraman’s (1997) description for entrepreneurship. According to Venkataraman (1997) entrepreneurship concerns “… how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated and exploited” (Shane and Venkataraman, 2000, p. 218).

Much of the research regarding entrepreneurship has looked at the construct with a focus on the entrepreneur. As such research has looked into entrepreneurs’ backgrounds, personalities and traits (Carland, Hoy, Boulton, and Carland, 1984) in comparison to the general population. Most studies have found differences between the groups. For instance, it has been found that entrepreneurs are more innovative and that they differ in their management styles (Stewart, Carland, and Carland, 1996). One entrepreneurial characteristic that has been the focus of much of the extant research concerns the risk propensity of entrepreneurs in comparison to that of the general population (D’Amboise and Muldowney, 1988). For instance Stewart, Watson, Carland and Carland (1999) found that entrepreneurs have a higher risk-taking propensity than corporate managers or small business owners and are also more creative than their counterparts are. On the other hand, other research has not been able to confirm differences between entrepreneurs and the general population when they are faced with risky situations (Brockhaus, 1980; Low and MacMillan, 1988). However, it makes sense that entrepreneurs are different from the general population when they are faced with risky decisions. One of the biggest concerns for new entrepreneurs is the need to raise money and capital at the beginning of the founding their business. This can be a tricky and risky venture for the entrepreneur to find adequate financial capital as many banks will not lend money without getting some kind of guarantee as, for instance, collateral. So entrepreneurs need to have a lower risk aversion to be able to still establish their own business despite not knowing whether they will succeed (Blanchflower and Oswald, 1998).

More recent studies have focused on the entrepreneurs’ behavior and cognitive processes (Baron, 1998; Palich and Bagby, 1995). Researchers find that entrepreneurs differ in their way of thinking and decision-making when compared to traditional managers. It has been shown that entrepreneurs use biases and heuristic thinking more often than do institutional managers (Busenitz, 1999). Heuristics are intuitive guidelines that simplify the decision-making process. These findings make sense, as entrepreneurs are faced with incomplete and vast amounts of information and uncertain and risky situations (Busenitz, 1999). They also have to make decisions as fast as they can since the opportunities they identify will not remain very long (Eisenhardt, 1989). One problem with heuristic thinking is that it can lead to overconfidence and an over-generalization (Busenitz, 1999). Entrepreneurs might judge an opportunity as excessively positive and generalize
it too much, though the opportunity might be more complicated and less opportunistic. This research has also been able to explain why entrepreneurs in some studies do not seem to have a higher risk propensity. As entrepreneurs oftentimes use heuristics, which can make them overly confident and optimistic about situations, when self-reporting they do not seem to perceive themselves as risk takers. When judging business situation in a different and more positive way than the general population would do, they do not think that they face greater risks than others (Busenitz, 1999; Palich and Bagby, 1995).

Other research has focused on comparing different types of entrepreneurs. Researchers suggest that entrepreneurs can be divided into novice, serial and portfolio entrepreneurs (Westhead and Wright, 1998a; Wright, Westhead, and Sol, 1998). As defined by Westhead and Wright (1998a), novice entrepreneurs are described as having no previous entrepreneurship experience and having established, purchased and/or inherited only one business. Habitual entrepreneurs have previous entrepreneurship experience and established, purchased and/or inherited more than one business. Habitual entrepreneurs can also be divided into subgroups. They are described as either serial or portfolio entrepreneurs. This paper will focus on serial entrepreneurs, meaning they establish, purchase and/or inherit another business after having previously owned one, yet they do not own more than one business at a time as opposed to a portfolio entrepreneur, who owns more than one business at a time.

Research has found that different types of entrepreneurs differ in their personal characteristics and motivations. However, when business performance by entrepreneur type is compared, performance does not appear to differ (Westhead and Wright, 1998a, 1998b, 1999). These findings suggest that that business success is not influenced by entrepreneur type and that businesses led by different types of entrepreneurs (e.g., novice or serial) can be equally successful. On the other hand, when founding a business by type of entrepreneurs is compared, the extant research shows that portfolio entrepreneurs have a higher success rate in starting the business than do a novice or serial entrepreneurs (Alsos and Kolvereid, 1998). It appears that portfolio entrepreneurs are more likely to follow through on identified opportunities than will novice or serial entrepreneurs. Based on the extant research it can be noted that entrepreneurs are a very heterogeneous group (Busenitz, 1999).

Novice versus serial entrepreneurs

Novice entrepreneurs have been the focus of much study (Carland et al., 1984; Carland and Carland, 1992; Stewart et al., 1996). The preponderance of research concludes; that entrepreneurs differ from traditional managers in multiple areas. For instance, Carland et al. (1984) found differences between entrepreneurs and traditional managers in their management styles. They found that entrepreneurs do not like routines and are more interested in change than small business owners or managers. Stewart et al. (1996) found, that entrepreneurs can be differentiated from small business owners by their unique drive for innovation as they combine innovative resources together to gain profit. Busenitz and Barney (1997) have also discovered that entrepreneurs rely more on heuristic thinking than managers do. Heuristic thinking means individuals use easier rules or strategies to make decisions.

Stewart et al. (1999) also found, that entrepreneurs scored higher in their need for achievement, preference for innovation and risk-taking propensity than do corporate managers or small business owners. Their research shows that entrepreneurs are driven and creative risk takers. However, the current research has gaps and there is a need to understand further why different types of entrepreneurs chose certain processes and strategies (Rosa, 1998). To date, it has been shown that entrepreneur types differ in their characteristics and motivations. It has also been found, that portfolio entrepreneurs have a higher success rate of transforming an existing opportunity into business than do a novice or serial entrepreneur (Alsos and Kolvereid, 1998).

Many studies comparing all three types have focused on prior experience. It has been found experience appears to make a difference. For instance experience can help habitual entrepreneurs to develop a mindset, which helps them identify and pursue only the best opportunities (McGrath and MacMillan, 2000). In addition, prior experience provides habitual entrepreneurs with tacit knowledge, which leads them to improved decision-making regarding new venture opportunities (Sarasvathy, 2001). Experience also leads to the development of cognitive skills which help habitual entrepreneurs interpret and systemize information in a more useful way (Ucbasaran, Westhead, and Wright, 2006). In a recent study about learning processes, Politis (2008) made the point that learning from different kinds of experiences influences different types of entrepreneurs as well. His study found that habitual entrepreneurs demonstrate improved skills on how to cope with uncertainty when starting a new business venture. However, Politis (2008) was not able to find significant differences in how entrepreneurs cope with absence of administrative routines and the learning of new organizational
tasks in a new business. This suggests that other factors, such as prior work experience, may have an effect on learning skills as well. Further, he notes, that habitual entrepreneurs see failure as more positive than do novice entrepreneurs. Habitual entrepreneurs see failure as a chance to learn from the experience and improve upon with the next opportunity.

More recently, studies have focused on decisions, actions and performance of different types of entrepreneurs. Research by Westhead, Ucbasaran and Wright (2005) found that habitual entrepreneurs differ among themselves as well as differ from novice entrepreneurs. For example, findings show that portfolio entrepreneurs have identified more opportunities in the past than serial or novice entrepreneurs; they also believe themselves to be more opportunistic than do novice or serial entrepreneurs. Additionally, they do not have any problems with identifying new business ideas and pursuing new business ventures. In contrast serial entrepreneurs show a more cautious behavior regarding new business as they do not want to ruin their reputation. Some serial entrepreneurs would rather repeat their past successes than looking into different market opportunities. Serial entrepreneurs use less sophisticated search behaviors for identifying new opportunities than do portfolio entrepreneurs. The majority thought that serial entrepreneurs’ biggest strength is being an expert in one technical or functional area. In contrast, novice entrepreneurs oftentimes are not able to respond to changing customer demands, which can be due to their limited experience. In addition, novice entrepreneurs do not identify opportunities in the same manner as do habitual entrepreneurs and are not constantly looking for new information such as habitual entrepreneurs do (Westhead et al., 2005).

Very few studies have focused on differences between entrepreneur types regarding opportunity recognition and exploitation (for exceptions see Ubasaran and Westhead, 2002; 2003). Ubasaran and Westhead (2002) compared habitual and novice entrepreneurs regarding opportunity recognition and exploitation. They find that habitual entrepreneurs and novice entrepreneurs do not significantly differ regarding information search. However, with a given amount of information habitual entrepreneurs are better able to identify opportunities than are novice entrepreneurs and they are also able to identify more opportunities than novice entrepreneurs can. Also habitual entrepreneurs showed higher innovative levels and these opportunities of habitual entrepreneurs tend to be more innovative in nature. This could be due to the habitual entrepreneurs’ unique mindset which has been influenced by past experiences (Ubasaran and Westhead, 2003). This research also found that different types of entrepreneurs have different attitudes toward opportunity identification. For example habitual entrepreneurs oftentimes say that one opportunity leads to another and that an opportunity often arises in connection with a business problem. Habitual entrepreneurs also believe that it is important to be alert and spontaneous regarding opportunity identification (Ubasaran and Westhead, 2003).

As entrepreneurship research comparing the different types of entrepreneurs is still in its infancy, all research studies so far have been exploratory in nature. Additionally, most studies that have been conducted so far, have differentiated only between habitual and novice entrepreneurs. Yet some studies have found that habitual entrepreneurs (for instance serial and portfolio entrepreneurs) themselves differ.

**Entrepreneurial orientation**

Entrepreneurial Orientation (EO) has been a central topic in research for over 30 years (Covin and Wales, 2011). The EO has its roots in the literature about strategy making processes and the first researchers to establish a definition, are Mintzberg (1973) and Khandwalla (1976/1977). Since first defining EO several different definitions have evolved. For instance Covin and Slevin (1989) state that, “entrepreneurial firms are those in which top managers have entrepreneurial management styles, as evidenced by the firms’ strategic decisions and operating management philosophy” (Covin and Slevin, 1989, p. 77). Miller and Friesen (1982) state that the EO concept catches the innovative strategy of a company, which is often determined by executives based on their temperaments and goals. It should be noted that Miller (1983) was first to take into account a collection of different organizational behaviors into the EO definition. In 1983 he states that an entrepreneurial firm “engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with ‘proactive’ innovations, beating competitors to the punch” (Miller, 1983, p. 771). In other words, EO is a construct that has three sub-dimensions, which include innovativeness, risk taking and pro-activeness. Lumpkin and Dess (1996) expand the number of dimensions and add competitive aggressiveness and autonomy to the construct. According to Rauch, Wiklund, Lumpkin and Frese (2009)

“Innovativeness is the predisposition to engage in creativity and experimentation through the introduction of new products/services as well as technological leadership via Rand D in new processes. Risk taking involves taking bold actions by venturing into the unknown, borrowing heavily, and/or committing significant resources to
ventures in uncertain environments. Pro-activeness is an opportunity-seeking, forward-looking perspective characterized by the introduction of new products and services ahead of the competition and acting in anticipation of future demand. Competitive aggressiveness is the intensity of a firm’s effort to outperform rivals and is characterized by a strong offensive posture or aggressive responses to competitive threats. Autonomy refers to independent action undertaken by entrepreneurial leaders or teams directed at bringing about new venture and seeing it to fruition” (Rauch et al., 2009, p. 763-64).

To Rauch et al. (2009), the EO construct itself represents practices and policies that can provide a basis for entrepreneurial actions and decisions. That is why it can be seen as an entrepreneurial strategy-making process for key decision makers to use to help organizations reaching their full purpose, stay with their vision and create competitive advantages (Rauch et al., 2009).

As most studies so far have focused on the first three dimensions (Rauch et al., 2009), this paper uses Covin and Slevin’s (1991) definition, who adopt a Miller and Friesen (1982) focus, as they specify what EO looks like in a firm. Covin and Slevin (1991) citing Khandwalla (1977) state that, “firms with entrepreneurial postures are risk taking, innovative, and proactive. They are willing to take on high-risk projects with chances of very high returns, and are bold and aggressive in pursuing opportunities. Entrepreneurial organizations often initiate actions to which competitors then respond, and are frequently first-to-market with new product offerings. In support of this strategic orientation, entrepreneurial firms characteristically emphasize technological leadership and research and development (p. 7-8). It emerges from a strategic-choice perspective (Child, 1972), which asserts that new-entry opportunities can be successfully undertaken by “purposeful enactment” (Van de Ven and Poole, 1995). Thus it involves the intentions and actions of key players functioning in a dynamic generative process aimed at new-venture creating.

Studies have recently focused on proving a relationship exists between utilizing an EO and increased firm performance. The idea is that organizations benefit from demonstrating newness, degree of boldness and responsiveness. Lumpkin and Dess (1996) discussed those benefits extensively. Especially in today’s environment where rapid changes occur, product and business model life-cycles are shortened and future profit streams are uncertain from existing operations, businesses need to constantly look for new opportunities. Thus, firms may be able to benefit from adopting an EO approach. Entrepreneurial organizations innovate on a frequent basis while they are taking risks. Firms try to anticipate demand and position their new products/services aggressively in the market which often leads to improved firm performance. That is why arguments suggest that EO leads to a higher performance (Rauch et al., 2009).

Whereas some studies suggest strong correlations between EO and business performance (Covin and Slevin, 1986; Hult, Snow, and Kandemir, 2003; Wiklund and Shepherd, 2003), other studies have found weaker correlations (Lumpkin and Dess, 2001; Zahra, 1991). Also studies have been able to show that the external environment has an influence on performance (e.g. Covin and Slevin, 1989; Zahra and Covin, 1995). For instance Zahra and Covin (1995) state, that innovation helps companies to stay ahead of competition and proactive firms introduce new products/service before the competition does, resulting in gaining a competitive advantage over the competition, which also leads to better financial results. Wiklund and Shepherd (2003) also find that the internal firm environment has an influence on performance. They show that EO strengthens the positive relationship between performance and knowledge-based resources. Lumpkin and Dess (1996) contended that external and internal factors influence the strength of the performance-entrepreneurial-orientation-relationship.

Although there are mixed results about the EO-performance relationship, Rauch et al. (2009) have been doing a meta-analysis across previous studies and found that EO has positive implications on performance. Their research has found moderately large correlation between EO and performance. These findings suggest that business will most likely benefit from adopting an EO approach towards doing business. They also agree with previous research (Lumpkin and Dess, 1996) that there are other variables that may influence the EO and firm performance correlation. Some factors they include are for instance national culture, business size and intensity of technology within the industry. However, more research on the exact influences of those variables is necessary before strong implications can be drawn.

Most studies so far have looked at the EO construct from a firm-level perspective. However, the construct can also be viewed from the entrepreneur level. Research so far is rather limited on comparing different types of entrepreneurs in respect to characteristics such as entrepreneurial orientation. However, a Carland, Carland and Stewart (2000) study on serial entrepreneurs suggests that serial entrepreneurs have a stronger propensity for risk taking and innovation. That is
why they should exhibit a greater EO, since by definition serial entrepreneurs undertake the risk of creating a new business more than once and hence; they have to be more innovative as well as they have established more than one business. Therefore it follows that:

**H1: Serial entrepreneurs will exhibit a greater entrepreneurial orientation than will novice entrepreneurs.**

**Market orientation**

The second construct of interest in this study is that of market orientation (MO) of the entrepreneur and his firm. Kohli and Jarowski (1990) argued that MO means delivering high quality products and services on a continuous basis by checking for and responding to changes in the marketplace. They find that MO consists of three components: the generation of market intelligence, sharing this intelligence through the firm and planning and executing a market response. The generation of market intelligence is for them the first step in the MO process and concerns ascertaining information about customer needs and analyzing external factors as to what causes those needs in customers. MO’s second component involves communicating these findings throughout the company. Communication thereby follows two paths, horizontally and vertically throughout the firm. A firm’s market response, the last component, defines the way the firm reacts to the collected and communicated information. It can be divided into two segments, the first entails response design, that is how plans are developed based on the information and the second component is how the plan is implemented. In other words, for Kohli and Jaworski (1990) MO is the ability of a firm to collect information, communicate the findings and how they react to the findings.

For Slater and Narver (1995) MO is the ability of an organization that produces the best necessary behaviors to produce superior value for its customers. Similar to Kohli and Jaworski (1990) it consists of three components: customer orientation, competitor orientation and inter-functional orientation. This can be also described in other words as learning about competitors and customers and using this information efficiently. This study adopts Kohli and Jaworski’s (1990) definition of market orientation defined as

> “the organization wide generation of market intelligence pertaining to current and future needs of customers, dissemination of intelligence horizontally and vertically within the organization, and organization wide action or responsiveness to market intelligence” (p. 54).

Since the 1980s much research has been undertaken on market orientation to derive on a construct that can define, operationalize and conceptualize the concept (Deng and Dart, 1994). The majority of the research supports the adoption of an MO by firms. However, there have been also more limited perspectives, which argue that marketing orientation has its limits (Arndt, 1978) while some have declared it dead (e.g. Sachs and Benson, 1978). More recently it has garnered more attention (Shapiro, 1988; Webster, 1988). Some researchers suggest that it is vital for companies to survive and have worked on measurements of this construct (Kohli and Jaworski, 1990; Narver and Slater, 1990).

Currently, MO is employed as an organization-wide context and it is of increasing significance in having a proactive attitude toward doing business and developing a competitive edge (Liu, Luo, and Shi 2002). Market orientation is important as it enables organizations to better understand markets and customers and help firms derive better product and service strategies (Liu et al., 2002). As both Jaworski and Kohli (1993) and Narver and Slater (1990) find, adopting an MO is useful for all companies in all kinds of environments, no matter how intense the competition or how turbulent the technological or market environment is. If implemented correctly throughout the organization (from the top to the bottom) it can help increase firm performance. In the extant research, the two concepts that gained most support are that of an information-based view of Kohli and Jaworski (1990) and a culture-based view of Narver and Slater (1990) (Suliyanto, 2011).

In recent research market orientation has also been positively linked to entrepreneurial orientation (Hurley and Hult, 1998; Morris and Paul, 1987). Some researchers suggest that both concepts are necessary for a firm to compete successfully in today’s market place (Slater and Narver, 1995). They argue that MO alone will act and respond only on current customers’ needs and market conditions and be a more reactive response to those needs, that is, they are being led instead leading the market (Kohli and Jaworski, 1990; Slater and Narver, 1995). As such, market oriented firms need to develop an EO as well which focuses on innovation and finding proactive ways to respond to the market and future customer needs (Slater and Narver, 1995). However, if a firm is only entrepreneurial oriented it will only focus on innovating and
undertake risky endeavors without ascertaining what the market and customers want, which can lead to failure. That is why MO and EO need to be present and balanced within the firm (Atuahene-Gima and Ko, 2001; Slater and Narver, 1995). Atuahene-Gima and Ko (2001) find that having both MO and EO present and balanced is important for efficiency in market launch, new product performance, timing of entry strategies and forming management support for innovation. Research further suggests that balancing MO and EO is necessary for a firm’s survival and prosperity (Atuahene-Gima and Ko, 2001; Slater and Narver, 1995). Scholars even argue that if only one concept by itself exists, it might even have negative effects on the firm. For instance, a too narrowly defined MO could lead a firm to focus only on the current needs and conditions without looking at emerging opportunities and lose focus on product innovation completely (Atuahene-Gima, 1996; Christensen, 1997; Matsuno, Mentzer, and Oszomer, 2002; Slater and Narver, 1995).

Based upon this research a redefining of MO has taken place, and is called entrepreneurial marketing. Due to changes and more dynamic market places in the recent years a new definition of marketing has been introduced by the AMA, which states that marketing is an “…organizational function and a set of processes for creating, communicating and delivering value to customers and for managing customer relationships in ways that benefit the organization and stakeholders.” (Keefe, 2004, p. 17). The definition does not define an explicit organizational context in which the marketing processes have to fall in. However, this definition implies that different organizational forms can have different attitudes toward marketing processes. For instance entrepreneurial oriented firms will have a different approach toward marketing than more traditional firms (Hills, Hultman, and Miles, 2008). Hills et al. (2008) found differences between entrepreneurial and traditional firms with respect to strategic focus, demand creation, flexibility and adaptivity. For example, entrepreneurial oriented firms focus more on creating new value and wealth, creating primary demand, focusing more on promotion and selling behavior, relying more on experience and intuition and are being less constrained by budgets than traditional firms. Miles and Darroch (2006) argue that companies who combine entrepreneurial thinking within their marketing strategy will be more innovative and manage risks better throughout all the marketing processes. Thus, according to Miles (2005) the only firms which will succeed in the marketplace are firms that efficiently and effectively use entrepreneurial thinking to create better value offerings for customers. This suggests that marketing is used to motivate opportunity creation, evaluation and exploitation (Shane and Venkataraman, 2000). In this manner the firm will not only concentrate on meeting current customers’ needs but also focus on innovation to identify new ways of satisfying current and new customer groups (Covin and Miles, 1999). Day and Wensley (1988) argue that a company needs to be market and entrepreneurial oriented to be able to sustain a competitive advantage. Morris, Schindehutte and LaForge (2002) state that entrepreneurial marketing means having a proactive attitude toward customer satisfaction through efficient and innovative value creation throughout the whole value chain. Morris et al. suggests that this kind of marketing consists of entrepreneurial and market orientation. The marketing domain includes elements of value creation and customer intensity (Keefe, 2004) and the entrepreneurial domain captures the risk management and propensity for proactive behavior (Lumpkin and Dess, 1996). This implies that innovation in an entrepreneurial marketing firm must include both, incremental and radical innovation that can evaluate and exploit new opportunities while still serving the current market needs.

Yet, despite all the research undertaken, results so far have been rather fragmented on relating entrepreneurship with marketing and there is a lack of integrated analysis and comprehensive theory (Kraus, Harms, and Fink, 2010).

We might expect that serial entrepreneurs will have built up more knowledge, relevant experiences as well as resources and systems to collect specific information concerning markets and customers and are be better to translate this information into an effective strategies. As a result we should expect that serial entrepreneurs would differ from novice entrepreneurs with respect to market orientation due to their more numerous and varied experiences. Therefore it follows that:

H2: Serial entrepreneurs will exhibit a greater market orientation than will novice entrepreneurs.

Opportunity recognition

Although researchers agree that opportunity recognition and information search is the first steps in the entrepreneurship process (Christensen, Madsen, and Peterson, 1994; Shane and Venkataraman, 2000), research on both constructs has been rather limited (Busenitz, 1999). This study adopts the entrepreneurial opportunity definition presented by Shane and Venkataraman (2000): “Entrepreneurial opportunities are those situations in which new goods, services, raw materials,
and organizing methods can be introduced and sold at greater than their cost of production (Casson, 1982)” (Shane and Venkataraman, 2000, p. 220).

The process of opportunity recognition has been theorized by two different economists, Kirzner and Schumpeter (Fuduric, 2008). Both theorists see the process of opportunity recognition from different perspectives. Some suggest that both are needed in different stages of the entrepreneurial process (Fuduric, 2008). Schumpeter (1934) says that opportunities are being created by creative and innovative individuals. His theory can be proven in situations of technological, political and socioeconomic changes. Kirzner (1973) suggests that opportunities are presented within the market and need to be discovered by individuals. He notes that individuals can spot an opportunity by being alert to them. According to Kirzner (1973) opportunities are created in the market through market disequilibria, which are created by incorrect decision-makings by individuals, which in turn creates market surpluses and shortages. These market surpluses and shortages form the creation of opportunities (Kirzner, 1997). Kirznerian opportunities cannot be spotted as easily, they are idiosyncratic and can occur at any time or place (Shane, 2003).

Recently Shane and Venkataraman (2000), who adopt Kirzner’s point of view, have published an article trying to find a framework for entrepreneurship research. In their research they suggest that researchers should focus on the why, when and how individuals exploit opportunities. According to these researchers this function depends on three characteristics: knowledge, cognitive and behavioral differences. Recognizing an opportunity requires a specific skill set as well as insights and circumstances that are not widely or uniformly available.

Cognitive thinking influences the way entrepreneurs identify opportunities and search for information. For instance search behavior depends on the person’s ability to process information and on the amount of information the person needs to gather (Woo, Folta, and Cooper, 1992). Studies have found that experience plays a role in this process. Entrepreneurs, who lack experience, might use a more simplified model to make decisions compared to more experienced entrepreneurs (Gaglio, 1997). However, it has been shown, that experience is not always helpful regarding information search. Habitual entrepreneurs may become overconfident or illusive of their control in their former experience with business ownership which may limit their information search (Busenitz, 1999). It has been found that novice entrepreneurs look for more information than habitual entrepreneurs do but they look less in unfamiliar settings (Cooper, Folta, and Woo, 1995). Another finding is the more confident an entrepreneur is, the less information he or she will look for (Busenitz, 1999). Over time, however, habitual entrepreneurs, who are more experienced, will acquire more information and useful business contacts that can provide them with insight regarding business opportunities. This would mean habitual entrepreneurs will have to be less proactive in searching for opportunities. It is likely that habitual entrepreneurs will also have built up a reputation and nourished relationships with advisors and financiers, thereby making it easier for them to come into contact with new ideas. Another characteristic that helps habitual entrepreneurs is learning that comes from prior experience. Habitual entrepreneurs can find better ways on how to process information and they might develop thinking patterns that help them with future situations. Along with their experience and individual history they are able to connect various pieces of information together and make inferences from it. Heuristic thinking would most likely help them with making the process of connecting information together (Busenitz, 1999). Low and MacMillan (1988) also suggested that networks are an important part of opportunity recognition for entrepreneurs. Studies have found that networks provide entrepreneurs with gaining knowledge of existing opportunities, finding ways to critical resources and getting help on how to remove obstacles (Hills, Lumpkin, and Singh, 1997). Habitual entrepreneurs should have more extensive and stronger networks than novice entrepreneurs.

From the research presented above we should expect that serial and novice entrepreneurs will differ in regards to opportunity recognition. As such, we might expect that:

\( H3: \text{Serial Entrepreneurs will exhibit greater opportunity recognition than will novice entrepreneurs.} \)

**METHODOLOGY**

**Data**

The hypotheses were tested using survey data elicited from small business owners located in the northwest U.S. state of Washington. Business owners were identified using the U.S. Small Business Administration’s (SBA) Central Contractor
Registry (CCR). The CCR is a self-certifying database of all firms who wish to do business with any branch of the U.S. federal government. Data was extracted from the CCR database using the CCR’s web-based Dynamic Small Business Search tool, which allows users to search the CCR database for firms who meet the SBA’s criteria for small business. Small business definitions vary according to each firm’s NAICS code and are summarized in the SBA’s “Table of Small Business Standards” (SBA 2006). Only those firm’s registering 200 or fewer employees were included in the sample.

The sample

An email was sent to 1200 business owners in Washington State who were identified through the SBA CCR meeting the criteria of 200 or fewer employees. The email explained the nature of the research and invited respondents to follow a link to a website where a survey questionnaire was prepared utilizing the Survey Monkey program. In all 78 respondents answered. The firms ranged from newly established to the oldest being 159 years old. A final sample of 61 entrepreneurs (37 novice and 24 serial) resulted.

The questionnaire

The questionnaire consisted of several sections.

- Screening question
- Entrepreneurial Orientation
- Market Orientation
- Opportunity Recognition
- Personal and Business Demographics (gender, number employees, age, years in business, industry type(s), etc.)

Entrepreneurial orientation (EO) was measured using a 6-item Likert type scale adapted from Vitale et al. (2004). This scale measures Entrepreneurial Orientation along the dimensions of innovativeness, acting proactively, and risk management. In a similar fashion, Market Orientation (MO) was measured using the Narver and Slater’s 15-item market orientation scale (Narver and Slater, 1990). Lastly, Opportunity recognition was measured with a 12 item scale adapted from Ucbasaran et al. (2003). Responses to EO, MO, and OR measures were recorded using six-point forced choice Likert-type scales to force a non-neutral response. Means testing was utilized to evaluate the hypotheses.

RESULTS

Table 1 provides the descriptive statistics regarding the respondent firms used in this study.

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<th>Serial</th>
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<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Businesses owned</td>
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<td>1</td>
<td>0</td>
<td>24</td>
<td>3.58</td>
<td>1.84</td>
</tr>
<tr>
<td>No. employees</td>
<td>37</td>
<td>20.9</td>
<td>43.26</td>
<td>24</td>
<td>16.7</td>
<td>37.08</td>
</tr>
<tr>
<td>Years in current</td>
<td>37</td>
<td>11.8</td>
<td>10.04</td>
<td>24</td>
<td>7.43</td>
<td>6.42</td>
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<tr>
<td>Business</td>
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Hypotheses tests

H1: Serial entrepreneurs will exhibit greater entrepreneurial orientation than will novice entrepreneurs.

H1 proposes that serial entrepreneurs will exhibit a higher level of entrepreneurial orientation than will novice entrepreneurs. An initial scale analysis was conducted to assess scale reliability and validity. After eliminating items that cross loading a three factor EO measure was determined (EO innovating, α = .73; EO proactive, α = .72; and EO manage risks, α = .65).
Two-sample t-tests on the entrepreneurial orientation variable were conducted. The results indicate that serial entrepreneurs do differ from novice entrepreneurs with respect to their entrepreneurial orientation. Specifically, serial entrepreneurs rate higher with respect to innovating (4.67 vs. 4.29, t = 1.39, p < .10) and managing risks (4.80 vs. 4.46, t = 1.62, p < .05) when compared to novice entrepreneurs. No differences were found between serial entrepreneurs and novice entrepreneurs with respect to being proactive (4.12 vs. 3.89, t = 0.98, p = 0.17 (Table 2). Consequently, H1 is supported.

**H2: Serial entrepreneurs will exhibit greater market orientation than will novice entrepreneurs.**

H2 proposes a similar set of predictions for serial entrepreneurs with respect to market orientation. That is, that serial entrepreneur will tend to be more market oriented than will novice entrepreneurs. Market orientation was measured using Narver and Slater’s 1990 Market Orientation scale ($\alpha = .88$). As with H1, a two-sample t-test on market orientation was utilized to evaluate this hypothesis. The results suggest that serial entrepreneurs and novice entrepreneurs display similar levels of market orientation (4.77 vs. 4.81, t = 0.19, p = .42). See Table 2. As a result, no empirical support is found with regards to H2.

**H3: Serial Entrepreneurs are better able to identify opportunities than are novice entrepreneurs.**

The third hypothesis suggests that there should be difference in respect to opportunity recognition between serial and novice entrepreneurs. More specifically, serial entrepreneurs should rate higher in opportunity recognition than novice entrepreneurs should by nature of the experience and assets they have accrued in starting and running multiple business ventures. Opportunity Recognition was measure using an eight item OR scale adapted from Ucbasaran et al. (2003) ($\alpha = .79$). As with the previous hypotheses two-sample means tests were utilized in the hypothesis test. Initial results appear to suggest that serial and novice entrepreneurs do not differ significantly with respect to opportunity recognition (4.33 vs. 4.21, t = 0.64, p = .26).

However, when further analysis is applied to drill down into the opportunity recognition construct some differences appear to emerge between serial and novice entrepreneurs. More specifically, serial entrepreneurs appear to more readily identify opportunities in that are nonrelated in nature than do novice entrepreneurs (3.40 vs. 2.52, t = 2.77, p < .01). In addition, the results indicate that serial entrepreneurs do not appear to believe that opportunity recognition requires immersion in a particular market (4.03 vs.4.45, t = 1.43, p = .08) nor that new business opportunities normally arise due to market or technological change (4.27 vs. 4.66, t = 1.67, p = .05). In addition, the results suggest that serial entrepreneurs do not feel that they can spot a real opportunity better than a professional researcher/analyst can when compared to a novice entrepreneur (3.93 vs. 4.39, t = 1.48, p = .07). Taken in total, the results do provide partial support for H3.

<table>
<thead>
<tr>
<th>Table 2: Results from Means Testing</th>
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<tbody>
<tr>
<td><strong>Entrepreneur Type</strong></td>
</tr>
<tr>
<td>Novice (n=37)</td>
</tr>
<tr>
<td>Serial (n=24)</td>
</tr>
<tr>
<td>T-test Results</td>
</tr>
<tr>
<td>p &lt; .10</td>
</tr>
</tbody>
</table>

EO: Entrepreneurial Orientation
MO: Market Orientation
OR: Opportunity Recognition

57
SUMMARY/CONCLUSIONS

Overall, the results provide some empirical support for the proposition made in this study that serial entrepreneurs will differ from novice entrepreneurs in terms of entrepreneurial orientation, market orientation, and opportunity recognition. More specifically, the results show that serial entrepreneurs do differ from novice entrepreneurs in terms of their innovating and proactive entrepreneurial orientation. Interestingly, the results did not provide convincing evidence that serial and novice entrepreneurs are more or less proactive with regards to their entrepreneurial orientation. Although serial entrepreneurs did rate higher in proactiveness, the difference was not large enough to approach significance at the 0.10 level. This result might be explained, in part, due to the nature of the sample used in this study. The small sample size (n=24) of serial entrepreneurs might not have accorded sufficient power in the means testing to tease out differences. Conversely, these results might suggest something quite different. It may be that some differences expected between serial and novice entrepreneurs disappear over time as experience is accrued. In the review and hypotheses development an argument has been proffered that serial entrepreneurs should differ from novice entrepreneurs due, in part, to the abilities and advantages developed from the experiences of starting and running multiple business enterprises that defines the serial entrepreneur. However, novice entrepreneurs who have succeeded in business for a significant number of years have also accrued experiences and resources that have enabled them to succeed over time. Consequently, some differences between serial and novice entrepreneurs may disappear over time as business success and the learning curve serve both. In this study, the median number of years that the sample of novice entrepreneurs had been in business was 10 years. This is a significant period of time in which to accrue experience and the resources that might be needed to develop and exploit identified opportunities.

With respect H2, the study results show that, at least within the US, entrepreneurs realize that a market orientation is necessary in order to succeed in a tough competitive environment. Both serial and novice entrepreneurs appeared market oriented as both had means on this measure above 3.0 on a six-point scale (where six reflects a high degree of market orientation). What is unexpected in the results is that novice entrepreneurs appear to exhibit a greater degree market orientation than serial entrepreneurs (4.81 vs. 4.77 on a six-point scale) although not significantly so. It was expected that serial entrepreneurs would be more market oriented due to their constant interaction within the market in a variety of ways brought about by their more varied experiences in developing business opportunities as reflected in the numbers of businesses started and run. This result was unexpected but may again be an artifact of significant business experience accrued by the achieved sample of novice entrepreneurs used in the study where the average age of novice entrepreneurs’ firms was 11.8 years and ranged from 1-37 years in business (median = 10 years). On the other hand, the results might reflect the nature of the hyper competitive market environment that small companies have found across the United States in today’s challenging economy. Additional research is warranted in order to elucidate these findings.

H3 proposed that there should be differences between novice and serial entrepreneurs in their opportunity recognition tendencies. As data limitation may have precluded this from being found with regards to the overall measure for opportunity recognition the results are nevertheless rather illuminating with respect to some specific areas of opportunity recognition. The results show that serial entrepreneurs are opportunistic than novice entrepreneurs in that they tend to look for more opportunity outside of their current business domain. Further, they appear more open to exploring opportunities in areas that they have not been previously immersed within nor do they feel that opportunities only emerge due to external forces such as market or technological change. That is, they do not simply react but appear more proactive in searching for and developing business opportunities. One unexpected finding was that serial entrepreneurs did put more stock in information derived from professional researchers or analysts than do novice entrepreneurs. It may be that as serial entrepreneurs with more experiences in exploiting varied business opportunity recognize the value offered by professional research organizations especially when the information needed to inform their decision making may come from areas in which the serial entrepreneur has more limited business experience. It might also be the case that a successful novice entrepreneur develops over time the requisite knowledge of the market environment that he/she operates within and does not need external information sources to identify opportunities.

This paper sought to explore differences between entrepreneur types (serial versus novice) with respect to several important variable of interest to both researcher and practitioners – entrepreneurial orientation, market orientation, and opportunity recognition. The findings are mixed. There appears to be empirical support for the contention that serial entrepreneurs (those who have engaged in starting and operating multiple businesses) do differ from novice entrepreneurs (those whose efforts have been wholly focused on starting and operating one business venture) with respect to entrepreneurial orientation and opportunity recognition. However, no differences appear to emerge with respect to market
orientation. It may be that over time, differences may fade over time as entrepreneurs compete and survive in the marketplace. Likewise, entrepreneurs may instinctively recognize that a market orientation is necessary for firm survival and growth.

As with any research, this research has limitations that impact its generalizability. The study only looked at businesses within one state and in one country – the United States. Additional research should be undertaken to see if the results replicate across geographical regions and cultures. In addition, the small number of respondents precluded a more complete analysis of the data and might have actually caused for some of the results to be understated. Efforts should be made to conduct larger studies that investigate the phenomena across business type and settings in order to further elucidate our understanding of entrepreneurs and their development and motivations.

As research in entrepreneurship is still rather fragmented it is important to keep focus on this phenomenon, especially as entrepreneurs are significant contributors to economic development. Although previous research has recognized there are varying types of entrepreneurs and that entrepreneur types may differ regarding behavior, actions and decision making (e.g., Ucbasaran and Westhead, 2003; Westhead, Ucbasaran, and Wright, 2006) this study was undertaken in an attempt to elucidate the factors that motivate entrepreneurship and entrepreneurs at the interface and further our understanding of the same. Hopefully this research will serve this purpose.

REFERENCES


BOUNDARY SPANNING IN THE ENTREPRENEURIAL FIRM: 
EFFECTS ON INNOVATION AND FIRM PERFORMANCE

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ABSTRACT

Innovations have been found to frequently originate from outside of organizations (Quinn, 1985; Utterback, 1971). While both small and large firms may face obstacles to achieving innovation, pursuing innovations outside of the firm’s boundaries has been suggested to enable small firms to mitigate liabilities of smallness (Ketchen Jr, Ireland, and Snow, 2007). But is this assertion true in all cases? What about the entrepreneurial firm which extends itself too broadly or too deeply into pursuing innovations outside of the firm, straining its limited resources? This research proposes that entrepreneurial firms may not only experience diminishing returns to firm innovativeness when activities at the boundary of the firm are pursued too aggressively, but actually begin to experience negative returns to firm innovativeness. The conceptual model presented here proposes this unique relationship between the extent of boundary spanning activities and entrepreneurial firm innovativeness. Further, this research delineates three different boundary spanning objectives, which drive the boundary spanning activities of the entrepreneurial firm.

INTRODUCTION

Innovations have been found to frequently originate from outside of organizations (Quinn, 1985; Utterback, 1971). In both small and large firms, the opportunity-seeking and advantage-seeking activities undertaken beyond the organization to achieve superior performance have been termed strategic entrepreneurship (Ireland, Hitt, and Sirmon, 2003). Under strategic entrepreneurship, opportunity-seeking results in a firm gaining knowledge from outside of its borders to supplement its own knowledge (Chesbrough, 2003a, 2003b; March, 1991). And while both small and large firms may face (different) obstacles to achieving innovation through strategic entrepreneurship, pursuing innovations outside of the firm’s boundaries has been suggested to enable small firms to mitigate liabilities of smallness (Ketchen Jr et al., 2007). But is this assertion true in all cases? What about the small, entrepreneurial firm which extends itself too broadly or too deeply into pursuing innovations outside of the firm, straining its limited resources? This research proposes that entrepreneurial firms may not only experience diminishing returns to firm innovativeness when activities at the boundary of the firm are pursued too aggressively, but also begin to experience negative returns to firm innovativeness.

Many firms have employees tasked specifically with seeking out and passing along information from both the external environment, as well as the internal environment, between the various departments or teams within the organization. While strategic entrepreneurship is used in the entrepreneurship literature, a more general term, “boundary spanning,” refers to both interdepartmental communication, and the communication between a firm and its external environment (Lysonski, 1985). The “boundary” is “the interface between a firm and its market environment, as well as between departments within a firm” (Lysonski, 1985, p. 26). The roles commonly found in the areas of marketing and sales, purchasing, human resources, advertising and public relations, as well as any other role which places an individual at the boundary of the organization (or formally defined internal department, division, or project team) for the purpose of transacting with the environment, are called “boundary roles” (Adams, 1976). The individual(s) serving as the boundary role person, or boundary spanner, represents the organization to the external environment, affecting key transactions between the organization and external agents (Adams, 1976). The boundary spanner is the representative of the organization’s preferences, beliefs, attitudes, norms, aspirations and values, among other characteristics. The boundary spanner must rely upon this “face” in order to effectively facilitate transactions between his or her own organization and the external environment, garnering the necessary social support and legitimacy (Adams, 1976; Aldrich and Herker, 1977).

All organizations have some boundary spanners, if only at the level of the organizational leader (Aldrich and Herker, 1977). These roles take on a unique dimension within the entrepreneurial organization. Entrepreneurship involves studying the sources of opportunities and the individuals who seize, evaluate, and exploit them (Shane and Venkataraman,
This is an appropriate definition of entrepreneurship for this research because boundary spanning activities are a way of studying the sources of opportunities, and entrepreneurial firms which seize, effectively evaluate, and properly exploit the opportunities, will likely be more innovative.

In entrepreneurial firms, one or two key individuals may likely play several of the departmental roles listed earlier, and this individual is likely the founder/entrepreneur himself/herself (Brodzinski, Scherer, and Wiebe, 1990). Just as the boundary spanner is the representative of the organization’s “face,” the actions of a founder/entrepreneur are often a direct reflection of the organization’s characteristics to the environment. The image of the entrepreneurial organization in the external environment is especially important since social support and legitimacy have been found to be key characteristics for young entrepreneurial firms to convey as they struggle to establish themselves within an industry (DiMaggio and Powell, 1983; Tornikoski and Newbert, 2007).

But are the resulting benefits of such boundary spanning activities a help or a hindrance to innovation in entrepreneurial firms? In his early work defining boundary spanning, Tushman (1977) explored the premise that innovation may be sensitive to the effective transfer of information across organizational boundaries. His study of a large research and development laboratory led him to identify boundary spanners who enabled various sources of external information and feedback to influence the innovating units of the organization. But, while boundary roles have been formally discussed in the context of larger, more established organizations (Aldrich and Herker, 1977; Tushman, 1977), extant entrepreneurship research has suggested the influence of external information on innovation in entrepreneurial firms is exclusively positive (Brodzinski et al., 1990).

In this study, we use boundary spanning theory to examine how the extent to which entrepreneurial firms seek innovations externally, and the pursuit of different boundary spanning objectives (the purpose that the boundary spanning activities are intended to accomplish), may affect firm innovativeness, and thereby, firm performance. By engaging in a large number of different boundary spanning activities, or spending significant time engaged in boundary spanning activities, entrepreneurial firms may collect a large number of innovative ideas, but not have the capacity to successfully commercialize them. Also, by expending their limited resources on the boundary spanning activities themselves (Brodzinski et al., 1990), the entrepreneurial organization may be unable to effectively integrate the learnings from these activities into the firm’s innovation strategy. The constraint of limited firm resources in entrepreneurial firms may lead to a point of not only diminishing returns, but also actual negative returns for bringing in learnings from boundary spanning activities intended to drive innovative new products or services.

This research contributes to the entrepreneurship literature by proposing that the resource constraints of small, entrepreneurial firms will lead to an inverted U-shaped relationship between the extent of boundary spanning activities and firm innovativeness, exhibiting not only diminishing returns, but also negative returns to firm innovativeness with more boundary spanning. Additionally, we will define different boundary spanning objectives, proposing that each objective will have unique effects on firm innovativeness and firm performance. While the information sources leveraged in boundary spanning activities have been previously categorized into types, such as “market” and “institutional” knowledge sources (Laursen and Salter, 2006), the concept of different firm objectives driving boundary spanning activities and having differing effects on firm innovation has not been studied previously and this is our primary contribution. Additionally, this research provides a new theoretical lens, boundary spanning theory, through which to examine what drives firm innovativeness in an entrepreneurial context, providing a theoretical base to examine some of the implications suggested by strategic entrepreneurship literature.

Specifically, the research questions for this study are: does the degree of boundary spanning activity influence firm innovativeness linearly, or in a more nuanced way? How do an entrepreneurial firm’s different boundary spanning objectives affect overall firm innovativeness? For example, is the firm engaging in activities that are strategic, operational, or informational in nature? Lastly, as entrepreneurial firms have limited resources and capacity to absorb the outcomes of these interactions, how does the capacity of the entrepreneurial firm to absorb and commercialize learnings acquired through these activities affect firm innovativeness and firm performance?

This research will first argue that the relationship between the degree of boundary spanning and entrepreneurial firm innovativeness is curvilinear – too little boundary spanning activity is bad for innovation, as is too much boundary spanning activity. Too little boundary spanning activity results in the entrepreneurial organization failing to legitimize itself in the industry and not having enough unique information to drive new product innovations. Equally, too much
boundary spanning activity negatively impacts innovation because the entrepreneurial firm becomes overwhelmed with the influx of ideas and the resources it takes to evaluate them. Taking both arguments together, there seems to be a middle-ground for boundary spanning which is optimal for entrepreneurial firm innovativeness.

Second, this research will propose how differing objectives of boundary spanning activity may influence entrepreneurial firm innovativeness. For example, do boundary spanning activities that are strategic in nature require a greater depth and breadth of activities to reach an ideal level of firm innovativeness than activities that are operational in nature? And lastly, we will explore how the entrepreneurial firm’s absorptive capacity – the ability of a firm to identify and value external knowledge (Cohen and Levinthal, 1990, 1994) – affects the relationships between the various forms of boundary spanning and firm innovativeness. A positive effect of firm innovativeness on firm performance will also be proposed.

THEORETICAL DEVELOPMENT AND LITERATURE REVIEW

Boundary Spanning Theory

Boundary spanning theory (Adams, 1976; Aldrich and Herker, 1977; Crawford and Nonis, 1996; Friedman and Podolny, 1992; Leifer and Huber, 1977) provides guidelines for how information search activities can effectively facilitate transactions between an organization and its environment. The theory predicts four factors that influence the behavior of the individual and/or the organization engaging in the boundary spanning activity (Adams, 1976; Callister and Wall Jr., 2001):

1. the nature of the boundary spanner’s relationship with his or her own organization,
2. the boundary spanner – external organization interaction,
3. the boundary spanner’s personal characteristics, and
4. the relationship between the boundary spanner’s organization and the external organization.

Adams (1976) called for further research in each of these relationships, and for a focus on identifying other variables that may affect boundary spanning activities.

A majority of studies since Adams (1976) have focused on the first relationship, between the boundary spanner and his or her own organization, and the resulting feelings of role conflict, role ambiguity, or role stress experienced by the boundary spanner (e.g., Crawford and Nonis, 1996; Keller and Holland, 1975; Singh and Rhoads, 1991). Other research has explored the relationship between the boundary spanner and the external organization, such as the influence of threats on the outcomes of the interaction (e.g., Galinat and Muller, 1988; Pruitt and Gleason, 1978). Limited research has been conducted on how the characteristics of the boundary spanner affect his or her relationship with the external organization (e.g., Caldwell and O’Reilly, 1982; Dubinsky, Hartley, and Yammarino, 1985). And lastly, very few studies (e.g., Shrum, 1990) have been conducted to explore the relationship between the boundary spanner’s organization and the external organization (Callister and Wall Jr., 2001).

This last relationship, which is between an organization that engages in boundary spanning activities and the external organizations with which it interacts, is explored within this conceptual research. This relationship is especially important to examine for entrepreneurial firms because any factors that influence the firm’s attempts to legitimize itself in the early years of operations will contribute heavily to the ultimate success or failure of the firm (DiMaggio and Powell, 1983; Tornikoski and Newbert, 2007). These influencing factors may include the extent to which the firm engages in boundary spanning activities, as well as the objective of the activities.

Table 1 provides an overview of key boundary spanning theory research and our own assertions of the general implications for entrepreneurial firms.
<table>
<thead>
<tr>
<th>Article</th>
<th>Contribution to boundary spanning theory</th>
<th>Implications for this research on entrepreneurial firms</th>
<th>Additional insights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams, 1976</td>
<td>Defines boundary roles and is the foundation for boundary spanning theory. Presents a model of organizational boundary systems and suggests future research.</td>
<td>Boundary spanners act as the &quot;face&quot; of the organization and can help a firm to obtain social support and legitimacy. These are two characteristics important for entrepreneurial firm success as well.</td>
<td>One should evaluate boundary spanning on the basis of overall system effectiveness (i.e., measuring the boundary spanning activities of the firm as a whole as opposed to the individual level activities).</td>
</tr>
<tr>
<td>Aldrich and Herker, 1977</td>
<td>Examines the creation, elaboration, and functions of boundary spanning roles in organizations.</td>
<td>Small organizations are able to survive with fairly simple boundary spanning role structures, with few differentiated roles and functions.</td>
<td>Innovations and organizational change are often the results of information brought into the organization by boundary spanners.</td>
</tr>
<tr>
<td>Leifer and Delbecq, 1978</td>
<td>The impetus for boundary spanning may come from any number of sources, including: discrepancy between organizational performance and goals, as well as inability to make decisions based on available information.</td>
<td>Entrepreneurial organizations engage in boundary spanning activities to drive innovation and performance. They do not have internal boundaries to span and so must engage in boundary spanning to make informed decisions.</td>
<td>Perceived environmental complexity and/or instability also requires boundary spanning activities to reduce the uncertainty.</td>
</tr>
<tr>
<td>Lysonski, 1985</td>
<td>A product manager has a given propensity to engage in boundary spanning regardless of environmental uncertainty.</td>
<td>Boundary spanners in entrepreneurial firms stimulate the innovation process by bringing new ideas and technology from the external environment into the firm.</td>
<td>Just as the product manager is a central transmitter of information about the product into the firm and vice versa, so is the entrepreneur.</td>
</tr>
<tr>
<td>Hult, 2011</td>
<td>Proposes a theory of boundary spanning specific to the marketing organization based on the integration of 31 organizational theories.</td>
<td>The elements of the theory are also appropriate for the entrepreneurial firm: strategic resources, leadership and decision processes, alliances and collaborations, and the marketplace.</td>
<td>Proposes broader applications for boundary spanning theory in more specific contexts.</td>
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</table>
The foundational principles of boundary spanning theory apply across firms of all sizes, but have special implications for entrepreneurial firms, as outlined in Table 1. To summarize, entrepreneurial firms may gain social support and legitimacy through boundary spanning activities, helping to drive innovation and performance through the informed decisions they make, based on information brought into the organization through boundary spanning activities.

Recent Applications of Boundary Spanning Theory

While the theory of boundary spanning emerged in the late 1970s (Adams, 1976; Aldrich and Herker, 1977; Tushman, 1977), it has persisted throughout the years, having been applied in the fields of strategy (Ahuja and Katila, 2004; Henderson and Cockburn, 1994; Jonsson, Holmstrom, and Lyttinen, 2009), new product development (Lysonski, 1985), team learning (Bresman, 2010), entrepreneurship (Brodzinski et al., 1990), and most recently, marketing (Hult, 2011).

G. Tomas M. Hult (2011) focuses on marketing as a key boundary-spanning role in his work to develop a broader vision of the marketing organization. He outlines a theory of the boundary-spanning marketing organization, naming it “MOR theory.” Hult (2011) defines the boundary-spanning marketing organization as:

\[
\text{An entity encompassing marketing activities that cross a firm’s internal and external customer value-creating business processes and networks for the purposes of satisfying the needs and wants of important stakeholders.}
\]

While useful for organizations of any size, this definition’s emphasis on the necessary integration between business processes, networks, and stakeholders for establishing and maintaining a successful organization is especially applicable for entrepreneurial organizations seeking to build business processes, expand networks and establish and satisfy the needs of new and existing stakeholders.

The foundational premises of MOR theory represent the integration of thirty-one organizational theories, resulting in four “strength” characteristics important for a successful organization:

1. strategic market resources,
2. marketing leadership and decision making,
3. network alliances and collaborations, and
4. marketplace operations.

We define each of these strengths individually as presented in Hult (2011), summarize their applicability to boundary spanning theory, and then suggest our own applications of MOR theory’s implications for entrepreneurial firms, in Table 2.
Table 2: MOR Theory in Entrepreneurial Firms

<table>
<thead>
<tr>
<th>Strength area</th>
<th>Definition (Hult, 2011)</th>
<th>Connection to boundary spanning theory</th>
<th>Implications for this research on entrepreneurial firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic market resources</td>
<td>The resources of the marketing organization are essential for integrating marketing insights and knowledge in order to develop a strategic position in the market, based on the firm's product and/or service offerings.</td>
<td>Boundary spanners filter insights and knowledge from boundary spanning activities to enable the firm to develop product and/or service offerings to establish or maintain a strategic position in the market (Adams, 1976; Tushman, 1977).</td>
<td>Resources are limited, thus too many insights acquired through boundary spanning interactions may lead to an inability to develop innovative product and/or service offerings in order to establish or maintain a strategic position in the market.</td>
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<tr>
<td>Marketing leadership and decision making</td>
<td>The marketing organization develops decision making techniques and procedures to manage the large amount of information available to marketing leaders, enabling them to shape strategy and the external environment (Child, 1972).</td>
<td>Enabling boundary spanners with specific leadership and decision making processes may help to structure the boundary spanner - external organization interaction by lessening the effects of the boundary spanner's personal characteristics (Callister and Wall Jr., 2001).</td>
<td>The establishment of decision making procedures may increase the absorptive capacity of the organization by helping the firm to manage large amounts of information acquired through boundary spanning interactions.</td>
</tr>
<tr>
<td>Network alliances and collaborations</td>
<td>Both collaboration and competition exist within a marketing organization's networks. The nature of these relationships is determined by the organization's positioning relative to the core competencies most valued by the industry's network.</td>
<td>Boundary spanning activities often emerge under organizational conditions that are highly ambiguous and/or ill-defined (Golden and Veiga, 2005).</td>
<td>Entrepreneurial firms will also collaborate and compete in order to reduce highly ambiguous situations.</td>
</tr>
<tr>
<td>Marketplace operations</td>
<td>Marketing organizations have to operate in internal and external, domestic and global, networks and support the needs of stakeholders and market influences.</td>
<td>Boundary spanners must operate in internal and external organizational networks and support the needs of multiple stakeholders, as well (Callister and Wall Jr., 2001).</td>
<td>Entrepreneurial organizations develop organizational networks through boundary spanning and must also support the needs of multiple stakeholders.</td>
</tr>
</tbody>
</table>

While MOR theory is focused on the marketing organization and not entrepreneurial firms, it still suggests many important considerations for applying boundary spanning theory in more specific contexts.
Boundary Spanning Activities

Manev and Stevenson (2001) found in their study of boundary spanning and influence within a firm’s communication network, that in order to be influential and effective, managers should scan the external environment for critical changes and then communicate those changes to others in the organization. Managers are most effective when they are able to balance communication within their organization with communication with representatives of other organizations (Manev and Stevenson, 2001).

Boundary spanning has also been explored within team contexts, finding that teams engaging in boundary spanning activities are more likely to achieve team goals and are perceived to be more effective in general (Ancona and Caldwell, 1992a). Golden and Veiga (2005) focus their research of boundary spanning in global teams on groups that function in highly interdependent work contexts. They explain that such organizational conditions can result in a highly ambiguous and ill-defined environment, which drives teams to engage in boundary spanning activities in order to effectively cope with the organization around them (Golden and Veiga, 2005; Kessler and Chakrabarti, 1996). Relating this to the context of entrepreneurial firms, they too are often operating under conditions of ambiguity and with ill-defined strategies. The high failure rate of new businesses has been attributed to informal strategic planning processes and a lack of systems to keep track of the firm’s performance (Wheelen and Hunger, 1995).

Further research on boundary spanning within teams has focused on how teams process information in relation to their organizational environment (e.g., Gresov, 1989; Nadler and Tushman, 1988) and how team members interact within team borders (e.g., Cohen and Bailey, 1997; Guzzo and Dickson, 1996). However, extant research lacks strong evidence on how the team interacts with its environment (Golden and Veiga, 2005), with the exception of research by Ancona and Caldwell (1992a, 1992b), who present the concept of teams establishing an external perspective. Understanding how entrepreneurial firms interact with their external environment will provide important insights into how these interactions drive innovation within the firm.

Today’s environment demands a new type of entrepreneurial team (Ancona, Bresman, and Kaeufer, 2002). Teams that are too inwardly focused tend to lack flexibility, whereas having an entrepreneurial focus helps teams to respond more quickly than traditional teams to the rapidly changing environment of changing technology and customer demands (Ancona et al., 2002). Ancona, et al. (2002) found that teams that are externally oriented and adaptive have better results across a wide variety of functions and industries. They term these teams “X-teams.” For example, X-teams have been found to be more innovative and have increased their on-time and on-budget performance (Ancona et al., 2002). Too much focus inside the team was found to be ineffective, with those teams best able to manage across boundaries to lobby for resources, seek up-to-date information, and link to other groups both inside and outside of the company, outperforming their more tradition counterparts (Ancona et al., 2002). While this research focuses on entrepreneurial firms, not entrepreneurial teams per se, the implications for the organization are the same.

Boundary Spanning in Entrepreneurial Firms

Brodzinski, Scherer and Weibe (1990) conducted one of the few empirical studies examining boundary spanning in entrepreneurial firms. The main focus of this research was to determine if the business owner’s individual decision style affected the type of boundary spanning activities he or she engaged in. Brodzinski, et al. (1990) noted that the criteria by which environmental information is evaluated has been investigated in prior research, but the importance of different types of information to small business owners remains unexplored.

Johnson and Kuehn (1987) found that the owner/manager of a typical small business spends more than four hours per day engaging in environmental activities (with more than two hours per day spent with customers). These findings are consistent with Dollinger (1984), who asserted that in entrepreneurial firms, the entrepreneur occupies the boundary spanning role, and the strategic activities in which the entrepreneur engages are the boundary spanning activities of the firm. The boundary spanning activity of the entrepreneur represents the perception of what aspects of the external environment should be acted upon, as well as the commitment of the organization’s resources (the entrepreneur’s time and expertise) (Dollinger, 1984). In terms of the present research, this would mean that the entrepreneur, as a representative of the entrepreneurial firm, determines which boundary spanning activities are absorbed into the organization and supported by resources to contribute to firm innovativeness and firm performance. Considering this finding, while
boundary spanning is primarily discussed at the organizational level, in entrepreneurial firms, individual-level boundary spanning research is also closely related.

Despite the benefits of boundary spanning activities, there is a point of diminishing returns between the number of boundary spanning roles and firm performance (Tushman, 1977). Tushman (1977) found that high-performing projects facing changing environments had fewer boundary spanners per project than lower-performing projects facing the same conditions. The lower-performing projects generally had more than one boundary spanner per project, leading Tushman to conclude that having a boundary spanner for each project in a large organization may be redundant and actually lead to problems of coordination and integration of project tasks. In the projects studied, the first few boundary spanner roles were associated with an increase in performance, but after a point, more boundary spanner roles actually decreased project performance. Further, for projects in less complex environments, an increase in the number of boundary spanner roles was also associated with lower project performance. Tushman’s (1977) research thus suggests that under both dynamic and stable environmental conditions, too many boundary spanner roles may be redundant and impede project coordination.

Considering Tushman’s (1977) findings in an entrepreneurial context, entrepreneurial firms are likely to be focused on a limited number of “projects,” given the organization’s developmental nature. Dedicating the firm’s limited resources to multiple boundary spanner roles may also cause redundancy, leading to poor project performance, which in the case of an entrepreneurial firm may mean lack of innovation, and thus poor firm performance, stagnation or even failure.

In larger, more established firms, employees are directed to fill specific roles considered as boundary spanner roles. New or small businesses generally do not have the same resources and are not usually able to support specific job descriptions, such as customer service representative or salesperson, so the owner/founder must instead take on this responsibility, interfacing with external constituents and forming contacts external to the firm (Brodzinski et al., 1990; Manev and Stevenson, 2001). Engagement in boundary spanning activities requires a boundary spanner to direct his or her efforts outside of the organization, away from the control of internal resources (Manev and Stevenson, 2001).

**Breadth and Depth of Boundary Spanning Activities**

Laursen and Salter (2006) studied the relationship between innovativeness and openness to external search at the firm level for the manufacturing industry in the UK. Through this research they emphasized the concepts of breadth and depth as two important areas of consideration for a firm’s external search strategies, linking both to innovative performance (Laursen and Salter, 2006). Their findings suggest that firms who search more widely and deeply are generally more innovative; however, the benefits to this openness are subject to diminishing returns, meaning that there is a point where additional search becomes unproductive.

Laursen and Salter (2006) base their research on Chesbrough’s ‘open innovation’ model (Chesbrough, 2003a, 2003b), which suggests that firms seek innovations beyond their own research and development departments, choosing instead to source successful innovations from a wide range of external sources. While similar to boundary spanning theory in terms of seeking innovations outside of the organization, open innovation is much more narrowly focused on sourcing innovations from existing organizations. Boundary spanning theory encompasses a much broader picture of external search, focusing on more general interactions between boundary spanners and external parties from a broader range of sources such as advisors, customers, competitors, professional organizations, etc. Nonetheless, the concepts of breadth and depth are also highly relevant in boundary spanning and will be applied in this research.

Additional research has also found breadth in the types of information searched to affect innovation outcomes (Ahuja and Katila, 2004; Rosenkopf and Nerkar, 2001; Von Hippel, 1988). In one of the first studies to conduct firm-level analyses of the impact of technological innovation breadth on innovation, Leiponen and Helfat (2010) found that having a greater breadth of knowledge sources is associated with greater firm-level innovation success. They also found no evidence of decreasing returns to a greater number of information sources and objectives. This finding is inconsistent with prior research, which found a diminishing returns relationship between breadth of search and innovative performance, suggesting that some firms have a tendency to ‘over-search’ (Katila and Ahuja, 2002; Laursen and Salter, 2006). One explanation for this discrepancy could be that Leiponen and Helfat’s sample firms had a mean of 318 employees, with an upper boundary of 6,615 employees (Leiponen and Helfat, 2010). With firms this large included in the sample it is likely
that these firms had significant resources at their disposal, thus the effects of allocating resources to several boundary spanning sources would not have the same impact that it would for an entrepreneurial firm.

Thus, in this research, findings consistent with diminishing returns of over-search are more likely to be found, but then explore over-search even more deeply. This research will, in fact, go further that suggesting only diminishing returns, but also propose that the limited resources of the entrepreneurial organization will lead to not only diminishing returns, but also actual negative effects on firm innovativeness with an increase in additional boundary spanning activities (either with too many different sources, or alternatively too much time spent with one particular source).

**Boundary Spanning Objectives**

In their field study of boundary spanning in the research and development facility of a large corporation, Tushman and Scanlan (1981) studied all work-related communication for a number of selected days over a 15-week period. The resulting communication data was separated into mutually exclusive communication domains. Extra-organizational communication was divided into two “areas”: professional areas (universities, professional societies) and operational areas (suppliers, vendors, customers) areas (Tushman and Scanlan, 1981). Laursen and Salter (2006) also divided the knowledge sources used by the organizations they studied into four different “types”: (1) Market (suppliers, customers, competitors, consultants, and research and development enterprises), (2) Institutional (universities, government research organizations, and private research institutes), (3) Other (professional conferences, meetings, trade associations, technical/trade press, computer databases, fairs, exhibitions), and (4) Specialized (technical standards, health and safety standards and regulations, environmental standards and regulations). The different sources of information used in Laursen and Salter (2006) are based on the core Eurostat Community Innovation Survey (CIS) of innovation.

As one of the contributions of this research, consistent with the research question of how the entrepreneurial organization’s boundary spanning objectives affect overall firm innovativeness, different boundary spanning objectives will be defined and proposed to have unique effects on firm innovativeness. Different boundary spanning sources identified in prior research (Laursen and Salter, 2006; Tushman and Scanlan, 1981), as well as additional sources identified by the research team, will be classified into three different boundary spanning objectives: “Strategic boundary spanning,” “Operational boundary spanning,” and “Informational boundary spanning.”

**Strategic boundary spanning** encompasses boundary spanning activities with a longer term, investment-based focus, including sources such as universities, consultants, and government and private research organizations. **Operational boundary spanning** represents more day-to-day boundary spanning activities that may lead to innovative ideas entering the organization, including interactions with: suppliers, vendors, customers, competitors, technical standards, health and safety standards and regulations, or environmental standards and regulations. Lastly, Information boundary spanning is comprised of boundary spanning activities involved with: professional conferences, meetings, trade associations, technical/trade press, computer databases, fairs, or exhibitions.

**Boundary Spanning and Firm Innovativeness**

Innovation and structural change within organizations are often the result of information brought into the organization by boundary spanners (Aldrich and Herker, 1977; Bennis, 1966). Boundary spanning behavior enables the organization to continually scan the environment for new technological developments, innovations in organizational, or product design, as well as relevant trends in related and unrelated industries (Aldrich and Herker, 1977). Boundary spanning activities prevent organizations from losing touch with their industry and becoming mismatched with the external environment (Aldrich and Herker, 1977; Child, 1972).

Organizations that engage in broader and deeper search may have a greater ability to innovate due to their ability to adapt and change (Laursen and Salter, 2006). Innovation is a very broad term that encompasses many different overlapping aspects of the diffusion and adoption of new ideas. To capture the broad nature of the term for this research, innovation is defined as an internally generated or purchased device, system, policy, program, process, product, or service that is new to the adopting organization (Daft, 1982; Damanpour, 1991; Damanpour and Evan, 1984; Zaltman, Duncan, and Holbek, 1973; Zaltman and Duncan). Further, this research will focus on the innovations of the organization as a whole, specifically, firm innovativeness. Firm innovativeness is an appropriate construct to examine with boundary spanning activities because, as with interactions between boundary spanners and the external environment, organizations adopt
innovations over time. Thus, firm innovativeness is more appropriate when multiple innovations, rather than a single
innovation, are considered (Damanpour, 1991).

**The Role of Absorptive Capacity**

The construct of absorptive capacity has evolved and expanded over time, not only by the authors of the original papers
on the subject (Cohen and Levinthal, 1989, 1990, 1994), but also through the more than 900 peer-reviewed academic
papers which use the construct (Lane, Koka, and Pathak, 2006). The original works, however, are very consistent with
boundary spanning theory and MOR theory in that they emphasize how interacting with the external environment enables
a firm to develop processes, policies, and procedures to facilitate sharing knowledge internally, to better understand how
to create new products and new markets, and to strategically use the firm’s resources to commercialize innovations based
on the firm’s resources (c.f., Adams, 1976; Callister and Wall Jr., 2001; Hult, 2011). Research addressing the intersection
of innovation and absorptive capacity has suggested that absorptive capacity helps the speed, frequency, and magnitude of
firm innovativeness (Lane et al., 2006).

The innovation process requires outside sources of knowledge (Cohen and Levinthal, 1990), but mere exposure to
external knowledge is not sufficient to internalize it successfully within the organization (Pennings and Harianto, 1992).
Up until this point this research has focused on the acquisition of new knowledge, but to achieve competitive advantage,
firms need to also assimilate that knowledge and apply it to commercial ends (Jansen, Van Den Bosch, and Volberda,
2005). Two types of absorptive capacity are introduced in Zahra and George (2002): potential absorptive capacity and
realized absorptive capacity. Potential absorptive capacity focuses on the firm’s acquisition and assimilation of
knowledge (some of which may never be exploited) (Jansen et al., 2005; Zahra and George, 2002). Alternatively, realized
absorptive capacity is the firm’s focus on transforming and exploiting knowledge (Zahra and George, 2002). Both forms
of absorptive capacity are relevant for this research because potential absorptive capacity is closely related to the
acquiring of knowledge externally, and realized absorptive capacity is related to the implementation of the external
knowledge (resulting in innovation).

**CONCEPTUAL DEVELOPMENT AND PROPOSITIONS**

**Boundary Spanning and Firm Innovativeness**

Prior research suggests that the intensity (amount of time spent on boundary spanning activities) and the extensity
(number of boundary spanner contacts) of boundary spanning activities are important measures of boundary spanning
activities (Katz and Kahn, 1978). These different degrees of boundary spanning activity might affect firm innovativeness.

In terms of this research, external search breadth represents the number of external sources, or the boundary spanning
relationships, that firms rely on in their boundary spanning activities (based on Laursen and Salter, 2006). External search
depth is the extent to which firms draw deeply from the different external sources, or boundary spanning relationships
(based on Laursen and Salter, 2006). Together external search breadth and depth represent the big picture of the
entrepreneurial firm’s external search, or intensity of boundary spanning.

Katila and Ahuja (2002) examined external search breadth and found that a firm’s innovative performance was in part a
function of its search behavior. They found a curvilinear relationship (an inverted U-shape) between breadth of search on
one side, and innovative performance on the other. This relationship suggests, as discussed previously, that some firms
have a tendency to ‘over-search’ (Katila and Ahuja, 2002; Laursen and Salter, 2006). Laursen and Salter (2006) provide
three reasons why ‘over searching’ may have a negative influence on firm performance. First, because there may be too
many ideas for the firm to manage and choose between – this is closely related to the absorptive capacity of the firm.
Another reason is that innovative ideas often come at the wrong time and in the wrong place to be fully exploited. And
lastly, if there are too many ideas, many may not be taken seriously or given the necessary attention or resources to
develop them to the point of implementation.

An example of ‘over searching’ in an entrepreneurial context can be seen in the following example about entrepreneurial
firms seeking external assistance. Chrisman, et al. (Chrisman, McMullan, and Hall, 2005) found that using the assistance
of counselors from a Small Business Development Center significantly influenced growth (sales and employment) in new
ventures up to a point; however, too much assistance proved to be a hindrance to sustaining high levels of growth. This example uses the dependent variable of firm growth, rather than firm innovativeness, but the findings suggest that the relationship would be similar between boundary spanning activities and firm innovativeness for entrepreneurial firms.

Additionally, in terms of search depth, innovative firms often draw intensively from a small number of external information sources (Laursen and Salter, 2006). With regards to boundary spanning activity, this suggests that some innovative entrepreneurial firms will also gather external information from a small number of key boundary spanning relationships. While firms that draw extensively from external sources tend to be more innovative due to building strong relationships with certain external sources, some firms can also become too reliant on external sources for innovation (Laursen and Salter, 2006). The following propositions support the idea that entrepreneurial firms may experience negative effects on firm innovativeness as a result of over-searching through boundary spanning activities:

\[ \text{Proposition 1a. Breadth of boundary spanning activity is curvilinearly (an inverted U-shape) related to entrepreneurial firm innovativeness.} \]

\[ \text{Proposition 1b. Depth of boundary spanning activity is curvilinearly (an inverted U-shape) related to entrepreneurial firm innovativeness.} \]

Further, this research focuses on three different objectives of boundary spanning activities to assess the effects on the boundary spanning – firm innovativeness relationship: strategic boundary spanning activities, operational boundary spanning activities, and informational boundary spanning activities. This distinction is important to assess because each type is representative of a separate search space, which may require different organizational practices in order to achieve an effective search process within the particular knowledge domain (Laursen and Salter, 2006). While the specific search process will not be examined in this research, different boundary spanning activities will be defined with the idea that different firm objectives will lead to different effects on entrepreneurial firm innovativeness, and thus have different points at which additional boundary spanning activities lead to negative effects on firm innovativeness. This study’s focus on firm innovativeness is at the organizational, as opposed to individual product level, consistent with Hurley and Hult (1998), who defined firm innovativeness as openness to new ideas as part of a firm’s culture. Thus, the following propositions are suggested:

\[ \text{Proposition 2a. The effect of entrepreneurial firm boundary spanning activity that is strategic in nature will have a higher inflection point than operational and informational boundary spanning activity.} \]

\[ \text{Proposition 2b. The effect of entrepreneurial firm boundary spanning activity that is operational in nature will have a higher inflection point than informational boundary spanning activity.} \]

**Boundary Spanning, Absorptive Capacity, and Firm Innovativeness**

The fact that valuable (or potentially valuable) knowledge exists in the external environment is a necessary, but not sufficient, condition for a firm to develop absorptive capacity (Lane et al., 2006). Thus, absorptive capacity on its own is not sufficient for firm innovativeness. It follows then that this is an appropriate moderator of the relationship between boundary spanning interaction and firm innovativeness, strengthening or weakening the relationship based on the absorptive capacity of the entrepreneurial firm in question, thus:

\[ \text{Proposition 3. The relationship between entrepreneurial firm boundary spanning activity and entrepreneurial firm innovativeness is moderated by the absorptive capacity of the firm.} \]

**Firm Innovativeness and Firm Performance**

Extant research has asserted that innovation capability is the most important determinant of firm performance (Mone, McKinley, and Barker, 1998), a finding which is supported by many empirical studies (e.g., Cooper and Kleinschmidt, 1987, 2000). Firms must be innovative in order to gain a competitive advantage, crucial to survival in a competitive marketplace (Li and Calantone, 1998); thus:

\[ \text{Proposition 4. Entrepreneurial firm innovativeness is positively related to entrepreneurial firm performance.} \]
**Conceptual Model**

Figure 1 depicts the proposed conceptual model. The breadth or depth of boundary spanning activities (further delineated by the firm’s boundary spanning objectives) affects entrepreneurial firm innovativeness. Further, this proposed relationship is moderated by the absorptive capacity of the firm. Lastly, the innovativeness of the entrepreneurial firm is proposed to positively influence entrepreneurial firm performance.

![Figure 1: Conceptual Model](image)

**DISCUSSION AND IMPLICATIONS**

Through this research we seek to present a more complex relationship between the opportunity-seeking activities of entrepreneurial firms and firm innovativeness than strategic entrepreneurship has initially suggested (c.f., Ketchen Jr et al., 2007). Our conceptual model can be viewed as a starting point for further examination of the likely negative impact that too broadly, or too narrowly, focused boundary spanning activities can have on the innovativeness of firms with limited resources. We also introduce three boundary spanning objectives, which drive entrepreneurial firm innovativeness to differing extents – strategic, operational, and informational boundary spanning activities.

While extant research has labeled and categorized different boundary spanning activities (such as “strategic” or “institutional” knowledge sources) (Laursen and Salter, 2006; Tushman and Scanlan, 1981), these categorizations do not represent the *intent* with which entrepreneurial firms undertook these boundary spanning activities. Our research is the first to argue that the objective with which the entrepreneurial firm pursues a boundary spanning activity will influence the extent to which these activities will benefit firm innovativeness. Our conceptualization of the effects of boundary spanning activities on firm innovativeness go beyond the ‘open innovation’ model (Chesbrough, 2003a, 2003b) to encompass a broader view of external search in entrepreneurial firms. For example, a firm may engage in boundary spanning activities with an informational objective with no intention of seeking to source an innovation from the outside party.

While absorptive capacity has been suggested to strengthen and magnify firm innovativeness (Lane et al., 2006), our research proposes that, again, this effect is more nuanced than previously proposed. If the relationship between different boundary spanning activities and entrepreneurial firm innovativeness is, indeed, an inverted U-shape, whereby additional boundary spanning activities reach a point of diminishing returns, followed by an inflection point at which the positive effects on entrepreneurial firm innovativeness turn negative, then a firm higher in absorptive capacity is proposed to magnify this relationship. For example, a firm high in absorptive capacity may be able to engage in more strategic boundary spanning activities before reaching a point of negative returns to firm innovativeness than a firm with a low degree of absorptive capacity. This same magnification of the inflection point should hold true for the other boundary spanning objectives as well (operational and informational boundary spanning). These relationships lend themselves to empirical investigation as part of our future research.

Lastly, our conceptual model includes a relationship supported in several empirical studies, that firm innovation is an important driver of firm performance (Cooper and Kleinschmidt, 1987, 2000; Li and Calantone, 1998; Mone et al., 1998). This relationship should be empirically investigated in future research related to this model because firm performance...
may be defined differently in entrepreneurial firms than in larger, more established ones. Additionally, the boundary spanning objectives pursued by the entrepreneurial firm may have a partial direct effect on firm performance, as well as through entrepreneurial firm innovativeness.

CONCLUSION

The conceptual model presented here contributes to the entrepreneurship literature by highlighting how the effects of constrained resources within an entrepreneurial firm can lead to an inverted U-shaped relationship between the extent of boundary spanning activities, entrepreneurial firm innovativeness and entrepreneurial firm performance. A further contribution is the delineation of the three different boundary spanning objectives, which drive the boundary spanning activities of the entrepreneurial firm. And lastly, the application of a new theoretical lens, boundary spanning theory, to the entrepreneurial context acts as a strong compliment to what we already know about strategic entrepreneurship, broadening our view of the ways in which external search activities can drive innovation.

REFERENCES


BUSINESS GROWTH BY ‘TALKING’: AN EXPLORATORY SOCIO-LINGUISTIC INVESTIGATION

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ABSTRACT

Objectives: This study sets out to explore the social construction of the operation and meaning of a language for business growth and to identifying where socio-linguistic gaps exist and how they can be improved which in turn could impact upon national competitiveness through better policy making and communication. In essence the study explores the linguistic constructs of psycho, social and administrative language construction in an entrepreneurial context. The study proposed an exploratory study that aimed to: Investigate the operation and meaning of the language for business in the context of the micro-business.

Prior Work: While the marketing/entrepreneurship literature contains reference to a ‘language’ of and for marketing within the small entrepreneurial firm and the literature within the sociolinguistic domain suggests that human meaning is constructed through the use of language in social settings (for example: micro-business), no focused research has yet to be undertaken by fusing the two domains in order to contribute to the development of marketing theory, ‘Contextual Marketing’ theory and applied social linguistics. (see for example: Brownlie and Saren 1997; Bjerke and Hultman 2002; Carson et al. 2003; Deacon 2008; Morrish et al. 2010; Deacon and Harris 2011)

Approach: The primary research took place in two phases, qualitative and quantitative: Qualitative: 6 focus groups (of 8 participants that represent both sector and regions of Wales) and in-depth interviews to determine the terminology or lexicography of small business in relation to this issue. Quantitative: a comprehensive questionnaire administered by telephone throughout Wales. Thus this paper reports the findings from the in-depth feature of phase one of the study.

Results- Implications- Value: At the date of writing full results are yet to have been collated – however early indications are that there is a socio-linguistic gulf between policy makers and practitioners in our study. The practitioner constructs, operates and gives meaning to language used for business growth that is at odds with the meaning given by policy makers – although similar words and phrases may be used. This gives rise to a linguistic concept of ‘code switching’ – an understanding of which would enhance policy development and delivery within the micro-business community.

INTRODUCTION

This research is predominantly interested in investigating the meaning and operation of growth in micro-business, particularly in Wales, UK. The aspiration of growth within an economy is a central feature of the policy development of all democratic economies world wide. This is the case in all economic climates but has become more pronounced since the financial crisis of 2008. When Birch (1979) identified that small firms and especially entrepreneurial small firms were the driving force of economic development through job creation he also identified that periods of economic recession came to an end often because such small firms began to grow.

However, as pointed out by Carter and Jones-Evans (2000:3) ‘a small firm, because of its size, can make only a minor contribution to the economy, but as there are so many small firms their collective contribution is substantial’. Thus in the contemporary economic climate the encouragement of growth within small firms has ‘again’ become a feature of political rhetoric and the task of policy makers and administrators – we say ‘again’, as scholars of economic history will confirm, the encouragement of growth in small firms is not a new economic development phenomenon (see for example: Smallbone and Wyer 2000; Huggins and Williams 2012).

Given that there is a political imperative to encourage small firms to grow our attention has been drawn to the mechanics of that encouragement and in particular to the ‘fundamental importance of culture, and use of language’ (Bjerke and Hultman, 2002:146) found within the focal firm, but also used by support agencies in defining the notion of growth. Thus we explore the meaning and operation of the language for growth in micro firms in Wales.
DEFINITION OF MICRO-BUSINESSES

In extant literature, what is now known as a micro-business has often had different definitions, from a business based on number of employees (Lean, 1998, Matley 1999, Kelliher and Reinl 2009,) to size (Roberts and Wood 2001) to an overarching term used to cover all ‘owner managed businesses, team managed businesses, family businesses, ethnic businesses’ (Devins et al, 2005, p541). The UK is part of the European Commission which has its own definition of micro-business and since 1996 has classified micro-businesses to be those with less than 10 employees (Lean, 1998, Matley 1999, Kelliher and Reinl 2009).

Many authors use the terms; ‘Micro-enterprise’ (Sandberg 2003, McAuley and Clarke 2009), ‘Micro-firm’ (Matlay, 1999, Hines 2000, Williams 2007, Kelliher and Reinl 2009) and ‘Micro-business’ (Lean 1998, Pratten 2005, Thomas and Thomas 2006, Pollitt 2011, Samujh 2011). In this study, these terms are all are taken to have the same meaning and to have similar characteristics, in that they all correspond to the EU definition of the term ‘micro-business’.

Structure of Micro-businesses

Research has shown that the organisational structure of a micro-business can be different to a larger business. From management structure, to culture, they ‘are intrinsically different in their organisational characteristics and approach to business problems’ (Kelliher and Reinl 2009, p522) and ‘theories derived from studies of larger businesses are inappropriate when applied to micro-firms’ (p522) due to the unique management structure of firms which are small.

The structure of micro-businesses tends to be ‘flat or horizontal’ (Kelliher and Reinl 2009, p523) with ‘all major decisions emulating from the structure’s centre’ (Mintzberg, 1983; cited in Kelliher and Reinl 2009 p523) through a merger of management and ownership. A flat structure has inherently few hierarchies and almost no management levels, therefore ‘in micro and small businesses the locus of organisation control rests entirely with the owner/managers’ (Matley 1999, p287), in contrast to medium to large sized organisations where control is delegated to a management team.

Micro-businesses by definition employ few employees and Gray (2002) notes that ‘most self-employed sole traders and very small family firms do not employ external capital or labour’ (p65) at all. Managers are often also the owners, as there ‘generally no need to appoint non-owning managers’ (Greenbank 2000, p403) through the ability of owner-managers to work at both ‘management and operational level’ (p403). The lack of a management team often results in an informal management style (Roberts and Wood 2002 p116) and this can produce a culture ‘lends itself to informal narrative modes of communication’ (Kelliher and Reinl 2009, p523).

Owner Management

Owner-managers can be defined as ‘individuals with an equity stake in the business who are also involved in the day-to-day running of the business’ (Nelson and Gibb 1993 p72). There is significant research on the role of the owner-manager in a small organisation (Nelson and Gibb 1993; Greenbank 2000; Devins et. al, 2005; Samujh 2011).

The lack of management structure can cause problems for micro-businesses by requiring ‘the owner/manager to be an expert in all fields of management’, creating time pressures that can lead to lack of growth (Samujh 2011). Samujh (2011) describes how shortages of time can arise from ‘the challenge of keeping up with the many areas of responsibility’. Samujh concluding that ‘for most, their response to (unexpected and uncontrollable calls upon their time) was to work extra hours in an attempt to cope’ (Samujh 2011 p19); increasing the cycle of dependence on the owner-manager.

Lifestyle Businesses

Discussions around the concept of lifestyle business (a small business that may have personal goals in addition or instead of economic goals), the goals of such businesses, reasons for their existence and their contribution to the economy, can be found in the literature (Nelson and Gibb 1993; Gray 2002; Komp埔ila and Reijonen 2006; Chaston 2008; Angove et. al, 2008 and Samujh 2011). Komp埔ila and Reijonen (2006) discussed that the goals of a micro-business may not be ‘maximising the financial performance of the firm, the owner manager may prefer independence and lifestyle’ (p13). However they continue stating that a minimum profitability will still be required by such businesses to protect the lifestyle
and livelihood of the owners. This minimum profitability target will be different for each business and hard for external organisations and legislators to predict.

Micro-business owners have, as seen in previous research, given reasons other than profit for their business existence; these reasons can be seen to be largely intrinsic and often are a lifestyle choice. Reasons varied from, independence (Nelson and Gibb 1993) and control of working life (Gray 2002), being the boss, achieving personal growth and development and being able to use special skills (Samujh 2011), in addition to ‘achieving an effective work/life balance, spending time with their family or living in a preferred geographic location (Charston 2008 p820). Chaston also discusses the role of ambition in choosing to create a micro-business however his research noted that once the business was established: ‘few respondents exhibit any interest in participating in training schemes aimed at enhancing business performance’ (p819) and these ambitions can diminish over time reducing further growth.

Micro lifestyle businesses may however continue to contribute to the local economy through networking, local resourcing, local sponsorship (such as of local football teams, school events) and through the provision of key services in a community (Greenbank 2001, Thomas and Thomas 2006, Chaston 2008).

Notion of Growth

Extant literature discusses Government policies for providing training and support for growing businesses (Nelson and Gibb 1993, Lean 1999, Greenbank, 2000 McAuley 2009), nevertheless definitions for what constitutes growth varies greatly, from employment growth (Greenbank 2000), to growth in turnover or sales (Greenbank 2001) to growth in reputation and trade. Any of these definitions also has its critics, McAuley (2009 p28) suggesting that growth: ‘expressed in terms of sales, employees, net assets or profits, is inappropriate, or at best blinkered’.

Further to growth in employees, turnover or trade, Lean (1998) argues that size and employment numbers are inappropriate as a ‘predictor of growth’ and that other more qualitative factors, such as a ‘businesses responsiveness to change’ and ‘survival and business sustainability’ are better determinants of the potential to growth. Such metrics of growth highlight the problems of, ‘understanding the dynamics of the growth process and entrepreneurial developments in small firms’ (McAuley 2009 p23). For those making policies and for those running such firms ‘there may be no single theory which can adequately explain small business growth’, posits McAuley (p23) and any attempt to define growth may vary significantly from small firm to small firm.

Business Survival

It has been suggested that rather than turnover or employee size, business survival may be a more appropriate indicator of business success (Gray 2002, Pratten and Lovatt 2005). Fear of failure is clearly a driver in business survival and such fear coupled with the instabilities of small firms may clarify why some firms resist growth. Greenbank (2001) found ‘that firms specified an upper size limit in order to remain in control of their businesses’. Citing concerns about larger premises, higher overheads and financial pressures to pay wages, as concerns which may threaten business functionality and make owner-managers wary of growth and change. Gray (2002) describes how fear of change creates established routines, and routines that work well in small businesses ‘quickly become embedded’, which can be a form of competitive advantage through localised knowledge of what works. However routinized behaviours also restrict growth based on the fact that these routines do work ‘and that the firm survives may reinforce a resistance to learning new ways or ideas on the part of many owner-managers’ (Gray 2002; p63).

Factors outside of the organisations control may also affect survival strategies and decisions for growth; for example ‘the recessionary state of the economy’ (McAuley 2009 p25); new industry standards, regulations, and increased competition from other suppliers (Kelliher and Reinl 2009 p524). External changes to the business environment can assist the decision to keep small, ‘micro firms competitive advantage is often built on localised and tacit knowledge that can respond quickly to market signals’ (Kelliher and Reinl 2009, p523) enabling them to make changes quickly and efficiently, according to Brady (1993, p46).
Management Style

In all business entities the management style will vary from organisation to organisation (Pratten and Lovatt 2005, p297) however there are characteristics that are typical of micro-businesses, with regard to business planning and decision making. Previous research has investigated how micro-businesses approach planning and report the way micro-businesses tend to utilise a ‘day by day’ method for business management (Sandberg 2003, Devins et al 2005, Kelliher and Reinl 2009). These day-by-day plans are often unstructured and irregular (Sandberg 2003 p413).

However Kelliher and Reinl (2009) highlight that whilst there may be a lack of formal planning that is not written; planning may still occur due to the owner/manager’s direct contact with customers, suppliers and employees which is an informal strategic planning process (p523).

In these informal plans, Greenbank (2001) found that some businesses did cite growth as objective, however many had reached a certain size, or didn’t have the ability to manage more than 2 or 3 employees themselves, Brady (1993) notes that this may be ‘because they cannot grow manageably beyond that point’ (p45). Desire for growth is not common and can be ‘seen as potentially creating instability in the firm’s operations’ (Gray 2002 p65) resulting in decisions to stay small with an uncomplicated structure.

Support – Internal and External

Support from internal and external sources is described in some research as ‘paramount due to the more limited ability of micro-firms to shape their external environment’ (Devins, 2005 p524). As noted earlier Owner-managers often work at both managerial and operational level, which, while cost efficient can lead to information deficits, support from internal and external sources can help address this deficit.

Internal knowledge may come from employees, stakeholders and use of market information (Devins et al 2005, Kelliher and Reinl 2009, Pollitt 2011). Early research by Lean (1998) showed that most owner-managers believe ‘it is their own efforts and experience which most critically affect their firm’s growth performance’. Later research by Devins shares this analysis, adding that where a small team works together; it has the effect of ‘forming the distinct culture of a micro-business that develops over time’ (Devins et al 2005). They are therefore in a position to acquire information from ‘the market and the way the business is functioning from personal experience’ rather than relying on third party information (Greenbank 2000), and consequently act on a ‘gut reaction’ which is ‘emotional, psychological and even physiological’ (Devins et al 2005 p541).

Internal support from employees of the business has revealed high success rates of business growth, not in employee numbers but in employee knowledge. Pollitt (2011) uses the example of growth through internal knowledge expansion when a member of staff attended a web design course and ‘redesigned the company’s web site, which has seen an increase from 300 to 800 visitors a month’ (p16). In addition to internal support, a micro-business may utilise support from those closely connected to the business. Devins (2005) calls these ‘close others’ (p544) and describes them as stakeholders with a close interaction within the business but who are not involved with the day-to-day processes, using examples such as ‘family or friends or other stakeholders such as particularly valued suppliers or customers’.

Support is also forthcoming from professional advisors, those who are not connected with the business on a day-to-day basis but may interact with the business and its activities, often due to necessity if a business requires finance or accounting support. Professional support may come from accountants, bankers, solicitors and financial advisors (Devins et al 2005). Devins highlights that where these are ‘in tune with the interests of the micro-business’ (p544) they offer advice that can improve the success of the business, however micro-businesses have exhibited signs of finding external support unattractive, particularly if interaction is limited and not developed into a relationship (p543).

Further to this, research by Angove et al. (2008) found that micro-businesses who may have been classed as a ‘lifestyle business’ by banks or advisors, felt they were at a disadvantage to those classed as growing, when applying for funding, grants and loans (p298). This creates a gap between desire for growth and the reality of it being possible (McAuley 2009 p25) due to an experience of being typecast into non-growth organisations (Gray 2002 p64).

However there is less literature which relates micro-businesses to growth and support, and very little cross-referencing this research about micro-businesses with the South-west economy.
## RESEARCH DESIGN

### Approach

The primary research took place in two phases, qualitative and quantitative:

Qualitative: 6 focus groups (of 8 participants that represent both sector and regions of Wales) and in-depth interviews to determine the terminology or lexicography of small business in relation to growth.

Quantitative: a comprehensive questionnaire administered by telephone throughout Wales.

Thus this paper reports the findings from the in-depth feature of phase one of the study.

A multiple exploratory case study approach was therefore selected (Echtelt et al., 2006), and the data generated through the instruments of face-to-face in depth responsive interviews (Rubin and Rubin 2005), and ethnographic participant - observer observation (Remenyi et al., 1998). This approach permitted exploration of the issues raised in the literature in relation to the meaning and operation of growth in micro firms. Personal interviews can be seen as a qualitative approach, which often ‘considers words rather than numbers as the major element of data’ (Hine and Carson, 2007, p5) therefore the interviews were kept deliberately unstructured to allow clients to voice their own opinions on what they find valuable. Carson (2001) suggests that interviews that are conducted more like conversations, produced a more relaxed experience for the interviewee, and produce a ‘collection of stories’ (p152) that are invaluable in gaining insight into the phenomena and generate context rich data (Deacon, 2008).

A qualitative research method creates the necessity for the researcher to interpret the data. A recursive technique is a procedure that is applied once, then applied to the result of that procedure, a circular question process without the assistance of coding. This process ‘typically unfolds over the course of several studies, each executed in concatenated fashion with reference to the earlier ones’ (Stebbins 2001, p6). In this research the researcher is the instrument of analysis, and it is appreciated that not everyone uses the same language or the same key-word; therefore a recursive abstraction is more suitable to pull together the different discussions into themes and patterns, to make sense of the data as a whole project. The recursive technique enables ‘presenting the system at various detail levels without losing the “big picture” and the comprehension of the system as a whole’ (Green and Rosemann 2005, P164).

### Case selection

The co-author of this research is an accountant (and micro-business) specialising in professional financial services for micro-businesses. Therefore, initial personal contacts were used and subsequently a purposeful sampling method was employed. Clients have been chosen for this list due to being classed as a micro-business; those with over 10 employees have not been selected. Participants being approached to take part on the basis of having a meeting already booked with their accountant to discuss current needs and for accountancy advice. Others have been invited for interview where a known issue with growth or retraction has occurred within the last financial year. The interviews were conducted at the client’s premises, primarily to prevent inconvenience to the client during their working day and also so the client was in familiar surroundings, (not in their accountant’s office which would make the situation more formal). The interviews had no pre-set duration and all interviews, were with permission, recorded and transcribed.

Table 1.0 provides an overview of the cases. The table offers a categorisation of the business a description of the activity and structure.
### Table 1: Categorisation and Description

<table>
<thead>
<tr>
<th>Code</th>
<th>Industry</th>
<th>Business Description</th>
<th>Formation</th>
<th>Management</th>
<th>No. of employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW</td>
<td>Service</td>
<td>Climate Change Consultant</td>
<td>Limited Company</td>
<td>2 Directors (husband and wife)</td>
<td>No Employees</td>
</tr>
<tr>
<td>CK</td>
<td>Service</td>
<td>Commercial Cleaning Company</td>
<td>Limited Company</td>
<td>1 Director</td>
<td>6 Employees</td>
</tr>
<tr>
<td>SPF</td>
<td>Trade</td>
<td>Building, planning and design and repairs</td>
<td>Sole Trader</td>
<td>Sole Manager</td>
<td>No Employees</td>
</tr>
<tr>
<td>AP</td>
<td>Trade</td>
<td>Pet Shops, pet food, medicines and services</td>
<td>Limited Company</td>
<td>1 Director</td>
<td>8 Employees</td>
</tr>
<tr>
<td>IS</td>
<td>Service</td>
<td>Development worker</td>
<td>Sole Trader</td>
<td>Sole Manager</td>
<td>No Employees</td>
</tr>
</tbody>
</table>

### FINDINGS AND ANALYSIS

In research of this kind, recursive abstraction can assist in the development of themes. Carson and Gillmore (2001) discuss themes as ‘either similarities or differences in the data’ (p154) that require ‘carefully considered judgments about what are significant in the data’ (p176).

This research has identified three major themes; Marketing Management, Service Offerings and Growth, with 7 subcomponents which started as independent themes that through a process of recursive abstraction have been incorporated into the overarching themes. This paper however reports only that which relates to the identified theme of growth.

### Table 2: Research Themes

<table>
<thead>
<tr>
<th>Theme</th>
<th>Subcomponent</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth in Micro’s</td>
<td>Notion of growth</td>
<td>Use of words, description, what basis, employees or Turnover</td>
</tr>
<tr>
<td></td>
<td>Basis for choosing to grow or not to grow</td>
<td>Decision process, comfortable with growth, dependant on other factors</td>
</tr>
<tr>
<td></td>
<td>Planning for growth</td>
<td>How to plan for it, future plans, any support in plans?</td>
</tr>
</tbody>
</table>

### THE CASE STUDIES

#### Growth

*Subcomponent One – Notion of Growth*

The language used by micro-businesses for business objectives may mean different things for different businesses due to the ‘informal narrative modes of communication’ (Kelliher and Reinl 2009, p523). The words used to describe growth are also likely to be different in context, clearly context will thus have an impact upon those agencies tasked with supporting growth - such as Business Link.

Micro –businesses in this study, when asked: ‘what does growth mean to you?’ offered the following contextual definitions of growth:
'Less to do with employee numbers. I have increased my number of employees over the years, but I wouldn’t do that if the business itself wasn’t growing. So for me growth is doing things right. Doing things right to get that margin’ (AP)

‘If I could take on more work I suppose I would be growing. I don’t want to grow with employees. I would like to take on more work – however would need more subcontractors to do it. I don’t want to employ’ (SPF)

‘Umm. More Contracts. More staff’ (CK)

‘it depends what you mean by growing really. I mean in terms of turnover and staff... ah... no we are not....But I suppose the other bit of it is whether we are growing in terms of our ...expertise, and ideas and reputation. And I would hope that we are. And we put quite a lot of effort into trying to maintain a kind of presence so people are aware of what we have done. (CW)

‘I would see business growth as more work, more income, more employees, a wider reach/impact, a growing reputation, a growing number of regular clients, size and location of work base’ (IS)

Of interest with AP’s answer is that he is juxtaposing many different types of growth and yet could also be seen to be contracting; his staff numbers are down, and one director resigned, reducing the number of directors, but his turnover is up and he hopes to open another shop through a plan for growth in his reputation. SPF would like to grow in volume of work, but feels restricted by employment legislation; therefore for him the additional growth in employee numbers would only come if work grew first. Like AP, CK would also like more contracts, but more staff is also a requirement if this happens, growth is less likely as turnover and profits have remained consistent over the last few years, without major growth in sales terms. CW would like to grow in expertise, ideas, and reputation; growing in terms of what people know about the company, for CW sales and profits have contracted during the recession. IS thinks all of the above ideas are valid and specifies them all, but in addition includes location and wider impact. IS’ business is service-based in her role as a development officer, increasingly her ability to do online work and be available for work over a larger area.

Differing metrics for growth highlight the problems of ‘understanding the dynamics of the growth process and entrepreneurial developments in small firms’ (McAuley 2009 p23). For those making policies and for those running such firms ‘there may be no ‘single theory which can adequately explain small business growth’ (p23) and any attempt to define growth may vary significantly from small firm to small firm. Yet the language used by micro-business support agencies uses the word growth, so some definition would appear to be need to be required, or clarification given.

Subcomponent Two – Basis for choosing to grow

Whilst the notion of growth may be contextual, subjective and perhaps in need of clarifying by legislators, how do these businesses identify a basis for growth, using there own terminology for growth?

A basis for growth may come from the acknowledgement that there is current demand for growth of a service or product. AP noted that even during a recession there was a demand for pet supplies and he had a steady income when other retailers may have struggled. This initiated the suggestion to him that he could open a 3rd shop. However as a basis to make a decision about growth AP is still cautious:

‘That would be the last shop then though. I wouldn’t want more than 3 shops to keep it manageable. Three shops would be the limit in terms of shop numbers. I could then increase growth through customer numbers and service etc.’ (AP)

This would appear to be basing growth on customer demand. AP knows that his current shops are successful; therefore the expansion is taking the idea and trying it in another location for more customers to experience. CW would agree:

‘To think about how we can broaden our client base but do it in way that makes sense’ (CW).
When asked about growth and decisions on growth, CW responded with explaining the importance of working towards broadening a customer base whilst increasing reputation. Current client knowledge may also be a factor in growth decisions, combined with business management:

‘I keep regularly reports on what is selling and how many customers. I don’t wait for the year end to see if I’m making a profit, I know every month. These things are more important than a long-term plan (AP)’

This comment combined with field notes reveal that AP keeps a weekly list of customers and their average spend - therefore customer knowledge is high and current. Such insight is discussed by Kelliher and Reiln (2009, p523) when they highlight that ‘micro firms competitive advantage is often built on localised and tacit knowledge that can respond quickly to market signals’.

A basis for growth may come from an external pressure to grow:

‘I think there is a lot of pressure; I think there is a lot of pressure all the way through, from government down through every level, that the expectation is that every business will grow year on year. And it isn’t really questioned as to whether or not that is a good thing, or a desirable thing. (CW)’

Clearly such external pressure can encourage growth but paradoxically also prevent growth. SPF feels forced to employ when he does not wish to be an employer:

‘I don’t want to employ, I would use more local labour, and take on more jobs to oversee but I don’t want the employment responsibility. The H&S, the contracts, the worrying about them on a scaffolding. (SPF)’

Research by Pratten (2005) underpins this point that there: ‘exists the danger of a negative attitude to employment legislation’ and hostility ‘to the introduction of more red tape’ (p298) and this in itself could hinder growth.

‘I’ve been going up a ladder for 30 years, and now I’m being told I can’t go up a ladder. My business has worked fine all this time, it doesn’t need changing with these laws (SPF)’

Another basis for growth may come from lifestyle decisions. IS describes her basis for growth as a family decision. Whilst she may be classed as a lifestyle business now, she has future plans for growth:

‘As my children move out of primary education and into secondary school...I envisage building up more work. I haven’t got that far yet... but I will certainly want and need more work in a year or two. (IS)’

Komppula and Reijonen 2006 agree that: ‘success is often equated with the achievement of clearly defined and measurable goals’ (p13). In micro-businesses these goals may change over time as a contextual basis for growth evolves.

Subcomponent Three – Planning for growth.

As discussed in the literature micro-business planning is often short-term and on a day-to-day basis; micro-businesses tend to utilise a ‘day by day’ method for business management (Sandberg 2003, Devins et al. 2005, Kelliher and Reiln 2009). Feedback in this study would agree with this contextualisation:

‘So as I am sure almost every business finds, almost from day one we had to tear up our business plan and... start again...probably now, we would be looking to predict kind of a month, maybe two months ahead in terms of cash flow. (CW)’

These day-by-day plans are often unstructured and irregular (Sandberg 2003 p413) producing results for those ‘who are primarily interested in immediately applicable performance’ (Kelliher and Reiln 2009 p526). It would appear from CW that initially businesses ‘intend’ to plan, but change over time to planning over a much shorter time frame befitting the informal and contextual nature of the micro business ‘life world’.
The extant micro-business literature recognises that business plans are often not written down with the notion that micro-businesses, ‘often subconsciously set objectives rather than make them explicit as part of a written business plan’ (Greenbank 2001 p108), case evidence suggesting that such subconscious processes become conscious through socialised and contextual verbal communication (Deacon and Harris 2011):

‘I think we may have done a written plan at the start – for the bank mainly! I keep most of my plans in my head. It’s all up here (points to head!). I can then move and adjust with the market, if things are selling well, I can amend my decisions on what to buy (AP)’

Other feedback from the interviewees exhibits less interest in completing plans for the bank, particularly CK, who had not heard from his business bank manager in 4 years:

‘We did have a business plan at the very beginning and we then revised that, ah certainly for the first two years. I can’t remember if we did formally revise it last year. Or if we did something much briefer.’ (CW)

This corresponds with research by Greenbank (2000) who explains that for most micro-businesses business plans are usually created because a bank manager has requested it. Few of the businesses researched by Greenbank would have generated plans for themselves. In this research CW is the only respondent who did formal plans in more than the first year of business.

There is also a need to examine those that are not planning for growth at all, and are actively planning not to grow. This theme emerged through several of the interviews and whilst a decision to grow may have generated a plan (formal or informal), it now appears that a strategy of ‘no growth’ is also a basis of future business activity (inactivity?), many talked about their decisions of when not to grow, more than their decisions of when to grow:

‘No. I am where I am. I think that we fulfil the need of the clients that we have got...and to expand would lessen that; I’m happy with my lot (CK)’

Brady (1993) notes that this may be; ‘because they cannot grow manageably beyond that point’ and choose instead to stick with what is working now. Desire for growth is not common and can be ‘seen as potentially creating instability in the firm’s operations’ (Gray 2002 p65) resulting in decisions to stay small with an uncomplicated structure.

‘I think there is just an assumption that businesses will grow and almost that, that it is a requirement that you do. And I think there is a broader argument there, about whether that is necessarily a good thing, and whether you get the best value out of people doing that (CW)’

In this study, ‘growth planning’ was not considered highly important; however business survival, language for growth and local networking were important.

**DISCUSSION OF FINDINGS**

The notion of growth and the language used to describe growth by those interviewed in this research revealed many definitions of growth and that this language played a role in expectations of growth. Each interviewee had a different definition from; more employees, to contracts, to number of shops, to increased turnover, to increased reputation and expertise. For those writing employment legislation that specifies growth as an objective, some clarification may be required as to what the legislators presume is the notion of growth, as in the context of the micro-business it has a multitude of socially constructed meta-meanings (Deacon 2008). Exploring the ‘notion of growth’ concept further, it was interesting to use AP as example who would appear to be growing yet simultaneously contracting, if any of the above literal definitions were used. He has increased turnover and number of shops, but a reduced level of staff, and has one less director. He could fit both the category of growing and retracting and may receive very different support depending on which category AP was thought to fit into by a support agency. Micro-businesses thus have varied motivations for success and levels of ambitions, and yet as explored here, guidance based on presumed shared language and intentions may not generate the correct support.
Further to the variances in definitions of growth, there appears a similar level of variance for how micro businesses define a basis for growth; from product demand, and client knowledge, to external pressure and lifestyle plans. AP was the only one to be actively making plans for growth, and is using his current customer demand as a basis for that growth. The other interviewees hypothesised about possible bases for growth but did not have current ambitions to act on these assumptions, maintaining that in addition to a basis for growth, such as demand, or client knowledge; the timing must be right. It would appear that micro businesses are reluctant to grow for growths sake.

There is also a need to examine those that are not planning for growth at all, and are actively planning not to grow. It appears that a strategy of ‘no growth’ is also a basis of plans (explicit and implicit), critically: many of the owner/managers talked about their decisions of when not to grow, more than their decisions of when to grow (see for example: Morrish et al. 2010). Either through fear of things becoming unmanageable (CK), or the need to take on employees (SPF), family commitments (IS) or because poor performance during the recession has reduced turnover and delayed plans for growth, yet focused on improved reputation instead (CW).

Response during the interviews regarding the level of support that micro businesses had been offered, revealed that two of those interviewed had used Business Link at start-up, however none of those interviewed used the service for information support in the day-to-day operation of their business, for business planning or for growth planning. None of the interviewees cited support agency usefulness in the last few years, preferring family advice and networking – especially with other local businesses.

Several of those interviewed cited family and other local micro-businesses where they would more likely go for support – commenting that local and personal networks are more approachable and the support more valuable to micro-businesses than the support offered at business link. The Department of Business Innovation and Skills published a report in January 2011 which recognised the support small firms get from other small firms; ‘small business owners have repeatedly told us that the advice they most value comes from other experiences business people’ (BIS, 2011, p8) and in response proposes to establish a mentoring service. However the networks described by CW, IS and CK are built on local networks, trust and longevity of business relationships. It would appear that most micro-businesses transactions occur though word of mouth, local reputation and close proximity where businesses share a similar culture, have better knowledge of local customers, news and will be experiencing similar external influences within context.

CONCLUSION

The importance of small firms to both the economic and the social well being of a nation has previously been discussed. The expanding economies of India and China and the opportunities offered by the resource rich states of the old Soviet bloc and South American nations will continue to impact upon the once dominant but now cash strapped and indebted western economies and as such will further enhance the need to encourage the birth of small firms that are driven by technology application and global aspirations (Scase 2007).

Any such encouragement by government agencies will inevitably be based upon a series of policies that have at their core a need for public accountability and to some extent, a political expediency. The outcome of such policy intervention has traditionally been a suite of economic development ‘growth products’ that are generic in nature and risk averse in operation – even if the rhetoric may suggest otherwise. This has often meant that the efficiency and effectiveness of such economic development ‘products’ fall far below the requirements and aspirations of the business community, many of the policy developments being mere adaptations of either: the growth approaches used by large firms, the ‘dilution’ and simplification of economic textbook theories or a combination of the two.

The resultant policy is therefore written in a language that fails to connect with the intended audience, there are linguistic disconnects and misinterpretation with the interlocutors. The vernacular of policy making is not the vernacular of the small firm ‘day to day’ operation. This study suggests that lexical disparity, in the context of the language and meaning of growth in the micro-business, could be overcome by developing alternative methods of policy delivery based upon an audit of the contextual ambiguity and interpretation of the meta-narrative (an understanding of the concepts of narrative, meta-narrative and meta-meaning are key to the development of meaningful policy for micro-business growth). In essence policy makers wishing to communicate effectively with the micro-business audience, in terms of ‘growth support’, are encouraged to adopt a lexis that is informal and socially constructed and communicated in context.
If successful in adopting this Socio-specific, approach an approach that uses a lexis that has a cultural understanding (Deacon 2008), future development policy would become contextualised through language – the uptake of development ‘policies’ would, as a result, be higher and subsequently the accountability features of policy expenditure versus economic improvement would be overcome.

An aspect of on-going socio-linguistic research within the field of the small firm, concerns the findings relating to ‘reflection’ and especially the situational development of lexical semantics. This lexical insight is linked to policy development through the desire to accelerate the growth of those small firms that have such a potential and to provide a mechanism to unlock nascent potential, operationalised internally or externally.

Lexical semantics, suggest that as a firm grows so does the lexis used for the meaning and operation of growth in context – this mirrors the development of language within the individual and in collective society and accepts that language through socio-linguistic use is piratical (that it borrows terms and meanings from multiple contexts) and evolutionary (it adapts to changes within society to enable individuals to re-centre ‘reality’ within context). However, the subtleties of change and the impact upon meaning are, just like society, either not recognised or take a significant period to become recognised, even though assimilation may have taken place rapidly. The importance of the identification and the speed of recognition of linguistic change are, it is proposed, fundamental to the development of growth within the firm (Deacon 2008).

Such lexical development is a precursor to firm development and the expansion of the meaning and operation of growth within a given cultural context. If recognised and captured, it can act as a bridge for the firm to build new forms of value within the wider value constellation (Deacon and Corp 2004). It appears that some owner/entrepreneurs use a ‘narrative content’ and ‘narrative context’ that creates a meta-meaning with connotations of growth and development.

Therefore government policy and support agency activity aspiration should be re-written to reflect the socio-specific lexicography of the micro-business…but only after accepting and understanding that while micro-business owner managers may appear to ‘speak’ the same language as policy makers their ‘narrative context’ is rich with contextual meta-meaning. In socio-linguistic terms this is the difference between ‘languages’ and ‘accents’ – where accent is a verbal signifier of a shared culture and lexical colloquiums and thus trust and significance.

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STRATEGIC PLANNING AND FIRM PERFORMANCE: A MULTI-COUNTRY STUDY OF ENTREPRENEURIAL FIRMS AT THE INTERFACE

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ABSTRACT

Statistical analyses of firm processes by firm type continue to remain relatively scarce in the entrepreneurship literature. Analyses across continents are as rare. The present work analyzes US and UK data of technical versus non-technical firms and their strategy processes and performance relationships among and between them. While the data set was restricted to entrepreneurial firms the results provide another analyzed set of data points for researchers, practitioners and students. The study finds that there are differences among and between the firm types.

INTRODUCTION

In 1987 Teach et al. investigated planning process outcomes as measured by firm performance in PC based software firms. They noted statistically significant differences in the performance between the firms that indicated formal or informal planning processes compared to firms that had none. In 1988 Bracker et al., extending the Teach et al. work, surveyed 217 firm members of the American Electronics Association. As in the first study the analyses indicated that planning process and performance were positively related.

The lessons learned from both papers were:

- Various measures of performance need to be analyzed, not just growth in sales.
- Strategies are multivariate in nature and care should be exercised in the analysis of bivariate results, even those statistically significant at <.100.
- Narrow studies by firm types should be conducted, leading to less generalized, but more specific results that may be more valid and come closer to the “truth” of the firms’ gestalt.

Since these studies, many confusing and sometimes conflicting results have been discussed in the literature. A second study was performed in 1992 by Schwartz et al. that covered differences between US and German technology based firms. This study reported significant differences in firm behavior (<.0100) posited to be the result of cross-country differences. The current study was designed to continue to add to the extant literature among technology and non-technology firms in different countries, especially with international entrepreneurship becoming quite important as a field of study and endeavor (GEM, 2005).

BACKGROUND

The following brief review of the literature with regard to the process followed for the development of strategic choice within firms and the resulting firm performance arrives at an impasse of sorts. It is a stance that one may suggest exposes the obvious – that the empirical studies show that the most successful strategies are those which are based upon a formal decision making process. However this stance is based upon the premise that all factors are known and all variables are considered especially those of culture and individual firm norms. As Campbell-Hunt (2000) point out the ability to link performance with strategic choice in entrepreneurial small firms may be undermined by the researchers’ lack of ability to factor all the variables that have influence and indeed it is a view that strengthens the contextual social construction proposition.

In 1994 Miller and Cardinal’s research reflected on the continued inconsistencies in business planning and firm performance studies. Their conclusion was that methodological issues resulted in the performance differences found rather than were reflective of the relationship between planning and performance. Methodological differences that helped
explain such discrepancies included the researchers’ desires to provide generalized results. Such results elucidated nothing about any specific firm type and further the data was analyzed utilizing inappropriate statistical techniques. Likewise, it may be that there are some industries or firm types that benefit less from formalized strategic planning processes and those industries were possibly declining or in the case of the individual firms, failing. Agglomerated data did not allow for those determinations.

Work by Deacon and Spilsbury (2004) commented on the dynamic social nature of entrepreneurial firms and how this creates a ‘dichotomy of assumptive positioning’ with regard to the action and indeed need for formal planning and how this reflects upon performance. This proposition has never been examined empirically nor has the relationship between these constructs been investigated comparing US firms to similar firms operating in other countries.

**Process Formality And Firm Performance**

As noted above, this paper seeks to explore the relationships between the formality of the strategy process that the participant firms within the study have made and their performance relative to firm type and location. Such an exploration can immediately throw up concerns over the interpretation of what constitutes ‘formal’ and ‘performance’ in any particular context and indeed if ‘formality’ is an aspect that can be ascribed to particular firm types in context. However it also highlights the need in entrepreneurial research to acknowledge the importance of contextuality in knowledge development within the entrepreneurship discipline – the generic study may be inappropriate at the point of application and likewise at the point of understanding.

Rue and Ibrahim (1998) reproduced the Teach et al. (1987) and Bracker et al. (1988) studies by surveying 253 firms, irrespective of whether or not the firms or owner/operators were entrepreneurial. The results indicated that firm performance was related to planning sophistication independent of firm type. On a positive note, while the relationship to industry performance was not as strong, there was a relationship identified.

Not surprisingly, the authors, after attempting to explain their inconsistent results, concluded that “using different populations and measures and larger samples” (p. 30) might help elucidate the relationships. “Finally, a comparison of firms with their counterparts in other countries would be a fruitful future research avenue (p. 31).” The current authors agree.

Perry (2001) sought to elucidate this issue with a matched pair study of successful and failed firms by age, size, industry and location (US). He did not consider the entrepreneurial nature of either the owner/operator or firm. His results indicated that “non-failed firms do more planning than similar failed firms did prior to failure.” These results are consistent with prior literature.

To some extent it stands to reason that there will be differing approaches to the development of strategy both within the focal firm and in the wider world – as the term strategy is derived from the ancient Greek military term for a general combining as it does the words ‘stratos’ and ‘ago’, which literally translated means to lead and army. Here, as with so many ‘marketing management’ terms, the usage of terminology out of context can lead to misunderstandings driven by the assumption of shared meaning.

Nevertheless it can be observed that there are differing views on what constitutes ‘formality’ and to some extent ‘planning’ within the entrepreneurial firm (Carson, 1993). Indeed there is some UK evidence that suggests that formal planning approaches are replaced by a ‘fire fighting’ necessity in order for the firm to manage/exploit complex markets (Hogarth-Scott et al., 1996), with more recent observations concluding that contextually these informal approaches have become ‘formalized’ through their acceptance by those ‘formal’ organizations who fund business (Deacon and Spilsbury, 2004). Therefore a positive answer to a question on the existence of a business/marketing plan may require some caution as definitional aspects will inevitably have an impact. It is a view similarly taken by Gibcus and Kemp (2003) who comment that the development of strategy can be studied from the perspective of process – in effect how strategy is formulated within the focal firm. They suggest that, given this perspective, organizations will approach strategic formulation either in a planned, formal and constant way or an evolutionary, ad hoc way reliant upon intuition rather than research for decision making.
What remains the challenge for researchers and is explored within this paper is the issue of what Carson (1993) calls the ‘credibility gap’, that is the gap between a satisfactory level of performance gained with an informal approach to strategic formulation and the ‘theoretically’ enhanced performance that may come from a more ‘formal’ approach. To some extent, of course, this is a purely academic debate as without the ability to time travel a concise answer can never be obtained, however the approach taken here with an attentiveness on specific firm types offers additional results if not a definitive response.

While it has been claimed by management (and strategic) classicists (see for example: Mintzberg, 1990; Porter, 1996, 1991; Seth and Thomas, 1994) that following formal and generic strategic typologies are essential for firm success and that a positive relationship is eluded to between the formality of process and performance. However, some evidence from other empirical research would suggest otherwise (e.g., Campbell-Hunt, 2000). This is a view that is supported by Snuij and Zwart (1994) who comment that due to the pressures of managing a firm, often single-handedly, the owner manager may not have the time let alone the inclination to strategize and formally plan. Further the ability for the owner/manager/entrepreneur to differentiate between planning and strategizing in a conceptual way may further suggest to academic field researchers that strategic planning in a formal way is not being undertaken (Deacon and Spilsbury, 2004) even if a form of intuitive ‘direction finding’ is. However, the Teach et al. (1987), Bracker et al. (1988), Rue and Ibrahim (1998) and Perry (2001) studies indicate otherwise and thus the confusion brought by the literature and competent researchers.

There is an inescapable fact that underlies such conceptualization within the entrepreneurial organization – that is a focal firm that has been established by an entrepreneur, typically one that is self motivated and visionary. The rationale of the small firm and that of the owner/manager/entrepreneur therefore are inevitably linked (Deacon and Corp, 2004). A strategic decision taken by the firm is one that will be driven by the personal views and goals of the individual (Postma and Zwart, 2001) and the resultant informalized process influenced by the competencies and sector specifics of the firm in context (Carson and Gilmore, 1999). This debate however acts as a basis for what could be called wider appreciation. The contextual issue of small firm strategic process is a central tenant to understanding the outcome that is most observable in that any strategic decision making can not be undertaken in isolation and that a marketing equivalent of the second theory of thermodynamics is applicable and appropriate. It has been argued (Percy, 1997) that to successfully operate in a dynamic business environment, where new competitors using new business models are creating new market spaces; requires not a fixed set of formalized strategies but a flexible and entrepreneurial approach to market development one that celebrates informal strategizing as opposed to formal strategy. The argument put forward by Hanlon and Scott (1993) that owner/manager/entrepreneurs are far too busy dealing with the day to day issues within the firm to concentrate on strategic planning somewhat supports this view – however the paradox is that the day to day issues of a business in today’s turbulent and disruptive environment are, as pointed out by Forsyth and Greenhough (2003), probably highly strategic.

The fact that there are historical and emergent positive relationships between formality and firm performance – especially within the UK context is seemingly paradoxical given the above discourse. However it is quite reasonable given the dual complexity of definitional and cultural constructs that are likely to be present within the focal participant firms.

In their conclusion Siu and Kirby (1998) highlight a number of limitations of the approach taken to research in this area as framed above. Their observation is that to advance the development of theory within each of the approaches identified then supporting empirical evidence is essential and appropriate methodologies developed to enable both collection and interpretation of data: ‘qualitative research methods, for example, in-depth personal interviews or ethnographic case study approaches, seem to be a complimentary alternative, in advancing the understanding of small firm marketing...by providing greater insights into and understanding of the processes observed.’ (Siu and Kirby 1998, p. 56).

Gibcus and Kemp (2003) underline the definitional problem and suggest that there is some confusion surrounding the term strategy within the focal firm, indeed Mintzberg (1990) makes an observation that in just one conversation the term can be used in a variety of ways. Thus some clarification may be needed and Gibcus and Kemp suggest that strategy could be seen as one or more of the following: it is a concept that at one end of the continuum has a formalized corporate view shifting to the informalized individual/entrepreneurial at the other.
Culture

This study could be observed as having a self imposed ‘duality of complication’, in that, it uses a multi country sample of firms, thus the complication for interpretation is both inter firm and inter country. The impact of ‘culture’ at a social interactive level and a focused business level is likely therefore. Indeed it is an aspect that has been discussed at length in the literature, Deshpande and Webster (1989) suggested that culture is some kind of organizational glue that provides the norms for the organization, and one must include within those embedded norms the formal processes used to guide the firm – including strategic formulation. The linkages between culture, norms and their influence of performance emerge from such discussions (Noble et al., 2002) and while no definitive answer has been forthcoming, researchers agree that contextuality plays a significant role in the focal firms approach to strategic choice (Deshpande et al. 1993; Carson et al. 1995).

### THIS PAPER

Data has been collected in two locations in the US and in various locations in the United Kingdom. Firm types range from manufacturing and technology intensive to retail and distribution. Data was insufficient to completely analyze city by city and country by country data by firm types, thus necessitating the aggregation of firms into two categories, technical and non-technical. US firms were aggregated by city as well.

### METHODOLOGY

#### The Sample

A cover letter explaining the nature of the research undertaken was addressed to the firm CEO, COO or the owner of the business. There were 227 respondents from various cities across the UK and two cities in the US (Spokane and Atlanta) who were personally contacted and asked to describe themselves using nominal and Likert-type scales as to their business and marketing planning processes, as well as their entrepreneurial nature. Performance measures of sales, patent activity, and business and employee growth were also collected. The firms ranged from newly established to the oldest being 159 years old. Outliers with sales greater than USD 80,000,000 were excluded (60 firms did not provide sales data). Only respondents that considered their firms somewhat to highly entrepreneurial were included. A final sample of 80 US and 21 UK firms resulted.

#### The Questionnaire

The questionnaire consisted of several sections.

- General information – entrepreneurship orientation of respondent and the firm, including sales, number of employees, firm type, year firm began, patent estate
- Formality and nature of business planning
- Cluster context
- Opportunity recognition (Teach et al., 1989)
- Marketing strategy/planning questions (Some from personal communication with R. D. Teach)

The research addresses the business and marketing planning processes portion of the survey only. As such, four business planning and five marketing planning questions were utilized in the study. A six-point forced choice Likert scale was used to force a non-neutral response. The entire questionnaire took about 30 minutes to complete. The primary questions used in this study are shown below.

The respondents were asked to indicate their response to the following questions:

1. Highly Disagree  
2. Disagree  
3. Somewhat Disagree  
4. Somewhat Agree  
5. Agree  
6. Highly Agree
Business Planning Questions:

V 36: My firm utilizes a formal strategic planning process.

V 38: My firm regularly updates its business plan.

Marketing Strategy/Planning Questions:

V 79: We develop a written mission statement for the business and communicate it to all employees.

V 80: We produce an updated marketing plan periodically which is consistent with our business plan.

V 81: We conduct market research to analyze the business’s competitive situation.

V 82: We monitor trends and changes in our external business environment on a regular basis.

V 83: We routinely review performance against our plan and identify causes of any variances which may exist.

Non Likert-Type Questions:

V 39: My firm has a written business plan. [ ] Yes  [ ] No

V 40: My firm has a written marketing plan. [ ] Yes  [ ] No

Hypotheses

Three hypotheses were developed to support the proposition that there were differences in the strategic planning process as related to firm performance by firm type by country. Given the age and size differences of firms in the two countries, the impact of age on firm performance was also analyzed. (The authors’ acknowledge the assistance of R. D. Teach in restating the proposition and hypotheses).

H1: US and UK firms will exhibit different strategic planning processes.

H2: US and UK firms will exhibit positive relationships between strategic planning process and firm performance.

H3: For US and UK firms, the relationship between strategic planning process and performance is not mediated by firm age.

Methods

Means testing, regression and discriminant analyses were utilized as appropriate to test the hypotheses.

Comments On Methodology

As always in small data sets the numbers of respondents are a concern in all analyses. Firm types, while similar, are also not homogenous. The agglomeration of firms, while somewhat similar, also provides additional variance.
RESULTS/DISCUSSION

The Sample

**Firm Characteristics** Of a total of the 227 questionnaires returned, a small number were unusable because the respondents either failed to identity the firm type, or to answer the question about whether or not the firm was entrepreneurial or the Likert-like questions were incomplete. Tables 1a and 1b show the descriptives for firms included in the final sample.

Table 1a provides the number of cases, means and standard deviations by each firm type for US firms included in the final sample. Means testing was used to determine if differences existed between firm types. No significant relationships at < 0.100 differences were found in firm age, 2004 sales, and firm size between the two firm types for US firms.

**Table 1a: Descriptive Statistics For US Respondent Firms By Firm Type**

<table>
<thead>
<tr>
<th></th>
<th>Technology Firms</th>
<th></th>
<th>Non-technology Firms</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
<td>N</td>
</tr>
<tr>
<td>Age of Firm</td>
<td>29</td>
<td>17.14</td>
<td>26.25</td>
<td>48</td>
</tr>
<tr>
<td>Sales 2004 Estimated</td>
<td>29</td>
<td>8860.411</td>
<td>17210.911</td>
<td>50</td>
</tr>
<tr>
<td>Employees 2004 Estimated</td>
<td>29</td>
<td>194.34</td>
<td>742.97</td>
<td>49</td>
</tr>
</tbody>
</table>

¹ in thousands US dollars

Table 1b provides the number of cases, means and standard deviations by each firm type for UK firms included in the final sample. Means testing was also used to determine if differences existed between the firm types. As with the US firms, no significant differences at < 0.100 were found in firm age, 2004 sales, and firm size between the two firm types for UK firms.

**Table 1b: Descriptive Statistics For UK Respondent Firms By Firm Type**

<table>
<thead>
<tr>
<th></th>
<th>Technology Firms</th>
<th></th>
<th>Non-technology Firms</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
<td>N</td>
</tr>
<tr>
<td>Age of Firm</td>
<td>14</td>
<td>3.78</td>
<td>3.27</td>
<td>6</td>
</tr>
<tr>
<td>Sales 2004 (E)</td>
<td>15</td>
<td>1891.811</td>
<td>3417.891</td>
<td>6</td>
</tr>
<tr>
<td>Employees 2004</td>
<td>15</td>
<td>11.67</td>
<td>14.84</td>
<td>6</td>
</tr>
</tbody>
</table>

¹ in thousands USD

Age, sales and employee numbers among the two countries were found to be significant at <0.100. The smaller number of firms and their obvious differences to US firms create analyses challenges.

Tables 1c and 1d provide the number of cases, means and standard deviations by firm type included in the final sample. Means testing was also used to determine if differences existed between US and UK by firm types. Differences were found between US and UK tech firms with respect to age (t = 2.70, p = .011) and 04 sales/estimated sales (t = 2.10, p = .044) and US and UK non-tech firms with respect to 04 sales/estimated sales (t = 3.68, p = .001). It appears that US tech firms are on average older and that US tech and nontech firms generate higher annual sales than their UK counterparts.
Table 1c: Descriptive Statistics For Tech Firms By Country

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th></th>
<th>UK</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
<td>N</td>
</tr>
<tr>
<td>Age of Firm</td>
<td>29</td>
<td>17.14²</td>
<td>26.25</td>
<td>14</td>
</tr>
<tr>
<td>Sales 2004 (E)</td>
<td>29</td>
<td>8860.41¹ ²</td>
<td>3417.89¹</td>
<td>15</td>
</tr>
<tr>
<td>Employees 2004</td>
<td>29</td>
<td>194.34</td>
<td>742.97</td>
<td>15</td>
</tr>
</tbody>
</table>

¹ in thousands USD
² p < .100

Table 1d: Descriptive Statistics For Non-tech Firms by Country

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th></th>
<th>UK</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
<td>N</td>
</tr>
<tr>
<td>Age of Firm</td>
<td>48</td>
<td>18.92</td>
<td>15.82</td>
<td>6</td>
</tr>
<tr>
<td>Sales 2004 (E)</td>
<td>50</td>
<td>8358.92¹ ²</td>
<td>15324.33¹</td>
<td>6</td>
</tr>
<tr>
<td>Employees 2004</td>
<td>49</td>
<td>42.43</td>
<td>88.42</td>
<td>6</td>
</tr>
</tbody>
</table>

¹ in thousands USD
² p < .100

Table 2 provides the descriptive statistics for the variables under study for both US and UK firms.
Table 2: Descriptive Statistics for Planning Variables Used in Study

<table>
<thead>
<tr>
<th>Variable</th>
<th>US</th>
<th>UK</th>
<th>n</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>My firm utilizes a formal strategic planning process.</td>
<td>Tech (n)</td>
<td>Non-tech (n)</td>
<td>44</td>
<td>.668</td>
</tr>
<tr>
<td></td>
<td>4.14 (29)</td>
<td>3.93 (15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.42 (50)</td>
<td>3.83 (6)</td>
<td>56</td>
<td>.535</td>
</tr>
<tr>
<td>My firm regularly updates its business plan.</td>
<td>Tech (n)</td>
<td>Non-tech (n)</td>
<td>42</td>
<td>.212</td>
</tr>
<tr>
<td></td>
<td>4.59 (27)</td>
<td>5.07 (15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.79 (48)</td>
<td>2.83 (6)</td>
<td>54</td>
<td>.162</td>
</tr>
<tr>
<td>We develop a written mission statement for the business and communicate it to all employees.</td>
<td>Tech (n)</td>
<td>Non-tech (n)</td>
<td>53</td>
<td>.005</td>
</tr>
<tr>
<td></td>
<td>4.10 (29)</td>
<td>2.53 (15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.64 (50)</td>
<td>2.50 (6)</td>
<td>56</td>
<td>.108</td>
</tr>
<tr>
<td>We produce an updated marketing plan periodically which is consistent with our business plan.</td>
<td>Tech (n)</td>
<td>Non-tech (n)</td>
<td>42</td>
<td>.277</td>
</tr>
<tr>
<td></td>
<td>4.07 (29)</td>
<td>4.46 (13)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.38 (50)</td>
<td>3.67 (6)</td>
<td>56</td>
<td>.716</td>
</tr>
<tr>
<td>We conduct market research to analyze the business’s competitive situation.</td>
<td>Tech (n)</td>
<td>Non-tech (n)</td>
<td>42</td>
<td>.393</td>
</tr>
<tr>
<td></td>
<td>4.07 (29)</td>
<td>3.61 (13)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.64 (50)</td>
<td>2.33 (6)</td>
<td>63</td>
<td>.025</td>
</tr>
<tr>
<td>We monitor trends and changes in our external business environment on a regular basis.</td>
<td>Tech (n)</td>
<td>Non-tech (n)</td>
<td>44</td>
<td>.703</td>
</tr>
<tr>
<td></td>
<td>5.14 (29)</td>
<td>5.00 (15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.72 (50)</td>
<td>3.83 (6)</td>
<td>56</td>
<td>.124</td>
</tr>
<tr>
<td>We routinely review performance against our plan and identify causes of any variances which may exist.</td>
<td>Tech (n)</td>
<td>Non-tech (n)</td>
<td>43</td>
<td>.408</td>
</tr>
<tr>
<td></td>
<td>4.31 (29)</td>
<td>4.64 (14)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.77 (49)</td>
<td>3.83 (6)</td>
<td>55</td>
<td>.938</td>
</tr>
<tr>
<td>My firm has a written business plan.</td>
<td>Tech (n)</td>
<td>Non-tech (n)</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td></td>
<td>23² (6)</td>
<td>15</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>4</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>2</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>My firm has a written marketing plan.</td>
<td>Tech (n)</td>
<td>Non-tech (n)</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>15</td>
<td></td>
<td>.015³</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>0</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>3</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>3</td>
<td>27</td>
<td></td>
</tr>
</tbody>
</table>

¹ Means from a six-point Likert-type scale
² Frequency of response
³ Pearson’s Chi square test of significance

Hypotheses

**H1**: **US and UK firms will exhibit different strategic planning processes.**

H1 predicts that both US and UK firms will demonstrate different strategic planning processes. Two sample t tests, Pearson’s Chi square tests and stepwise discriminant analyses were utilized to test whether differences existed between US and UK by firm types. Specifically, t tests were utilized on the means for the business planning and marketing planning variables (V36, V38, and V79-83). Likewise, a Pearson’s Chi square test was utilized for V39 and V40 to compare the frequency of responses on these planning variables between US and UK firms by firm type. Lastly,
discriminant analyses were utilized to determine whether different multivariate strategy processes existed among the firm types. Results are shown in Tables 3 through 8.

The results suggest that the US and UK firms do differ in their strategic planning processes. Tech firms did differ with respect to whether a mission statement was communicated to employees ($t = 2.99$, $p = .005$). Differences were also found with respect to non-tech firms. Specifically, it appears that more US firms find it important to have a mission statement communicated to employees ($t = 1.82$, $p = .108$) and that more marketing research was conducted within these firms compared to their UK counterparts ($t = 2.72$, $p = .025$).

An examination of the proportion of US versus UK firms that have a written business and marketing plan suggests differences between US and UK firms at least in respect to tech type firms. 79.3 percent of US tech firms had written business plans versus 100 percent of respondent UK tech firms (Pearson’s Chi square = 3.59, $p = .058$). Similar results were found with respect to marketing planning whereby 68.1 percent of US tech firms had written marketing plans versus 100 percent of UK tech firms (Pearson’s Chi square = 5.89, $p = .015$). US and UK non-tech type firms did not differ with respect to the proportion of firms having written business and marketing plans (V39: Pearson’s Chi square = 0.83, $p = .362$; V40: Pearson’s Chi square = 0.49, $p = .485$). Moreover, the results suggest that tech firms more often employ formal strategic planning processes than non-tech firms in the UK and US (Tables 4b and 4c).

Specifically, a greater percentage of tech firms had business plans and marketing plans than non-tech firms; 79.3 vs. 46.9 percent and 68.2 vs. 35.1 percent respectively for US firms (V39 and V40) and 100.0 vs. 66.7 percent and 100.0 vs. 50.0 percent respectively for UK firms.

### Table 3: Variables With Statistically Significant Means

<table>
<thead>
<tr>
<th>Variable</th>
<th>US</th>
<th></th>
<th></th>
<th>UK</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tech V79</td>
<td>4.10</td>
<td>1.70</td>
<td>2.53</td>
<td>1.55</td>
<td>44</td>
<td>2.99</td>
</tr>
<tr>
<td>Non-tech V79</td>
<td>3.64</td>
<td>1.94</td>
<td>2.50</td>
<td>1.38</td>
<td>56</td>
<td>1.82</td>
</tr>
<tr>
<td>Non-tech V81</td>
<td>3.64</td>
<td>1.64</td>
<td>2.33</td>
<td>1.03</td>
<td>56</td>
<td>2.72</td>
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</table>

### Table 4a: Results From Pearson’s Chi Square Tests Of V39 And V40 - By Country And Firm Type

<table>
<thead>
<tr>
<th>Variable</th>
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<th></th>
<th></th>
<th>UK</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>39 V39</td>
<td>Yes 23</td>
<td>15</td>
<td>3.59</td>
<td>.058</td>
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<tr>
<td>No 6</td>
<td>0</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes 23</td>
<td>4</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>No 26</td>
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<td>0.83</td>
<td>.362</td>
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<tr>
<td>40 V40</td>
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<td>15</td>
<td>5.89</td>
<td>.015</td>
<td></td>
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<tr>
<td>No 7</td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Yes 13</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No 24</td>
<td>3</td>
<td>0.49</td>
<td>.485</td>
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</tbody>
</table>
Table 4b: Results From Pearson’s Chi Square Tests Of V39 and V40 For US Firms By Firm Type

<table>
<thead>
<tr>
<th>Variable</th>
<th>Tech</th>
<th>Non-tech</th>
<th>Chi Square</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>39 Yes</td>
<td>23</td>
<td>23</td>
<td>7.89</td>
<td>.005</td>
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<tr>
<td>39 No</td>
<td>6</td>
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<td>40 Yes</td>
<td>15</td>
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<td>.014</td>
</tr>
<tr>
<td>40 No</td>
<td>7</td>
<td>24</td>
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</tbody>
</table>

Table 4c: Results from Pearson’s Chi Square Tests of V39 and V40 for UK Firms by Firm Type

<table>
<thead>
<tr>
<th>Variable</th>
<th>Tech</th>
<th>Non-tech</th>
<th>Chi Square</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>39 Yes</td>
<td>15</td>
<td>4</td>
<td>5.52</td>
<td>.019</td>
</tr>
<tr>
<td>39 No</td>
<td>0</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 Yes</td>
<td>15</td>
<td>3</td>
<td>8.75</td>
<td>.003</td>
</tr>
<tr>
<td>40 No</td>
<td>0</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Discriminant Analysis** As strategy is multivariate in nature, stepwise discriminant analyses (equal groups) were utilized to determine multivariate process differences among firm types by country. Not all respondents answered all Likert-like questions, resulting in a reduced number of cases.

For all US and UK tech and non-tech firms, discriminant analyses were run utilizing variables 36, 38, 39, and 40 and then variables 79 through 83 respectively. Due to sample size all variables were entered. For the tech firms for the strategy variables (36, 38, 39, 40), US versus UK, the results were not significant at <0.001 (Table 5a). The Wilks’ lambda (.835) significance was 0.232. For the non-tech firms US versus UK (Table 5b) the Wilks’ lambda of 0.741 was significant at <0.025.

Table 5a: Classification Results For US Versus UK Strategy Variables, Tech Firms Only

<table>
<thead>
<tr>
<th></th>
<th>Predicted Group Membership</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Country</td>
<td>US</td>
</tr>
<tr>
<td>Count</td>
<td>US</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>UK</td>
<td>3</td>
</tr>
<tr>
<td>%</td>
<td>US</td>
<td>45.0</td>
</tr>
<tr>
<td></td>
<td>UK</td>
<td>20.0</td>
</tr>
</tbody>
</table>

60.0 % of original grouped cases correctly classified.

Table 5b: Classification Results for US and UK firms Strategy Variables, Non-Tech Firms Only

<table>
<thead>
<tr>
<th></th>
<th>Predicted Group Membership</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Country</td>
<td>US</td>
</tr>
<tr>
<td>Count</td>
<td>US</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>UK</td>
<td>2</td>
</tr>
<tr>
<td>%</td>
<td>US</td>
<td>94.3</td>
</tr>
<tr>
<td></td>
<td>UK</td>
<td>33.3</td>
</tr>
</tbody>
</table>

90.2 % of original grouped cases correctly classified.

Wilks’ lambda significant <0.025
Similar analyses were conducted for the marketing/planning variables. The results are shown in Tables 6a and 6b.

**Table 6a: Classification Results for US and UK firms Marketing/planning Variables, Tech Firms Only**

<table>
<thead>
<tr>
<th></th>
<th>Predicted Group Membership</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country</strong></td>
<td><strong>US</strong></td>
<td><strong>UK</strong></td>
</tr>
<tr>
<td><strong>Count</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>26</td>
<td>3</td>
</tr>
<tr>
<td>UK</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td><strong>%</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>89.7</td>
<td>10.3</td>
</tr>
<tr>
<td>UK</td>
<td>27.3</td>
<td>72.7</td>
</tr>
</tbody>
</table>

85.0 % of original grouped cases correctly classified. Wilks’ lambda of 0.548, Significant < 0.001

**Table 6b: Classification Results for US and UK firms Marketing/planning Variables, Non-Tech Firms Only**

<table>
<thead>
<tr>
<th></th>
<th>Predicted Group Membership</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country</strong></td>
<td><strong>US</strong></td>
<td><strong>UK</strong></td>
</tr>
<tr>
<td><strong>Count</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>42</td>
<td>7</td>
</tr>
<tr>
<td>UK</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td><strong>%</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>85.7</td>
<td>14.3</td>
</tr>
<tr>
<td>UK</td>
<td>16.7</td>
<td>83.3</td>
</tr>
</tbody>
</table>

85.5 % of original grouped cases correctly classified. Wilks’ lambda of 0.691, significant at < 0.002

Thus the outcomes indicate that there are differences among processes and the hypothesis is supported. The causal relationship as to whether or not country culture or firm type (by category and similarity or difference within a category) or firm size plays a role is unknown.

**Strategic Planning Processes And Firm Performance**

**H2:** US and UK firms will exhibit a positive relationship between strategic planning process and firm performance.

H2 posits that there will be a positive relationship between strategic planning and performance for both US and UK firms. In order to test this hypothesis, due to sample size, backward regression analyses were performed in which the business and marketing planning variables (V36, 38, 39, and 79-83) were regressed on the dependent variable sales growth (s_grow). S_grow was measured as the percent change in sales from 2003 to 2004 as self reported by respondent firms. The regression results are shown in Table 7.

These results indicate that for US tech firms there is a positive relationship between a firm having a business plan and performance as measured by s_grow (t = 1.75, p = .008) although it does not appear that formal strategic planning processes are necessarily employed to develop these plans (V36: t = -1.98, p = .061). No significant relationship at < .100 was found between the marketing planning variables (V79-83) and firm performance for both tech and non-tech US firms as well as UK tech firms. There was insufficient data to test for this relationship in UK non-tech type firms. Thus H2 is only partially supported and there is a relationship between planning and performance, a result previously identified in the literature.
### Table 7: Variables with Statistically Significant Betas Testing for Hypothesis 2

<table>
<thead>
<tr>
<th>Loc</th>
<th>Type</th>
<th>DV</th>
<th>IV</th>
<th>Beta¹</th>
<th>n</th>
<th>t</th>
<th>p</th>
<th>Adj R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>Tech</td>
<td>s_grow</td>
<td>V36</td>
<td>-.430</td>
<td>22</td>
<td>-1.98</td>
<td>.061</td>
<td>.239</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>V39</td>
<td>.635</td>
<td></td>
<td></td>
<td>.008</td>
<td></td>
</tr>
</tbody>
</table>

¹ Standardized Beta

### Age as Mediator

**H3:** For both US and UK firms, the relationship between strategic planning process and performance is not mediated by firm age.

H3 predicts that firm age will not mediate the relationship between firms’ strategic planning processes and firm performance. Mediation is demonstrated when a previously significant predictor to criterion relationships becomes nonsignificant at <.100 when the mediator variable is included in the regression equation (Baron and Kenny, 1986). The results of the regression analysis conducted to test this hypothesis are found comparing results in Table 8.

A comparison of the beta coefficients and their level of significance suggests that firm age does mediate the relationship between firms’ strategic planning processes and firms’ performances for US tech type firms. Specifically, the relationship between the predictor variable V36 and criterion variable became nonsignificant at >.100 when age was included in the regression equation (V36: t = -.456, p = .654). In addition, adjusted $R^2$ improved marginally from .239 to .247. As no previous significant predictor (<.100) to criterion relationship was found between US non-tech and UK tech and non-tech firms, mediation could not be established between age and the planning variable for these firms. As such, firm age was found to mediate the relationship between firms’ strategic planning processes and firm performance for US tech type firms only. Therefore, H3 is not supported.

### Table 8: Variables with Statistically Significant Betas Testing for Hypothesis 3

<table>
<thead>
<tr>
<th>Loc</th>
<th>Type</th>
<th>DV</th>
<th>IV</th>
<th>Beta¹</th>
<th>n</th>
<th>t</th>
<th>p</th>
<th>Adj R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>Tech</td>
<td>s_grow</td>
<td>age</td>
<td>-.387</td>
<td>22</td>
<td>-2.04</td>
<td>0.063</td>
<td>.247</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>V39</td>
<td>.495</td>
<td></td>
<td>2.62</td>
<td>0.018</td>
<td></td>
</tr>
</tbody>
</table>

¹ Standardized Beta

### SUMMARY

The purpose of this study was to elucidate the relationship between strategic planning processes and firm performance in a cross-cultural study. With several notable exceptions, previous research in this area has tended to look at agglomerated data and specific strategy types relating them to firm performance. The results have been inconsistent and have not generated consensus amongst researchers. Although this study does not endeavor to ascertain whether any particular strategy contributes to firm performance it does attempt to identify whether having formalized strategic planning processes in place relate to better firm performance and whether or not a relationship, if any, is specific to firm types and location.

For hypothesis one: **US and UK firms will exhibit different strategic planning processes.**

This study does find some evidence that UK and US firms do differ with respect to strategic planning processes. The results showed that a greater proportion of UK tech firms produced both business and marketing plans than similar type US firms. In addition, the results showed that US non-tech firms place greater emphasis on marketing research to guide
These findings were not inconsistent with Harris (1996) propositions that barriers to market orientation (and by extension to marketing planning processes) can be accounted for by the values and artifacts of organizational culture which may differ across nations. Other research (e.g., Schwartz et al., 1992; Muzyka et al., 1991; Scheinberg and MacMillian, 1988; Teach and Schwartz, 2003; Uslay et al., 2001; Yang et al., 1991) have found similar cross-cultural differences related to entrepreneurship and business practice. Hence these findings add to a body of research that argues that cultural differences influence market and business orientation. Though the outcomes indicate that there are differences among processes and the hypothesis is supported. However, as always, the causal relationships as to whether or not country culture or firm type (by category and similarity or difference within a category) or firm size plays a role is unknown.

For hypothesis two: **US and UK firms will exhibit positive relationships between strategic planning process and firm performance.**

While this study does not conclusively prove there exists a positive relationship between strategic planning processes and firm performance, in general, it does provide additional empirical evidence that firms that produce written plans (business or marketing) or engage in strategic processes appear to have improved business performance. The results are consistent with extant literature (e.g., Teach et al., 1989).

For hypothesis three: **For both US and UK firms, the relationship between strategic planning process and performance is not mediated by firm age.**

Firm age was found to mediate the relationship between firms’ strategic planning processes and firm performance for US tech type firms only. Therefore, the hypothesis was not supported.

**CONCLUSIONS**

While it has been claimed that strategies are persistent (Mintzberg, 1987) caution must be taken in that there are differing views on what constitutes formality in strategic planning processes, especially within entrepreneurial firms (Carson, 1993). The current results are consistent with previously cited papers (Teach et al., 1987; Bracker et al., 1988; Schwartz et al., 1992; Rue and Ibrahim, 1998; and Perry, 2001) and thus add to the literature.

*While there are many results than can be questioned by the researcher in the search for “truth,” and agglomerated data, methodology, and a rush to publication all serve to mislead, it is an unfortunate fact of social science that most human processes are only valid in nature and only hard science is accurate. It is left to the researcher to determine how close he/she wishes to come to accuracy and how much solace is found in approaching it better than others do.*

**FUTURE RESEARCH**

While this research was limited by the sufficiency of data and in some cases relationships could not be tested for certain firm types it does provides a basis from which additional studies might emanate. Specifically, further investigations might be conducted to determine if entrepreneurial orientation influences strategic planning processes and performance and whether or not this relationship varies by industry, market, or national culture.

**ACKNOWLEDGEMENTS**

Working with colleagues that have lead the way and also continue to lead the way (and supply data) makes words somewhat meaningless in acknowledgments. However, Dick Teach, as always is there as he has been since 1980 with and for Bob Schwartz and now for his new colleague, Vince Pascal. Nancy Birch, one of our EWU colleagues, also supports Bob and Vince with timely advice on statistical analyses. Jonathan, Bob and Vince are most appreciative of both Dick’s and Nancy’s support.
REFERENCES


ABSTRACTS
BEYOND THE DESTRUCTION: ENTREPRENEURIAL STRATEGIES AND INITIATIVES POST THE CHRISTCHURCH EARTHQUAKES

Sussie C. Morrish, University of Canterbury
Morgan P. Miles, University of Tasmania

ABSTRACT

On the 22nd of February 2011, Christchurch New Zealand was rocked by a 6.3 magnitude earthquake striking in the middle of a work day. Despite the massive damage suffered by businesses in the Central Business District and the resulting 181 fatalities, preliminary research reports that in excess of 95% of businesses are still operating in the Canterbury region (Stevenson, et al. 2011). These businesses have come through despite the many obstacles and in the face of one of the worst global recessions. This paper looks at entrepreneurial initiatives and eventual strategies that have emerged after the devastating Christchurch earthquakes in 2010 and 2011 and their effect on the Canterbury recovery.

The paper adopts vulnerability – resilience theory as discussed by Manyena (2006) for the context to provide the theoretical framework to better understand why some entrepreneurial initiatives have been successful, while others are less so. Figure 1 offers a summary of vulnerability – resilience theory.

Figure 1: Vulnerability - Resilience Theory

It is the aim of this paper to highlight the many challenges that businesses were confronted with during and after the disaster and highlight the innovative strategies that were employed by entrepreneurs that helped them and their businesses re-start and ensure the survival of their business. With this, we find that a qualitative approach, more specifically the use of a multiple case study design appropriate. Exemplary cases that demonstrated leadership, resilience and determination to rise above the odds were selected.

Preliminary findings indicate that business resilience in the aftermath of a major disaster is significantly affected by the ability of the organisation to look after the well being of key staff at the outset followed by the ability to secure key assets so that business operations can quickly restart. Other factors such as clear lines of communications and reliable information dissemination are also crucial. There is also evidence that resilient organisations display entrepreneurial characteristics such “opportunity-seeking” in terms of business processes (e.g. retail practices), customer and supplier relationships and product offerings. The role of local and national governmental bodies is also highlighted.
The Canterbury earthquakes are among the most significant events in the recent past. The destruction to the CBD has been unprecedented yet businesses have risen up to the challenge and survived. It still remains to be seen however how these thrive in light of the many challenges. A better understanding of how they can “survive and thrive” and the support mechanisms will have implications in terms of our understanding of resilient organisations.
AN EXAMINATION OF THE INVERSE CREATIVE DESTRUCTION EFFECT: DO NATURAL DISASTERS CREATE OPPORTUNITIES FOR INNOVATION?

Nezih Altay, DePaul University
Javier Monllor, DePaul University

ABSTRACT

Natural disasters are ubiquitous events that significantly impact the infrastructures, populations, and general economies of countries and regions that are prone to them. In 2010 natural disasters caused 295,000 deaths around the world. The year 2011 on the other hand, broke the record on economic losses with $380 Billion (Munich RE, 2012). We believe there is a pressing need for better understanding the role natural disasters play in economic and business performance for the following reasons. First, the frequency and intensity of natural disasters are shown to be increasing (Emanuel, 2005). Second, there is compelling evidence that disasters are becoming more economically costly (Horwich, 2000). And third, natural disasters are rarely isolated events. Due to the global nature of markets and supply networks, local catastrophes increasingly result in indirect global consequences (Wagner and Bode, 2006). For example, in the past year, first the earthquake and the subsequent tsunami in Japan and later extensive flooding in Thailand caused major parts shortages and disruptions in global supply chains. However, despite their undeniable impact on the socio-economic fabric of the affected populations very few publications address the relationship between catastrophic events and entrepreneurial efforts.

While destructive in nature disasters also create opportunities for investment and growth. Damaged physical assets and technology could be replaced with better and more productive versions. Stronger businesses may lose market share both in regional and national markets allowing new or smaller ventures to enter these markets (Alesch et al., 2001). Reconstruction efforts may lead to more resilient institutions and improve the business climate. Disruption of traditions and policies and weakening of existing organizational structures may even create a favorable climate for innovation and entrepreneurial pursuits. A recent article in the Wall Street Journal showcasing five firms with innovative solutions against flooding provides anecdotal evidence that “mother nature is also the mother of invention”(WSJ, September 1, 2011; p. B5). However, there is no published study that garners a good understanding of how natural disasters impact entrepreneurial perceptions and innovative activity.

Creative destruction is the disruptive process of transformation that accompanies radical innovation. Innovative entrepreneurs enter the market and their actions destroy the value of established companies. Casson (2005) argues that while extreme events cause temporary economic distress (e.g. layoffs of workers with obsolete skills could be considered as the price of new innovation) in the long-term, society as a whole enjoys a rise in overall quality of life due to the accumulation of innovation. We visualize extreme events as a form of disruptive process of transformation. While these events bring destruction to a region’s economy and its established companies, they also create new opportunities and serve as a force of innovation that could potentially jump-start new and creative entrepreneurial ventures. The process of creative destruction is therefore inverted in the face of extreme events. While entrepreneurship acts to destroy the value of current incumbents, extreme events act as the destructive force that creates opportunities for innovation and are exploited by innovative and entrepreneurial companies.

Few researchers have attempted to understand the impact of these events on entrepreneurial tendencies, behaviors and activities (Crowards & Coulter, 1999; ECLAC, 2002; Rasmussen, 2004), even though entrepreneurship is considered a vital component of post-disaster reconstruction (Galbraith and Stiles, 2006). Even less understood is how disasters could serve as a source of entrepreneurial opportunity and innovation. To date, Brück, Llussá and Tavares (2011) conducted the only study that looked at this question. They found that extreme events have a significant positive impact on the perception of rewards. They also showed that while terrorist attacks have a significant positive impact on entrepreneurial activity, natural disasters, on the other hand, tend to impact entrepreneurial activity negatively.

With this project, we plan to expand on Brück et al.’s (2011) preliminary work in the following ways:

(1) Bring an important theoretical lens with which to study the phenomenon, in our case, in the form of Schumpeter’s creative destruction framework.
(2) Expand current knowledge by not only studying how extreme events impact entrepreneurial actions, but also the quality of those actions.

(3) Scrutinize whether the impact extreme events have on venture survival also affect venture creation.

In this proposed research we will merge two sets of secondary data and apply fixed-effect regression to explore the impact of disasters on entrepreneurial activity. Entrepreneurship data will be drawn from the Adult Population Surveys, collected by the Global Entrepreneurship Monitor (GEM). GEM is the largest survey-based study of entrepreneurship in the world. Data is collected in exactly the same way and at the same time every year in over 80 countries since 1999. Every year, national teams conduct a survey of at least 2000 people within the adult population, collecting data on attitudes towards entrepreneurship in the general population and whether the individuals are engaged or not in start-up activity or own or run a business. Disaster data is compiled from EM-DAT, a database maintained by the Center for Research on the Epidemiology of Disasters (CRED). The EM-DAT data is compiled from different sources such as the United Nations, the U.S. Office of Foreign Disaster Assistance, reinsurance firms, humanitarian organizations, and news agencies.
With this quote, Poincaré was trying to focus mathematician’s attention to area’s that would help them uncover promising mathematical facts, but his advice could very well have been directed at entrepreneurs attempting to discover new and creative business opportunities. For Poincaré (1913), mathematics worthy of being studied are those which revealed unsuspected kinships between facts “long known, but wrongly believed to be strangers to one another.” It would seem easy then for anyone to discover the next million dollar venture, if all that he needed to do was to recognize opportunities that are entirely unrelated to one another and that, at some basic level, share recognizable components (Baron, 2004a). But, as anyone who has tried to come up with an innovative entrepreneurial idea will tell you, the reality is that this is much harder to do in practice and we soon discover that it is something only a few are capable of doing successfully and on rare occasions consistently. Yet, everyday, we learn about individuals who are able to do just that and we wonder how they were able to see those opportunities that we can only recognize in retrospect and ask ourselves “why didn’t I think of that before?”

This question: “How entrepreneurs recognize opportunities and why some are able to or better at recognizing opportunities than others” is considered one of the central questions in the entrepreneurship field (Baron, 2004b; Gaglio & Katz, 2001; Kaish & Gilad, 1991; Shane, 2003; Shane & Venkataraman, 2000). While many valuable theories have been proposed as to why entrepreneurs have a distinct ability to recognize opportunities, research has converged on three popular explanations: personality differences, cognitive differences, and social network differences (Dyer, Gregersen, & Christensen, 2008). Among these, entrepreneurial cognition has garnered significant attention in the past few years.

A cognitive perspective suggests that everything we think, say or do is influenced by mental processes (Baron, 2004a). Entrepreneurial cognition aims to understand how entrepreneurs use mental models to combine unconnected information that helps them to identify and invent new products or services (Mitchell et al., 2007)

Research on entrepreneurial cognition has examined a range of cognitive processes that could be involved in opportunity recognition. Our working memory plays a key role, as its effective operation leads individuals to focus their attention on what is important and relevant in a given situation (Baron, 2004b). Busenitz and Barney (1997) compared the decision-making processes used by entrepreneurs and managers in large organizations and found that entrepreneurs rely more on heuristics and biases, in this case, representativeness and overconfidence when making decisions. Gaglio and Katz (2001) looked at entrepreneurial alertness as a distinctive set of perceptual and information processing skills and detailed a conceptual model designed to answer the questions of how market environments are represented in the minds of entrepreneurs and how they differed from other market actors. They propose that entrepreneurs rely on more accurate mental models or schema that represent their environment and the marketplace. Ward (2004) considered how the cognitive processes of conceptual combination, analogy, and initial problem formulation could be applied by entrepreneurs in order to come up with new ideas for products or services that are both novel and useful. These process have similar characteristics to pattern recognition, which Baron and Ensley (2006) suggest is involved in the identification of opportunities. Entrepreneurs have an ability to “connect the dots” between changes in technology, demographics, markets, government policies and other factors that allows them to recognize opportunities that others don’t. Finally, Grégoire and Shepherd (2010) went beyond just looking at the factors that influence opportunity recognition, and examined the reasoning strategies that individuals employ in an attempt to understand why these factors play such a fundamental role. Using think aloud verbalizations of executive entrepreneurs as they attempted to recognize opportunities, they found that their cognitive processes involved structural alignment and that this process is facilitated by prior knowledge.
The emphasis that entrepreneurial cognition has received in these and other papers makes it apparent that this is considered an important aspect of the opportunity recognition process that needs to be studied, but if we are to truly make inroads into the mind of the entrepreneur we cannot settle for just understanding the processes that go on in his mind, we need to move a step further and consider studying the neurological underpinnings that control these processes. It is in the brain that entrepreneurs identify and collect information, create concepts, form exemplars, and models that are then compared, combined, merged and structurally aligned in order generate novel and valuable business opportunities. These processes are only possible thanks to a vast and complicated array of electrical impulses and chemical reactions that are controlled by our genes. Genes provide the instructions for the creation of proteins and if a single gene that codes for a particular protein is missing, that chemical reaction won’t occur as efficiently as it should, leading to development of individual differences that can affect behavior (Nicolaou, Shane, Cherkas, & Spector, 2008).

To date little to no studies are being conducted in this arena, but we’re starting to see some works that have began to uncover the biological factors that influence entrepreneurial behavior and the results, while premature, look promising. Based on the evidence that many psychological attributes are influenced by genes, and building on the extant literature that shows that who becomes an entrepreneur is correlated with a variety of psychological attributes such as sensation seeking, need for achievement, overconfidence, locus of control, optimism, and risk-taking propensity, current studies have focused on whether genetic factors lead people to develop psychological attributes which predispose them to become entrepreneurs. Nicolaou, Shane, Cherkas & Spector (2008) based their research on sensation seeking they found that between 37 and 42 percent of the variance in the tendency of people to engage in entrepreneurship could be accounted for by genetic factors. White et al. (2007) took a different methodological approach although their research hypothesis was similarly grounded. The authors measured testosterone levels of study participants. High testosterone has been linked to risk taking and ongoing neural processes. They argue that individuals with a family business background will channel their risk taking propensity toward new venture creation and their results seem to support their hypothesis. They found that new venture creation was more likely among those individuals that had a higher testosterone level in combination with a family business background.

Results from these and other similar studies (Koellinger et al., 2010; Nicolaou, Shane, Adi, Mangino, & Harris, 2011; Nicolaou, Shane, Cherkas, Hunkin, & Spector, 2008; van der Loos et al., 2011; Zhang et al., 2009) support the fact that biological, hereditable and genetic factors may play a critical role in explaining entrepreneurial behavior and could predispose people into entrepreneurial careers (Shane, 2003).

This paper will concentrate on the neurotransmitter dopamine. Involved in motivation, emotion and cognition (Kulisevsky, Pagonabarraga, & Martinez-Corr, 2009), it is also closely associated with reward-seeking behaviors such as approach consummation and addiction (Pessiglione, Seymour, Flandin, Dolan, & Frith, 2006 Dolan, & Frith). Sensation seeking is a behavior that has already been linked with entrepreneurial behavior and is also associated with dopamine levels in the brain. For this reason it is considered a worthy subject for study in order to find genes associated with entrepreneurial activity (Nicolaou, Shane, Cherkas, & Spector, 2008). Dopamine has also been found to impact many cognitive processes that are also related to entrepreneurial cognition and opportunity recognition such as memory, creativity and pattern recognition, among others. Understanding dopamine’s effect on these processes can improve both empirical and theoretical research. Just like studies of genetic factors that impact entrepreneurship, studies of dopamine can help researchers conduct better empirical research as they would be better equipped to identify the appropriate comparison group to test the effect of environmental factors. By specifying the role of genetic factors, researchers can determine if the observed association between individual differences and cognitive factors are artifacts of an omitted variable (Nicolaou, Shane, Cherkas, & Spector, 2008). Studying the neuropsychological underpinning of the entrepreneur also helps us bring back focus on individual differences and how these interact with situational factors to not only increase the tendency to engage in entrepreneurial activity but also discover entrepreneurial opportunities. (Nicolaou, Shane, Cherkas, & Spector, 2008; White, et al., 2007). It can help us better understand the cognitive bases that drive entrepreneurial behavior and serve as sources of variation that contribute to the ability to recognize entrepreneurial opportunities. In essence and what I consider the most important implication is that looking at the neurology of the brain might help us answer one of the most important questions that drives entrepreneurial researchers: “why some persons and not others recognize specific opportunities”.
ABSTRACT

This study investigates the impact of entrepreneurial orientation (EO) and its dimensions on SME growth in firms located in the Rhine Valley, a region that covers parts of Austria, Switzerland and Liechtenstein. Overall multiple regression analysis showed that firm growth is attributed to innovativeness and risk-taking. However differences prevail between the three countries analyzed. Therefore our results suggest that firm growth depends on each EO dimension with regards to environmental aspects. Practical as well as theoretical implications are discussed.
SOME THOUGHTS ON CUSTOMER DEVELOPMENT, LEAN STARTUP, AND DISRUPTIVE INNOVATION

Joe Giglierano, San Jose State University

ABSTRACT

About ten years ago, John Mullins made a presentation to the Marketing and Entrepreneurship Research Symposium stating that for all our research on new venture startup, the success rate of startups was largely unaffected. Now, after several more years, perhaps we are seeing the development of methods that stand to change this state of affairs. In the last five years Steven Blank has introduced the idea of “customer development” and Eric Reis has refined this, calling it the Lean Startup method.

The thinking and observations that form the underpinnings of customer development (and hence, lean startup) focus on the high level of uncertainty inherent in a startup, especially when an innovative idea (product or service) is being launched into an unfamiliar market. When the product (or service) is unfamiliar to intended customers, market research is not very good at projecting how these prospective customers will respond. To reduce this uncertainty, Steve Blank says that it is necessary for the startup to conduct customer development and product development concurrently. What the company learns in customer development informs the product development effort, and vice versa.

Customer development involves “hypothesis testing” – trying out small product experiments, using prototypes, which allow prospective customers to react positively or negatively interactively. Because the prototypes are far less costly than full featured, fully engineered products, the entrepreneur thus gets low cost feedback. The entrepreneur can update the idea based on the feedback and devise the next round of “experiments:” As the entrepreneur progresses, the understanding of customers gets better, the product gets better, and the experiments look more and more like revenue generating transactions. A key element of the customer development approach is the development of a series of progressively more complex “minimum viable products” (MVPs) as the entrepreneur gets feedback from prospective customers. Another key element of the approach is to embrace the idea of “pivoting” – changing the product idea and the business model as feedback is obtained. It is OK for the entrepreneur to be wrong. The idea of customer development is to discover a product-market fit through the series of experiments. Being wrong and adjusting is part of the process.

This way of thinking and the methodology stand in contrast to the prevailing method in many startup technology companies. For a long time, the standard Silicon Valley approach has been to design and develop a fully engineered product before offering it for sale. This approach, though, has proved costly since invariably the initial idea for a new product has flaws that prevent product-market fit. Fully engineering the product and ramping up the capability to produce in quantity (or designing a system that delivers a fully engineered service) has great potential for wasting a lot of investment capital. Blank points out that more ventures failed due to lack of product-market fit than failed from not having a working product.

There are still many aspects of this method that need to be researched. Chief among research questions is whether this method actually works better than more traditional methods: no researcher has yet quantitatively tested whether the approach actually produces better results. Theoretically, iterative customer development makes more sense for reducing uncertainty than one-time marketing planning, following from a fully engineered product. The evidence at this stage, though, is only anecdotal. Still the anecdotal evidence suggests that we may be on a path that results in startup methods that hold the promise of improved success rates.
FROM HYPERCYCLES TO EFFECTUAL MARKETING PLANNING: HOW THE MARKETING AND ENTREPRENEURSHIP SYMPOSIUM HELPED TRANSFORM AN EARLY STAGE IDEA INTO A PUBLICATION

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ABSTRACT

At the 2009 Research Symposium, we presented an early stage idea called Hypercycle Planning. Partially based on the presentation feedback and some serendipitous presentations that bookended ours, the hypercycle concept eventually matured into Effectual Marketing Planning (EMP). A conceptual paper that details EMP was accepted into the Academy of Marketing Science Review in April 2012.

This presentation will outline the five elements of EMP and the three propositions that eventually emerged. In addition, we hope to make two new contributions. First, we would like to share our experience on successfully navigating the academic process of publishing entrepreneurial focused material in a marketing journal. Second, our paper successfully used the theory of effectuation to legitimize the need for marketing theory developed specifically for entrepreneurs. We will attempt to show how this theory can empower future researchers to make similar contributions.
THE IMPACT OF INNOVATION AND MARKET ORIENTATION ON NASCENT VENTURES’ SALES REVENUES: EVIDENCE FROM THE PSED2 DATA SET

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ABSTRACT

Nascent entrepreneurial ventures represent an enormous potential for value creation in economies around the world. However, the vast majority of these firms never succeed in achieving initial sales revenues. Two factors which scholars have suggested are important determinants of nascent ventures’ success are the innovativeness of their products and services and their understanding of customers’ demands in light of current offerings in the marketplace. This paper tests the importance of these factors utilizing a sample of 1,179 nascent ventures from the PSED2 data set. The results suggest that firms which fill gaps in current market offerings achieve initial revenues within five years of founding, but firms which introduce innovative products and services do not.