

Conference Name: Australian Centre for Entrepreneurship Research Exchange Conference
2013

Conference Location: Queensland University of Technology, Gardens Point

Conference Date: 6 – 8 February, 2013

ISBN: 978-1-921897-55-9

Editor: Per Davidsson

Paper Title: Emergent and Deliberate Entrepreneurial Strategies in SMEs

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Emergent and Deliberate Entrepreneurial Strategies in SME's

Key words: entrepreneurial strategy, qualitative, SMEs, performance

Abstract

Entrepreneurial strategies in large firms have been analysed in terms of antecedent conditions, elements and outcomes (Ireland, Covin & Kuratko, 2009), but to date less attention has been given to the strategies used by small and medium enterprises to remain competitive. The purpose of this paper is to increase our knowledge and understanding of the types of strategies and activities that existing small and medium enterprises (SMEs) are using to generate new economic activity to ensure the success of their business.

This paper explores findings from a qualitative study of SMEs and identifies entrepreneurial management (Stevenson & Jarillo 1995) in different forms in different sized firms. Findings indicate that small and medium sized enterprises seeking to remain competitive, engage in proactive entrepreneurial strategies that develop and exploit capabilities.

INTRODUCTION

Firms recognise opportunities to extend or grow their business through both opportunity discovery and opportunity creation (Alvarez & Barney 2005, 2007) and the entrepreneurial strategies they develop may be more emergent or deliberate (Mintzberg & Waters 1985). Firms seeking to remain competitive often develop entrepreneurial strategies to increase their options for performance. The importance of entrepreneurial strategies has been the subject of much debate generating a range of definitions (Brown, Davidsson & Wiklund, 2001; Stevenson & Jarillo, 1990). The entrepreneurial activities that firms undertake to generate new economic activity to ensure the success of their business are sometimes characterised as innovation strategies, as firms seek to try new ways to create value and capture value in the marketplace. Corporate entrepreneurship includes new business and also the transformation of organisations through renewal of key issues (Guth & Ginsberg, 1990).

Identifying market opportunity and the creation of new combinations of resources to pursue it are the characteristics of entrepreneurs (Kirzner, 1973; Schumpeter, 1934). The challenge of entrepreneurial management to convince everyone that the company's overriding goal is change (Stevenson & Jarillo, 1986). This paper explores findings from a qualitative study of SMEs and identifies entrepreneurship and entrepreneurial management (Stevenson & Jarillo, 1990) in different forms in existing firms.

The paper reports analysis of the findings from data collected from an investigation of entrepreneurial activities of small and medium sized firms in the spatial information industry. The Spatial Information industry is a rapidly growing industry that consists of companies offering a wide range of geographic-related services such as surveying, remote sensing, location-based services, photo-grammetry, mapping, aerial imagery, land development, environmental management, geographic information systems, web services and global positioning systems (GPS). Some of the possibilities generated by the spatial information industry have become better known in the community through new services such as Google maps and GPS guided processes. The SI industry includes firms with a history of surveying and others more focused on application of information technology with some small family

businesses and medium sized firms are partners in international collaborations. This industry contributes up to \$12.5 billion annually to Australia's gross domestic product.

The contribution we are seeking to make is to increase knowledge about the types of entrepreneurial strategies used by small and medium enterprises in the spatial information industry as they survive and prosper in a dynamic industry. The paper is structured as follows: First we briefly refresh on previous studies on entrepreneurship and strategic orientation. Strategic capabilities often reflect the changing requirements and changing nature of the environment and relevant technologies and entrepreneurial opportunity. Second we describe the research design and methods. Third we present findings and relationships. Finally we present implications for theory and practice and future research.

BACKGROUND

Entrepreneurship

We use the definition of entrepreneurship as “a process by which individuals, either on their own or inside organizations, pursue opportunities without regard to the resources they currently control” (Stevenson & Jarillo, 1990:23). These authors contend that “the essence of entrepreneurship is the willingness to pursue opportunity, regardless of resources currently under control to find a way” (Stevenson & Jarillo, 1990: 23). They argue that there are three key aspects of this entrepreneurial process: (i) detection of the opportunity; (ii) willingness to pursue it and (iii) confidence and the possibilities of succeeding are key components of the process. In addition two other essential environmental factors include (i) an environment that encourages the detection of opportunities and (ii) the motivation to pursue opportunity and its facilitation (Stevenson & Jarillo, 1990: 25).

These notions of opportunity and willingness to pursue opportunity were operationalized in later research in large firms as: 1. Strategic orientation where they include Commitment to opportunity; 2. Resource Orientation (commitment of resources and control of resources); 3. Management structure; 4. Reward philosophy; 5. Growth orientation; and 6. Entrepreneurial culture (Brown et al., 2001). The items for strategic orientation used in their research instrument:

1. As we define our strategies, we are driven by our perception of opportunity.
2. We are not constrained by the resources at hand. Our fundamental task is to pursue opportunities we perceive as valuable and then acquire the resources to exploit them.
3. Opportunities control our business strategy.

Our research investigates how managers in existing firms in a dynamic industry context generate economic activity that is new to a market (Davidsson, 2008) within the fast changing technological developments of a global connected industry.

RESEARCH DESIGN AND METHODS

A guided non-representative sample was created from the a list of organisations in the spatial industry business association in Australia (SIBA) members list, including surveying and other spatial firms with different sizes on both the east and west coast of Australia. Sampling included four firms Queensland, four in New South Wales, five in Western Australia, six in Victoria and one in the Australian Capital Territory.

An interview protocol developed from in-depth discussion of the different dimensions of the research questions was developed and trialled and implemented throughout the study. Exploratory semi-structured interviews were employed to explore the activities and orientation. 20 firms were interviewed face to face in semi-structured interviews that on average lasted approximately 1 to 1.5 hours. Using thematic analysis, the recorded transcribed interview data were analysed for patterns and variations.

FINDINGS

Firms from the spatial information industry use spatial information in a number of ways and their activities can be broadly clustered into three groups: (1) Category A: predominantly surveying firms; (2) Category B: predominantly spatial sciences firms and (3) Category C: where firms combined surveying and spatial sciences firms. The primary activities of Category A firms are measuring, assembling and assessing land and geographic related information to be used for land planning and implementing the efficient administration of the land and the structures thereon, e.g. engineering and mining surveyors or boundary surveyors. Firms in Category B consist of spatial information users and information technology firms that manage and analyse data that has geographic, temporal, and/or spatial context. This category also includes development and management of related information technology tools, such as aerial and satellite remote sensing imagery, GPS, and computerised geographic information systems (GIS). In addition we found another category - Category C firms that may have begun as surveying firms and moved into more spatial information users, or have started as IT firms that have their own surveying section to carry out survey work.

Each of these categories of firms contains a large spectrum of diverse firms. In addition, a certain overlap between Category A and Category B firms can be observed, as some Category A firms move onto spatial territory and several Category B spatial sciences firms have their own surveying subdivision. For the purpose of this research, however, the interviewed firms are divided into the three separate groups mentioned with Category C representing only two firms that were clearly active in both categories. The proportion of firms in each category is shown in Table 1.

Using these categories we examined the business strategies in each category of firms and summarised the responses across all firms to identify similarities and differences.

Category A Firms

In Category A surveying firms, the changes to business strategy in prior twelve months included a tighter strategy around which customers to work with, close customer relationships, continued experimenting with technologies and keeping a watching brief on new technological possibilities. In addition, acquisitions of smaller firms by larger players occurred within this category within the last five years.

- *More focussed strategy about which customers to work with, having learnt from spending too much time working for clients who weren't paying, or didn't pay the right sort of fees*
- *Greater use of robotic instruments for efficiency and effectiveness.*
- *Keeping a watching brief on GPS developments in GPS, Currently this technology not useful in the city and hence urban practice, but they might become useful in the*

future; For example, our firm looked at GPS, but decided the accuracy wasn't good enough; Keeping up with the latest software is useful.

In summary, the strategies included developing 'new to the firm' activities, and asserting the quality of their work in their marketing strategies.

- *Developing a 3D model for a customer and then also do it for other customers (new to the firm)*
- *Marketing more on quality than on price, and more use of website in the last twelve months*

Small Category A firms described these changes and activities as “*slow and imperceptible changes to the business day by day*” rather than planned business strategies.

Continual Business Improvement using three major approaches

a. Seeking increased effectiveness and efficiency with technologies

- *Experimenting with new technology called laser scanning by hiring technology which throws out 1,000 lasers into a room and picks up every nook and cranny, in a three dimensional sense (but waiting for the 10th generation before we purchase it).*
- *In the last five to ten years the main innovation I guess is that we use robotic instruments, so we have been able to reduce some of our field parties from two people down to one and essentially do the same work. So there has been a cost savings in wages there. I guess also the speed of a new machine, so there has been a vast improvement in technology over the last ten years, as to what you can physically do in a day compared to the older ones.*
- *We've probably had one machine probably for six years, and another machine for three or four years, so we have gone down that path now.*

b. Changing work practices to carry out more deskwork remote from the site

- *From the town planning side, probably the last five years, we have gone more to the desktop audit so like with the advances in aerial photography, whereas before we used to have to go out and look at a site, you can do desktop work, look at a photo of the property, see what the site is and go to Google street view and look at what it looks like from the road*
- *We plan searching with 'smart maps' and we can do it all remotely from our office*

c. Improving business processes and focus on customer relationships

- *Our firm wanted to chase new business but we weren't very good at it, so we hired a business coach with weekly and later monthly meetings. He suggested indicators and measuring what the firm was doing and marketing. Changes were implemented, amongst which starting a newsletter. Firm is now looking at upgrading the website.*
- *Change to marketing concepts: We send out newsletters now to our (existing) clients, with new things coming through and letting them know.*

Category B Firms

In Category B spatial service firms, changes in business strategy are based on technological possibilities and monitoring clients for feedback and developing new software, developing integrated systems used in mergers and acquisitions to integrate IT systems. Firms also develop formal collaborations and partnerships with international companies, with acquisitions and some insourcing of specialized expertise when needed.

a. Dynamism in Strategy

Changes in corporate strategy are related to the changing legislative environment around smart networks and pilot studies funded by government. Close relationships with customers and consultation about their needs and then to technology providers and engage in training with this technology. Some rationalisation and firm acquisition of specialist services such as photography is also found.

- *In relation to our business strategy, the areas that we focus on now are different to what they were twelve months ago, but it hasn't been a deliberate (approach) – the strategy was this and now it's that. It (the changed strategy) is based on the technologies available realizing that things are suddenly possible whereas before they weren't, and just getting feedback from our clients on what they were prepared to pay for.*
- *Our Corporate strategy was rewritten three months ago. We've got a different strategy now, that focus strategy is contrary to what we were doing before, we were growing aggressively, geographically and diversifying, we have pulled back on that, and said "no, we're only a spatial company" and it's not all about growth, it's about being really good at what you do.*
- *During the next couple of months the firm plans to review their corporate strategy. (Effectively, this has been to take their knowledge of spatial technologies and data, developing relations with a growing list of government agencies in Victoria, then looking at another jurisdiction's counterpart to that agency and selling that experience and expertise to those other agents).*
- *The firm identified three new initiatives for 2011 that we said were really important for the organization going forward. They were accorded the same priority as paid work. The first project was developing capabilities in the IRS development space (operating systems) The second one was a new mapping technology for producing multi scale multi resolution maps (competition for Google maps), The third one is a site history reporting service (concerns contaminated land use).*
- *We use Friday afternoons at times when staff work on the big picture stuff; so nothing that is client specific. We are saying, "Right what can we work on for the next half a day that is going to get us closer to our big picture".*

b. Structural change in organisation:

Changes in strategy often resulted in changes in organisational structure, such as forming specialist groups to plan and monitor changes, and increased responsiveness to changing market needs.

- *In the last year an addition to the management structure was made (it is not a line management structure, it runs diametrically opposed to that). "We have established a formal group of middle managers within the organization, which we call COG, the Company Operations Group, and set up a group of groups to report to that on special*

topics, and they are working groups and cover various things, areas of company operation and we have basically said that the role of COG is to develop and implement our annual plan and senior management is involved as well, but it's about getting greater involvement across the board in the development of the plan itself, but also it's implementation and responsibility for implementation across the organization. That group is large, it is 13 staff, COG. So it is all about involvement and the evolution of responsibility."

- *Change in business: Growth in firm has influenced changed from a situation with one manager and a lot of people reporting to him to a different structure where there are managers in different areas. Those managers are practitioners as well and they can interact, help each other and share ideas.*
- *We make regular changes to the organizational structure as a result of planning process, and what works and what doesn't work and re-organising to better fit the market.*
- *We have changed our organisational structure and have added a business in and changed our capability in the last month.*
- *Firm was reviewed about 12 months ago and the conclusion was that the company had been growing faster than the development of formal systems and this was an impetus for change of internal systems. The company is still young, so pretty much all of the activities within the company are still developing, and our technologies and approaches are developing.*
- *We are appointing new skilled staff in the Business Development area/Marketing. This is a new position generated in Marketing and Business Management to be appointed in January 2012*

c. Marketing changes

- *New staff appointed in marketing person now, twelve months ago we didn't have marketing staff and now we have two marketing people.*
- *Marketing activities evolving with websites and firm is also looking if they want to do something with twitter and social media*
- *Firm is currently trialling a change in its marketing strategy: We have had some resistance in some areas of our client, to our pricing, which is really all about lack of understanding of what the product will deliver. However, it is still a barrier for some people and so we have developed and re structured our pricing to break it down, rather than one lump sum, break it down into components, so that people can feel that they can take a base level service, and then add onto that as they require. So that is something which has been a new initiative, and we are just starting to get feedback from the marketplace on that now.*
- *When we have a new piece of equipment of something we have upgraded, we develop brochures (to advertise this to potential customers)*
- *At conventions or conferences sales people try to talk to potential customers*
- *We are using new technologies and CRM (Customer Relationship Management)*
- *We respond to invitations to partner with international firms: For example a USA based company offers 24 hour online support and were looking for a firm in the Australia/Pacific time zone. Since the firm was active on forums we were approached to participate.*

d. Continuing Experimentation

Experimentation by these firms included using pilot programs where firms consider ways to improve the processing, or applying a piece of software to a small part of the business before they roll it out across the firm. Experimentation also includes continued investment in research and development (R&D) experimentation and software development.

- *Our firm does a lot of experimentation including investigation to find out if something is feasible or not or try and estimate how long it would take to do if we decided to do it.*
- *On a few (3 of 4) projects the firm has tried out what they can do with some of the newer equipment they have bought, in this way innovating on their processes. We also innovated in the way we used existing technologies. For example: using a digital camera helped to provide the same results with less flying time – cheaper for the customer. Firm did one major pilot project, took the opportunity with a couple of other projects to allow them the opportunity to test it.*
- *We focus on different software improvements*
- *During the last 12 months the firm purchased three new instruments for projects.*
- *We use other people's data, taking complex software and making data more useful.*
- *We develop new indicators to measure: internal – software, and disseminate our findings.*
- *We research software packages and their possibilities and then apply to existing data sets*
- *We develop a lot of software to improve our current products and develop new products, so the bulk of our R and D work (...) is spent on people's salaries. On specific projects which are identified as what the company needs to work on, and then we assign people to work in them.*
- *The R and D grants in general are a key source of funding for us, and we've just finished one and we are now applying for another one.*

e. New product development

- *Company is starting to build some new products, e.g. a design for helping mining companies get permit approvals, a permit approvals system. Three companies are interested and currently the firm is trying to find out whether they can make it work for all three of them. Project is at proof of concept stage ahead of prototype and the firm intends to patent it eventually.*
- *Product development focus and firm has commenced to develop a third product to add to their two current products, a transfer mapper: a software product which is being designed to allow them to scan and gather spatial data on a different piece of equipment in the mining industry. Its status is at working prototype and it is patented.*
- *New product was introduced during the last year: We now sell all the Google technology, so we're their primary enterprise partner in spatial for the whole region and another product called Voyager.*
- *We developed software products in 2001, 2006, 2011.*
- *Some IP issues that we deliver, and we may provide then our client/customer a non exclusive right to use but that will tend to come back to software that is developed. The whole IP thing is a very difficult area, particularly in a services company*

f. Significant improvement to existing product or process or application in new fields

- *We develop ongoing innovation activities for different clients*
- *During the last year, the project sizes have gone up, firms are dealing with larger clients and projects with increased sharing of responsibilities.*
- *Our firm is buying new software and survey equipment all the time. Example: GPS receivers, they work better and pick up satellites. Firm can now survey in places where traditionally they would have had to do it a slower way.*
- *We sell to new customers. For example the Department of Environment and Water used geospatial information for environmental management.*

Category C Firms

Category C firms showed alertness to new possibilities and to potential for efficiencies. In these firms, emerging strategies included new product and service development, increasing formal organisational processes and consolidation and close relationships with customers.

- *Our business is in a growth stage and there is not enough process and formality in the firm. We are trying to introduce this, draw up procedures etc. e.g. changing field practices and coding things differently, so that it doesn't take extra time in the field and saves time in the office, while guaranteeing a higher quality and consistency.*
- *Increasing standardisation of firm processes: contacts, human resources.*
- *Each employee now has funds to spend at their own discretion towards their professional development. Employment contractors were standardised (pay scale), timekeeping and performance systems were implemented. Currently the profitability of certain projects is being evaluated. Measuring time taken helps the firm to understand whether we can bid for a job at all, from a profit standpoint.*

Better project management practices for time management and project tracking across locations

- *Changing the survey data practices so that the firm can spend less time processing the data. For example: to collect parking information for a council, so 300km of road, all the signs had to be surveyed and put into a GIS. The traditional way to do that would be to walk around for a few months. The firm engaged a sub contractor to drive around with a street view with higher resolution and developed a solution just for in-house use in the office, to record all that information. By doing so, they were able to do it in three or four days.*

Continuous monitoring of new technology and equipment for performance and price and similar processes with software

- *Purchasing new HD laser scanner and new project information management software called New Forma to try to improve workloads.*
- *We will have a program to look for and identify opportunities and improvements, in market diversification but also consolidating existing markets with new products.*
- *The firm had some spare capacity during the GFC which they deployed into R and D projects. When we came out of the GFC we had some new things to put to the market.*

Close relationships with users

- *We actually do a lot of R and D with the user, because they will say oh I'm terrible with this, can you do this, oh yes of course we can, and then we try and find out how.*

In summary, across all categories of firms, some similar processes are observed. All categories of firms were engaged in new sources of work, continuous business improvements and sensitivity to the need for changing their work practices to meet changing environments. The firms monitor the changing possibilities of new technological developments in hardware and software, and the changing technological infrastructure as potential sources of effectiveness and efficiencies. Close relationships and monitoring of their relationships with clients are presented. The firms are also sensitive to the changing legislative environments as opportunities for new services or new forms of services. However, there also appear to be some differences.

For Category A firms, close relationships with customers appears to involve developing deeper relationships with existing clients, or firms they are referred to by their existing clients. Their activities include developing new services through applying problem solving expertise and openness to experimentation to develop new solutions, often in specialist niches.

For Category B firms, the key factors of responsiveness to changing environments and technologies is clearly demonstrated through a dynamic approach to business strategies, changing organisational structure and staffing, ongoing experimentation and better marketing of their capabilities, products and services. These firms are more overtly engaged in developing new products and services and in experimenting to find new ways to expand their customer base.

The small sample of Category C firms shows that sensitivity and alertness to opportunities in changing external environments also requires some formalisation and consolidation after a growth stage, and reviewing internal processes and practices. These firms also value their staff and encourage capacity building.

Findings from our investigation of firms in the spatial information industry indicate that all small and medium sized enterprises are seeking to remain competitive, engaging in proactive entrepreneurial strategies that develop and/or exploit capabilities. Distinct patterns of entrepreneurial strategies were found from data collected and analysed in this study. One strategy largely used by small, mainly surveying firms for developing new value added services to existing customers, appeared to emerge from longstanding close relationships with customers who were seeking solutions to new problems. The second strategy largely used by medium sized spatial services firms, was more focused on new products and services and the exploitation of existing competencies and the broader application of these competencies within existing and new markets. The hybrid firms in Category C showed both new product and new service developments and the characteristics of ambidextrous organisations (Tushman & O'Reilly, 1996) exploring new arenas as well as exploiting existing capabilities.

DISCUSSION AND CONCLUSIONS

Firms in the spatial information industry compete in a fast changing markets where increasingly sophisticated technology creates the potential for new ways of working, new ways of solving problems and faster, more accurate and more efficient solutions. In such markets and industries, knowledge and the ability to generate and capture new knowledge is essential for business survival and success, and learning through experimentation is essential (Jenson et al, 2007).

The forms of entrepreneurial strategies used by these firms appear to be closely related to changing environments and emerging technological possibilities, the size of the firms and the

services they provide. The smaller firms appeared to focus on generating value based on their expertise and problem solving capabilities. The larger firms engaged in both exploration and exploitation of their capabilities in new product and new service development demonstrating openness to work with other firms in partnerships or collaboration.

This research has implications for the importance and the forms of networks of relationships that firms have with their existing customers and their application of new ways of working with new and existing customers.

LIMITATIONS AND FURTHER RESEARCH

This study of firms in the spatial information industry used sampling across categories, sizes and locations of firms to enable the investigation of diverse firms. While sampling processes were informed by the SIBA database as well as advice and assistance to select a balanced sample, it is likely that a different selection process may have generated different results. This study provides some preliminary findings of the strategies used by firms to generate economic activity new to the market. Future research regarding the changing nature of the firm's capabilities and the extent to which firms reconfigure their organisations to maximise responsiveness to dynamic environments (Zahra, Sapienza & Davidsson, 2006) could be examined with a longitudinal studies.

Further research perhaps with a quantitative study of a larger sample of firms in this industry may gain more detailed information about the nature of entrepreneurial strategies, the context and conditions in which they arise and the ways in which they contribute to successful business performance.

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Table 1. Interviews with Spatial Information Firms

Interviewee's function	Firm category	Firm size	Firm location
Director	Category A	Small	NSW
Managing Director	Category A	Small	NSW
Director	Category A	Medium	NSW
Registered cadastral Surveyor, Owner	Category A	Small	QLD
Office Manager	Category A	Medium	QLD
General Manager; Operational Manager	Category A	Small	WA
Chief Executive Officer	Category B	Medium	ACT
Managing Director, Owner	Category B	Small	NSW
Survey Manager	Category B	Large	QLD
Managing Director	Category B	Small	QLD
Manager	Category B	Small	VIC
Managing Director, Geo spatial systems developer	Category B	Small	VIC
Client executive	Category B	Large	VIC
Managing Director	Category B	Medium	VIC
Managing Director, Chief Executive Officer	Category B	Medium	VIC
R&D Manager	Category B	Medium	WA
Managing Director	Category B	Medium	WA
Chief Executive Officer	Category B	Medium	WA
GIS Coordinator	Category C	Small	VIC
Business Development Manager	Category C	Medium	WA