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STRATEGIC DECISION-MAKING IN SMALL AND MEDIUM-SIZED ENTERPRISES: EVIDENCE FROM AUSTRALIA

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Strategic decision-making (SDM) is fundamental to shaping the success of firms; however, the DM processes described in traditional DM theories and models have only limited applicability for our understanding of strategic decisions in small enterprises. This is because most DM models have been developed from studies of decision processes in large firms. This paper investigates the SDM process in small and medium-sized enterprises (SMEs). Data were gathered by conducting 13 case studies of Australian SMEs. It was found that a two-staged SDM process was used by many SME owners/managers and that rather than a problem-analysis-solution progression, SMEs engaged in a problem-solution-analysis process. SDM weaknesses identified were that SME owners/managers had a narrow focus in developing potential decision alternatives. Moreover, the quality in executing information searching and processing was quite moderate. Contributions of this study are that it provides new insights into SDM practices in SMEs and extends previous research in the area by providing a DM process model.

***Keywords**: strategic decision-making, decision-making process, decision-making characteristics, SMEs, Australia*

I. INTRODUCTION

There is a substantial body of research built around describing and detailing decision-making as a key process of strategic management (e.g. David, 2008; Eisenhardt, 1999; Nutt and Wilson, 2010; Hart, 1992). This emphasis is easy to understand given that strategic decisions are fundamental in shaping the success of a firm over the course of its existence (Eisenhardt and Zbaracki, 1992). However, much of this research investigates decision-making within large organisations which has limited applicability for our understanding of strategic decisions in smaller firms (e.g. Hofer, 1975; Robinson and Pearce, 1983; Wood and LaForge, 1979). As Curran states, small and medium-sized enterprises (SMEs) are "not [simply] large businesses scaled down" (Curran, 2000, p.44).

SMEs are characteristically different from their larger counterparts in decision-making protocols, structures and tools. Perhaps for this reason, decisions in SMEs (compared with those undertaken in large businesses) tend to "depart from the norms of rational decision-making theories" (Gustafsson, 2009, p.293). Other factors relating to small size, for example, limited financial, technological, and human resources; inadequate decision-making skills or knowledge; and decisions taken by individuals (usually the owner-operator or principal) instead of teams (Brouthers, Andriessen and Nicolaes,

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1998) also give rise to contextual differences between large and small firms in terms of strategic decision-making (SDM) actions, behaviours and processes.

While SME-focused studies do exist, this body of work is relatively limited (see section: Strategic Decision-Making in SMEs) and provides for a fragmented understanding of the decision-making dynamics in firms constrained by their size. This gap in our understanding has significant implications for both policy-makers and managers. In every nation, SMEs dominate in both numbers (90-99% of all firms, depending on definition used) and broad economic contributions (GDP growth, productivity, employment creation, innovation, level of market competition, etc) (Lundstrom and Stevenson, 2001; Stevenson and Lundstrom, 2001). However, many SMEs perform poorly and exit rates for the sector are frequently high (Ahmad and Seet, 2009). Although there are many factors that contribute to poor performance and firm demise, inadequate SDM skills have been noted as a primary reason (Brouthers *et al.,* 1998).

In much of the SDM literature, a key objective is to offer effective suggestions for practice (i.e. how decisions *should* be made). To meet this goal in relation to SMEs, it is necessary first to understand decision-making as it occurs (i.e. how decisions *are* made) in these firms. However, "coherent descriptions" (Nutt, 2011, p.6) are still lacking and, accordingly, this paper aims to provide a detailed description of the activities and routes that SMEs undertake in making their strategic decisions.

Research on SDM in SMEs is warranted for several reasons. First, it can improve our understanding of what activities SME managers/owners engage in and help identify the strengths of, and pitfalls in, their SDM processes. Secondly, it can contribute to decision-making theory through developing a model of the SDM process in SMEs. Third, this work can help SME managers/owners improve their SDM processes and outcomes. Finally, this paper could assist government policy-makers in developing better programs to support SMEs in their countries.

II. STRATEGIC DECISION-MAKING

Two broad threads of investigation can be identified in the strategy literature: strategy content/characteristics, and strategy process. SDM forms a subset of the latter. In this literature, most SDM models can be described as 'phase' models since they typically divide the decision-making process into a number of well-defined and directional stages and steps through which an individual or group proceeds when making a decision (Cowan, 1986; Nutt, 2008; Witte, 1972).

For example, an early decision-making process model outlined by Mintzberg, Raisinghani and Theoret (1976) consists of three major phases and seven steps:

TABLE 1:
MODEL OF STRATEGIC DECISION-MAKING

Phase	Step
1. The identification phase	1) Decision recognition 2) Decision diagnosis
2. The development phase	3) Search route 4) Design routes
3. The selection phase	5) Screen 6) Evaluation-choices 7) Authorisation

Witte (1972) offered a more general model that consists of five major phases or steps: (1) problem recognition; (2) information gathering; (3) alternative development; (4) alternative evaluation; and (5) choice. Complementing this effort to map the decision-making sequence, attention has focused on the key dimensions or characteristics of the decision-making process by describing how decision phases or steps are actually undertaken. For example, Pfeffer (2005) proposed four organisational decision-making models: rational, bureaucratic, organised anarchy, and political power, based on eight dimensions including goals and preferences, decision process, information and computational requirements, and decisions.

Two of the dominant decision models in SDM literature are synoptic and incremental. A synoptic process is characterised by a high degree of rationality and analysis, while an incremental process is characterised by decision-makers' experience, intuition, and political behaviours. Fredrickson (1983) provided an overview of the differences between these two models across a number of characteristics: motive for initiation, concepts of goals, relationship between means and ends, concept of choice, and comprehensiveness (both analytical and integrative). More recently, Elbanna (2006) provided an extensive review on these two SDM models, examining the concept and role of rationality, political behaviour, and intuition.

Some scholars have concentrated on specific characteristics and attempted to model processes involved in SDM. For example, based on the role of top management and the degree of participation of organisational members, Hart (1992) developed an integrative framework that contains five modes: command, symbolic, rational, transactive, and generative. Still others have called for contextual variables to be included in order to better account for the complexity of SDM and improve the explanation of SDM outcomes (Hart and Banbury, 1994; Hough and White, 2003). Contextual factors include a broad range of environmental, organisational, and decision-specific variables (Rajagopalan, Rasheed and Datta, 1993), and generally influence the process characteristics of strategic decisions. For example, environmental characteristics cover stability/dynamism, favourability/hostility, and complexity (Baum and Wally, 2003; Bourgeois and Eisenhardt, 1988; Fredrickson and Mitchell, 1984; Ginsberg, 1984), while organisational factors include centralisation (Baum and Wally, 2003), the role of top management (Papadakis and Barwise, 2002), politicization (Bourgeois and Eisenhardt, 1988), ownership, and firm size (Ghobadian and O'Regan, 2006; Papadakis and Barwise, 2002). Overall, these factors variously influence decision agendas, the development of alternatives, speed of decision-making, and comprehensiveness of decisions (Baum and Wally, 2003; Bourgeois and Eisenhardt, 1988; Kauer, zu Waldeck and Schäffer, 2007; Papadakis and Barwise, 2002). Decision-specific factors include aspects such as the urgency or expediency behind the decision, impetus or catalyst driving a particular decision, decision complexity, decision risk, and outcome uncertainty (Rajagopalan *et al.,* 1993).

Overall, these decision-making theories and models have shed light on how strategic decisions are made and categorised in organisations. However, with a few exceptions (e.g. Brouthers *et al.,* 1998; Jocumsen, 2002; Robinson and Pearce, 1984), most of these models have been developed based on the research outcome of large business organisations (e.g. Mintzberg *et al.,* 1976; Quinn, 1980) or those operating in public sectors such as government departments and universities (Pfeffer, 2005).

III. STRATEGIC DECISION-MAKING IN SMEs

As noted previously, strategic decision-making in SMEs is unlikely to follow the same structured pathways or processes described above. This is still a relatively uncharted area of research and studies conducted on SMEs tend to be narrowly concentrated on venture start-up decisions and the motivational drivers behind such entrepreneurial decisions (Gibcus, Vermeulen and de Jong, 2004).

Even so, a partial picture can be pieced together. McGregor and Tweed (2001, p.280) noted that:

> *The management process in a small firm is unique and cannot be considered the same as professional management in larger organisations practiced on a reduced scale. In small firms the managerial roles are likely to be located in one person whose personality, experiences and knowledge influence the management process. The core competencies of the enterprise become virtually synonymous with the competencies of the manager.*

This has significant implications for SDM processes in SMEs. First, the centralisation or concentration of SDM in the one person (often the founder/owner) is likely to be strongly influenced by the entrepreneurial vision that initially gave rise to the enterprise. According to Brouthers *et al.* (1998, p.132), this vision is "difficult to dislodge" and may make the SDM process less rational as founders work in pursuit of a personal ideal. As noted by Culkin and Smith (2000), a key feature of SMEs is that the business is "inextricably tied up with their [i.e. the founder's] life and identity" (p.149). Therefore, various factors come into play, including individual needs such as the need for achievement and autonomy/independence/control (Gibcus, Vermeulen and Radulova, 2008), and (in family-owned businesses which represent a significant proportion of SMEs) familial dictates (Aldrich and Cliff, 2003). Jayasinghe, Thomas, and Wickramasinghe (2008) describe this phenomenon as "bounded emotionality", where economic or rational reactions (such as in SDM processes) are constrained by the emotions of entrepreneurial needs.

A second implication is that SDM becomes highly dependent on the capabilities of a key individual. Key factors such as personal background, experience, and even personality can significantly influence strategic awareness (Berry, 1998; Gibcus *et al.,* 2008). This makes SDM a variable practice in SMEs. Additionally, 'smallness' can exacerbate this situation because resource limitations (capital, time, human) often restrict the ability of SMEs to utilise internal teams or external specialists when expertise is needed for complex technical decisions (Culkin and Smith, 2000). At the same time, the range of decisions that need to be made is extensive and includes all aspects of operating a business. As a result, decision-making biases and heuristics, as well as intuition, are more likely to be used in strategy selection in SMEs (even after extensive analyses) than in larger firms (Brouthers *et al.,* 1998; Busenitz, 1999; Busenitz and Barney, 1997; Kort and Vermeulen, 2008).

Overall, SDM is generally less predictable in SMEs (Curseu, Vermeulen and Bakker, 2008), and more likely to deviate from the norms and processes mapped from studies of large firms (Gustafsson, 2009). Jocumsen (2002) investigated strategic marketing decisions in SMEs and showed specifically how processes were likely to differ. In his study, five broad steps were identified: (1) decision initiation; (2) information

gathering/research; (3) internal matter consideration; (4) financial analysis and assessment; and (5) final commitment. Steps 2, 3 and 4 represented the 'core' steps; they were loosely defined, conducted non-sequentially and iteratively, and their boundaries tended to blur and overlap. Jocumsen (2002) noted that the entire process was simpler and "much less complex" than that described in theories, frameworks, and models based on SDM processes of large firms (p.669). Additionally, although (simple) analytical tools were used, decision outcomes were based essentially on the "extensive use of gut feel and intuition... [and] past decision experiences" (ibid.).

Gibcus, Vermeulen and de Jong (2004) approached the study of SDM in SMEs by investigating the processes and practices in which different types of decision makers were engaged. The researchers identified five groups (daredevils, long rangers, doubtful, informers, and busy bees) and noted that the common basic features of decision-making behaviours between the groups were substantially different (e.g. frequency of decisions, independence of decision makers, risk profiles, ambition, information search, consideration of alternatives) (Gibcus *et al.,* 2004). The researchers argue that, if decision behaviours are different across different types of decision makers, then generalised theories and models (especially those based on decision makers in large firms) provide only a narrow view of SDM because the research presents an incomplete picture of the processes that actually take place, particularly with relation to SMEs.

If this is the case, a number of important questions still remain; for example, what are the component steps/stages/phases/sequences in the SDM processes undertaken in SMEs? How are they conducted? Are there strengths and weaknesses in the sorts of SDM processes engaged in by SMEs? More importantly, can the quality of SDM in SMEs be improved?

IV. RESEARCH DESIGN AND METHODS

Our research adopted a case-study research design, following procedures suggested by Yin (2003). Case studies are widely used in researching SMEs (Bhalla, Henderson and Watkins, 2006; Chetty, 1996) and also regarded as an appropriate approach for theory building (Eisenhardt, 1999; Eisenhardt and Graebner, 2007).

To answer the question of how SMEs make strategic decisions, we analysed these processes in a sample of Australian firms. Decision processes can be conceptualised as 'how' the decision was made; that is, the decisional steps/routes/pathways that lead from the appearance of a problem to the formulation of a final solution/action (Nutt and Wilson, 2010, p.12). Witte (1972) suggested two possible approaches for investigating SDM in firms: the first examines the total system of processes for all strategic decisions made within a specified period; the second investigates the processes associated with a single or specific strategic decision. On the basis of methodological and operational difficulties, Witte noted that the second approach was preferable and would produce a more easily identifiable result.

Following Witte, we focused on a single/specific major or important decision that was both a 'true decision' (using Mintzberg *et al.*'s (1976) idea of a "specific commitment to action" (p.246)), and one that could be isolated for the processes to be mapped and analysed (i.e. separated from other decisions) (p.158). Deviating from Witte, we

allowed our sample firms to self-select a strategic decision for discussion with the following stipulations that the decision be:

a. Sufficiently recent (within the last three years), so that key processes associated with the decision could still be identified in relative detail (e.g. from documents, records, communications, memory/recall); and

b. 'Strategic'; that is, a non-routine decision with significant medium to long term competitive, economic, operational or other consequence for the firm. Notionally, this decision should be "large, expensive and precedent setting" (Nutt and Wilson, 2010, p.4).

Sampling Consideration

A database of 40 candidate organisations was developed from recent lists of State Innovation Awards, and Industry and Export Awards nominees in Western Australia. These organisations were cold-called to explain the purpose of the research and request their participation. A total of 19 organisations agreed to participate; 13 of these satisfied the Australian definition of an SME (i.e. <200 employees), and provide the basis for our analyses and discussions. The distribution of ownership, size, and sector of these 13 organisations is presented in Table 2.

TABLE 2:
THE DISTRIBUTION OF OWNERSHIP, SIZE AND SECTOR IN THE SAMPLE

Firm	Sector	Ownership	Employees	The Strategic Decision
1.	M	Partnership	70	Development of a speed limiter with a data logger
2.	M	Partnership with VC	40	Internationalisation (exporting a laser guiding system controller to Europe)
3.	M	Partnership	16	Setting up a subsidiary (or majority JV) in the US
4.	M	Family business	170	New product development – setting up a new concrete pool division
5.	M	Public listing	40	Setting up a production facility for a new product (steel frame); setting up a JV in Dubai
6.	M	Shareholding	30	Developing a short frequency product which is a VHF radio
7.	M	Public listing	14	Developing a new product (a safety device) for small boats or yachts
8.	M	Partnership	12	Developing a winch
9.	S	Public listing	28	New strategy development
10.	S	Partnership	90	Opening a major office in South Africa
11.	S	Partnership	30	Developing a new software
12.	S	Sole owner	7	Entering a new country
13.	M	Sole owner	40	New product development

NOTE: M: manufacturing firm; S: service organisation; N: number of employees

Data collection and analysis

We constructed a list of questions focused on identifying activities conducted in the SDM process. Questions also explored certain contextual factors, particularly environment and organisational ones. The development of the list was nominally guided by the decision processes described by Mintzberg, Raisinghani and Theoret (1976) and Jocumsen (2002), although refinements to specific questions were also made during the data collection process. Following Nutt (2011), the overall approach to question development treated decision making as "an action-taking process" (p.9).

The subsequent interviews, informed by this list, were the primary data collection method employed. The interviews were semi-structured and covered listed questions as well as new and unexpected information (Bourgeois and Eisenhardt, 1988; Mintzberg *et al.,* 1976). Generally, interview procedures followed Bourgeois and Eisenhardt (1988), who asked court-like questions (such as what, how, when, who, and where) for two reasons: to determine the firm's background and operation, including goods or services offered, markets served, ownership, and size in terms of number of employees); and to explore major strategic decisions taken over the past three years. For the latter, interviewees were asked to select one decision, and describe the detailed steps undertaken to reach that decision. Key characteristics explored included factors taken into consideration, participation, and speed at which the decision was made, as well as its economic outcome as outlined by Rajagopalan, Rasheed and Datta (1993).

For eight SMEs, owners or presidents of the companies were the interviewees; in the others, they were senior business development managers. Interviews generally lasted one-and-a-half to two hours. Although interviews were conducted with individuals, the unit of analysis selected for this study was, in essence, the organisation. In keeping with Yin's (2003) 'holistic' case study approach, the project also collected other sources of information germane to the study. When clarification or expansion of answers was required, interviewees reviewed documents and archives, and brought in other staff who participated in the decision.

Interviews were recorded and data collection followed university protocols for the ethical conduct of research. Recordings were transcribed and Nvivo used to manage the transcripts (data) during analysis, which involved a two-stage process. First, we used the key models described above (notably, Mintzberg, Raisinghani, and Theoret [1976]; Witte [1972]) to guide the identification of the activities undertaken by each organisation, and provide a broad overview of the processes' flows and major steps/routes/pathways taken. Steps that did not conform to these general models were coded, and their roles and sequences in the SDM process further analysed.

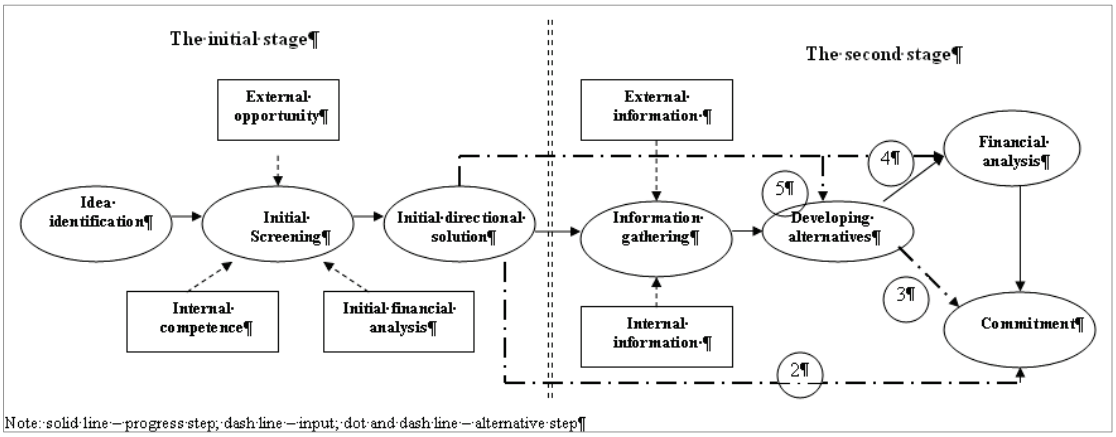
Next, cross-case analyses were conducted using theme identification and pattern matching (Yin, 2003) to compare the major patterns of activities and process flows across the organisations. In this way, both single case and cross-case comparisons were able to achieve 'literal' and 'theoretical' replications (Yin, 2003).

V. FINDINGS AND DISCUSSION

The strategic decision-making process

The dominant pattern of the SDM processes from our cross-case analyses is presented in Figure 1.

FIGURE 1:
A TWO-STAGE MODEL OF STRATEGIC DECISION-MAKING IN SMEs



The figure shows a two-stage decision-making process that emerged from 10 of the 13 decisions we investigated. Generally, the first stage is where ideas are screened off and a directional solution is produced; the second stage is where more information is collected, analyses are conducted, the directional solution is refined, and the decision is finally taken. We now discuss the steps in each of the stages.

The initial stage

Decision initiation/recognition

The catalyst for strategic decisions often came from external stimuli rather than within the organisation. Mintzberg, Raisinghani, and Theoret (1976) classified ideas into three distinct groups: opportunities, problems, and crises. However, we found that it was often the combination of opportunity and threat that provided a stimulus for strategic action in the organisations. For example, the decision to establish a US production plant for an interior ship-panel manufacturer was made because a major client established a business division there. This could be an opportunity for the firm to expand its market; it was also a threat because, if the client was not followed, this could allow competitors to supply the client's US division and its Australian headquarters in due course. As the owner stated:

> *"We can let them [a major client in the ship-building industry] do their thing on the Gulf coast. They will probably have to buy our products because they know us but eventually they'll get a local supplier. If we don't do something, we will just be creating a competitor. There was only one thing to do. We'll have to set up there as well."* (Firm 3)

Nevertheless, failing to translate environmental stimuli into a more immediate impact on customers and competitors was a major problem in the SDM process, often

coupled with internal technology-driven issues. Commenting on his organisation's decision to develop a new product – a speed limiter for forklifts – for a new type of client, one interviewee said:

> *"The legislation has changed in the use of forklifts and it's now fully regulated that you can only drive a forklift at a certain speed. We jumped onto that because we have speed controls. The need for that was a legislative change and customers run quite big fleets of forklifts. They wanted to regulate the speeds that they could drive at by these mainly low skilled operators."* (Firm 1)

In further explaining why the revenue from this product was not as good as expected, he stated:

> *"We had three competitors so we had to deal with them. But you are right because in a technology company, we are either going up against competition or [the customer's] perception. [The customer's] perception was that 'we've never had it before so we don't need it'. If you have competition, it just slows it [sales] down. You just have to overcome the customer's [view] that they don't want it and the competition [that] wants to retain their customers."* (Firm 1)

This suggests that inadequate competitor and customer analyses were important causes of unsatisfactory outcomes from this decision. This was also observed with another organisation whose managing director stated:

> *"[The product] has won a bunch of awards, we've got a design award. Everybody loves it. The fact that it's not walking off the shelves… it is a market acceptance problem. It's not because of the design."* (Firm 7)

Twelve out of 13 ideas were generated by the owners/managers. The marketing manager of a communication equipment manufacturer describes it this way:

> *"How we came about that decision is that we continually review on a monthly basis how our business is going. We regularly discuss how we can increase our sales. We decided to do a bit of study on how we could look at a short-range product [radio communication equipment] before we go down that path of investing money in R&D."* (Firm 6)

Another important source for decision initiation and recognition were those managers newly recruited from outside the organisation. For example, one interviewee discusses the origin of an idea:

> *"It's really through [this newly recruited technical manager's] knowledge of the market that he identified the opportunity in this market."* (Firm 4)

Overall, this initial decision is similar to what is called "opportunity discovery" by Sanz-Valasco (2006); that is, these initial decisions were rudimentary and based only on the owners/managers' awareness of the existence of opportunities or needs with little use of other elements (such as their prior knowledge and resources) to reflect on these opportunities and develop them.

Initial screening

An additional step found in this stage was the initial screening of ideas. Ten of 13 interviewees indicated they considered at first if external stimuli matched the organisation's internal competence and resources. In other words, the fit between the internal competence and external opportunities was considered as an important criterion to screen off the identified ideas.

This initial screening typically involved the owner/manager's knowledge about the environment, his/her own organisation, and the simple collection of new information. Only those ideas that passed an initial fitness test were candidates for further consideration. This is illustrated by the owner of a safety control manufacturer:

> *"Australian standards [in safety] are among the highest in the world .... I realised that Europe was getting very serious about safety standards. I started looking at European standards and realized that we in Australia could start building something that fitted European standards."* (Firm 2)

The initial fitness test may involve a simple financial consideration. For example, the partner and manager of an interior panel manufacturer said:

> *"There are some very big navy contracts in the US. We were assured we are the Pentagon's first priority. If they do happen, they will happen within a few hours of where we've set up [our manufacturing plant in the USA]. They will want X boats equal in size to the biggest we've supplied and so it is more than we've ever done from here, and so it will be over a period of Y years. If those projects do happen, it will be a very nice base-load of Y years."* (Firm 3)

Such an initial screening is sensible for SMEs as they usually lack resources. Thus, they can focus on those ideas with potential and proceed with further steps such as information gathering and financial analysis.

The development of an initial directional solution

This was the final step in the first stage of the SDM process. After initially screening the ideas, many interviewees reported that they developed an initial solution, often broad and tentative. Examples include an initial commitment to the idea of setting up a manufacturing plant in the USA for the interior ship panel manufacturer, and the opening of a new division for concrete swimming pools for a pool company. Generally, this appeared to be an important step or gateway in the overall SDM process and raises the prospect that DM in SMEs may comprise two stages: an initial, then a final stage (see Figure 1).

However, we identified a major limitation in the development of this initial directional solution where some SME owners/managers concentrated on only one predetermined directional solution. In terms of feasibility assessment, this was based on how well the opportunity fitted with internal competencies and was only sometimes accompanied by a simple financial analysis. In other words, the decision process was very narrowly focused and aimed for acceptable outcomes. This has the potential to produce unsatisfactory decision outcomes especially since little attention is given to contingency planning.

As a summary, the activities described in this first stage are similar to what Sanz-Velasco reported as "opportunity development", where owners/managers developed the opportunities identified based on knowledge of customers, existing technology, revenue models (Sanz-Velasco, 2006), and personal network (Taylor and Thorpe, 2004).

The second stage

Information gathering

More information was gathered if SME owners/managers decided that it was desirable to proceed with the initial directional solution. All the owners/managers we interviewed had strong understandings of the resources and skills within their organisation; therefore, the major focus of gathering further information was on the external environment. However, no sophisticated technique, such as scenario planning, was mentioned by interviewees.

A total of 11 interviewees reported conducting a scan of the external environment. These scans were generally limited in scope, but relevant to the business; for example, changes in customer needs, technology, law and regulations, and competitor moves. One interviewee said:

> *"But to sell something in Europe you need to go through the EC (European certification) process. With a product like ours, it's not just the self-certification, it needs to be inspected and all the designs must be reviewed, and so it's very expensive."* (Firm 2)

Competitor and customer information was the most sought-after external information for SMEs. For example, the owner of a swimming pool manufacturer stated:

> *"The concrete pool market isn't that well serviced; it's serviced by the cottage industry. There was a market there that wasn't being particularly too well attended to. There was a market there where we saw growth; in that market we saw potential for us to increase our market share in the concrete [pool] division."* (Firm 4)

Two medium-sized businesses also collected political and economic data, particularly in the countries to which they exported their products, or where they had set up branches.

At this stage, internal factors under consideration hinged on the nature of the decision to be made. These factors often included the strengths and weaknesses of the company, particularly its technology, human, and financial resources. The responses from two interviewees illustrate this well:

> *"We had the infrastructure here and I have a huge pool of people in purchasing… we have all the support to back up a concrete [pool] division. We have the yard here as a concreting depot… and the internal structure and the competency of the people in here [to set up a new swimming pool division]*." (Firm 4)

> *"We looked at what our strengths and weaknesses were and we decided that we have a good reputation in our industry; we have a good understanding of what customers need, so we developed… we decided to embark on developing a short frequency product which is a VHF radio."* (Firm 6)

A poor understanding of the customers or buyers can be very costly, as the managing director of a safety protection device manufacturer said: *"[My understanding of buyer needs is] a little bit weak to be fair. What I've done is I'm defining a product without a buyer*". The firm was still running at a loss after four years in business.

Methods used for information gathering

Only interviewees from three medium-sized organisations mentioned they used a systematic approach to collecting information. The partner of a mining service business indicated that the firm collected information from public sources, conferences, and internal sources about political stability, risk, corruption, taxation, and human resources (e.g. graduates in mining engineering) in a foreign country when they were considering setting up a branch there. The owner of the swimming pool company said that they had employed a market research company to gather information about customers and competitors, and used industry survey data. Another interviewee reported that they collected market and competitor information from the internet, trade shows, feedback from customers, field visits, and participation in industry professional associations.

This indicates that as firm size increases, it is more likely that information collection becomes more comprehensive. Nevertheless, the knowledge of owners and managers was still heavily relied upon.

No sophisticated techniques were mentioned for analysing the data they collected; rather, simple reasoning prevailed. The expression of the owner of safety protection equipment illustrates this point:

> *"We knew that the presses were being sold in Australia and I could work out roughly who was doing what. I worked out that within Australia, there were about X to Y press brakes being sold in Australia… I could get machine dealers who bring these machines in, get in touch with their company and get an understanding of where those machines were being built. I could make a part picture and I could establish assumptions that I believed about Z press brakes sold worldwide. I could collect more and more information. I am still collecting information today to justify my [number of machines sold globally]. Today I'm about 85% sure. Back then I was about 30% sure. Generally as a country gets wealthier people buy luxury yachts and things. As a country gets wealthier the country generates better income and more attention is paid to safety as its workers get paid better incomes."* (Firm 2)

Developing alternatives

Searching for alternatives, such as joint ventures and strategic alliances, seemed very limited at the second stage. Three major approaches were used by the SMEs. First, they focused on one potential solution developed in the first stage, then gathered information and processed it to see if the initial solution was acceptable. The second

approach was to refine the initial solution; for example, from setting up a wholly-owned branch overseas versus considering a joint venture, based on the outcome of further information analysis. The third approach was to wait actively ("active waiting" in Sull's [2005] terms) if they believed they needed additional internal or external resources. For example, the mining service company only set up their overseas office after it was approached by a manager in the client's organisation, and the swimming pool manufacturer opened a division only after it fortuitously identified an experienced partner to run that division.

Financial analysis, evaluation, and approval

Financial analysis is often conducted informally by SME managers and owners with some interviewees focusing on costs and revenue only. For example, one interviewee described how his organisation conducted the financial analysis in developing a new product:

> *"Yes, in a macro sense [in predicting the revenue for the new product to be developed]. We don't look at the specifics. We look at the population of the host equipment, who owns it, what they will pay for a solution, what they will pay for reporting [for complying with the government regulation]. There is a target group at a very high level. Then that says if we achieve the hurdle we can spend this much to achieve it."* (Firm 1)

The marketing director of the telecommunication equipment manufacturer added:

> *"We do a costing and prepare a design specification and get a design team in to determine how long it will take. We look at that factor. We also look at our own financial position to determine at what point we can afford to do this. We also look at what government funding is available to it for bringing the product forward if we can get some assistance."* (Firm 6)

Similarly, the managing director of the ship panel manufacturer indicated that they budgeted for a joint venture in the USA by considering market size, the cost of setting up a plant, and a detailed break-even analysis. The description by the business development manager about how his company evaluated the financial viability of setting up a new production facility division vividly illustrates the simplicity of financial analysis in many SMEs: "*We know our capacity and how many units we can put out a day or a month and of course the costs of that*."

Developing a business model was also part of the analysis, as the partner of a mining services company describes:

> "*We discuss the cost and what makes it a success. We still do our evaluation and the numbers. As long as we can guarantee to satisfy ourselves, there is no reason why not to do that*." Firm 10

Financial and non-financial criteria were found in evaluating the decision alternatives. Financial criteria covered sales, profits, and/or return on investment. One medium-sized firm considered return on investment as a financial criterion:

> *"We put it into a financial model and see if it makes sense as a return on investment."* (Firm 6)

One point to be noted is that one of the three partners in the firm is the financial controller, which suggests that the background of the top management team dictates how sophisticated the financial evaluation is.

However, none of the interviewees mentioned the use of formal (e.g. feasibility study report) or sophisticated (e.g. cash flow, sensitivity analysis) methods in their alternative evaluation. When asked why more advanced methods were not used, the operation manager of the metal housing component manufacturer replied:

> *"In theory it would be great to do sensitivity and discounted cash flows and the like. But the reality is, if you want the work you have to be able to get on and make the decisions. So, although in theory a lot of those things are great, it's not a gut feel, it's a calculated risk I suppose. We're not a big company so we do have to take a discounted risk sometimes. BHP [a large multinational] can sit down, but [as] a small company we rely heavily on personal contacts with people that we've known a very long time and say "can we do business with you if our price is right?" They can say yes. We'll take their word for it and that is how we do it."* (Firm 13)

Again, lack of resources was cited as a contributing reason for not using sophisticated financial methods. However, close relationships with customers or partners and the comprehensive knowledge about their internal competencies can be used to mitigate the risks caused by a lack of detailed financial analysis and evaluation.

Non-financial criteria included deterring competitors, maintaining relationships with key clients, and defending market share. Examples are the ship panel manufacturer that set up the joint venture in the USA. Maintaining competitive advantage is another criterion used by SMEs, with this statement being a case in point:

> "*I knew the necessary features and requirements [for our products] at a price that was considerably cheaper than the next nearest competitor; especially in the military market*." (Firm 2)

The final approval for the decision depended mainly on the ownership of the firms. For partnership companies, it was the consensus of partners; for family businesses, it was the incumbent manager.

VI. CONCLUSIONS AND IMPLICATIONS

The aim of this paper was to explore how SMEs made strategic decisions and provide a better understanding of SDM processes in smaller firms. To this end, 13 Australian SMEs were studied and a general SDM model was constructed from our research findings.

Our aim was to ascertain what steps SME managers went through to make strategic decisions. This was the first question we addressed, and a two-stage SDM process was identified and described. This involved a preliminary stage that comprised three major steps: (1) decision initiation/identification; (2) initial screening through the use of existing information about the environment and internal capabilities; and (3) initial solution development. Once an initial directional solution was developed, SMEs then embarked on the second stage of decisional processing. This stage involved a further

four steps: (1) information gathering; (2) initial solution refinement; (3) financial analysis; and (4) commitment.

This finding is important in that it brings new knowledge to existing SME literature, which has long argued that SDM is qualitatively different in small and large organisations but which, at the same time, has provided few conceptual models of how strategic decisions may *actually* be different. In relation to the broader SDM literature, our two-stage model provides a contrast to prevailing models that (as discussed above) have generally been based on large organisations, and which paint the SDM as a one-stage phenomenon comprising sequentially discrete steps or phases that typically progress from problem to analysis to solution. In our two-stage model, decision processes essentially flow from problem to solution to analysis.

A second conclusion from our findings is that the quality of each activity in the SDM process depends heavily on the firm's resources and competencies of owners and managers (e.g. level of training, knowledge, and experience); that is, the 'structural attributes' of SMEs (Jones, Macpherson, Thorpe and Ghecham, 2007). Owners and managers in our study typically had close contact with customers and this provided them with a good understanding of customer organisations, operations and needs. Additionally, this contact and understanding helped owners and managers in decision-making, and was especially beneficial to those who were not particularly strong on formally analysing external environments.

The third conclusion concerns the fit between external opportunities and internal competencies being a common criterion for SME owners and managers when screening ideas. Such a fit could be an important contributor to the decision's effectiveness and ensuing organisational performance. In this respect, SME managers displayed – either consciously or by instinct – distinct managerial competence in making their strategic decisions. However, locking in too early to a very limited range of potential solutions, rather than actively searching for alternatives in the first stage (as well as planning for contingencies), appears to be a major limitation in the overall SDM process.

Fourth, ideas for SDM in SMEs appear to come mainly from owners and managers and, to a lesser extent, newly recruited managers from outside the organisation. Opportunities and needs in the external environment were the major stimuli for decision activities. In this respect, SDM is essentially passive and reactive.

The final conclusion is that the techniques used for information gathering and analysis, or "procedural rationality" (Dean and Sharfman, 1993), by SME managers are basic or simplistic. The experiences and educational qualifications of senior management, as well as firm size, largely influence this. Better qualified managers in relatively larger firms appear to be those most likely to engage in more comprehensive information collection, and utilise more advanced techniques for information processing.

In combination, the above also provides an insight into the types of strategies pursued by SMEs. In broad terms, these are arguably 'defender' (holding markets/customers) and 'analyser' (holding markets/customers plus exploiting opportunity) type strategies (Miles, Snow, Meyer and Coleman, 1978). As previously indicated, strategic action in our SMEs was often precipitated by the combination of an opportunity and threat; and

while few of these enterprises took a proactive approach in terms of innovating and seeking new opportunities (i.e. prospectors), neither were they typically 'reactors' per se. This observation is important as SMEs are sometimes painted as being strategically adrift and merely vehicles by which owners/managers pursue entrepreneurial ideals (e.g. see reviews by Robinson and Pearce (1984), Sandberg, Robinson and Pearce (2001)).

Some inherent limitations should be acknowledged in relation to our work. Our sample was limited in study location and numbers of firms included. Consequently, this restricted our ability to systematically explore the influence of factors such as firm size, life cycle/stage of growth, industry, geography, and other characteristics in our cross-case analyses. Our two-stage model, therefore, provides only an initial and general conceptualisation of SDM processes in SMEs, with possibilities for further replication, validation, and development. Another limitation is that we only focused on a single strategic decision. By nature, strategic decisions are unique (i.e. non-routine), complex (high ambiguity/uncertainty associated with solutions) and 'precedent setting' (Nutt and Wilson, 2010). As such, findings based on the study of a single decision could have limited generalizability to how other strategic decisions are made by SMEs.

Overall, our findings suggest a number of implications for SME owners, managers, and those involved in supporting SMEs (such as government policy-makers, academics and researchers in entrepreneurship/small business management, industry associations, and other support groups). For example, developing decision alternatives appears to be an attribute that is only weakly imbedded in the SDM processes of SMEs, particularly in the development of initial directional solutions. Although the importance of such a step to the overall quality of the decision-making has been strongly advocated by veteran academics (Nutt, 2004), our evidence suggests that this voice is not well heeded by SMEs. If we accept that good strategy is the result of a robust SDM process (Eisenhardt, 1999), and that this is important to a firm's performance, then this aspect of SME decision processing could be a point of remedy. Similarly, although our sampling frame was constructed from a list of nominees vying for prestigious State industry awards, our interviews showed that the catalyst for strategic decisions in this select group of firms was externally situated. Notwithstanding operational achievements, SDM tended to be passive, reactive, and this represents another opportunity for productive intervention.

To conclude, the objective of this study was to provide a better understanding of what occurs in SDM processes for SMEs by mapping the flow of decisional activities. It was not to highlight SME inadequacies. Following Jocumsen (2008), we hope that a "deeper knowledge" (p.670) of SDM will help target efforts to enhance SME success.

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