



The recognition of first time international entrepreneurial opportunities

Evidence from firms in knowledge-based industries

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Abstract

Purpose – This paper aims to complement existing theories of internationalization by studying an important aspect which has been neglected in previous studies: the process of international entrepreneurial opportunity recognition. International market entry is conceptualized as an entrepreneurial, innovative act; and opportunity recognition consists of both discovery as well as deliberate and systematic search.

Design/methodology/approach – The methodology employed involves eight case studies of small and medium-sized enterprises (SMEs) operating in knowledge-based industries in Australia. The unit of analysis is the “opportunity-firm” nexus.

Findings – The paper finds that firms with little or no prior international knowledge tend to make use of opportunity discovery rather than deliberate/systematic search. In contrast, firms with extensive prior international experience and knowledge were found to deliberately search and discover their first international opportunity. International opportunity discovery did not occur simply through serendipitous encounters with new information from networks or referrals but involved interpreting possible matches between pre-existing means (resources, skills, new technologies) and new ends (international markets) in a problem solving process. It favours those with the requisite prior knowledge and entrepreneurial orientation.

Practical implications – The paper offers guidelines on what business practitioners and export promotion agencies can and cannot do to influence opportunity recognition process. Particular attention was paid to strategies to avoid costly deliberate search among resource-stricken SMEs.

Originality/value – This study introduces Knightian uncertainty and Kirznerian discovery as the conceptual cornerstones of internationalization that can help account for the lack of incrementalism and optimizing logic in internationalization among smaller firms.

Keywords International business, Entrepreneurialism, Knowledge economy, Australia

Paper type Research paper



Introduction

There has been a proliferation of “little heroes” in international markets in recent times, going by various names including: Hot growth companies or gazelles

(*Business Week*, 2004a, p. 50), Hidden champions (*Business Week*, 2004b, p. 56), Born globals (Oviatt and McDougall, 2005; Knight and Cavusgil, 1996, Madsen and Servais, 1997), International SMEs (Knight, 2000), Virtual instant global entrepreneurs (Katz *et al.*, 2003), and Accidental exporters (Styles and Harcourt, 2001). The emergence and success of these types of firms need to be reconciled with our theories of firm internationalization but they present problems which have led researchers to propose alternative types of explanations (Rialp and Rialp, 2001; Coviello and McAuley, 1999; Styles and Seymour, 2006). An important issue related to these new types of explanations is the process of firm opportunity recognition in international markets. By this we mean the way people and firms discover opportunities to enter international markets for the first time, or to go into other international markets, and how and why they decide to exploit them. International opportunity recognition is the beginning of the internationalization process and deserves more systematic research attention than it has so far received because it is the trigger that starts everything off.

A review of the internationalization literature reveals that empirical studies in the area have given scant attention to the process of opportunity recognition. Studies of opportunity recognition have largely been the domain of entrepreneurship research in a domestic context (Shane, 2000; Arenius and de Clercq, 2005; Lumpkin and Lichtenstein, 2005). Existing theories of internationalization implicitly assume that internationalization is preceded by opportunity recognition but provide little explanation of this. These include the Uppsala model's process of knowledge and learning (Johanson and Vahlne, 1977, 1990), the network perspective's focus on information flow and resource links (Johanson and Mattsson, 1988, 1992; Axelsson and Johanson, 1992), and the eclectic paradigm's ownership (O), location (L), and internalization (I) advantages (Dunning, 1977, 1979, 1988, 1993) which all take for granted that a firm recognizes a foreign market opportunity. Johanson and Vahlne (1977, 1990) repeatedly used the word "opportunity" in their discussion of internationalization but did not provide an explanation as to why or how an opportunity is recognized. Some 25 years later they recognized this when they noted that, "the opportunity side of the internationalization process is not very well developed in our earlier papers" (Johanson and Vahlne, 2006, p. 167), and went on to emphasize the importance of opportunity in the Uppsala/process model. Despite this importance and growing calls for greater integration of entrepreneurship and internationalization literature (Jones and Coviello, 2005; Styles and Seymour, 2006; Matthews and Zander, 2007), there are very few empirical studies that focus on the process of international opportunity recognition. This gap has received greater interest in international marketing in recent years, as seen by the publication of a special issue in international entrepreneurship by *International Marketing Review* (Styles and Gray, 2006). It is argued here that a more in-depth understanding of the opportunity recognition process would help advance current theories of internationalization.

In this paper, we use theories of entrepreneurship to explain what happens before internationalization takes place. We define internationalization as "the recognition and exploitation of entrepreneurial opportunity that leads to new international market entry." More specifically, we seek to complement existing theories of internationalization by providing a more in-depth and systematic analysis of the process of first time international entrepreneurial opportunity recognition and the factors that influence it. First time opportunity recognition is an important "epoch"

that may influence the development of subsequent opportunity recognition. We describe opportunity recognition as a process that consists of both discovery as well as deliberate and systematic search. We begin by identifying the opportunity recognition gap in mainstream theories of internationalization and synthesizing insights from the fast developing entrepreneurship literature. Thus, we adopt a more holistic conceptual approach in the spirit of Bell *et al.* (2004), Jones and Coviello (2005) and Spence and Crick (2006). Next, we develop propositions about the factors influencing opportunity recognition. Then, we report the results of eight case studies of international opportunity recognition by small and medium-sized enterprises (SMEs) in knowledge-based (KB) industries and examine the extent to which we are able to account for the events taking place. Finally, we offer implications for theory and practice, assess the limitations of our research and suggest areas for further development.

Theories of internationalization

There are three separate but interconnected theoretical approaches to internationalization:

- (1) the Uppsala/process model;
- (2) the eclectic/economic paradigm; and
- (3) the network perspective.

The key components of these views are summarized in Table I.

The eclectic/economic and Uppsala/process models focus on the characteristics of a focal firm and its market-environment fit to explain the form and process of internationalization. The network perspective complements these models by focusing on the role and influence of other economic and non-economics actors and the way the direct and indirect social and business relations between a focal firm and these other actors shape its pattern and speed of internationalization.

The three models have different underlying assumptions about the key determinants of internationalization. The eclectic/economic paradigm rests on L/I advantages stemming from considerations of transaction cost theory, firm control, resource commitment, and the reduction of risk and opportunism. In contrast, The Uppsala/process and network models are based on the interplay of market knowledge and commitment on the one hand, and relationship formation and development on the other, as means of overcoming limited knowledge and attenuating opportunism. Moreover, internationalization is viewed in the Uppsala/process and eclectic/economic models as a rational and purposeful planning process in which firms seek to optimize outcomes and minimize risks given limited knowledge. This contrasts with the network perspective that views markets as networks and where internationalization is viewed as a more emergent and unplanned process stemming from the interactions taking place within networks of interconnected firms and other organizations involved in an industry and market. New international market opportunities and initiatives may arise anywhere in the network that can in turn lead others to recognize and exploit similar or linked opportunities that they might otherwise have remained blind to.

These three mainstream theories assume the importance of business opportunities in international markets; however, none of these perspectives directly addresses the process of opportunity recognition (Table I).

| | Uppsala model | Economic view | Network view |
|---|--|---|--|
| Main theme | A process of gradual international involvement, with an interplay between (1) the development of knowledge about foreign markets and operations and (2) increasing commitment of resources to foreign markets | The extent, form and pattern of international production are determined by the configuration of three advantages: ownership (O), location (L), internalization (I) (eclectic paradigm) | Internationalization is the exploitation of network advantage. A firm is initially engaged in a network, which is primarily domestic. Relationships of a firm can be used as "bridges" to other networks, including foreign networks |
| Key rationale | Firms trade off between growth and risk/uncertainty. The lack of complete information of overseas market poses risks, which are reduced by experiential knowledge | Access to perfect information right from the start of the internationalization Firms trade off between risk and return, control and resources Decisions are made on the basis of economic and rational calculation that gives the most optimal return for the firm | Industries are regarded as networks of business relationships. The network influences initial market entry and mode of entry. Businesses are tied to each other through different bonds: technical, cognitive, social, administrative, legal, and economic. Networks provide opportunities, knowledge, and experiences |
| Method of internationalization | Stages model: progression from no regular exporting, exporting via independent representatives, exporting via sales subsidiary, to overseas manufacturing Psychic distance model: start with low psychic distance markets and progress to greater psychic distance market | The more O advantage, the higher the propensity to internalize the O advantage and the more attractive a foreign country as a production location, hence the greater the propensity to internationalize L advantages determine the mode of foreign market entry, i.e. export or production | (1) The establishment of relationships in country networks that are new to the firm (international extension), (2) development of relationships in those networks (penetration), (3) connecting networks in different countries (international integration) A firm's position in the network defines its opportunities and restrictions for future growth |
| Perspective on SME internationalization | Most SME behavior has been described using this theory The most cited theory of internationalization | Focus on large multinational firms: limited application for SMEs as SMEs rarely progress towards FDI or international production | A multilateral approach to internationalization: a more recent view of internationalization of SMEs, especially high-tech firms |

(continued)

Table I.
A comparison of three mainstream theories of internationalization

| | Uppsala model | Economic view | Network view |
|-------------------------------------|--|--|---|
| Strengths | <p>Emphasis on the importance of the learning process in internationalization; learning is always a relevant concept</p> <p>The less relevance of psychic distance assumption</p> <p>More valid at early stages of internationalization, when market knowledge and market resources are still a constraint</p> <p>Too deterministic, limiting firms' strategic choice of appropriate entry modes</p> <p>Assume organic firm growth, hence ignore mergers and acquisitions, alliances, JV; and other mode of entry: (franchising, licensing, etc.)</p> <p>Cannot explain the reversal of stages nor one-off exporters</p> <p>Less relevant for service industries</p> | <p>High explanatory value for global firms; provides strong logic for internationalization</p> <p>Accused of being a theory with "shopping list" of variables</p> <p>Overlap and redundancy of some explanatory variables, particularly O and I advantages</p> <p>1 autological definitions, e.g. firms internalize because of I advantages and have I advantages because they internalize</p> <p>Only describes the motives for FDI without making any emphasis on the "time" dimension of the investing phenomena</p> <p>Static: does not explain the shift from one mode of entry to another nor other choice of entry mode except for FDI</p> <p>The interrelationship between choice of entry mode and international market selection is unclear</p> <p>Location is a source of entrepreneurial opportunities. Factor, market or technology seeking behavior is basically an entrepreneurial process. However, the model does not explain the very process of opportunity recognition</p> | <p>Focus on the dynamics and evolution of internationalization rather than just motives or patterns of internationalization</p> <p>Does not provide the rationale for the choice of foreign mode of entry among various alternatives</p> <p>Does not explain the internationalization patterns and processes of firms which do not possess connections/relations</p> <p>The assumption that firms are active in the establishment of new relationships and the development of old relationships does not always hold</p> <p>Skew towards small high-tech firms that use networks to go directly to more distant markets</p> |
| Weaknesses | | | |
| Link to entrepreneurial perspective | <p>Assumes the importance of identification of opportunities in each stage of international market involvement but does not explain the very process of opportunity recognition</p> | | <p>Assumes that networks and relationships are the source of opportunities in international markets but does not explain the very process of opportunity recognition</p> |

International opportunity recognition

Academic thought on entrepreneurship can be traced back to early economic literature that defined the entrepreneur as an arbitrageur (Cantillon, 1734). As the literature advanced, entrepreneurs began to be described in various ways as coordinators of production and distribution, modern leaders and managers (Say, 1971), as well as coordinators and arbitrageurs (Walras, 1954). The most influential theories of entrepreneurship stem from the work of three contrasting thinkers in economics:

- (1) Israel Kirzner;
- (2) Joseph Schumpeter; and
- (3) Frank Knight.

Table II summarizes their core ideas and contrasts the three different approaches that view entrepreneurship as:

- (1) a discovery process;
- (2) an innovation process; and
- (3) an uncertainty bearing process.

Kirzner (1973, 1979, 1997) views entrepreneurship as the enabler and discoverer of the market process, the means by which market equilibria are reached from states of

| | Kirznerian | Schumpeterian | Knightian |
|--|---|---|--|
| Main theme | Entrepreneurship as discovery process | Entrepreneurship as innovation process | Entrepreneurship as uncertainty bearing process |
| Key rationale | Knowledge is distributed in the society (Hayek, 1945) and possession of idiosyncratic knowledge allows people/firms to recognize opportunity by discovery Entrepreneurial alertness as a critical element in the discovery process (Kirzner, 1973, 1997) | The carrying out of new combinations creates the circular flow in the economy The pursuit of new combinations is influenced by the dream and will to found a private kingdom; the will to conquer; the joy of creation | The entrepreneurial task is rewarded with the residual income (profit), the reward for bearing uncertainty Risk is calculable but Uncertainty is not |
| Relevant concepts or research to this theory | Opportunity discovery-evaluation-exploitation (Shane and Venkataraman, 2000) Discovery of technological opportunities (Shane, 2000) | Creation of new means-ends framework/relationships (Eckhardt and Shane, 2003) Entrepreneurship as new entry (Lumpkin and Dess, 1996) | Market as creative process in the face of non-existent, hard-to-predict future (Buchanan and Vanberg, 1991) Preference of uncertainty/risk taking (Khilstrom and Laffont, 1979; Brockhaus and Horowitz, 1986) |

Table II.
A comparison of three influential theories of entrepreneurship

disequilibria through the profit opportunities recognized by entrepreneurs. In this view, markets are characterized as being in a state of constant disequilibrium due to imperfect and limited information and resulting inefficiencies (Hayek, 1945). Entrepreneurs see opportunities to make extra profit by exploiting market disequilibria and in so doing drive the economy towards equilibrium conditions in which there are no longer such opportunities. The exploitation of profit opportunities by entrepreneurs alerts others to the opportunities and draws in imitators until eventually competition reduces profit levels to normal levels and equilibrium is restored (Shane and Venkataraman, 2000). The significant contributions of Kirzner have been to focus attention on “alertness” in entrepreneurial discovery and on the role of learning and knowledge development and diffusion in market processes.

Schumpeter, views entrepreneurship in a different but complementary way as a dis-equilibrating process, a way of driving market change and innovation, or what may be called disruptive entrepreneurship. He identified five types of innovation as (Schumpeter, 1934):

- (1) introduction of new products;
- (2) introduction of new methods of production;
- (3) opening of new markets;
- (4) introduction of new materials or sources of supply; and
- (5) developing new organizational structures.

Innovators (entrepreneurs) enjoy “temporary monopoly power” (Baumol, 1993, p. 6) and, when imitators see above-normal gains can be made, they enter and erode the entrepreneurs’ profit and return the market to equilibrium.

Unlike the Kirznerian and Schumpeterian view, the Knightian view (Knight, 1921) treats entrepreneurship as an uncertainty bearing process. Knight differentiated between the notion of risk, which is calculable, and uncertainty, which is not. The entrepreneurial task is rewarded with the residual income (profit), which is the reward for bearing uncertainty. This perspective is related to the portrayal of a market as a creative process in the face of a non-existent, hard-to-predict future (Buchanan and Vanberg, 1991). The Kirznerian, Schumpeterian, and Knightian views describe three aspects of the same underlying process.

Defining entrepreneurial opportunity

A number of definitions of entrepreneurship have been suggested:

- the creation of new enterprises (Low and MacMillan, 1988);
- the study of why, how and what happens when entrepreneurs act (Stevenson and Jarillo, 1990);
- new entry, i.e. entering new or established markets with new or existing goods or services by launching a new venture (Lumpkin and Dess, 1996); and
- the study of the discovery, evaluation, and exploitation of opportunities (Shane and Venkataraman, 2000).

There has been a shift in research emphasis in recent times, away from a focus on the characteristics/traits of people (Begley and Boyd, 1987; Brockhaus and Horowitz, 1986;

McClelland, 1961; Gartner, 1988) who act in entrepreneurial ways and an economic rationalist approach, that assumes perfect information, rational expectations and optimization as the determinants of entrepreneurship (Khilstrom and Laffont, 1979), to a behavioral and process approach, which focuses on understanding how opportunities are discovered and acted upon by people and firms (Eckhardt and Shane, 2003; Shane, 2000; Shane and Venkataraman, 2000). Here, we take a process approach.

Despite there being no agreed definition of entrepreneurship (Gartner, 1990; Ucbasaran *et al.*, 2001), a common theme has emerged around the concept of opportunity as a central element in the process (Eckhardt and Shane, 2003; Shane and Venkataraman, 2000). Opportunities are recognized by entrepreneurs in various ways that are not yet well understood and are acted on, or exploited by the entrepreneur or by others to whom the opportunity is sold or transferred.

Opportunities are different ways to innovate to make profits or improve the state of affairs of a person or firm and they may be summarized in terms of the five types identified by Schumpeter described above. Opportunities vary in terms of the significance of the potential innovation involved. Radical innovations are those requiring fundamental change in the configuration of a product or service (Roy *et al.*, 2004), which involve new types of means-ends frameworks or relationships (Kirzner, 1997). These we refer to as entrepreneurial opportunities, which are defined by Eckhardt and Shane's (2003, p. 336) as: "situations in which new goods, services, raw materials, markets and organizing methods can be introduced through the formation of new means, ends or means-ends relationships." Other types of opportunities are characterized by more incremental innovation, involving modifications to or the fine tuning of existing means-ends frameworks, existing products and services, to serve similar types of market requirements. For example, revising price or advertising strategy, purchasing a large supply of raw materials from domestic or foreign markets that suddenly becomes available at low price, or outsourcing a production capability to reduce costs, are examples of non entrepreneurial opportunities (Lumpkin and Dess, 1996). Also, buying a lottery ticket or speculating in stock markets do not fall within the definition of entrepreneurial opportunity because they do not lead to new means-ends relations. But the opportunities to form a new venture (Gartner, 1990; Low and MacMillan, 1988), to create a new product/brand, or to enter new international markets (Davidsson, 2004) are entrepreneurial.

Two schools of thought may be distinguished in terms of the way opportunities are found – search vs discovery. One school believes that opportunities are identified through a purposeful, rational, and systematic search process (Drucker, 1998; Herron and Sapienza, 1992), similar to a formal strategic planning process. A search for opportunities may be in response to a particular problem, such as when a firm is facing declining sales, market share, profit, or tough competition. This type of search for opportunities requires the searcher to know what they are searching for, what they do not know. The search is undertaken for a piece of missing information that the searcher is aware of (Kirzner, 1997).

The other school believes that opportunities are unknown until discovered and that one cannot deliberately search for something that one does not know exists (Kirzner, 1997; Kaish and Gilad, 1991). Hence, there is an element of surprise that follows each discovery. This school emphasizes the existence of conditions conducive to opportunity discovery, which include the possession of relevant skills,

prior knowledge, and alertness as well as networks of contacts and relations facilitating the discovery process (Kirzner, 1973, 1979, 1997). Prior knowledge is thought to play a crucial role as existing knowledge provides the basis for understanding, accepting and combining new knowledge, and creates “knowledge corridors” that allows recognition of some opportunities but not others (Venkataraman, 1997). Active search can be relevant too. This is not because we know what we are looking for but because the act of searching makes people and firms likely to find other things that were not known in the first place, including new types of opportunities.

Cognitive attributes are relevant as opportunity recognition is an active cognitive process of combining and recombining knowledge and ideas in new ways, the ability to visualize new means-ends relationships using existing concepts and information (Shane and Venkataraman, 2000). Lastly the motivation of the person or firm is relevant as this galvanizes the whole process, whether this be for profit or the pleasure of discovery itself.

Opportunity discovery should be distinguished from pure luck, although from the point of view of the participants in the process it may appear to be luck. It is not pure luck in the sense that various conditions influence who can and cannot discover different types of opportunities and the kinds of opportunities that are potentially discoverable. As in science ideas and knowledge may lay dormant for many years waiting the right conditions (including other relevant ideas) for their further development and use. Pure chance or luck is “where the finder has done nothing to generate the outcome ... unrelated to his efforts, actions, thoughts and purposes” (Kirzner, 1997, p. 121). The cases of accidental exporters (Styles and Harcourt, 2001) and “unplanned” internationalization (Crick and Spence, 2005; McAuley, 1999; Bell, 1995), are examples of what may at first seem to be luck. But they are not, they are examples of the role played by social networks combined with firm competencies and motivations that drive the discovery of international market opportunities. As Kirzner (1997, p. 72) describes the process “without knowing what to look for, without deploying any deliberate search technique, the entrepreneur is at all times scanning the horizon, as it were ready to make discoveries.”

Several propositions maybe advanced concerning each of the three main drivers of the opportunity recognition process identified in the literature, i.e.:

- (1) prior knowledge;
- (2) international network structure; and
- (3) a firm’s entrepreneurial orientation (EO).

Prior knowledge. People are able to recognize opportunities because they have relevant prior knowledge that makes this possible, while others do not (Venkataraman, 1997; Shane and Venkataraman, 2000). According to Venkataraman (1997), each person’s idiosyncratic prior knowledge creates a knowledge corridor that allows opportunities to be recognized or not. In a study of technological innovations at Massachusetts Institute of Technology, Shane (2000) showed that differences in prior knowledge (i.e. of markets, ways to serve markets and customer problems) influenced who discovered entrepreneurial opportunities and that different entrepreneurs see different opportunities. This finding is supported by the work of Arenius and de Clercq (2005) on the role of human capital in opportunity recognition. Other scholars have

suggested that profound market or technical knowledge is a prerequisite for new venture ideas (Christensen and Peterson, 1990).

Prior knowledge consists of objective and experiential knowledge:

[O]bjective knowledge is acquired through standardized methods of collecting and transmitting information, i.e. market research, etc.; experiential knowledge is country-specific and cannot be transferred between firms or business units (Eriksson *et al.*, 1997, p. 340).

Eriksson and colleagues (1997) distinguish three types of experiential knowledge in an international business context: experiential knowledge of clients, the market, and competitors (foreign business knowledge), experiential knowledge of government, institutional frameworks, rules, norms, and values (foreign institutional knowledge), experiential knowledge of the firm's capability and resources to engage in international operations (internationalization knowledge). Internationalization knowledge would seem more important in explaining subsequent internationalization processes rather than initial international market entry, but the prior internationalization experience of people in a firm due to their working in other firms, is relevant.

Foreign institutional and business knowledge can be acquired through foreign language proficiency, overseas travel, living and work experience, education abroad, and prior employment/business experience abroad. This produces what may be described as a person's international orientation (Dichtl *et al.*, 1990). International orientation and experience are forms of tacit, experiential knowledge of the type the Uppsala model focuses attention on, that reduce the perceived risk and uncertainty associated with entering foreign markets.

Prior knowledge influences the way entrepreneurs comprehend, extrapolate, interpret, and apply new information in ways that those lacking it cannot duplicate (Roberts, 1991). It helps entrepreneurs appreciate the value of new information. It influences individuals' willingness and ability to make new connections among pre-existing ideas as well as with new ideas, hence allowing them to recognize opportunities. On the one hand, the more prior international experience and knowledge a firm has, the more likely a firm is to deliberately search for international opportunities because the firm knows what it is searching for, and what it does not know. Moreover, the more prior international experience and knowledge a firm has, the greater its chance of identifying unanticipated new means-ends relationships leading to an international opportunity. As prior international experience and knowledge grows over time, a firm's known unknowns expand and this permits more deliberate and systematic search for international opportunities.

This leads to our *PI*:

PI. The greater the prior international experience and knowledge of members of a firm, the more likely the firm is to deliberately search and discover first time entrepreneurial opportunities in international markets.

International network structure. Entrepreneurship is both an economic and social activity and social contacts often drive entrepreneurial activity (Ambler and Styles, 2000). Society and business is characterized by information heterogeneity due to the specialization of people and firms in different types of activities, industries, and locales (Hayek, 1945; North, 2005). Social and business networks extend the eyes and ears of

a person or firm, providing a means of access to new and different types of information and ideas than would otherwise be encountered (Wilkinson and Young, 2005). They are also a means of accessing and co-producing resources required to further develop and exploit entrepreneurial opportunities and a means of spreading and managing the risks and uncertainties involved (Wilkinson and Young, 2005).

The important role played by networks and social ties is well established in entrepreneurship research (Elfring and Hulsink, 2003; Christensen and Peterson, 1990; Aldrich and Zimmer, 1986). Research shows that:

- they are sources of information or ideas that trigger entrepreneurial opportunity recognition;
- they reduce firms' perceived risks of entering a new market through more trusted information sources; and
- they are a gateway to resources.

Thus, it is not surprising that entrepreneurs' social networks are often considered the most significant resource of the firm (Johanson and Mattsson, 1988). The role of networks in foreign market selection and entry indicates that international entrepreneurial opportunity development is a discovery process rather than solely determined by strategic decisions, rational processes, or systematic information gathering (Styles and Ambler, 1994; Coviello and Munro, 1995).

An individual's or firms' social and business network comprises both strong and weak ties. According to Granovetter (1973, p. 1361), "strength of a tie depends on the combination of the amount of time, emotional intensity, intimacy and the reciprocal services." Ties between diverse sets of people with infrequent, irregular, loose, and non-affective contacts (Elfring and Hulsink, 2003), such as friends, friends of friends, casual business contacts, scientific community contacts, and association memberships, are examples of weak ties. According to Granovetter (1973) weak ties are more likely to be a source of new types of information. Most people have more weak than strong ties and weak ties can act as bridges linking networks with different types of information and ideas. Burt (1992), further developed Granovetter's theory by pointing out that it is not the strength of the tie that matters so much as whether they link different networks that are otherwise not connected, or in his terms bridging "structural holes."

The role of weak ties as sources of international entrepreneurial opportunity recognition has some empirical support. The many studies that have been done over the years on why firms go into international markets have shown that unsolicited orders are an important trigger (Simmonds and Smith, 1968; Barrett and Wilkinson, 1985; Ellis and Pecotich, 2001; Crick and Spence, 2005). For example, Styles and Ambler (1997) found that among 434 Australian and British exporters, 22 percent of exporters made contact with their overseas distributors through friends or other acquaintances, while 21 percent knew the overseas distributor from a previous job or business. These accidental exporters were discoverers of, not searchers for, international entrepreneurial opportunities (Styles and Harcourt, 2001). Similarly, Ellis and Pecotich (2001) show that weak ties, as the result of the cosmopolitanism of decision makers, provide necessary information for the discovery of international entrepreneurial opportunities and export initiation. Hills *et al.* (1997), in a study of solo entrepreneurs vs network entrepreneurs, found that network entrepreneurs discovered significantly more opportunities. Lastly, Singh *et al.* (1999) found that the size of

a social network is significantly and positively related to the number of new venture ideas identified and the number of new venture opportunities recognized/discovered.

Weak ties are more likely to link a firm to diverse sources of information leading to the identification of international opportunities without deliberate search. Through such ties information dispersed throughout international networks gets combined and recombined in new ways that can trigger first time international opportunities. As a firm becomes more involved in international markets the number of weak ties grows leading to new and unanticipated discoveries of international market opportunities.

The above argument leads to our *P2*:

P2. The greater the number of international weak ties a firm has, the more likely the firm is to discover first time entrepreneurial opportunities in international markets.

Entrepreneurial orientation. Lumpkin and Dess (1996, 2001) and Knight (1997) identified five dimensions of EO:

- (1) autonomy;
- (2) innovativeness;
- (3) risk taking;
- (4) proactiveness; and
- (5) competitive aggressiveness.

Kreiser and colleagues (2002) show how the five dimensions are linked to different aspects of a firm's activity and performance and we argue here that they affect opportunity recognition in various ways. We propose that three of the five dimensions of EO, innovativeness, autonomy, and proactiveness, drive opportunity recognition in international markets. Innovativeness is a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes. It is a critical factor, and in some ways it is an aspect of entrepreneurship rather than an antecedent, that enables a firm to visualize, think, and extrapolate new means-ends relationships in international markets. Autonomy is the independence and freedom in bringing forth an idea or vision and carrying it through to completion. It is the precondition for creative decision making required to see new means-ends frameworks in international markets. Proactiveness is a forward-looking perspective that accompanies innovative or new venturing activity and enables a firm to think and see new means-ends frameworks ahead of others.

The other two dimensions of EO affect the willingness and ability of people and firms to exploit (rather than recognize) new opportunities. Risk taking is the proclivity to engage in risky business activity and the preference for bold vs cautious acts to achieve a firm's objectives. It is a prerequisite for entry into unfamiliar foreign markets with untried and untested new approaches, where resources are at risk and expected returns are uncertain. Competitive aggressiveness is the firm's propensity to directly and intensely challenge its competitors to achieve entry, to improve its market position, or to outperform rivals in the marketplace. It drives the firm to enter new foreign markets.

Therefore, a greater tendency to welcome and support new ideas and forward looking perspectives will increase a firm's chance of identifying new means-ends relationships leading to international market opportunities, without deliberate search. As a firm's EO grows over time as a result of successful internationalization, the firm is more likely to deliberately and systematically search for international opportunities in line with the Uppsala and eclectic paradigms.

The above arguments lead to our *P3*:

- P3.* The greater a firm's entrepreneurial orientation, in terms of innovativeness, autonomy, and proactiveness, the more likely the firm is to discover first time entrepreneurial opportunities in international markets.

Method

A case study approach was used to examine the processes of international opportunity recognition in a sample of SMEs operating in KB industries in Australia. The focus was on the first international opportunity exploited in the history of a firm. The unit of analysis is the "opportunity-firm" nexus. KB industries are defined by the Organization for Economic Co-operation and Development as "those industries which are relatively intensive in their inputs of technology and human capital" (Austrade, 2002). They consist of four sectors, i.e.:

- (1) emerging industries (IT, and health, biotechnology and science);
- (2) high-tech manufacturing;
- (3) medium-high-tech manufacturing; and
- (4) KB services.

We focus on these types of firms because they tend to have a relatively higher rate of internationalization than others (Austrade, 2002). It also allows us to control for industry effects to some extent.

Purposive rather than statistical, probabilistic sampling was used in this study (Pauwels and Matthyssen, 2004; Yin, 2003). Specifically, our aim was to achieve:

- literal replication, whereby similar results across cases are observed for predictable reasons (e.g. the same pattern of first international opportunity recognition);
- theoretical replication, whereby contrary results are observed but for predictable reasons (e.g. differences emerge between firms that discover vs search for opportunities due to the extent of prior knowledge); and
- analytical generalization, whereby the researcher is able to generalize a particular set of results to a broader theory.

Case studies were conducted of eight SMEs operating in biotechnology, telecommunication, IT, and electronics industries in New South Wales, Australia. We defined SMEs as those with less than 200 employees (Australian Bureau of Statistics, 1998; Austrade, 2002). Dun & Bradstreet, The *Australian Biotechnology Directory* (n.d.), and a list of Australia's 2004 CeBit Exhibition exhibitors were used to identify potential firms and respondents. We only selected Australian owned firms that were not part of international firms or other international organizations.

Personal interviews were conducted with a key informant from each firm, except for one case (Case 2) where two key informants participated in the interview. The informants were the founders, owners, Chief Executive Officers, Managing Directors or directors involved in the decision making process for the first international market opportunity. To minimize respondents' memory recall problems we restricted the cases to firms whose first international opportunity was still relatively new. The interview covered issues such as the founding of the firm, the process of international opportunity recognition, firm characteristics, as well as key success factors and obstacles in international markets. All interviews were recorded and transcribed prior to analysis and clarifications and additional information were sought from respondents about any ambiguities as required. The data collection took place between January and June 2004. A description of the cases is provided in Table III.

Within-case and cross-case analyses were used to identify patterns relating to the international opportunity recognition process. The researchers worked as a team in analysing the cases and attempted to achieve consensus in the interpretation. For the most part the focus of the analysis is not interpretive in the sense that we did not seek to understand the way the respondents interpreted events and outcomes, so much as develop a history of the the key sequences of events leading up to the firms first international venture. The method of analysis may be characterized as a form of narrative event sequence analysis (Buttriss and Wilkinson, 2006; Van de Ven and Poole, 2005). Respondents were provided with case summaries and asked to clarify any ambiguous elements.

Results

Prior knowledge and networks (P1 and P2)

The results of our findings are summarized in Table IV. *P1* and *P2* concern the nature of the opportunity recognition process and are discussed together because they are interrelated in the opportunity recognition process. The results show that the first international market entry among firms with little or no prior international experience and knowledge was nearly always preceded by some kind of process of discovery rather than deliberate search (Cases 1, 2, 4, 5, and 8 in Table IV). In contrast, those with extensive prior international knowledge did deliberately search for their first opportunity (Cases 3 and 7). Prior technical knowledge emerged as a critical factor that complemented prior international knowledge or the lack thereof in the opportunity recognition process. Cross-case comparisons suggest that opportunity discovery did not occur simply by encountering new information or referral. Rather, this was followed by a process of interpreting possible matches between pre-existing means and new ends and problem solving. The characteristics of KB industries as revealed by the cases is that entrepreneurs had to solve customer specific problems, not simply transfer solutions from one customer to another in an arbitrage manner. Hence, entrepreneurs only recognized opportunities within their domains of their expertise.

The difference between those that discovered vs deliberately searched for opportunities lies in the timing of interpreting and problem solving. In the former, the interpreting and problem solving process occurred only after new information from foreign markets was received/encountered, while in the latter this process had occurred earlier. Unlike firms which deliberately searched for opportunities, those who

Table III.
Summary of cases
in the study

| Firm | Year est. year int'l* | Industry/business | No. of employees | Ownership status | Internationalization |
|--------|--------------------------|--|---------------------|----------------------------------|---|
| Case 1 | 1997 | Telecommunication (remote monitoring systems) | 8 | Private, wholly-owned company | Internationalized, but low intensity |
| Case 2 | 1998* 1992 1995* | Telecommunications (antenna) | 150 | Private, wholly-owned company | Highly internationalized |
| Case 3 | 2000 — | IT consulting and mobile computing (Location based services) | 6 | Private, wholly-owned company | Domestic |
| Case 4 | 1997 2000* | IT consulting (Logistic solutions using SAP) | 180 | Private, wholly-owned company | Internationalized, but low intensity |
| Case 5 | 1999 2000* | Biotechnology (genome sequencing liquid and software) | 10 | Private, wholly-owned company | Highly internationalized |
| Case 6 | 2003 | Biotechnology (air monitoring systems) | 3 | Private, wholly-owned company | Domestic |
| Case 7 | 2000 2000* | E-commerce (global trading and payment services) | 4 | Private, wholly-owned company | Internationalized |
| Case 8 | 1980 1996* | Electronics (nursing call systems) | 23 | Private, wholly-owned company | Internationalized, but low intensity |

| Firm and founding | Presence of prior knowledge of int'l market prior to first entry | Presence of prior technical knowledge | Presence of international weak ties | Entrepreneurial orientation | Mode of recognition of the first international opportunity | Country of and time to first int'l opportunity |
|-------------------|--|--|--|--|--|--|
| Case 1 | None. But have tacit experience from the domestic market | Expertise in electronics and computing | Member of Nokia and Ericsson networks | Innovativeness, proactiveness, autonomy (high); risk taking (high and low); aggressiveness (low) | Discovery. When presenting a client's story in a Nokia conference in Germany they were approached by an Irish power company | Ireland (1 year) |
| Case 2 | None. But the three founders have domestic business experience | World class expertise in military antenna and radar technology | Not directly, but is well known in the telco forum in the region as a supplier to Telstra, Optus, etc. | Innovativeness, proactiveness, autonomy (high); risk taking (medium); aggressiveness (low) | Discovery. Was found by a Singapore-based Telco vendor for a project in SingTel. The vendor has strong international operations and presence and was not satisfied with their current supplier | Singapore (3 years) |
| Case 3 | One shareholder has extensive international experience with IBM; two founders have experience in India and Indonesia | Expertise in IT and wireless technology | An Australian with extensive int'l experience in high tech venture capital in Europe and the USA | Innovativeness, proactiveness, autonomy (high); risk taking (medium); aggressiveness (low) | The firm knew the market in Europe very well particularly the UK so they Deliberately search in UK market by hiring the Australian consultant | UK (not exploited yet; under negotiation) |
| Case 4 | None. But the founder has extensive experience in SAP in Australia | World class expertise in SAP; the founder has a PhD in Applied Mathematics | Member of SAP networks | Innovativeness, proactiveness, autonomy (high); risk taking (medium); aggressiveness (low) | Discovery. Was approached by SAP Hong Kong to fulfill a job that they could not handle in Hong Kong | Hong Kong (3 years) |

(continued)

Table IV.
The process of opportunity recognition in international markets

| Firm and founding | Presence of prior knowledge of int'l market prior to first entry | Presence of prior technical knowledge | Presence of international weak ties | Entrepreneurial orientation | Mode of recognition of the first international opportunity | Country of and time to first int'l opportunity |
|-------------------|--|---|--|--|---|--|
| Case 5 | None. Two scientists with zero commercial experience | Expertise in genomics and molecular biology (a PhD and post-doc in biotech) | A post-doctoral mentor in Japan who knew of the president of a large biotech firm in Japan | Innovativeness, proactiveness, autonomy (high); risk taking (medium); aggressiveness (low) | Discovery. The alertness leading to discovery heightened as the firm faced a financial difficulty after early failure to secure financing | Japan (1 year) |
| Case 6 | Strong. Previous international consulting but the client faced serious failures in the US market. Key employees (CFO, strategist, tech teams) have extensive int'l work experience | Expertise in small-sensing technology (four professors in science/engineering and psychology) | The main founder and key employees have strong personal networks overseas | Innovativeness, proactiveness, autonomy (high); risk taking (low); aggressiveness (low) | No international opportunities recognized | None |
| Case 7 | The founder has extensive int'l business experience in banking and finance in India, USA, Asia, Australia | Expertise in the interface of IT and cross-border transaction | Strong networks in India, USA, Australia | Innovativeness, proactiveness, autonomy (high); risk taking (high); aggressiveness (low) | Deliberate search for international opportunities with E-Bay. But the search for B2B service led to discovery of C2C services to facilitate online credit card payment) | Virtual market in E-Bay (1 year) |
| Case 8 | None. But has developed tacit experience in the domestic market | Expertise in electronics | Relations with an Australian architectural firm with multinational presence in Asia | Innovativeness, proactiveness, autonomy (high); risk taking (medium); aggressiveness (low) | Discovery. Was approached by a large public hospital in Indonesia who was referred by the architectural firm's office in Indonesia | Indonesia (16 years) |

discovered their first opportunity had no prior thoughts or plans about the location, mode of entry, or timing of such opportunity. Nor did they consider entering foreign markets that were psychologically close or optimizing market choices in any way.

All firms, except the online payment company (Case 7), relied on their networks as sources of ideas, information, and new knowledge, leading to opportunity recognition in international markets. But a simple association between the number of weak ties and opportunity recognition, as is sometimes implied in literature, was not apparent. Nor was there a clear relationship between the mode of opportunity recognition (i.e. discovery vs search) and the type or number of network ties. What appeared to matter was not the number of ties but particular ones that linked the right people and firms at the right time. And this can only be known after the fact it seems. But networks played a key role in shaping who does know what and who can know what and hence shapes opportunity discovery. In general, the results suggest that Uppsala's incrementalism and the eclectic paradigm's L and I logic did not well explain the first time opportunity recognition process but that the O advantages and network advantages were relevant.

For example, in Case 1, the founder of a mobile computing company discovered his first international entrepreneurial opportunity to supply an innovative remote meter-reading solution to an Irish electricity company during a Nokia conference in Germany. This opportunity was not discovered purely by chance or luck but through a combination factors, including a presentation to an international conference in Germany held by Nokia, a partnership with Nokia and Ericsson, prior technical knowledge in mobile computing, possessing and pioneering a unique technology in remote monitoring systems, strong R&D skills, and being easily found by search engines such as Google. The opportunity found them as much as they found it. Being found by the Irish company did not automatically lead to opportunity discovery but involved an interpretation process and discussions to solve specific technical problems in remote monitoring technology within a new context, which resulted in "surprise" following the discovery:

We were invited by Nokia in Frankfurt to give a talk of what we were doing for an Australian utility company and at the conference there's a gentleman from an Irish electricity company who came and talked to me about it [...] We quickly realized that after some modifications the technology could be used to solve their (Irish power company's) problems and that it was not limited to read only electricity meters, it can read anything from air conditioning systems, building management systems, security alarms or anything that needs controlling, reading or interrogating [...] that's the beauty of our solutions.

When we started we did not think of being an export company.

Deliberate search? [...] not really [...] it tends to come to us [...] we don't actually go out there and advertise in overseas magazines [...] or travel overseas to sell our products [...] so we do it in indirect way [...] it come from our web site, in working relationship with Nokia and Ericsson, attending international conferences and network with people.

Other firms reported similar stories of opportunity discovery (Cases 2, 4, 5, and 8). These firms had no prior international knowledge but had extensive technical knowledge in the areas of antenna technologies, enterprise-resource planning, biotechnology, and electronics, respectively. So when they were approached by a telecommunication vendor from Singapore (Case 2), global SAP partner in Hong Kong (Case 4), and a potential client from Jakarta through contacts with an Australian

architectural firm partner (Case 8), they were able to internalize the new information and saw potential solutions to the customers' specific requirements. The founder of the firm in Case 5 was desperate after consecutive failures in the early stages of firm formation and this heightened his alertness to new opportunities in Japan through his weak ties. As evident in the cases, the discovery process involved thinking and solving various logistical and engineering problems in customizing antenna for the Singaporean environment (Case 2), in solving specific client-software problems that SAP Hong Kong could not handle (Case 4), in solving the specific requirement of the hospital in Indonesia (Case 8) and in solving the problems of fitting a novel genome sequencing system within the clients' existing laboratories (Case 5). Without prior international knowledge, the entrepreneurs did not know where and what to search for – a discovery mode was dominant. The entrepreneurs did not make prior plans on the location, mode of entry and timing of internationalization and therefore psychic distance and optimizing logic had little relevance.

The cases indicate that the incidence of deliberate search for an international opportunity occurs when there is extensive prior international experience and knowledge (Cases 3 and 7). In these cases, the interpreting and problem solving processes had occurred previously, as a result of the prior international business experience and knowledge of the people involved. This allowed firms to redirect pre-existing products and services to fulfill specific needs without waiting for a new piece of information to trigger the process. This allowed the firms to enter psychologically close countries and/or optimize their choices of foreign markets, which are examples of incremental innovations rather than truly entrepreneurial acts. For example, the management team in the mobile computing company (Case 3), had extensive prior international experience and knowledge. Specifically, one of the founders had experience with IBM in a number of countries, including those in Europe, while the other two managers were IT professionals with extensive experience in India and Indonesia. Their understanding of the relatively mature and well established infrastructure of the mobile/wireless market in Europe, especially in UK, led to their deliberate search for opportunities in UK. This process was assisted by the hiring of an experienced Australian consultant who had extensive high tech venture capital experience in Europe and the USA. The founder explained:

Instead of spending so much effort and money in educating the market, we think let's try and see if we can operate in a more mature market [...] that's where we identify UK as the very first in the rank [...] we know that telco in Europe have deployed mobile location services on the telecommunication network [...] so they can find a location based on the triangulation of signals from three different cell sites.

It started off with us hiring a consultant here to carry out our marketing activities [...] but when I hired the person I knew I was looking for somebody [...] with strong connections with people at the senior level [...] we identified this person who has been very successful in the US and Ireland for 11 years in taking small tech firms to market [...] he's an Australian guy but lived in the US for 11 years and Ireland in 4 years [...] and he's now back in Australia [...] I have been looking for this kind of guy [...] because we knew we are small.

In another example, the founder of an online payment company (Case 7) had extensive international experience in the banking and finance sectors in India, the USA, Asia, and Australia. His in-depth knowledge of cross-border transactions allowed the firm to deliberately search for opportunities with E-Bay. The search for a business-to-business

service opportunity eventually led to the discovery of a customer-to-customer service opportunity based on facilitating E-Bay's customers' online credit card payments. Thus, knowing what and where to search, the firm deliberately searched for international opportunities at the outset, discovering specific opportunities in the process.

The founder of the firm in Case 6 had extensive prior international and technical knowledge but was not able to find international opportunities it seems due to over cautiousness. This is further discussed below.

Surprisingly, factors that the literature has traditionally suggested as important sources of knowledge about international markets (i.e. foreign education, proficiency in foreign languages, and foreign residency) did not lead to opportunity recognition in the specific countries where the founders and members of the firm had prior histories. However, these factors had a more general influence on the level of international entrepreneurial alertness, willingness and ability to search internationally, and willingness to accept the uncertainty associated with the first international opportunity.

The results provide support and added new insights regarding *P1*. More specifically, the absence of prior international experience and knowledge was associated with the discovery of first time international opportunities and deliberate search occurred for those that had prior international knowledge. Prior technical knowledge played a much greater role than expected. The evidence partially supported *P2* and generated new insights into the importance of the quality rather than quantity of weak ties in the first time opportunity recognition process. Burt's concept of structural hole is relevant in that weak ties that provide access to new types of strategically important information play an important role.

Entrepreneurial orientation (P3)

In all cases there was evidence of high-levels of innovativeness, proactiveness and autonomy providing support for *P3*. Innovativeness and proactiveness were reflected in the ability to be a pioneer in world-class technology. But firms also knew their limits and the consequences of being innovative and proactive, as the following quotes make plain:

R&D is very important to us [...] although this company is young but it has the world's first technology [...] it won 12 awards [...] there's a reluctance to change [...] but from technological and manufacturing point of view we do think out of the box (Case 2, telecommunication/antenna entrepreneur).

We survive by being a leader in R&D and offering new product to the marketplace [...] we are seen in the market as the leader, with advance and cutting edge technology for aged-care equipment [...] we are interested in trying new things, but in a limited way [...] we are approaching things in a fairly focused way but we are also willing to step off that tangent to try and see what else is available [...] but we haven't done any radical departures though (Case 8, electronics entrepreneur).

Autonomy was reflected in the ways the firms are organized, which were organic and less hierarchical:

We allow freedom in discussing, researching, trying out new ideas [...] if there are new ideas [...] let's analyze the ideas [...] but we pursue ideas where the distance between concept to reality is achievable and we can do it (Case 3, mobile computing entrepreneur).

The company is non-tiered structure [...] there is no hierarchy in this company, anyone can talk to me and make suggestions (Case 8, electronics entrepreneur).

Our findings also highlight opposing views in the literature relating to risk taking. Firms in our sample that recognized international opportunities ranged from those that can be described as prudent and calculating risk takers (Cases 2, 3, 4, 5, and 8), to those that can be described as relatively high risk takers (Case 7). One case showed extreme risk aversion (Case 6) and this was associated with an inability to recognize and countenance international opportunities. Prudent vs high risk taking did not differentiate those who recognized more valuable opportunities. Further, a mix of risk taking orientations is evident in many cases, with high risks being tolerated in certain domains or projects and low risks in others. Case 1 is an example:

In day-to-day business, we play it safe because we know we have good, solid products [...] We are conservative in a lot of respect [...] in terms of technology, we only build if there's customer demand for it [...] that's what we call prudent management [...] however there's a different risk, for example the fire alarm project where we have to invest new office, hire four to five extra people [...] a lot of our focus will be given for this customer alone [...] it's a large and important project [...] it's something that can't get wrong [...] even though it's risky but we decided to proceed because we know the technology we have is good enough to do this basically (Case 1, mobile computing entrepreneur).

The online payment company in Case 7 showed a relatively high propensity for risk taking, as evident in its efforts to create a new market for online trading and payment:

That's part of our business [...] we are always looking for things and try things that haven't worked [...] www.myexport.com.au is an example [...] it is high risk, nobody would bet a dollar on this [...] I have personally invested two years of my time in this project [...] we invested our money, with the opportunity cost we could have done other things [...] the whole thing is complete risk because there is nothing like it [...] so nobody can be sure if SMEs would take it up [...] we do try and do things which are new and risky but not all are successful (Case 7, online payment company).

The founder of the biotechnology firm in Case 6 witnessed its consulting client failing and nearly went into bankruptcy in the US market. This led to his extreme cautiousness and risk aversion in international markets, which may have stopped the firm recognizing opportunities in the future:

There are many sharks everywhere! There are the competitors that could come in with a price point which you couldn't reach. Because they have large capital, they can ignore the patent and you would be able to fight them because you are too small [...] Our competitors can be just anybody, pharma, software, etc. As soon as the big players see this technology, they will soon compete or buy us (Case 6, a biotech entrepreneur).

We are also new in the business, so we are reluctant to getting ripped off, we are a typical knowledge-company with of 20 years of research, we are not going to let people steal it from us, and that fear may limit our growth [...] we are going to be risk averse and rip-off averse [...] and because we are new to it, we can't discriminate a true friend from a false friend (Case 6, a biotech entrepreneur).

High levels of competitive aggression was not evident in any of the cases. Instead they were more focused on leveraging contingencies to their advantage and finding their own unique opportunities. Case 2 is an example:

We are not in a position to go head to head to our competitors [...] we are aggressive in as much as we are looking at niche market where we can grow our business without having to ring the bell to the major competitors (Case 2, telecommunication/antenna entrepreneur).

We have never focused on competitors [...] we always said to our staff to forget about what our competitors are doing and focus on what we do [...] if you focus on your competitors than on your own business [...] it's detrimental to what you are trying to do (Case 1, mobile computing entrepreneur).

The results provide partial support for *P3*. The findings suggest that not only were innovativeness, autonomy, and proactiveness important in opportunity recognition but so were risk taking and aggressiveness dimensions. Risk taking propensity did not clearly differentiate who would discover more valuable international opportunities. Nevertheless, extreme risk-aversion could cause a blind-spot that prevents a firm from contemplating or formulating an international opportunity. Competitive aggressiveness was relatively low. Rather, "aggressiveness" in this study is more to do with a firm's strong desire to leverage contingencies that present themselves than to defeat competitors, as suggested in the original EO scale.

Discussion

Our research indicates that initial international market entry is largely a process of opportunity discovery rather than deliberate search, especially when little or no prior international experience and knowledge is present. Prior knowledge combines with new information derived from various sources, including social and business networks to reveal opportunities worthy of pursuit. Cohen and Levinthal (1990) suggest that "fortune favours the prepared firms," our findings suggests that "opportunity favours the prepared and connected firms." International opportunity discovery requires favourable conditions within the firm to exist in terms of prior international and technical knowledge, intellectual property, openness/access to information sources including the internet, and firm characteristics such as EO. The discovery process did not occur simply through serendipitous encounters with new information from networks or referrals but involved interpreting possible matches between pre-existing means (resources, skills, new technologies) and new ends (international markets) in a problem solving process. It favours those with the requisite prior knowledge and EO.

Our results support previous findings that idiosyncratic prior knowledge creates knowledge corridors that shape what can be seen and responded to. All the firms in the cases recognized international opportunities only within their areas of expertise. In particular, prior technical knowledge proved to be important in the KB cases studied, as it provided the basis for formulating an opportunity from the various ideas and information available. The personal and business relations and networks in which a firm is embedded play a critical role in determining how information and ideas move around and who can and does know what and when. A lack of business-related knowledge in foreign markets is mitigated by an openness to new ideas, which is related to risk taking and innovativeness.

The results show that in cases where management had significant prior international experience and knowledge firms tended to "deliberately search" but can also "discover" international opportunities. The Knightian view of entrepreneurship complements the Kirznerian view to explain this. To firms with extensive prior international experience and knowledge, the first international opportunity is not

a radically new experience, and they are more able to deliberately search for it. In these cases, the firm's known unknowns are more extensive. This is what Knight (1921) refers to as "risk," which is calculable and analyzable. In contrast, the first international opportunity for firms with little or no prior international experience and knowledge is a totally new experience or so-called Knightian uncertainty (Knight, 1921). Deliberate search plays another role in these cases. In the process of deliberately searching for something people and firms discover something unexpected and unsought. This is a characteristic of the innovation process generally and reflects to the nature and role of Knightian uncertainty.

Prior research on the initial stages of firm internationalization supports this distinction between discovery and deliberate search. For example, in studies by Simmonds and Smith (1968) and Ellis and Pecotich (2001), the first international opportunity recognized by firms with little or no prior international experience and knowledge was more the result of discovery than deliberate search. This also fits with Crick and Spence's study (2005). Nearly, all of the first international opportunities they studied were recognized by means of "discovery," in which the first information came from networks, participation in trade missions, or simply serendipitous encounters. Prior studies like this portray discovery as more of an information encounter process rather than explaining how information is processed leading to the discovery (Simmonds and Smith, 1968; Ellis and Pecotich, 2001; Crick and Spence, 2005; Spence and Crick, 2006). In contrast, our study shows that encountering new information via networks or referrals is only part of the process – it is followed by a process of interpreting possible matches between pre-existing means and new ends and problem solving. Our results demonstrate that "luck" or serendipity can occur due to the presence of Knightian uncertainty, but it is the firm's ability to cognitively formulate or conceive of new means-ends combinations that allows the firm to discover an opportunity. This supports prior conceptions of the difference between ability and luck (Kirzner, 1997; Denrell *et al.*, 2003) and it provides a link between the Kirznerian concept of discovery and deliberate search and the Knightian concept of uncertainty that advances our understanding of the internationalization process of the firm.

Prior research provides evidence of deliberate vs opportunistic and proactive vs reactive approaches to internationalization (Leonidou *et al.*, 2007; Spence and Crick, 2006). However, few studies have investigated why and under what conditions each approach is more likely to occur. Our distinction between Knightian uncertainty and risk, how this relates to prior international knowledge, weak ties and the role of problem solving abilities in opportunity recognition, offers a more in-depth understanding of why and how each approach to internationalization occurs.

Our results complement existing theories of internationalization by offering a more in-depth understanding of the nature of the opportunity recognition process and the role of EO in this process. The Uppsala model and the eclectic paradigm assume deliberate search with companies and decision makers in these two paradigms having access to extensive prior international knowledge and technical knowledge and internationalizing incrementally. Such assumptions are not appropriate in the case of the growing number of smaller firms internationalizing, who may be borne global and whose patterns of internationalization are difficult to explain in terms of incremental change and optimizing logic. Our results show that firms with no or little prior international experience and knowledge discover and are discovered by international

opportunities rather than seek them. As international experience develops firms have greater knowledge and experience and more resources to engage in deliberate search in line with the Uppsala model and eclectic paradigm.

Our results also complement the network perspective on internationalization and reveal the role of strong and weak ties. Weak ties play an important role because they may span structural holes connecting different knowledge networks and introduce firms to new types of market knowledge which can lead to opportunity discovery. Strong ties are also important because of the role they play in disseminating information entering a network, passing on information to others who may be more able to use it. These findings provide support for prior research that emphasizes the importance of a “relational paradigm” in internationalization and international marketing research (Leonidou, 2003; Styles and Ambler, 1994; Johanson and Mattsson, 1986; Loane and Bell, 2006).

The study offers new insights as to the role of EO in international opportunity recognition. Risk taking and aggressiveness emerge as important dimensions in addition to innovativeness, proactiveness, and autonomy. Our results suggest that aggressiveness did not mean being aggressive toward competitors, as suggested by the original EO scale, but rather aggressively seeking to leverage opportunities when they presented themselves. This propensity to leverage contingencies or to exploit unexpected discoveries is similar to Sarasvathy’s concept of effectual reasoning (Sarasvathy, 2001). The original EO construct, which originated as part of strategic management logic or causal reasoning, may need modification to suit the reasoning and practices of entrepreneurs.

Results relating to risk taking reflect the opposing views seen previously in the literature (Brockhaus and Horowitz, 1986; Begley and Boyd, 1987; Gartner, 1988). In general, our results suggest that the degree of risk taking did not differentiate between entrepreneurs that recognized more or less valuable international opportunities. In addition, risk taking varies by domain being high in certain domains/projects and low in other domains/projects.

Conclusions

The case studies show that while initial international market entry may at first appear to be the unplanned result of chance events there is a more subtle underlying logic in which new knowledge derived from a firm’s position in networks interacts and combines with prior knowledge to reveal potential opportunities. Even though firms cannot deliberately search for what they do not know exists our results show they can enhance the opportunity recognition process through the diversity of their existing knowledge base, their positioning in communication networks and their willingness to consider new possibilities. This leads us to refine our initial propositions in the following way:

- P1.* Firms that have no prior international experience and knowledge will be more likely to recognize first time international opportunities by means of discovery rather than through deliberate search. Those with international experience and knowledge will be more likely to recognize first time international opportunities by means of both deliberate search and discovery.
- P2.* The greater the extent to which the weak ties a firm has span structural holes linking different international knowledge networks, the more likely the firm is to discover first time entrepreneurial opportunities in international markets.

-
- P3.* Firms that exhibit stronger entrepreneurial orientation will be more likely to discover first time entrepreneurial opportunities in international markets.

This research advances existing theories of internationalization by providing an explanation of the process of recognizing initial international opportunities, the conditions under which firms deliberately search for vs discover opportunities in international markets, and how the two are connected. We introduce Knightian uncertainty and Kirznerian discovery as the conceptual cornerstones of internationalization that can account for the lack of incrementalism and optimizing logic in internationalization among smaller firms. The study also offers a greater understanding of the network perspective of internationalization. That is, networks, relations, and referrals are necessary but insufficient to account for the discovery process. Through their networks and referrals firms encounter new information but this is only the first part of the process. It is followed by a process of interpreting and recombining of new and prior knowledge in new ways that suggest international market opportunities including new means, new ends, and new means-ends combinations. This helps clarify the process of discovery that has been neglected in previous studies (Simmonds and Smith, 1968; Ellis and Pecotich, 2001; Crick and Spence, 2005; Spence and Crick, 2006).

The distinction between discovery and deliberate search is important for business practitioners as it draws the boundary between that which firms can and cannot do and what to expect when they venture abroad. The findings suggest that firms with either extensive or no prior international experience and knowledge can generate diverse ideas through their participation in various types of networks, including partnerships, conferences, the internet, and hiring people or partners with extensive international experience and strategic positions in the networks. It can be advantageous for small and resource-stricken firms to adopt a collaborative rather than competitive aggressive view of international markets. A preparedness to entertain and to leverage contingencies or unexpected discoveries is important, such as when firms are found by (prior and new) network ties or find unexpected opportunities when deliberately searching for something else. As international knowledge, resources and networks grow over time through initial successes in international markets the ability and willingness to deliberately seek out new international opportunities expand.

The research also highlights the need for managers to understand why and how “luck” can occur and how this links to the notion of Knightian uncertainty. Information about foreign markets may be encountered serendipitously but problem solving capabilities must be present for opportunity recognition to occur and so must other factors be present, such as the possession of intellectual property, superior technology and technical knowledge. “Luck” in international market entry is not easily predicted or estimated due to the presence of Knightian uncertainty. A firm’s “Luck” only makes sense afterwards.

Although the first international opportunity may not be highly profitable, they can still be beneficial as they result in experiences and learning as well as network development that facilitate further discoveries.

Finally, export promotion agencies seeking to boost international opportunity recognition could focus some of their resources and support on programs that assist novice exporters to work through the initial international opportunity recognition

process. The learning that takes place will not only assist these firms make the most of their initial international opportunity, but also to search for and discover subsequent opportunities.

This research is not without limitations. First, although the case studies provide evidence that firms recognize opportunities related to their prior technical knowledge, openness to new extramural ideas, EO and other firm characteristics, it provides only indirect evidence about the ability of some people and not others to cognitively “process” ideas/information leading to opportunity recognition. Second, respondents’ self-serving bias may be present, based on introspection and retrospection. They might have rationalized a process that had either favorable or unfavorable results for them. This is despite our effort to sample only those firms that had internationalized recently. Nevertheless, additional research is required to systematically study the nature and role of the different processes involved in international market opportunity recognition. Lastly, the use of single key informants as the main data source could limit our understanding of the cases studied. However, as the decision making activities and knowledge of SMEs strategy and operations often tend to be centralized in the hands of a few key individuals (Carson and Gilmore, 2000; Crick and Spence, 2005; Styles and Hersch, 2005), this method is appropriate and commonly used in studies such as these.

Styles and Seymour (2006) identified considerable scope for marketing to contribute to international entrepreneurship which would, in turn, advance marketing theory. Our study supports their proposition. Specifically, our study shows how factors influencing opportunity recognition and exploitation process such as prior knowledge, networks, and EO can affect the way that firms create and exchange value with their customers in international markets. Future research can examine in greater detail the effect of entrepreneurial processes and mind-sets on more specific marketing issues in international markets including decisions on branding, marketing communication, pricing, product design, customer equity, and environmentally-oriented marketing practices. We encourage scholars from both disciplines to cross fertilize each other’s intellectual resources to further advance our knowledge and practices in these domains.

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