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Examining the role of international entrepreneurship, innovation and international market performance in SME internationalisation

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Abstract

Purpose – The current study aims to examine the role of international entrepreneurship and innovation in small to medium-sized enterprise (SME) internationalisation, also touching on the role of the firm size as a proxy of resources in the SME internationalisation process. The study seeks to look at these issues in the context of manufacturing firms, arguing that entrepreneurial SMEs pursuing international market entry undertake organisational innovation, which in turn enables such firms to achieve higher marketplace performance.

Design/methodology/approach – The paper was based on the development and administration of a self-completed survey of 302 managers.

Findings – The results suggest that international SMEs differ from non-international SMEs in terms of international entrepreneurship, organisational innovation intensity and firm size.

Research limitations/implications – The cross-sectional research design and the regional nature of the sampled firms may limit the generalisability of the findings. The manufacturing sectors that were studied provided an appropriate setting, although research in other industries is required.

Practical implications – The findings provide SME managers with a feasible path to internationalisation, in that firms striving towards internationalisation must undertake organisational innovation. Innovative firms are better equipped to exploit international market opportunities and perform better in such markets.

Originality/value – In spite of the central role assigned to innovation in a firm's competitive strategy, the literature that examines the role of innovation in SME internationalisation has been limited. Addressing this research gap the paper examines the role of international entrepreneurship and innovation in SME internationalisation.

Keywords International business, Small to medium-sized enterprises, Entrepreneurialism, International marketing, Business performance

Paper type Research paper

Introduction

The international marketing literature over the last decade reflects a growing interest in small and medium-size enterprise (SME) internationalisation. This interest is driven by policy planners' desire to facilitate increased SME participation internationally

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which is hindered by the lack of a well-developed body of knowledge on SME internationalisation. The growth of interest can also be attributed to the pioneering interest in a number of interrelated disciplines such as strategic management, entrepreneurship and international business. The growing international marketing literature reflects a somewhat fragmented stream of research in that marketers have focused on market entry strategies (Tavakoli and McKiernan, 1999; Coviello and Martin, 1999; Crick and Jones, 2000), export information use (Williams, 2003), marketing strategies adopted by internationalising SMEs (Knight, 2000; Rundh, 2001) and international market performance (Lu and Beamish, 2001). In spite of the central role assigned to innovation in a firm's competitive strategy, the literature which examines the role of innovation in SME internationalisation has been limited. Similarly, the strategic marketing literature has assigned a prominent position to entrepreneurship citing it as a "parent of innovation" (Day and Wensley, 1988; Kerin, 1992). Accompanying this aspect of the marketing and innovation literature, there has been a strong interest in the concept of entrepreneurship within the broader SME internationalisation literature (and growing interest in the strategic marketing literature) (Day, 1992; Hill and LaForge, 1992; Carson, 1999). However, the role of international entrepreneurship and innovation in SME internationalisation has received limited attention in the international marketing literature.

Addressing the areas identified above where there has been limited attention, this paper examines the role of international entrepreneurship and innovation in SME internationalisation. The extant work by entrepreneurship researchers indicates that an entrepreneurship posture tends to be a "resource consuming posture" (Romanelli, 1987; Covin and Slevin, 1991). In this context, the role of "firm size" as a proxy of firm resources may be an important aspect to understand internationalisation and innovation. Addressing the demand for a broader conceptualisation of innovation, as has been espoused by Varadarajan and Jayachandran (1999) and others, we argue that both technological and non-technological innovations enable SMEs to achieve higher performance differential in international markets. The paper contributes to international marketing literature by examining the role of international entrepreneurship and organisational innovation in SME internationalisation.

Entrepreneurship, innovation and SME internationalisation

Reflecting the growing academic and practitioner interest on SMEs' contribution to national economies there has been a substantial interest in the international marketing literature on SME internationalisation (e.g. Knight, 2000; Coviello and Martin, 1999, Hutchinson *et al.*, 2006). However, the internationalisation literature has traditionally emphasised the activities of large multinational firms and tends to rely on large firms as the traditional unit of analysis (Coviello and McAuley, 1999). This reflects a substantial inadequacy in the literature as there is growing consensus among researchers that SMEs differ from their larger counterparts in terms of their managerial style, independence, scale of operations and decision-making characteristics. Small businesses are not smaller versions of big businesses and they deal with unique size-related issues and behave differently from their larger counterparts (Shuman and Seeger, 1986). Similarly, there is evidence to suggest that SMEs find unique ways of overcoming their size-related internationalisation constraints (Gomes-Casseres, 1997; Coviello and McAuley, 1999). The literature on the rapid, non-incremental and early internationalisation of born-global firms (Bell, 1995; McDougall and Oviatt, 2000) suggests that highly entrepreneurial SMEs challenge the conventional wisdom by directly entering global markets with innovative products. These views reflect the inadequacies of the theoretical approaches with origins in the large firm context and also highlight the need to address the unique operational characteristics of SMEs in any attempt to conceptualise the SME internationalisation process.

Recent approaches to conceptualise the SME internationalisation process reflects an emerging consensus that SME internationalisation is an entrepreneurial activity (Knight, 2000; Lu and Beamish, 2001). Importantly, the foreignness of the new environment has significant implications for SME internationalisation. The nature of the new environment being entered, relative to the domestic environment and expansion, reinforces the entrepreneurial characteristics of the internationalisation strategy (Lu and Beamish, 2001).

In a parallel development, two distinctive research streams within the strategic marketing literature suggest a strong link between entrepreneurship, innovation and competitive strategy. The first relates to the role of marketing in the strategy dialogue (Day, 1992; Kerin, 1992; Piercy, 1998; Morgan *et al.*, 2000) and suggests that "the functional role of marketing in strategic management deals with the entrepreneurial work of the organisation and organisational renewal and growth; in short innovation" (Kerin, 1992, p. 332).

The second, which focuses on research on the marketing and entrepreneurship interface (Hill and LaForge, 1992; Carson, 1999), suggests a strong link between the two activities. Marketing behaviour and entrepreneurial behaviour are similar in nature as "they are both boundary spanning, involve an extensive interplay with environment, require the assumption of risk and uncertainty, and inevitably interface the complexities of human behaviour with commercial and other endeavours" (Hill and LaForge, 1992, p. 33). There is a growing consensus that the marketing/entrepreneurship interface within an SME context is "change-focused, opportunistic in nature and innovative in management approach" (Collinson and Shaw, 2001, p. 761). However, the entrepreneurial opportunity-seeking behaviour beyond domestic markets and the primary strategies through which opportunities are sought is yet to be explored extensively within the entrepreneurial marketing literature. In particular, the role of entrepreneurial international market entry behaviour through innovation-based competitive strategy appears important. This suggests the importance of entrepreneurship as the driving force of innovation, which is the primary vehicle for gaining differentiation advantages in competitive markets, particularly in the international arena.

The literature that examines the role of innovation in the internationalisation process can be broadly classified at the macroeconomic level and the firm level. As observed by Wakelin (1998), there has been considerable macroeconomic evidence suggesting that differences in innovation, in addition to relative prices, can influence export behaviour. Several country studies undertaken at sector level (Buxton *et al.*, 1991) have found some evidence of a positive role for innovation in trade performance.

At the firm level, three key trends are evident in the innovation, marketing and firm performance literature. First, majority of the studies in this area have used R&D expenditure as a proxy of innovation and as a basis for classifying firms as innovators and non-innovators (e.g. Bloodgood *et al.*, 1996). However, R&D expenditure is not an appropriate indicator of innovation (Varadarajan and Jayachandran, 1999), because firms can use the terms "R&D", "product development" and "problem-solving" interchangeably (Australian Manufacturing Council, 1995).

Second, reflecting a general trend in innovation research, international marketing literature examining the role of innovation in the internationalisation process is biased toward technological innovation and has primarily focused on product innovation (e.g. Kleinschmidt and Cooper, 1988; Cavusgil and Kirpalani, 1993). However, the entrepreneurial marketing literature suggests that SME innovation should not be confined to product innovation (Carson and Gilmore, 2000). Firms undertake both technological and non-technological innovations (Porter, 1990; Hyvarinen, 1990) and both types of innovations enable firms to gain entry into competitive international markets (Australian Manufacturing Council, 1995; Hyvarinen, 1990).

Third, the majority of firm-level studies have concentrated on testing the Schumpeterian hypothesis of a positive relationship between firm size and innovation. In a study that examines the firm size, level of innovation and exporting, Wakelin (1998) found that large innovative firms are likely to export, and smaller innovative firms with only one or two innovations are less likely to export and more likely to service the domestic market. This finding supports the traditional view that strategic options available for SMEs are constrained by the "resource poverty" (Welsh and White, 1981) condition. However, this view is increasingly being challenged by the growing literature on "born global" (also known as "international new ventures" or "global start-ups") firm internationalisation. These firms which are exemplar SMEs challenge the conventional theories of internationalisation by directly entering global markets with highly innovative products, sometimes even bypassing domestic markets (Oviatt and McDougall, 1995; Knight and Cavusgil, 1996).

The growing international entrepreneurship literature which has primarily evolved within the "born global firm" literature assigns a prominent role to international entrepreneurship in the accelerated internationalisation of born global firms (Oviatt and McDougall, 2005a, 2005b; Knight and Cavusgil, 1996; Madsen and Servais, 1997). It is argued that with greater entrepreneurship SMEs can overcome their resource-poverty constraints and embark on rapid internationalisation. This proposition is further supported by the inconclusive nature of research examining firm size effect on export performance. A decade of research has failed to establish a clear relationship between firm size and export performance (Madsen, 1987; Moen, 1999; Calof, 1994) implying the significance of other factors, such as, firm entrepreneurship on exporting. In somewhat of a departure the born global firm literature suggest that in the absence of sufficient resources to control many assets through ownership-born globals tend to use alternative transaction governance structures (Oviatt and McDougall, 2005a) which may include powerful resource conserving structures such as network structures (Larson, 1992; Andersson and Wictor, 2003).

Importantly, the preceding discussion suggests that SME internationalisation is an entrepreneurial activity. However, the primary strategies through which entrepreneurial SMEs achieve internationalisation have not received adequate attention both in the international marketing and international entrepreneurship literature. Although, innovation is considered the primary strategy for value creation, the international marketing literature that examines the role of international entrepreneurship in innovation and international market performance has been limited. Further, although the entrepreneurship literature suggests that entrepreneurship posture tends to be a resource consuming posture, there has been no prior research that would indicate how resources interplay with international entrepreneurship, innovation and SME internationalisation. Overall, the role of innovation in internationally entrepreneurial firms' efforts to enter global markets remains unexplored, reflecting a substantial research gap within the international marketing literature.

Conceptual framework

The theoretical conjecture raised here suggests that entrepreneurial SMEs will tend to pursue exporting. It also suggests that such firms are also more innovative and are thus able to rapidly gain competitive advantages, which shows in greater performance differentials in their marketplace activities.

As defined by McDougall and Oviatt (2000, p. 903), international entrepreneurship (IE) is:

> [. . .] a combination of innovative, proactive and risk-seeking behaviour that crosses national borders and is intended to create value in organisations. . .the study of IE includes research on such behaviour and research comparing domestic entrepreneurial behaviour in multiple countries.

This study adopts this definition, which is rooted in the firm-behaviour approach to entrepreneurship (Covin and Slevin, 1986; Naman and Slevin, 1993) in the conceptualisation and measurement of international entrepreneurship. An essential quality of entrepreneurship is new entry – entering new or established markets with new or existing products, as well as the launching of new ventures (Lumpkin and Dess, 1996).

In recent years, some researchers have directly or indirectly explored the validity of individual dimensions of international entrepreneurship within the firm internationalisation context. (e.g. risk-taking propensity and exporting (Roux, 1987); firm proactiveness and export success (Denis and Depelteau, 1985); and technological innovativeness and export success (Beamish *et al.*, 1993). Similarly, some studies have found support for the overall construct in some areas of international marketing strategy. For instance, Yeoh and Jeong (1995) examined the impact of international entrepreneurship on the exporting firm's strategic posture while Knight (2000) investigated the role of international entrepreneurship on strategic competence, international preparation and technology acquisition. However, studies that examine the overall contribution of these dimensions on a firm's internationalisation strategy have been limited.

We observe several inadequacies in these efforts to validate this construct in the international marketing literature. First, the firm-behaviour model of entrepreneurship has primarily evolved in a technological innovation context. Research that explores the role of this model in organisational innovation, has been limited. Second, majority of the studies have examined the direct influence of entrepreneurship on exporting. This direct approach provides limited input to practitioners and policy planners as such an approach does not examine the primary strategies that are pursued by entrepreneurial firms for internationalisation. More research is needed on the competitive strategies that are adopted by entrepreneurial firms in their efforts to break the global market entry barrier. The past literature in general has paid scant attention to the combined role of international entrepreneurship and innovation in the SME internationalisation. In this study, we operationalise McDougall and Oviatt's (2000) conceptualisation of international entrepreneurship discussed above as a continuum using the attributes of innovativeness, proactiveness and risk-seeking discussed above capturing the degree of "international entrepreneurial intensity" of the firm. The conceptual framework used in this study is indicated in Figure 1.

Organisational innovation

Porter (1990) defines innovation to include both improvements in technology and better methods or ways of doing things. It can be manifested in product changes, process changes, new approaches to marketing, new forms of distribution, and new conceptions of scope. Overall, Porter's (1990) value chain analysis explicitly suggests that innovations can occur in any value-creating activity of the firm. Strengthening this view, Rothwell (1992) suggests that technological innovation can be accompanied by a series of non-technological innovations. There is growing empirical evidence to suggest that firms undertake all forms of innovation. Recent Australian studies (Weerawardena, 2003a, 2003b; Australian Manufacturing Council, 1995) found that Australian firms broadly use four types of innovation, including product, process, market and business systems. Overall, the literature reflects the need to define innovation broadly, incorporating all forms of innovation (Dewar and Dutton, 1986; Damanpour, 1991; Porter, 1990; Hyvarinen, 1990).

Therefore, taking a broader conceptualisation as the theoretical basis it is argued that organisational innovation possess a multi-dimensional structure having the potential to be measured as higher-factor model. Although the foregoing discussion provides support to conceptualise organisational innovation broadly to include both technological and non-technological innovations, empirical research examining the role of organisational innovation in SME internationalisation is limited and fragmented. For example, Knight (2000) found that born global firms use innovative marketing techniques to achieve superior international market performance. Similarly, Anderson (2000) found evidence to support Schumpeter's (1934) broader conceptualisation of innovations. The international entrepreneurs studied by Anderson (2000) not only undertook new product development but also introduced innovative production methods and vigorously sought new sources for procurement of materials. Building on this perspective, organisational innovation is defined in this study as:

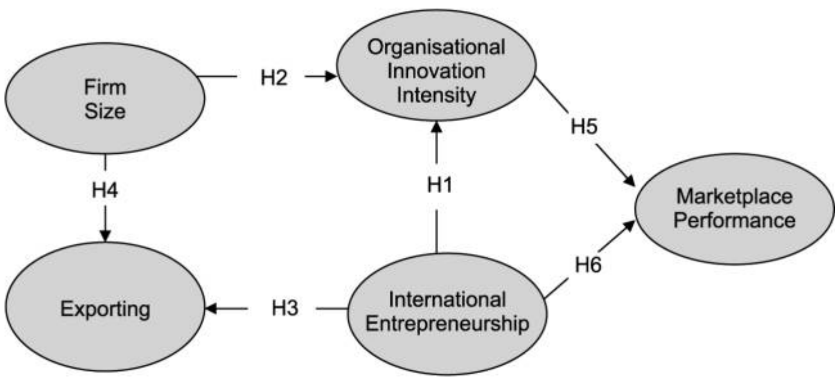

Figure 1.
Theoretical framework

> [. . .] the application of ideas that are new to the firm, which create added value either directly for the enterprise or indirectly for its customers, whether the newness and added value are embodied in products, processes, services, or in work organisation, management or marketing systems.

Organisational innovation construct is conceptualised as comprising of technological (product and process) and non-technological (managerial and marketing) innovation. Whilst past research has primarily focused on technological innovation, in this study we define innovation broadly incorporating both technological and non-technological innovations. Accordingly, organisational innovation is operationalised in terms of the type and the degree of innovation that captures the degree of organisational innovation intensity of the firm. In general, based on our discussion in the previous section, a positive association between "entrepreneurship" and the growth-oriented efforts of the firm via innovation is suggested as shown in Figure 1. A firm's entrepreneurial orientation will dictate its competitive orientation (Merz and Sauber, 1995), and in this context innovation is a key action. Thus:

H1. International entrepreneurship has a significant positive effect on organisational innovation intensity.

Firm size

Based on our earlier discussion the role of size in innovation and SME internationalisation can be viewed from two perspectives. First, SME internationalisation literature suggests that SMEs overcome their resource-based constraints to internationalisation using alternative governance structures including network structures. In this area, international entrepreneurship appears to be a key factor driving this process. In somewhat of a departure, some researchers argue that "a firm's ability to engage in entrepreneurial behaviour will depend, in part, on its resources and competencies" (Covin and Slevin, 1991, p. 15). An entrepreneurial posture tends to be a resource-consuming posture (Romanelli, 1987) and organisations with abundant resources may have a greater capacity than those with sparse resources to engage in entrepreneurial activity" (Covin and Slevin, 1991, p. 15).

Traditional innovation literature stresses that larger firms have an advantage in innovation (Rogers, 2004). This view is based on a number of subsidiary arguments. First, larger firms have stronger cash flows to fund innovation. Equally, larger firms may have higher assets to use as collateral for loans. Second, a larger volume of sales implies that the fixed costs of innovation can be spread over a larger sales base. Third, larger firms may have access to a wider range of knowledge and human capital skills, which are pre-requisites for innovation. Thus:

H2. Firm size positively influences organisational innovation intensity.

Internationalisation and exporting

Exporting has been extensively employed by firms as an internationalisation strategy. Compared to direct foreign investment via equity modes, exporting is a non-equity mode of market entry and a relatively easy and fast way to enter foreign markets because it involves comparatively low levels of commitment and risk (Lu and Beamish, 2001). In exporting, a firm does not have to make a substantial resource commitment to a foreign market as it does when making a foreign investment. Exporting is also an easier strategy to implement because a firm does not have to deal with the complexities of establishing a foreign subsidiary. Further, exporting provides relatively faster access to a foreign market because a firm can use its existing production facilities to serve its foreign markets rather than building new production facilities in a foreign market. These unique advantages associated with exporting are especially important for SMEs that typically face resource constraints and would not like to make excessive resource commitments and be exposed to unreasonably high investment risks (Lu and Beamish, 2001).

The international marketing literature suggests that entrepreneurship gives rise to certain processes and practices intended to maximise organisational success in new markets (Lumpkin and Dess, 1996). In a small firm the total competitiveness of the firm is positively influenced by the founder who can pay attention to the detailed operations of the business (Slevin and Covin, 1995). International entrepreneurial behaviour crosses national borders and is intended to create value for the organisation (McDougall and Oviatt, 2000). A growing number of researchers suggest that internationalisation is an entrepreneurial act (Ibeh and Young, 2001), and that entrepreneurs pursue international market opportunities without regard to the resources currently under the firm's control, or environmental factors which they face (Ibeh and Young, 2001). Thus:

H3. International entrepreneurship has a significant positive effect on SMEs' propensity to engage in exporting.

The relationship between firm size and internationalisation has been widely examined in the internationalisation literature. Within this literature it has often been suggested that firm size can be seen as "a useful and manageable approximation of firm resources" (Bonaccorsi, 1992). Larger organisations appear able to generate stronger competitive capability than their smaller rivals. This occurs primarily as a result of their superior access to resources, greater market power, and economies of scale and scope. Despite the proposed importance of size, consensus has not been reached about firm size and its relationship with internationalisation, particularly export behaviour. Further, those researchers who have found associations between size and export activities have failed to provide any information which identifies the amount of variance explained by size (Calof, 1994). The theoretical conjecture raised here is that small firms will not possess sufficient resources to undertake even a low resource entry strategy such as exporting. However, within this context the larger firms (i.e. medium sized) will have at their disposal sufficient resources to undertake export activity. Thus we see a resource discrepancy which sees medium sized firms being more prone to have export capacity which they will enact, while small firms will not. Thus:

H4. Firm size has a significant positive effect on SMEs' propensity to engage in exporting.

Internationalisation and market performance

Market entry mode has been argued to be the cornerstone of a firm's international market entry strategy (Tse *et al.*, 1997). The selection of an appropriate entry mode strategy is crucial and when a firm expands into foreign markets, entry mode has long been considered to have major impact upon firm success (Woodcock *et al.*, 1994; Delios and Beamish, 1999). Within the market entry mode literature, exporting has been a focus for not only firm expansion, but also academic research, particularly focusing on exporting and firm performance.

Despite the increased number of studies that have been concerned with international market performance, there is no uniformly accepted conceptualisation and operationalisation of the construct (Cavusgil and Zou, 1994; Sousa, 2004). In a major literature review on export performance measures Sousa (2004) discovered as many as 50 different performance indicators, indicating a lack of consensus with regard to the concept. Sousa (2004) observes that export performance indicators used in the studies reviewed could be classified into objective and subjective measures. In the broader marketing area, performance (marketplace) has been seen as referring to the relative measurement of a firm's product success in the marketplace. Indeed, market share is deemed a measure of firm's product performance, as product success is created with high market share (Keller and Lehmann, 2003). As such, market share has been widely used as a reliable indicator of success (see Smith and Park, 1992; Chaudhuri and Holbrook, 2001; Weerawardena *et al.*, 2006). Similarly, sales volume is also a measure of performance as it reflects the level of direct earnings from customers. This measure is also widely used in the marketing literature (see Bronnenberg and Sismeiro, 2002; Julian and O'Cass, 2004; Weerawardena *et al.*, 2006). Indeed, when one focuses on a firm's specific products and examines its market share, sales volume and sales growth, one tends to concentrate on a level more attuned to marketing or marketplace performance as opposed to organisational performance and more in line with the result of creating a customer, as the customer buys the firm's products (O'Cass and Ngo, 2007).

The notion of firm performance resides in the marketplace strength of a firm achieving the established objectives in the marketplace for its products as evidenced in total sales, profitability, market share, and the like. Specifically, total sales and profitability are considered key financial performance indicators, while market share is treated as a non-financial or operational performance indicator that is widely used in strategic marketing (e.g. Baker and Sinkula, 1999). For example, total sales is a firm's performance indicator as it reflects the level of direct earnings from customers so much so that firms with a high level of customer equity are argued to possess strong brands. This proclamation is evident in the contribution of customer acquisition, customer retention, and add-on selling to brand success. Research has shown that firms whose customers exhibit greater purchasing loyalty do exhibit greater market shares (Ehrenberg *et al.*, 1990) and we contend this comes from greater satisfaction. In addition, firms that have a high level of customer retention will hold greater market share as they have loyal customers (Chaudhuri and Holbrook, 2001).

Similarly, entering international markets is suggested as a meaningful performance indicator of entrepreneurial firms. In a recent review of literature Zahra and George (2002, p. 261) suggest that international entrepreneurship can be defined as:

> [. . .] the process of creatively discovering and exploiting opportunities that lie outside a firm's domestic markets in the pursuit of competitive advantage.

This definition builds on recent writings in the field of entrepreneurship that highlight the importance of opportunity recognition, discovery, and exploitation as distinguishing characteristic of entrepreneurship (Shane and Venkataraman, 2000; Zahra and Dess, 2001) and as such achievement in such endeavours should manifest higher levels of performance. This view suggests that whilst international entrepreneurship leads to competitive advantage, internationally entrepreneurial firms tend to exploit opportunities outside their domestic markets and such exploitation yield performance differentials in activities such as entering new markets, increased market share and increased customer satisfaction. Consequently, firms that are internationally entrepreneurial tend to achieve greater marketplace performance. Thus:

H5. International entrepreneurship has a significant positive effect on marketplace performance.

Organisational innovation intensity market performance

Conceptualising organisational innovation broadly to include both technological and non-technological innovations in examining the role of organisational innovation in SME internationalisation provides a basis to explore its impact on marketplace performance. For example, Knight (2000) found that born global firms use innovative marketing techniques to achieve superior marketplace performance.

Possessing superior innovative abilities enable firms to continuously create advances in the offerings they bring to the market (Kim and Mauborgne, 1997). For example, the success of intensely innovative Japanese firms against US firms in the 1980 s, can be attributed to their leading edge technology breakthroughs to not only satisfy current needs but also to create valuable market offerings (Prahalad and Hamel, 1990). These firms outperformed their competitors in terms of sales revenue, market share, and profitability by developing higher levels of greater innovation intensity. Organisational innovation enable manufacturing firms to gain competitive advantage (Weerawardena, 2003a, 2003b). Furthermore, possessing high levels of innovation intensity enable firms to accommodate turbulence in their entrepreneurial environment (Han *et al*., 1998) and therefore improve the fulfilment of business goals (Han *et al*., 1998). Such a superior marketplace performance (e.g. entering new markets, increased market share and increased customer satisfaction), appears strongly linked to innovation intensity. Thus:

H6. Organisational innovation intensity has a significant positive effect on Marketplace performance.

Research design

The study was based on the development and administration of a self-completed survey of managers. The firms (i.e. managers) were obtained from a list of manufacturing firms that were developed as part of a larger study of SME marketing and innovation. Firms were selected from those located in a major Australian State. The rationale for selecting firms from a single geographic region was to ensure a common business environment, thus controlling for the effects of external factors such as government regulations and assistance schemes, taxes, labour and material costs to some extent. The decision to select a sample of firms from the manufacturing industry was driven by the aim of examining all the types of innovation within the firm as discussed above, but limited to a single sector, thus reducing possible cross-industry issues.

Key informants

In this study managers (CEOs) were used as the key informants. With the key informant approach, data is collected from a senior manager or a group of senior managers on information pertaining to the whole organisation (or business unit). It is assumed that such senior managers have the best vantage point for viewing the entire organisation and, thus, will provide the most accurate responses (Glick *et al*., 1990).

Data on strategy gathered from middle and lower managers have questionable validity because these managers typically do not have access to information about how the total system operates (Snow and Hrebiniak, 1980). Researchers have found that CEOs provide data that is as reliable and valid as that obtained from multiple informants (Zahra and Covin, 1993).

In the context of this study the job titles given by the respondents in the field study indicated that the sample was in fact made up of senior managers and top decision makers. As an additional measure, as suggested in Kumar *et al.* (1993), a self-assessment of knowledge was adopted and on this measure the mean value was greater than five providing evidence of knowledge.

Measures

International entrepreneurship. The international entrepreneurial scale captures the extent to which the firm's strategic leaders are proactive, innovative and risk seeking in the exploitation of export marketing opportunities in their beliefs and is based on the conceptualisation of McDougall and Oviatt (2000). High scores on this scale indicate that the firm's key decision-makers value innovation, are proactive and tolerate risk. For example, items such as:

- Top managers of my firm have . . .a strong tendency for low risk projects (with normal rates of return).
- A policy of growth primarily financed through internally generated funds.
- Top managers of my firm believe that . . . it is best to explore new opportunities cautiously via "one step at a time" adjustments.
- When confronted with external uncertainty, my firm . . . adopts a cautious "wait and see" posture in order to minimise costly mistakes.

The items in the entrepreneurship scale were measured via a five-point scale.

Organisational innovation intensity. The innovation intensity scale captures the extent of the firm's product, process, managerial, and marketing innovations via the actual manifest innovations. This reflects a broader conceptualisation of innovation that incorporates both technological and non-technological innovation. High scores on the innovation intensity scale indicate that the firm has introduced radical innovations in its product, process, managerial, and marketing systems. As such, this study uses the organisational innovation intensity measure developed by Weerawardena (2003a, 2003b), which incorporates both the degree and type of innovation. For example, items such as: Product innovations introduced by our firm during the last five years have been . . . Limited – Extensive; Product improvements have been mainly . . . Incremental (marginal improvements to existing products radical) – Radical (change in technology). Marketing innovations introduced by our firm during the last five years have been . . . Limited – Extensive. Marketing innovations have been mainly . . . Incremental – Radical. The items were rated on five-point scales from limited to extensive or radical to incremental.

There has been a substantial debate in the marketing literature regarding the approach to be adopted in the measurement of multi-dimensional constructs. While marketers have traditionally used reflective measures, recent studies have recognised the need for formative and advocated the use of formative measures wherever necessary (Diamantopolous, 1999; Jarvis *et al.*, 2003). Moreover, it is important to note that the reflective approach assumes that the measures are all caused by a single underlying construct while the formative approach assumes the reverse. (Jarvis *et al.*, 2003). Also, in a reflective model, indicators are expected to covary with each other and a change in one of the indicators will be associated with changes in other indicators. Within this backdrop, the measurement approach for the organisational innovation construct was primarily driven by the manner it was defined and conceptualised. While the product and process innovations represent the technical system of the firm, the managerial and marketing innovations represent the administrative system of the firm. Literature suggests that these two systems interact with each other in the organisational innovation process (Damanpour *et al.*, 1989). For example to ensure initiation and development of technical innovations the administrative system of the firm should be open to new ideas and practices. Therefore, in this study the organisational innovation construct was conceived as a reflective first-order second-order configuration in which the dimensions involved in the construct are the manifestations of the overall construct structures as a type 1 model according to Jarvis *et al.*'s (2003) arguments.

Exporting. The export characteristics of firms were measured via an item that asked the respondent to identify if their product was exported or not. The study focused exclusively on the issue of those firms pursuing international activity versus those who did not. The study did not examine the extent of this activity. Thus, exporters were coded as 1 and non-exporters were coded as 2.

Firm size. The specific size of firms was obtained by providing respondents with a categorical variable based on classifications obtained from the Australian Bureau of statistics. This measure had two categories identifying number of full-time employees being within the range of up to 20 small and >21 to 200 medium.

Marketplace performance. In this study we used both objective and subjective measures to assess international market performance (see Appendix). Accordingly marketplace performance was measured by assessing the firm's activity in:

- entering new markets;
- increased market share, and
- increased customer satisfaction measured on a scale from 1 (not at all) to 5 (a great deal).

Analytic techniques and results

The administration procedure yielded 302 usable surveys. The preliminary analysis indicated that 173 firms were exporters and 129 did not export and that 164 firms were small- and 138 were medium-sized firms. The respondent firms varied across a number of characteristics including number of employees with a mean of 31 employees. The firms in the sample were on average 21 years old, with approximately 50 percent of firms being 16 years old or less. Approximately 57 percent of firms in the sample were competing in export markets, on average for five years.

The data were initially examined using confirmatory factor analysis, with all items representing each construct analysed in separate CFA models. All fit statistics and reliabilities were acceptable, with results for International Entrepreneurship indicating $\chi^2 = 12.25$, RMR 0.037, GFI 0.99, RMSEA 0.03, and reliability 0.83, Organisational innovation intensity indicating $\chi^2 = 33.25$, RMR 0.056, GFI 0.99, RMSEA 0.05, and reliability 0.86 and marketplace performance indicating $\chi^2 = 3.8$, RMR 0.024, GFI 0.99, RMSEA 0.01 and reliability 0.80.

Following the initial analysis, composite variables were computed to represent the constructs via means of the measures for each construct (see the Appendix, Figure A1). Standard deviations and inter-correlations were estimated as indicated in Table I. To assess the discriminant validity, the arguments of Gaski and Nevin (1985) and O'Cass and Ngo (2007) were followed, which suggest that if the correlation between two composite constructs is not higher than their respective reliability estimate, then discriminant validity exists. The results indicated that using this criteria all reliability estimates (Cronbach's alpha) were greater than their correlation. Similarly, convergent validity was tested using the squared multiple correlations from the confirmatory factor analysis to calculate the average variance explained. Average variance explained (AVE) for all factors were greater than or equal to 0.50 as recommended by Fornell and Larcker (1981). Finally, the structural model was estimated for an examination of the hypotheses.

Partial Least Squares (PLS) was used to test the hypotheses. PLS is a general technique for estimating path models involving latent constructs indirectly observed by multiple indicators (Fornell and Cha, 1994; Wold, 1981). The focus here is on inner model relationships between the latent constructs and the evaluation of these relationships is undertaken on the basis of multiple indices, characterised by their quality, sufficiency to explain the data, congruence between analytical and theoretical expectations, and precision (Lohmöeller, 1989; O'Cass, 2001). As such, a systematic examination of the specific indices that relate to the predictive relevance of the modelled relationships was undertaken (Fornell and Cha, 1994; Lohmöeller, 1989) including; r^2, AVA, regression weights ands critical ratios. These indices provide evidence for the existence of the relationships rather than definitive statistical tests, which may be contrary to the philosophy of soft modelling as outlined by Falk and Miller (1992) and others as no distributional assumptions are made. Another consideration with PLS is that it explicitly allows for model specification using categorical variables. This allowed for the recoding of Exporter-non-exporter and firms size into dummy variables (0-1) to be used in the analysis of *H2, H3* and *H4*. This procedure is similar to that adopted by O'Cass and Pecotich (2005) and O'Cass and Ngo (2007) using PLS with categorical variables.

The results are provided in Table II for the inner model results that arise from the hypothesised relationships. The average variance accounted (AVA) for the endogenous variables was 0.489 and the individual R^2s were greater than the recommended 0.10 (Falk and Miller, 1992) for all of the predicted variables. As all of the R^2 estimates were larger than the recommended levels it is appropriate and informative to examine the significance of the paths associated with these variables.

Construct	Correlations				Mean	SD
Firm size						
Exporting	−0.187*					
Firm performance	0.131*	−0.216*			2.24	0.973
Organisational innovation intensity	0.196*	−0.302*	0.583*		3.08	0.839
International entrepreneurship	0.046	−0.381*	0.526*	0.572*	3.34	0.810

Note: * Correlation significant at $p < 0.05$

Table I. Means, standard deviations, and intercorrelations

Predicted variables	Predictor variables	Hyp.	Path	Variance due to path	R^2	Critical ratio[a]
Innovation intensity	International entrepreneurship	*H1*	0.582	0.345		14.01*
	Firm size	*H2*	−0.153	0.030	0.375	3.15*
Exporting	International entrepreneurship	*H3*	−0.368	0.140		7.15*
	Firm size	*H4*	0.161	0.030	0.170	2.99*
Firm performance	International entrepreneurship	*H5*	0.353	0.220		6.41*
	Organisational innovation intensity	*H6*	0.466	0.310	0.537	9.22*
AVA[b]					0.489	

Notes: *Significant at 0.05; [a]bootstrap estimate divided by bootstrap standard error; [b]average variance accounted for

Table II.
Partial least squares results for the theoretical model

A reasonable criterion for evaluating the significance of the individual paths is the absolute value of the product of the path coefficient and the appropriate correlation coefficient (Falk and Miller, 1992, p. 74). As paths are estimates of the standardised regression weights, this produces an index of the variance in an endogenous variable explained by that particular path and 1.5 per cent of the variance is recommended as the cut off point. In Table II all the paths exceeded this criterion and the bootstrap critical ratios were of the appropriate size (greater than 1.96, p @ 0.05), supporting all hypotheses.

Discussion and implications

A central theme of this paper is that internationally entrepreneurial SMEs pursuing international market entry undertake organisational innovation to a larger degree than non-exporters. Innovation, in turn, enables these firms to perform better in international markets. Collectively, the results provide support for the conceptual framework, indicating that the theoretical constructs operate largely as hypothesised. The paper argued that SME internationalisation process is an entrepreneurial activity and entrepreneurial SMEs pursuing international market entry actively undertake innovation in all areas of value creating activities. The results of the study largely support this position, thus contributing to the literature on international entrepreneurship and innovation-based competitive strategy. As noted earlier, the concept of international entrepreneurship is still in an early stage of conceptual development and lacks a strong empirical foundation. The majority of research on international entrepreneurship has examined the impact of one dimension of the construct on exporting. Most of the studies have focused on the direct relationship between entrepreneurship and exporting, paying lesser attention to primary strategies that are adopted by such firms in their quest for international market entry, thus limiting the use of such findings to practitioners. Although literature for several decades has argued the potential role of organisational innovation in exporting, past research has been biased toward technological innovation. However, the findings suggest that both technological (product, process) and non-technological innovations (marketing and organisational systems) facilitate exporting via the positional advantages gained through such innovations.

The results suggest largest difference across exporters and non-exporters is in their entrepreneurial intensity. This suggests the importance of adopting an entrepreneurial posture in a firm's strategic decision-making initiatives in relation to its efforts in exporting. SMEs adopting an international entrepreneurial posture will display greater innovativeness, proactiveness and risk-taking propensity in their strategic decisions. Exporters and non-exporters differ in their organisational innovation intensity and international market performance. Exporters relative to non-exporters are more likely to develop superior products and perceive and explore innovative ways of performing the value-creating activities.

Overall the findings contribute to the international marketing literature and the research on marketing/entrepreneurship interface (Hill and LaForge, 1992; Carson, 1999; Carson and Gilmore, 2000) by suggesting that "entrepreneurial effort" (Collinson and Shaw, 2001) is a key driver of SME internationalisation. As the findings suggest, entrepreneurial marketers are not simply focused on product innovation (Carson and Gilmore, 2000) but pursue innovation in all value creation activities.

The findings provide SME managers with a feasible path to internationalisation, in that firms striving towards internationalisation must undertake organisational innovation. Managers should recognise that both technological and non-technological innovations are important, and separately or together can impact on a firm's international market performance. The internationalisation process is driven by managers who appear to possess what might be termed "international entrepreneurial characteristics". The manner in which entrepreneurship is conceptualised in this study has implications for both practitioners and policy planners. The firm behaviour model of international entrepreneurship adopted in this study implies that any firm can adopt an entrepreneurial posture by displaying innovativeness, a high tolerance for risk-taking, and proactiveness. In our theoretical framework, entrepreneurs are not "born" as suggested in conventional theories; rather firms can be guided and educated to become entrepreneurial in their decision-making through strategic leadership.

Limitations and future research

Though the analysis provides solid support for the hypothesised relationships, several limitations need to be recognised. The sample provides an appropriate context to examine the underlying theory and accompanying hypotheses, although these findings may not generalise to other settings. Specifically, the authors recognise the regional nature of the sample, which may limit the generalisability of findings. We used single-informant reports to measure each of the theoretical constructs. An alternative approach would have been to combine information from multiple-informants, although the practical difficulties associated with using information from multiple-informant reports are well recognised by management researchers (Kumar *et al.*, 1993). Next, the cross-sectional research design limits the extent to which inferences can be made about the causal ordering of variables. Finally, the manufacturing sectors that we studied provided an appropriate setting, although research in other industries is required. Consider that the pace of technological change in some industries may differ from the manufacturing sectors that we studied. Also, the study focused on the effect of entrepreneurship, innovation and internationalisation versus non-internationalisation as they relate to marketplace performance. Whilst our primary concern has been the effect of these characteristics on marketplace performance and whether it impacts internationalisation, the next step should be to focus on the extent of internationalisation. That is if the emphasis should be on firms' focus and profit from being derived from international and domestic or solely domestic or solely international.

The results of this study suggest several avenues for future research on exporting. First, the study developed and validated new measures of organisational innovation and international market performance. Further research may validate these constructs in different sample settings. Similarly, different and better measures of these constructs may also reveal patterns of relationships different to those reported here. Similarly, future research may also explore the antecedents of organisational innovation in exporting strategy. Organisational learning capabilities may be critical antecedents of innovation. Future research may examine the role of dynamic learning capabilities as intervening variables in the export oriented entrepreneur-driven innovation process. The literature suggests that entrepreneurial actions are influenced by the characteristics of environments within which they operate. Future research may examine the environmental factors influencing the entrepreneurship and internationalisation of SMEs.

A logical extension of this study will be to examine how the factors that are unique to SMEs impact their internationalisation efforts. As noted earlier there is consensus among researchers that any attempt to conceptualise the SME strategy process must take cognisance of the unique characteristics of SMEs. These may include the owner/manager profile, resource constraints and personal networks that influence the growth strategies of SMEs.

Conclusion

This paper primarily focused on examining the role of international entrepreneurship and innovation-based international market entry SMEs,s which has received limited attention in prior international marketing research. The central argument of the study is that entrepreneurial SMEs pursuing international market entry undertake organisational innovation, which in turn enables them to gain positional advantages. Empirical evidence has been found to support this general hypothesis contributing to both theory and business practice. From a theoretical standpoint, this study contributes to international marketing theory by validating the emerging international entrepreneurship concept in organisational innovation-based international market performance. In particular, firms that undertake both technological and non-technological innovations gain positional advantages facilitating global market entry. Furthermore, it has shown that SMEs pursuing innovation-based competitive strategy for internationalisation are characterised by higher levels of international entrepreneurship. Overall, the study expands our understanding on strategic factors that differentiate exporters from non-exporters.

It is hoped that the focus of this research and the findings presented may encourage others to further explore the dynamics of sustainable competitive advantage and export drivers of SMEs. The nexus between innovation and firm characteristics is vital in marketplace performance. In a changing international marketing scenario, it is also crucial to revisit and validate the views of Drucker (1954) who argued that firms unilaterally pursue the creation of a customer. Marketing and innovation are the two primary functions in this pursuit. However, we would extend this view to argue, yes innovation is vital, but understanding what drives innovation is just as critical. We also extend this view to argue that the views expressed are critical in the movement from a domestic focus to an international focus for SMEs pursuing export opportunities in their marketing.

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Appendix.

(1) International entrepreneurship

The following statements identify the COLLECTIVE management style of your firm's key decision-makers. Please circle the number that best reflects your firm's management style.

In dealing with international markets;

	Top managers of my firm favour:						
(1)	... an emphasis on marketing tried and true products; avoiding heavy R&D expenditure.	1	2	3	4	5	... a strong emphasis on R&D expenditure, technological leadership and innovation.
	In the past five years:						
(2)	... my firm has marketed no new products/services.	1	2	3	4	5	... my firm has marketed many new products/services.
(3)	... changes in products/services have been minor.	1	2	3	4	5	... changes in products/ services have been dramatic.
	In dealing with its competitors, my firm:						
(4)	... typically responds to actions which competitors initiate.	1	2	3	4	5	... typically initiates actions to which competitors respond.
(5)	... is seldom the first business to introduce new products, administrative techniques.	1	2	3	4	5	... is often the first business to introduce new products, administrative techniques.
	In dealing with its competitors, my firm:						
(6)	... seeks to avoid competitive clashes and prefers a "live-and-let-live" posture.	1	2	3	4	5	... has a very competitive "beat-the-competitors" posture.
	Top managers of my firm have:						
(7)	... a strong tendency for low risk projects (with normal rates of return).	1	2	3	4	5	... a strong tendency for high-risk investments (with chances for very high rates of return).
(8)	... a policy of growth primarily financed through internally generated funds.	1	2	3	4	5	... a policy of growth primarily financed through external sources such as borrowing.
	Top managers of my firm believe that:						
(9)	... it is best to explore new opportunities cautiously via "one step at a time" adjustments.	1	2	3	4	5	... bold and wide-ranging changes are necessary to achieve the firm's objectives.
	When confronted with external uncertainty, my firm:						
(10)	... adopts a cautious "wait and see" posture in order to minimise costly mistakes.	1	2	3	4	5	... adopts a "bold and aggressive" posture to maximise potential opportunities.

(*Continued*)

Figure A1.
Measures for constructs

(2) Organizational innovation intensity

Innovation refers to any NEW IDEA that your firm adopts for its products, production processes, managerial/administrative and marketing activities which directly or indirectly ADDS VALUE TO THE FIRM.
Please think about the innovative activities your firm has undertaken during the PAST FIVE YEARS. Please circle the number, which corresponds to the degree of innovation for each of the following statements.

Product innovations
(Some examples: (a) improving existing products (b) creating entirely new products)

(1) Product innovations introduced by our firm during the last five years have been...						
Limited	1	2	3	4	5	Extensive
(2) Product improvements have been mainly...						
Incremental; (marginal improvements to existing products)	1	2	3	4	5	Radical (radically new products; change in technology)

Production process innovations
(Some examples: (a) introducing computer-based production applications, (b) automated material-Handling, (c) introducing manufacturing information systems)

(3) Process innovations introduced by our firm during the last five years have been...						
Limited	1	2	3	4	5	Extensive
(4) Process innovations have been mainly...						
Incremental (marginal improvements to existing production process. No change in technology)	1	2	3	4	5	Radical (radical changes to production process. Change in technology)

Managerial innovations
(Some examples: (a) introducing computer-based administrative applications (b) developing new employee reward/training schemes (c) obtaining new financing sources (d) introducing new departments or project teams)

(5) Managerial innovations introduced by our firm during the last five years have been...						
Very limited	1	2	3	4	5	Extensive
(6) Managerial innovations have been mainly...						
Incremental (marginal improvements to existing managerial practices)	1	2	3	4	5	Radical (totally new managerial practices)

Marketing innovations
(Some examples (a) introducing new pricing methods (b) new distribution methods (c) new sales approaches or leasing arrangements (d) entering a new market)

(7) Marketing innovations introduced by your firm during the last five years have been...						
Very limited	1	2	3	4	5	Extensive
(8) Marketing innovations have been mainly...						
Incremental (marginal improvements to existing marketing methods)	1	2	3	4	5	Radical (totally new marketing methods)

(3) International market performance

To what extent has organizational innovation assisted your firm to achieve the following?

	Not at all				A great deal
(1) Entering new markets	1	2	3	4	5
(2) Increased market share	1	2	3	4	5
(3) Increased customer satisfaction	1	2	3	4	5

Figure A1.

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