Examining the Role of International Entrepreneurial Orientation, Domestic Market Competition, and Technological and Marketing Capabilities on SME's Export Performance

Abstract

Purpose – The purpose of this paper is to extend our understanding of the development of SME organizational capabilities and their contributions to export performance by incorporating two antecedents: one from the internal environment (international entrepreneurial orientation) and another from the external environment (domestic market competition).
Design/methodology/approach – A proposed framework built on RBV and contingency theory was tested using PLS with data collected from 470 Korean SMEs.
Findings – International entrepreneurial orientation and domestic market competition both prompted SMEs to develop their technological and marketing capabilities, leading to enhanced performance in international markets. Full mediating effects of technological and marketing capabilities were discovered between international entrepreneurial orientation and export performance.
Practical implications – Given the direct effect of organizational capabilities on export performance, SMEs should facilitate the spirit of international entrepreneurial orientation and heightened managerial awareness of domestic market competition in order to efficiently cultivate organizational capabilities.
Originality/value – Unique findings indicate that SME capabilities can be optimally cultivated under the coexistence of an internal impetus (i.e., international entrepreneurial orientation) and a harsh external environment (i.e., domestic competition), demonstrating the significance of context in developing organizational capabilities.

Key words: small- and medium-sized enterprises, international entrepreneurial orientation, domestic market competition, organizational capabilities, export performance

Introduction

A firm's organizational capabilities play a critical role in its success in international markets (Autio *et al*., 2000; Zahra *et al*., 2000). According to the resource-based view (RBV), organizational capabilities refer to the bundle of skills and knowledge embedded in a firm's organizational routines (Knight and Cavusgil, 2004; Krasnikov and Jayachandran, 2008), serving as the main source of its competitive advantages (e.g., Grant, 1991). They offer a "key role of strategic management in appropriately adapting, integrating, and reconfiguring internal and external organizational skills, resources, and functional competences to match

the requirements of a changing environment" (Teece *et al*., 1997, p.515). The importance of organizational capabilities may be even more critical to small- and medium-sized enterprises (SMEs) that must compete in international markets with limited resources.

SMEs require different sets of skills and knowledge when competing in international markets; accordingly, various capabilities related to marketing, technology, operations, etc. may be needed (Day, 1994). Despite the significance of organizational capabilities to a firm's successful export performance (Behyan *et al*., 2015; Knight and Cavusgil, 2004; Rodriguez and Rodriguez, 2005; Zhou *et al*., 2010), the specific development of these different capabilities remains underdeveloped. According to contingency theory, firms establish optimal strategies in response to organizational and environmental conditions (Harvey, 1982), which are mediated by managerial perception (Penrose, 1959). Consequently, managerial perception toward the environment is critical for creating reactions and selecting from among various strategic choices. Managers of SMEs in hostile environments—for instance, with high domestic market competition or small domestic market size—may be motivated to emphasize the development of different capabilities to remain competitive. Yet, when addressing the antecedents of various capabilities, previous studies have largely focused on the role of the internal environment—e.g. international entrepreneurial orientation—on marketing or technological capabilities (Keh *et al*., 2007; Knight, 2000; Martin and Javalgi, 2016; Weerawardena and O'Cass, 2004). Given that entrepreneurially-orientated firms may adjust their operations in dynamic environments (Covin and Slevin, 1989), these capabilities can be built effectively when such firms are challenged in the competitive market. However, the simultaneous effect of internal (e.g., international entrepreneurial orientation) and external environment (e.g., domestic market competition) on the development of SME capabilities has not been addressed in previous studies.

The purpose of this study is to extend our understanding of the development of SME organizational capabilities and their contributions to export performance by incorporating two relevant antecedents—one from the internal environment (international entrepreneurial orientation) and another from the external environment (domestic market competition). Two types of organizational capabilities deemed critical for SMEs—technological and marketing capabilities—were selected for this study (e.g., Knight and Cavusgil, 2004). Built on RBV and contingency theory, a research framework was proposed to empirically test the role of organizational capabilities between the two antecedents and export performance in the context of SMEs in South Korea (hereafter referred to as "Korea"), a country chosen for its severe domestic market competition and its economic dependence on SMEs. In Korea, SMEs account for 99.9% of firm establishments and 87% of employment, much higher than the average employment (68%) of OECD member countries in 2013 (Organization for Economic Co-operation and Development, 2015, October). These numbers are critical since SMEs account for only 60% of employment in the U.K. (Department for Business Innovation & Skills, 2015, October 14) and 48% in the U.S. (Caruso, 2015, February). Despite their significant role in the Korean economy, SMEs face difficulties when competing against large companies that can use their financial dominance to push down the prices of their small and medium-sized suppliers. In response to hostile conditions for SME growth, about 1 million business start-ups and 0.8 million closures emerge annually (Small and Medium Business Corporation, 2014). To overcome domestic difficulties and continue their success, many Korean SMEs seek international expansion as a survival strategy. Since exporting functions as a strategic entry into foreign markets when SMEs start internationalization (Zahra *et al*., 2000), it is important to understand which factors determine the export performance of such enterprises. The findings of this study will provide useful insight for SMEs that face uncertainty about which organizational capabilities to develop in order to optimize export

performance. Academically, detailed explanations will reveal what motivates SMEs to develop different organizational capabilities and how each contributes to export performance.

Theoretical Background

Resource-based View, Organizational Capabilities, and Export Performance

The resource-based view (RBV), developed within the field of strategic management, rests on the notion that a firm's ability to generate resources and capabilities holds the key to its competitive advantage and organizational survival (Autio *et al*., 2000; Barney, 1991). Firm resources can be classified into three categories: physical capital (e.g., physical technology, plants and equipment, geographic location), human capital (e.g., training, experience, knowledge, judgement, intelligence, relationships, individual workers), and organizational capital (e.g., formal and informal planning, controlling systems, formal reporting structure) (Barney, 1991). RBV highlights that a firm's resources should be valuable, rare, imperfectly imitable, and not substitutable in order to ensure sustained competitive advantage.

Penrose (1959) maintains the importance of effective and innovative management, rather than mere possession, of resources to create economic value. Organizational capabilities—defined as a firm's ability to deploy, leverage, and reconfigure its resources effectively—can transform limited resources into competitive outcomes (e.g., Barney, 1991; Knight and Cavusgil, 2004). In achieving a firm's strategic goals, therefore, capabilities are considered more critical than resources since they consolidate the firm's assets to maintain competitive positioning over competitors (Teece *et al*., 1997). With their deep roots in a specific organization's routines and processes, capabilities prove to be difficult for competitors to replicate and thus appear more instrumental than resources in achieving sustained competitive advantage. Managers function as catalysts that convert the firm's resources into capabilities (Kor and Mahoney, 2004).

Previous studies have generally categorized organizational capabilities into three groups: operational, dynamic, and learning (e.g., Collis, 1994; Teece *et al*., 1997; Zahra *et al*., 2006). Operational or ordinary capabilities reflect a firm's ability to perform basic functional activities using a broad range of its resources (Collis, 1994). Dynamic or core capabilities, considered to be of a higher level than the former, allow firms to recognize the intrinsic value of resources and developing competitive advantages (Collis, 1994; Teece *et al*., 1997). Learning or meta-capabilities are continuous processes that renew or update other capabilities (Collis, 1994), allowing firms to integrate and combine various knowledge assets as learning routines (Teece *et al*., 1997).

RBV emphasizes dynamic capabilities for their key role in strategic management through appropriate adaptation, integration, and reconfiguration of internal and external resources (Knight and Cavusgil, 2004; Teece *et al*., 1997). Dynamic capabilities related to SME internationalization often include technological (Knight and Cavusgil, 2004), marketing (Kotabe *et al*., 2002; Martin and Javalgi, 2016), innovation (Knight and Cavusgil, 2004), networking (Zhou *et al*., 2010), and reconfiguring capabilities (Jantunen *et al*., 2005). Among these, marketing and technological capabilities are commonly regarded as the most important for SMEs (Kotabe *et al*., 2002; Krasnikov and Jayachandran, 2008; Teece *et al*., 1997; Weerawardena and O'Cass, 2004). Marketing capabilities include a firm's "ability to differentiate products and services from competitors and build successful brands" (Kotabe *et al*., 2002, p.82), as well as the capacity "to apply the collective knowledge, skills, and resources of the firm to the market-related needs of the business" (Weerawardena and O'Cass, 2004, p. 421). The literature suggests its strong association with firm performance compared to other capabilities (Krasnikov and Jayachandran, 2008). By contrast, technological capabilities include a "firm's ability to perform any relevant technical function or volume activity within the firm, including the ability to develop new products and processes and to

operate facilities effectively" (Teece *et al*., 1997, p.521). Previous researchers have emphasized innovation as an essential component in developing new technical products and services, investing in R&D, and improving manufacturing processes (Kotabe *et al*., 2002; Teece *et al*., 1997; Zahra *et al*., 2000). This study specifically incorporated marketing and technological capabilities to understand SME's export performance.

Recent scholarship on the internal and external determinants of export performance has grown considerably (Behyan *et al*., 2015; Brouthers *et al*., 2015; Chen *et al*., 2016; Hart and Tzokas, 1999; Jantunen *et al*., 2005; Lefebvre *et al*., 1998; Lisboa *et al*., 2011; Navarro-García *et al*., 2016; Zou *et al*., 2003). In particular, the relationship between organizational capabilities and export performance is crucial because a firm that has attained the former often achieves higher economic value than that of its competitors. In a study on Malaysian manufacturing firms, Behyan *et al*. (2015) found that a firm's organizational capabilities are positively related to export performance. According to the Uppsala model of internationalization (Johanson and Vahlne 1977, 2003; Johanson and Wiedersheim-Paul, 1975), technological and foreign market knowledge serve as the basis for capabilities that are required during internationalization. For instance, advanced technology can lead to reduction of manufacturing costs, improvement of production quality, and development of innovative products at premium prices. Moreover, effective marketing skills and tactics can increase sales, resulting in financial growth in international markets. Superior marketing capabilities also tend to enhance customer loyalty and perceived quality (Zou *et al*., 2003). Therefore, a firm that develops organizational capabilities related to technology and marketing can improve its export performance in ways that its competitors cannot.

Contingency Theory and Domestic Market Competition as External Antecedent

As an organization theory, contingency theory assumes that no perfect universal strategic choices exist that are optimal to all organizations (Ginsberg and Venkatraman, 1985). Rather, optimal choices or actions are contingent upon particular internal and external situations that require different approaches to handle, manage, and solve the relevant issues. In this view, firm strategies function as reactions to uncertain and unexpected organizational and environmental conditions (Harvey, 1982). Therefore, the situations or contexts that motivate firms to develop various competitive strategies can serve as contingency variables by contributing to differences in performance (Hambrick and Lei, 1985). Such contexts can be external to a firm—such as environmental contingency variables that include economic changes, cultural and social movement, and environment uncertainty (e.g., Ekeiedo and Sivakumar, 1998)—or internal to a firm—such as organizational contingency variables comprising managerial characteristics, style, structure, and systems. This study views domestic market competition as an environmental contingency variable and international entrepreneurial orientation as an organizational contingency variable, both of which relate to the strategy and export performance of Korean SMEs.

Competition is "the process of rivalry between firms striving to gain sales and make profits" (Godfrey, 2008, p.3). The literature indicates that competition offers positive contributions to economic development. High degrees of competition within the domestic market often drive improvement to firm-specific productivity, innovation, and better prices (Godfrey, 2008; Porter, 1990). Previous studies suggest that domestic market competition promotes internationalization (e.g., Fan and Phan, 2007; Yiu *et al*., 2007), higher shares of direct exports in total sales (e.g., Hiep and Nishijima, 2009), and higher export performance (e.g., Goodwin and Pierola, 2015). That is, higher competition in the domestic market motivates firms to export and achieve higher performance. Yet, an explanation for why and how domestic market competition relates to higher export performance remains lacking. This

study views that firms perceiving intense competition, rather than little or no competition, will allocate their resources to building capabilities necessary to compete in international markets. In the following section, why this study views international entrepreneurial orientation as internal contingency variable will be explained.

International Entrepreneurial Orientation as Internal Antecedent

For SMEs with limited financial and managerial resources, various firm orientations— entrepreneurship orientation (e.g., Rialp *et al*., 2005), internationalization orientation (e.g., Behyan *et al*., 2015), innovation orientation (e.g., Knight and Cavusgil, 2004), or learning orientation (e.g., Rhee *et al*., 2010)—are critically important to internationalization. Such orientations are principles (Hakala, 2011) and adaptive cultures (Knight, 2000; Knight and Cavusgil, 2004) that guide the activities and behaviors of firms to enhance their performance and match resources with the environment (Hakala, 2011). In the literature, various orientations have been frequently studied as antecedents of competence/capabilities (e.g., Knight and Cavusgil, 2004) or as moderators between resources and firm performance (e.g., Wiklund and Shepherd, 2003). In particular, this study focuses on entrepreneurial orientation, which has received a significant amount of study in the literature. Entrepreneurial orientation, or entrepreneurial proclivity, refers to an organization's predisposition to accept entrepreneurial processes, practices, and decisions (Matsuno *et al*., 2002). As a strategic orientation, entrepreneurial orientation specifically captures the entrepreneurial inclinations of firm strategies (e.g., Lumpkin and Dess, 1996). Three dimensions that characterize entrepreneurial orientation include innovativeness, risk-taking behavior, and proactiveness. Innovativeness refers to a firm's predisposition to supporting new ideas, choices, creative processes, and changes (Lisboa *et al*., 2011). It is also "a willingness to support creativity and experimentation in introducing new products/services, and novelty, technological leadership and R&D in developing new processes" (Lumpkin and

Dess, 2001, p.431). Risk-taking behavior comprises a firm's willingness to commit to high investments in business despite the high cost of potential failure (Lumpkin and Dess, 1996). Proactiveness reflects the entrepreneurial tendency to anticipate future wants and needs in the marketplace and take initiative by pursuing new opportunities ahead of the competition (Keh *et al*., 2007). Based on these dimensions, entrepreneurial orientation can be described as a firm's strategic posture toward entrepreneurship, including its members' willingness to innovate, take aggressive risks, and proactively pursue new market opportunities.

This study focuses on SME export performance and entrepreneurial orientation as it pertains specifically to internationalization. International entrepreneurial orientation prompts SMEs to adopt innovative, risk-taking, and proactive behaviors in international markets. For instance, SMEs with high levels of international entrepreneurial orientation tend to seek innovative products and services targeting international markets, view foreign markets as opportunities rather than risks, and scout for business opportunities and partners abroad. Zhou *et al*. (2010) noted that new SME exporters rapidly identified international opportunities due to their unique entrepreneurial characteristics and perspectives. SMEs that are strong in these three dimensions (innovation, risk-taking behavior, and proactiveness) are more likely to make strategic decisions to combine relevant resources, cultivate sustainable capabilities (e.g., Autio *et al*., 2000), and upgrade core capabilities in order to succeed in international markets (Knight, 2000; Zhou *et al*., 2010). Entrepreneurial orientation thus functions as a critical factor in both the initiation stage and the subsequent performance outcomes of early internationalization (Knight and Cavusgil, 2004; Oviatt and McDougall, 1994). This implies that SMEs' international entrepreneurial orientation is indicative of whether its internal environment encourages creativity and change toward strategic goals of export. Based on this, this study views international entrepreneurial orientation as an internal contingency variable that facilitates development of SME capabilities.

The Proposed Framework and Hypotheses Development

Built upon RBV and contingency theory, a research framework was proposed incorporating two contingency variables— international entrepreneurial orientation as an internal contingency variable and domestic market competition as an external contingency variable—and two organizational capabilities—technological capabilities and marketing capabilities (see Figure 1). Bridging strategic management and the modern resource-based view, Penrose (1959) emphasized that managers play a key role in the conversion of firm resources into capabilities to create competitive advantages under contingent conditions. Managerial experience, knowledge, and perception often lead to different reactions to volatile environments (Kor and Mahoney, 2004; Penrose, 1959). Strategic choices are, therefore, contingent upon managerial perception. Accordingly, SME managers working in a small market with high competition such as Korea are more likely to consider international expansion and thus strategically build key capabilities (i.e., marketing capabilities and technological capabilities) by combining or reallocating their resources. In addition, entrepreneurial orientation promotes "key strategic initiatives intended to enhance organizational performance" (Knight, 2001, p.165). Consequently, entrepreneurially-oriented SMEs will cultivate their capabilities to achieve strategic goals during internationalization. This paper posits that domestic market competition directly affects both capabilities rather than entrepreneurial orientation, since orientation comprises a firm's adaptive culture (Knight, 2000; Knight and Cavusgil, 2004). Cultivating a spirit of international entrepreneurial orientation within the firm may take some time. When domestic competition is severe, SMEs are more likely to develop capabilities that yield immediate results (i.e., performance) instead of promoting entrepreneurial culture, which is more difficult to develop. In summary, the premise of the proposed model is that both international entrepreneurial orientation and domestic market competition prompt SMEs to develop technological and marketing

capabilities, leading to high export performance. We also tested whether the two organizational capabilities mediate the relationship between international entrepreneurial orientation and export performance. The proposed hypotheses are as follows.

[Insert Figure 1 here]

SMEs with higher levels of international entrepreneurial orientation tend to perform more effectively in international markets because they proactively adopt new technologies and embrace the business risks associated with strategies that target products tailored to needs of foreign customers (Brouthers *et al*., 2015). Entrepreneurially-oriented firms are willing to devote resources to exploiting uncertain opportunities through innovative ideas and risk-taking behavior. Technological capabilities include a firm's ability to develop new products. Knight and Cavusgil (2004) empirically found that a born global firm's entrepreneurial orientation facilities the development of technological competence. Relatedly, several studies discovered that SMEs with strong entrepreneurial orientation are more likely to engage in new product exploration, discovering new innovations that differ significantly from existing products (Covin *et al*., 2006; Dayan *et al*., 2016). Besides these examples, however, very few studies have provided empirical evidence of the relationship between international entrepreneurial orientation and the development of technological capabilities. Yet, given that entrepreneurial orientation motivates strategic behavior leading to internationalization (Knight and Cavusgil, 2004; Zhou *et al*., 2010) and impacts whether an organization achieves the desired business performance (Govindarajan, 1988), SMEs with strong international entrepreneurial orientation will invest in developing their technological capabilities. SMEs with limited financial resources struggle to compete effectively in international markets without technological advancement. For innovative and entrepreneurial SMEs, therefore, the development of new technologies and technology-related capabilities seems only natural

(Schumpeter, 1934). SME innovativeness engenders new ideas and creative processes, reflecting a willingness to depart from existing technologies to create new ones (Lumpkin and Dess, 1996). Proactiveness enables SMEs to develop technologically advanced products ahead of the competition. Instead of passively responding to market changes, entrepreneurially-oriented SMEs take actions to acquire new technological knowledge and meet the diverse latent needs of international customers (Atuahene-Gima and Ko, 2001). Based on this, we hypothesize that

H1: International entrepreneurial orientation positively influences SME technological capabilities.

In addition to building technological capabilities, international entrepreneurial orientation likely facilitates the development of marketing capabilities. SMEs with strong international entrepreneurial orientation seek strategic initiatives to achieve higher performance in international markets (Knight, 2001). Once SMEs enter international markets, marketing capabilities are needed to address consumer needs, differentiate their products and services from those of competitors, and attain their intended strategic goals. Consequently, SMEs with strong international entrepreneurial orientation will invest resources and efforts into developing their marketing capabilities in international markets. The relationship between entrepreneurial orientation and marketing capabilities has been confirmed in diverse settings more substantially than that between entrepreneurial orientation and technological capabilities (Keh *et al*., 2007; Knight, 2000; Martin and Javalgi, 2016; Weerawardena and O'Cass, 2004). In a study of SMEs in Singapore, Keh *et al*. (2007) found that firms with strong entrepreneurial orientation were more likely to acquire and utilize marketing information. Knight (2000) found that internationally entrepreneurial SMEs demonstrated strong marketing, quality leadership, and product specialization. Martin and Javalgi (2016)

further discovered the positive influence of entrepreneurial orientation on the marketing capabilities of Mexican international new ventures. Taken together, we hypothesize that

H2: International entrepreneurial orientation positively influences SME marketing capabilities.

Domestic market saturation and competition can serve as a push factor for internationalization. Previous researchers have suggested that intense industry competition in home markets can prompt SMEs to internationalize early (e.g., Fan and Phan, 2007; Yiu *et al*., 2007). Yiu *et al*. (2007) suggested that high levels of home industry competition often propel firms to seek market opportunities overseas.

For successful entry into international markets, SMEs must develop the necessary capabilities. According to Porter (1990), the presence of intense rivalry in the home market is a powerful stimulus for the creation and persistence of competitive advantage, since it creates pressure for firms to innovate in order to compete. Therefore, rivalries serve as a strong driving force for SMEs to deploy available resources toward developing skills and capabilities needed to compete. By contrast, SMEs that encounter low competition are less motivated to deploy resources toward the development of capabilities.

While previous studies have not explicitly tested the role of domestic market competition in the creation of organizational capabilities, this study predicts the relationship to be positive, since SMEs assume that the presence of severe competition in the domestic market demands greater effort in improving capabilities in order to survive. Both technological and marketing capabilities are needed to effectively compete in international markets. Thus, this study postulates that domestic market competition will facilitate the development of both technological and marketing capabilities.

H3: Domestic market competition positively influences SME technological capabilities.

H4: Domestic market competition positively influences SME marketing capabilities.

Various studies have uncovered the effect of technology-related variables on SME export performance, including technological innovation (Azar and Ciabuschi, 2017), investment in R&D (Lefebvre *et al*., 1998), technological learning (Zahra *et al*., 2000; Zhou *et al*., 2007), and technological competence (Knight and Cavusgil, 2004). For instance, technological innovation enhances export performance (Azar and Ciabuschi, 2017), while product innovations, patents, and process innovations positively influence export intensity as well as the decision to export (Rodriguez and Rodriguez, 2005). Similarly, Lefebvre *et al*. (1998) found that R&D-related capabilities positively affect SME export performance in terms of sales. Advanced and new technology learning from foreign countries also correlates significantly with export performance (Zhou *et al*., 2007). Innovation capabilities, similar to technological capabilities, were also found to enhance quality performance among small IT firms in Pakistan (Ndubisi and Agarwal, 2014). Investment in technological development can reduce manufacturing costs and help differentiate products and services from the competition through innovative designs and functions (Kotabe *et al*., 2002). Adopting cutting-edge technology can improve quality and efficiency in product operation, benefiting SME's export performance. Taken together, we hypothesize that

H5: Technological capabilities positively influence SME export performance.

A firm's marketing capabilities and other marketing related factors are essential to achieving high performance, and the literature confirms their impact on performance in various contexts (e.g., Brouthers *et al*., 2015; Morgan *et al*., 2009; Navarro-García *et al*.,

2016; Zou *et al*., 2003). In a study of U.S. and U.K.-based SME exporters, Brouthers *et al*. (2015) found that SMEs with greater participation in foreign marketing alliances had stronger levels of export performance and the impact was greater for SMEs that also possessed strong marketing capabilities. In a study of Chinese SME exporters, Zou *et al*. (2003) found that export marketing capabilities such as distribution, communication, and pricing enhanced each venture's financial performance in the export market. Similarly, there was a positive effect on performance caused by strategic decisions to adapt marketing mix elements (product, price, communication, and distribution) to suit foreign markets (Navarro-García *et al*., 2016). Through meta-analysis, Krasnikov and Jayachandran (2008) further confirmed that the effect of marketing capabilities on performance was stronger than that of research-and-development and operational capabilities. Martin and Javalgi (2016) discovered the link between marketing capabilities and performance to be stronger than the link between entrepreneurial orientation and performance. Similar to marketing capabilities, marketing orientation—referring to the actual implementation of marketing concepts (Kohli and Jaworski, 1990)—was found to improve performance in international markets among Indian SMEs in Business-to-Business markets (Javalgi *et al*., 2011). While SMEs may be limited in resources, those with embedded marketing capabilities in their routines and practices can find innovative ways to leverage their scant resources to maximize outcomes, resulting in superior export performance in international markets. Based on this, we posit that

H6: Marketing capabilities positively influence SME export performance.

Method

Sample and Data Collection

SMEs in this study were defined as firms that hire less than 300 employees and that report annual sales of less than 150,000 million Korean won (approximately USD 133.5 million), based on the definition established by the Korean Small and Medium Enterprises Act. A sampling frame of 3,000 actively exporting SMEs was developed based on a nationwide database compiled by the Korea Chamber of Commerce and Industry. It excluded SMEs in micro businesses that employed less than 30 employees, as well as SMEs in service industries such as retail and wholesale, since these firms may exhibit different internationalization patterns than those of manufacturing SMEs. A survey company hired for data collection contacted executive personnel from the 3,000 SMEs by email or phone regarding survey participation. A questionnaire and prepaid return envelope were mailed to respondents who agreed to participate. Respondents were assured that their responses were anonymous in order to control social desirability bias. The survey relied on self-reporting by the contacted executive, a limitation that presented issues of low response rate and of generalizing explicit information from implicit thoughts based on fixed points (i.e., Likert scale). However, because of the method's ability to generalize findings and predict similar contexts using relevant factors (e.g., Wilson, 2002; Woodside, 2010), it has been widely used in research on firm behavior. Among the 564 questionnaires that were returned (18.8% return rate), 470 were used in the analyses, excluding incomplete responses.

Measurement

Internal and External Antecedents. The measurement items were drawn from previous studies. SME international entrepreneurial orientation was measured using fourteen items adapted from Zhou *et al.* (2010) that fully captured all three dimensions of entrepreneurial orientation with high reliability (proactiveness α=.816; risk taking α=.735; innovativeness α=.825) compared to that of other general entrepreneurial orientation measures (e.g., Covin and Slevin, 1989; Knight and Cavusgil, 2004; Lumpkin and Dess, 1996). Respondents were

asked to evaluate their level of agreement with each statement (e.g., "our top management actively seeks contact with suppliers or clients in international markets") on a 7-point Likert scale (1=strongly disagree to 7=strongly agree). Domestic market competition was operationalized as the managerial perception of the degree of competition in the domestic market, measured based on three items adapted from Yiu *et al*. (2007).

Organizational Capabilities. Four items measuring technological capabilities (α=.72) were adapted from Knight and Cavusgil (2004). Respondents were asked to rate their firms' technological capabilities compared to those of their competitors on a Likert scale (1=strong disagree to 7= strongly agree). The firms' abilities with regard to technological invention, product innovation, and technological superiority were evaluated. Four items measuring marketing capabilities were developed based on conceptualizations of Knight and Cavusgil (2004)'s international marketing orientation and McKee *et al*. (1992)'s marketing skills. Respondents were asked to rate their firms' knowledge on customers/competitors, advertising effectiveness, ability to use other marketing tools to differentiate products, and effectiveness of pricing compared to competitors.

Export Performance. Previous studies have measured SME export performance based on economic (e.g., sales, profits, and market share), degree (e.g., number of countries and continents exported to), and non-economic indicators (e.g., perceived success about international activities) (Katsikeas *et al*., 2000). The majority of these studies used economic indicators such as sales, profit, market share, return on investment, and/or return on sales (Autio *et al*., 2000; Brouthers *et al*., 2015; Hart and Tzokas, 1999; Kotabe *et al*., 2002; Lefebvre *et al*., 1998; Lu and Beamish, 2001; Nakos *et al*., 1998; Nummela *et al*., 2004; Zahra *et al*., 2000; Zhou *et al*., 2010; Zou *et al*., 2003). Accordingly, this study evaluated financial export performance, which can be measured either objectively or subjectively (e.g., Brouthers *et al*., 2015). This study measured export performance subjectively since SME data

on objective financial performance tends not to be readily available due to managers' reluctance to disclose actual figures (Nakos *et al*., 1998). To measure subjective export financial performance, three items were adapted from Keh *et al*. (2007), all of which were rated on a Likert-type scale ranging from 1 ("strongly disagree") to 7 ("strongly agree"). Respondents were asked to evaluate their performance in major export markets in terms of market share, sales growth, and profitability in foreign markets over the past three years.

Control Variables. Background information on the firms was collected, including the year of firm foundation, number of firm employees, and the first year of foreign market entry. Firm size was measured as a continuous variable by the number of full-time employees, and firm age was operationalized as the number of years during which the firm existed (Zahra *et al*., 2006). Appendix I displays these measurement items.

Results

Sample Characteristics

Descriptive statistics of the collected data showed that many of the firms were established in the 1990s (42.3%), began exporting in the early 2000s (50.0%), and were small-sized firms with less than 100 employees (75.6%, mean = 78). Average total sales in 2013 were $24,003,000, and average sales from exports reached $6,627,000. The sample encompassed a wide range of small and medium-sized manufacturers, ranging in specialty from agricultural/marine and textiles/apparel products to chemicals and machinery. The respondents included CEOs and executives (11.8%), upper level managers (72.9%), and general managers (15.3%). The average number of years spent at working at these firms was 9 years.

Preliminary Data Analyses

A principal component analysis with orthogonal Varimax rotation was utilized to test each measure's dimensionality. The requirement of eigenvalues greater than 1.0 and factor loadings exceeding .50 were adopted for factor identification. While the 14 items that measured international entrepreneurial orientation were expected to represent three dimensions (proactiveness, risk-taking behavior, and innovativeness), the factor analysis produced one factor with a range of .61 to .84 after four items with low factor loadings were removed. Those four removed items included the following: 1) Our top managers have regularly attended local/foreign trade fairs; 2) When confronted with decisions about exporting or other international operations, our top management is always tolerant of potential risks; 3) Our top management always encourages new product ideas for international markets; and 4) Our top management is very receptive to innovative ways of exploiting international market opportunities. The average of all ten items formed the final scale for international entrepreneurial orientation. The remaining multi-item measures (i.e., domestic market competition, technological capabilities, marketing capabilities, and performance) were found to be unidimensional.

Measurement Model

The statistical analyses in this study were performed using a PLS-SEM model with SmartPLS 3.0. Partial least squares (PLS) is a causal-predictive method of analysis in which theoretical knowledge is limited and the exploration of relationships among constructs is emphasized in order to test and validate a model (Chin, 1998b). Moreover, it enables assessment of the psychometric properties of the measurement model, estimation of the structural model's parameters, and comparison of parameters among heterogeneous subgroups such as countries and cultures (Henseler *et al*., 2009). Because of these strengths, PLS modeling has become popular in empirical research on international marketing (Henseler *et al*., 2009). It was also deemed appropriate to exploring the internal (international entrepreneurial orientation) and

external (domestic market competition) firm environments of Korean SMEs, since the antecedents of organizational capabilities have not been thoroughly investigated.

Table 1 presents the results of the measurement item assessment, which show that the composite reliability (CR) values of all multi-item measurements ranged from 0.77 for marketing capabilities to 0.90 for international entrepreneurial orientation. Since the acceptable level of CR is 0.70 (Nunnally and Bernstein, 1994), all scales showed satisfactory reliability. Discriminant validity was assessed using average variance extracted (AVE), which required a value greater than 0.5 (Fornell and Larcker, 1981). Discriminant validity among the constructs was tested by examining whether the squared correlation between the two constructs was lower than the AVE for each construct (Fornell and Larcker, 1981). These conditions were met, indicating that the constructs investigated in the study were distinct from each other, confirming discriminant validity. Additionally, each item's factor loading on its respective construct was greater than the 0.70 benchmark and statistically significant based on the *t*-statistics of the loadings, indicating convergent validity. The reliability of each multi-item scale was assessed using Cronbach's alpha values, which ranged from 0.94 (marketing capabilities) to 0.74 (export performance and technological capabilities) as shown on Table 1, indicating acceptable internal reliability for all measures.

[Insert Table 1 here]

Structural Model

Variance explained (R^2) and path coefficients (β) are often used in PLS modeling to assess the structural model (Dayan *et al*., 2016; Moreno and Casillas, 2008). Based on the example of Chin (1998a), the bootstrapping procedure was performed to examine R^2 and the statistical significance of path coefficients (β) through *t*-tests.

For the variance explained, a value greater than or equal to 0.1 is suggested (Falk and Miller, 1992). The results of all R^2 values indicate an acceptable explanatory power with a range of .311 to .604. Within this range, the maximum predictive power indicates the degree to which the firm possesses technological capabilities (R^2 = 60.4%). The variance explained was 31.1% for marketing capabilities and 42.1% for export performance. To generate standard error and t-statistics, bootstrapping (1,000 resamples) was used, as suggested by Chin (1998a) and Moreno and Casillas (2008). According to Chin (1998a), standardized path coefficients of at least 0.2 are considered significant (see Figure 2).

[Insert Figure 2 here]

Hypotheses Testing

Figure 2 presents the results of hypotheses testing based on path significance and variance explained (R^2). Firm age and firm size were controlled, possibly affecting export performance (e.g., Brouthers *et al*., 2015; Nakos *et al*.,1998; Navarro-García *et al*., 2016), though these factors were found to be insignificant across all proposed paths.

H1 and H2 hypothesized a positive effect from international entrepreneurial orientation on technological and marketing capabilities. The results showed that international entrepreneurial orientation indeed yielded a significant positive effect on technological ($\beta = .53$, $p < .001$) and marketing capabilities ($\beta = .28$, $p < .01$), supporting H1 and H2. Thus, SMEs that scored high on international entrepreneurial orientation were more likely to possess strong levels of these capabilities.

H3 predicted a positive influence from domestic market competition on technological capabilities; the effect was significant ($\beta = .36$, $p < .001$), thus supporting H3. Similarly, domestic market competition had a significant positive influence on marketing capabilities ($\beta = .28$, $p < .01$), confirming H4. The results indicated that SMEs with strong home market competition appeared to develop their own technological and marketing capabilities.

Tests with technological and marketing capabilities as independent variables and export performance as a dependent variable revealed that both technological ($\beta = .40$, $p < .001$) and marketing capabilities ($\beta = .29$, $p < .01$) yielded significant positive effects on export performance, supporting H5 and H6. As hypothesized, SMEs with stronger capabilities showed stronger export performance compared to those with weaker capabilities.

Mediation Analysis. To gain a better understanding of the role of the two capabilities in our model, potential mediating effects on the linkage between international entrepreneurial orientation and export performance were explored. Following Preacher and Hayes (2008)'s suggestion, the bootstrapping procedure was adopted. First, the direct effect from international entrepreneurial orientation on export performance should be significant without the mediating variables (technological and marketing capabilities), which was proved in our analysis ($\beta = 0.49$, $p < 0.001$) (see Figure 3A). Second, the significance of indirect effects and associated t-values were assessed after entering each capability as a moderator. As a necessary condition, two direct effects (EO - TC and TC – PERM in Model B and EO - MC and MC – PERM in Model C) should be significant (Baron and Kenny, 1986; Preacher and Hayes, 2008), which was found to be true as shown in Figure 3. When each mediator was entered, international entrepreneurial orientation no longer had a significant direct effect on export performance in Model B (c^1: 0.49, $p < 0.001 \rightarrow 0.04$, n.s.) and Model C ($c^2$: 0.49, $p < 0.001 \rightarrow 0.03$, n.s.). The results collectively indicated that the indirect effect of international entrepreneurial orientation on export performance through technological (.29) and marketing capabilities (.13) was significant (see Table 2). The results of testing a bias-corrected 95% bootstrap confidence interval for two indirect effects showed that these intervals do not contain zero, suggesting that each mediated relationship was significantly different from zero at a 95% confidence level (Preacher and Hayes, 2008). This offered evidence for the existence of a mediating relationship (see Table 2). To further examine the existence of full

mediation, the variance accounted for (VAF) metric was computed using the following formula: total effect divided by indirect effect. According to Hair *et al*. (2013), full mediation is demonstrated when the VAF value exceeds .8. The results yielded a VAF value of .90 (.29/.32) in Model B and .81 (.13/.16) in Model C, as shown in Figure 3, confirming that technological and marketing capabilities fully mediated the influence of international entrepreneurial orientation on export performance.

[Insert Table 2 here]

[Insert Figure 3 here]

Discussion and Implications

SMEs must optimize their limited resources to develop capabilities that are important in achieving high performance in international markets. The development of such capabilities may become heightened when international entrepreneurial orientation is internally high and when the firm is externally faced with severe domestic competition. With this in mind, a research framework was proposed based on RBV and contingency theory and tested with data collected from 470 Korean SMEs. The findings of this study supported all the proposed hypotheses. The following discussion highlights the study's major findings.

First, this study confirmed that higher international entrepreneurial orientation correlates with stronger technological (H1) and marketing capabilities (H2), indicating that the internal creative spirit of SME entrepreneurial orientation does facilitate the development of both capabilities, as suggested by many earlier studies (e.g., Dayan *et al*., 2016; Keh *et al*., 2007; Knight and Cavusgil, 2004; Martin and Javalgi, 2016). While the essential role of international entrepreneurial orientation in export performance has been explained previously (Knight, 2000; Knight, 2001; Knight and Cavusgil, 2004; Oviatt and McDougall, 1994), this study delved further into the full mediating effects of organizational capabilities between international entrepreneurial orientation and export performance. This implies that SME

international entrepreneurial orientation itself may not automatically lead to export performance. Only when entrepreneurial orientation facilitates technological and marketing capabilities does this effect occur, directly promoting export performance (H5 and H6).

Second, this study discovered the role of domestic market competition in facilitating both technological (H3) and marketing capabilities (H4). The competitive domestic market often pushes SMEs to international markets (e.g., Fan and Phan, 2007; Yiu *et al*., 2007). However, this study demonstrates that the role of domestic market competition accounts for more than just incentivizing SMEs to expand internationally. It finds that such competition encourages SMEs to develop their own capabilities to succeed in these international markets. This finding proves particularly encouraging to SMEs in small domestic markets such as Korea, since a competitive domestic market may at times function as an advantage. It corroborates Porter (1990)'s notion that intense rivalry creates constant pressure for firms to innovate (Porter, 1990). Lumpkin and Dess (1996) also suggested that competitive advantage likely results from innovative efforts under competitive and dynamic environments.

Third, as hypothesized, both technological (H5) and marketing capabilities (H6) were discovered to act as significant enablers for SMEs pursuing enhanced export performance, thus supporting previous findings (Krasnikov and Jayachandran, 2008; Theodosiou *et al*., 2012). Furthermore, technological capabilities (H5) ($\beta = .40$, $p < .001$) had a stronger impact on export performance than did marketing capabilities (H6) ($\beta = .29$, $p < .01$). However, this finding is inconsistent with that of Krasnikov and Jayachandran's (2008) study, which found marketing capabilities to have stronger effects. This may be explained by the fact that our sample consisted of Korean SMEs, while Krasnikov and Jayachandran (2008)'s finding was based on meta-analysis. Indeed, Korean SMEs with few resources may invest their resources in developing technological capabilities more than marketing capabilities because, without technological advancement, they may not prove comparable to their international competitors.

Resource-poor SMEs frequently prioritize core technological and operational capabilities concerning product development or process innovation, and for this reason they frequently lack internal marketing capabilities (Coviello and Munro, 1995). The findings of this study also support this reasoning. The entrepreneurial orientation of Korean SMEs facilitates the development of technological capabilities (H1) ($\beta = .53$, $p < .001$) more than that of marketing capabilities (H2) ($\beta = .28$, $p < .01$). Similarly, domestic market competition also prompts the development of technological capabilities (H3) ($\beta = .36$, $p < .001$) more than marketing capabilities (H4) ($\beta = .28$, $p < .01$). The relative importance of technological capabilities, however, may depend on differences between SMEs and large firms or between U.S. firms and non-U.S. firms. Therefore, further studies are needed to confirm this relationship. Another reason may be explained by the fact that product innovation is largely associated with the concept and measurement of technological capabilities in the literature (e.g., Kotabe *et al*., 2002; Teece *et al*.,1997; Zahra *et al*., 2000). Innovation is broadly defined as the development of new products, production processes, business practices, or forms of organization (Sundbo, 1991), as well as a unique introduction of combined resources (Penrose, 1959). Consequently, innovation is not limited to technological features. The dominant role of technological capabilities over marketing capabilities may be due to the inclusion of innovation only in the measurement of technological capabilities. If innovation concepts are included in conceptualizing and measuring marketing capabilities, the results might be different.

This study provides several insightful academic implications. First, there are certain types of capabilities that firms should develop to achieve different strategic goals, as export performance cannot be entirely fulfilled by one type of capability. Unlike large firms that enjoy abundant resources for the development of diverse capabilities, SMEs that lack resources should focus on nurturing capabilities that directly relate to their immediate

strategic purposes, such as export performance. Previous studies have directed more attention to marketing capabilities than to technological capabilities, preventing the discovery of the relative importance of varying capabilities. By incorporating two types of organizational capabilities into a research framework, this study provides empirical evidence for the relationship between the various capabilities and performance. While a meta-analysis was conducted to discern the diverse impact of different organizational capabilities on performance (e.g., Krasnikov and Jayachandran, 2008), this empirical study is among the first to apply the context of SME exports to international markets.

Second, by linking RBV research with contingency theory, this study implies that organizational capabilities can be a function of the combined effect from an SME's internal and external environment. This approach is unique in that entrepreneurial orientation is often perceived to be an antecedent of internal capabilities in the current literature. Together, the results of this study suggest that SME capabilities can be optimally cultivated when both internal impetus (i.e., international entrepreneurial orientation) and harsh external environment (i.e., domestic competition) coexist, thus demonstrating that context matters in developing capabilities. This finding encourages scholars to investigate how external environment contingency factors might be related to SME capability development.

Third, the finding of a full mediating effect from organizational capabilities between international entrepreneurial orientation and export performance adds new insight to the literature. In explaining the inconsistent relationship between international entrepreneurial orientation and international performance (Lumpkin and Dess, 1996), the literature found a partial mediation effect from knowledge-reconfiguring capabilities (Jantunen *et al*., 2005) and acquisition/utilization of marketing information (Keh *et al*., 2007), a full mediating effect through market orientation (Matsuno *et al*., 2002), and a mixture of full and partial mediating effects through network and knowledge capabilities upgrading (Zhou *et al*., 2010). The full

mediating roles of organizational capabilities found in this study provides an additional perspective in understanding the link and clarifying the role that organizational capabilities contribute to it.

From a practitioner standpoint, these results also offer insight to SMEs in terms of internationalization endeavors. Capabilities are integral to a firm's success. This study explains the positive role played by international entrepreneurial orientation in the creation of such capabilities. SMEs should facilitate entrepreneurially-oriented behaviors so that they can foster creativity, remain open to change, and continually seek ways to enhance their competitive positioning. At the same time, since an SME's acute perception of the competitive domestic market relates to capability development, firms should remain aware of environmental changes. Moreover, government and trade organization in small countries such as Korea can provide diverse workshops targeting firms with different characteristics. This support offered to small- and medium-sized export firms can enable cultivation of firm capabilities to overcome resource limitations. The findings also suggest that both technological and marketing capabilities should be developed for heightened export performance, even though technological capabilities contribute more to high performance in international markets. However, most output related to SME technological capabilities, such as inventions or new product development, tends to be prone to imitation (Krasnikov and Jayachandran, 2008). For this reason, SMEs should remain vigilant to changes in consumer needs while honing their technological capabilities. Export marketers are advised to invest resources in understanding foreign markets and maximizing their marketing capabilities to target international consumers and achieve fruitful export performance.

Limitations and Future Studies

The findings of this study provide accurate understanding of the proposed relationships, since firm size and firm age were controlled for SMEs in Korea. Yet, these findings may stem from

the specific context of this study. For this reason, generalization to SMEs in other countries would require further investigation. Beyond the two types of capabilities examined in this study, inclusion of other capabilities, such as networking capabilities for their importance in B2B marketing, would allow for more comprehensive understanding of their specific roles. Capability development may be related to specific international markets that SMEs choose to enter (e.g., developed countries versus developing countries). Future studies can therefore direct efforts to identifying the potential role of entry markets.

References

Atuahene-Gima, K. and Ko, A. (2001), "An empirical investigation of the effect of market orientation and entrepreneurship orientation alignment on product innovation", *Organization Science*, Vol. 12 No. 1, pp. 54-74.

Autio, E., Sapienza, H.J. and Almeida, J.G. (2000), "Effects of age at entry, knowledge intensity, and imitability on international growth", *Academy of Management*, Vol. 43 No. 5, pp. 909-24.

Azar, G. and Ciabuschi, F. (2017), "Organizational innovation, technological innovation, and export performance: the effects of innovation radicalness and extensiveness", *International Business Review*, Vol. 26 No. 2, pp. 324-36.

Barney, J.B. (1991), "Firm resources and sustainable competitive advantage", *Journal of Management*, Vol. 17 No. 1, pp. 99-120.

Baron, R.M. and Kenny, D.A. (1986), "The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical consideration", *Journal of Personality and Social Psychology*, Vol. 51 No. 6, pp. 1173-82.

Behyan, M., Mohamad, O. and Omar, A. (2015), "Influence of internationalization orientation on export performance: in the perspective of Malaysian manufacturing firms", *Journal of Business & Industrial Marketing*, Vol. 30 No. 1, 83-95.

Brouthers, K. D., Nakos, G. and Dimitratos, P. (2015), "SME entrepreneurial orientation, international performance, and the moderating role of strategic alliances", *Entrepreneurship Theory and Practice*, Vol. 39 No. 5, 1161-87.

Caruso, A. (2015, February), *Statistics of U.S. Businesses Employment and Payroll Summary: 2012*, U.S. Census Bureau, Washington, DC.

Chen, J., Sousa, C.M.P. and Xinming, H. (2016), "The determinants of export performance: a review of the literature 2006-2014", *International Marketing Review*, Vol. 33 No. 5, pp. 626-70.

Chin, W.W. (1998a), "Issues and opinion on structural equation modeling", *MIS Quarterly*, Vol. 22 No. 1, pp. 7–15.

Chin, W.W. (1998b), "The partial least squares approach to structural equation modeling", in G.A. Marcoulides (Ed.), Modern Methods for Business Research, Lawrence Erlbaum Associates, London, pp. 295-236.

Collis, D.J. (1994), "Research note: how valuable are organizational capabilities?", *Strategic Management Journal*, Vol. 15, No. S1, pp. 143–52.

Coviello, N.E. and Munro, H.J. (1995), "Growing the entrepreneurial firm: networking for international market development", *European Journal of Marketing*, Vol. 29 No. 7, pp. 49-61.

Covin, J.G., Gree, K.M. and Slevin, D.P. (2006), "Strategic process effects on the entrepreneurial orientation-sales growth rate relationship", *Entrepreneurship, Theory and Practice*, Vol. 30 No. 1, pp. 57-81.

Covin, J.G. and Slevin, D.P. (1989), "Strategic management of small firms in hostile and benign environments", *Strategic Management Journal*, Vol. 10, No. 1, pp. 75–87.

Day, G. (1994), "The capabilities of market-driven organizations", *Journal of Marketing*, Vol. 58 No. 4, pp. 37-52.

Dayan, M., Zacca, R., Husain, Z., Benedetto, A.D. and Ryan, J.C. (2016), "The effect of entrepreneurial orientation, willingness to change, and development culture on new product exploration in small enterprises", *Journal of Business & Industrial Marketing*, Vol. 31 No. 5, pp. 668-83.

Department for Business Innovation & Skills (2015, October 14), *Business Population Estimates for the UK and Regions 2015*, The U.K. Government, Sheffield.

Ekeiedo, I. and Sivakumar, K. (1998), "Foreign market entry mode choice of service firms: a contingency perspective", *Journal of the Academy of Marketing Science*. Vol . 26 No. 4, pp. 274-92.

Fan, T. and Phan, P. (2007), "International new ventures: revisiting the influences behind the 'born-global' firm", *Journal of International Business Studies*, Vol. 38 No. 7, pp. 1113-31.

Falk, R.F. and Miller, N.B. (1992), *A Primer for Soft Modeling*, The University of Akron, Akron, OH.

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.

Ginsberg, A., and Venkatraman, N. (1985), "Contingency perspectives of organizational strategy: a critical review of the empirical research", *Academy of Management*, Vol. 10 No. 3, pp. 421-34.

Godfrey, N. (2008), "Why is competition important for growth and poverty reduction." Organization for Economic Cooperation and Development (OECD) Investment Division. Department of International Development: London 4.

Goodwin, T.K. Castro, P. and Martha D. (2015), *Export Competitiveness: Why Domestic Market Competition Matters*. Public policy for the private sector; Note No. 348, World Bank Group. Washington, D.C. Available at: http://documents.worldbank.

org/curated/en/432141468189538318/Export-competitiveness-Why-Domestic-Market-Competition-Matters [Accessed 17 July 2017].

Govindarajan, V. (1988), "A contingency approach to strategy implementation at the business unit level: integrating administrative mechanism with strategy", *Academy of Management Journal,* Vol. 31 No. 4, pp. 828-53.

Grant, R.M. (1991), "The resource-based theory of competitive advantage: implications for strategy formulation", *California Management Review,* Vol. 33 No. 3, pp. 114-35.

Hair, J.F., Hult, G.T.M. Ringle, C.M. and Sarstedt, M. (2013), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Sage, Thousand Oaks, CA.

Hambrick, D.C. and Lei, D. (1985), "Toward an empirical prioritization of contingency variables for business strategy?", *Academy of Management Journal,* Vol. 28 No. 4, pp. 763-88.

Hakala, H. (2011), "Strategic orientations in management literature: three approaches to understanding the interaction between market, technology, entrepreneurial and learning orientations, *International Journal of Management Reviews*, Vol. 13 No. 2, pp. 199-217.

Hart, S. and Tzokas, N. (1999), "The impact of marketing research activity on SME export performance: evidence from the UK", *Journal of Small Business Management*, Vol. 37 No. 2, pp. 63-75.

Harvey, D.F. (1982), *Strategic Management,* Merrill, Columbus, OH.

Henseler, J., Ringle, C. and Sinkovics, R. (2009), "The Use of Partial Least Squares Path Modeling in International Marketing", in Sinkovics, R.R. and Ghauri, P.N. (Ed.), *Advances in International Marketing*, Vol. 20, Emerald Group Publishing Limited, pp. 277-319.

Hiep, N. and Nishijima, S. (2009), *Export Intensity and Impacts from Firm Characteristics*

Domestic Competition and Domestic Constraints in Vietnam: A Micro-data Analysis, No. 238, Research Institute for Economics and Business Administration, Kobe University, Japan.

Jantunen, A., Puumalainen, K. Saarenketo, S. and Kylaheiko, K. (2005), "Entrepreneurial orientation, dynamic capabilities and international performance", *Journal of International Entrepreneurship*, Vol. 3 No. 3, pp. 223-43.

Javalgi, R.G., Todd, P. and Granot, E. (2011), "The internationalization of Indian SMEs in B-to-B markets", *Journal of Business & Industrial Marketing,* Vol. 26 No. 7, pp. 542-48.

Johanson, J. and Vahlne, J.E. (1977), "The internationalization process of the firm-a model of knowledge development and increasing foreign market commitments", *Journal of International Business Studies*, Vol. 8 No. 1, pp. 23-32.

Johanson, J. and Vahlne, J.E. (2003), "Business relationship learning and commitment in the internationalization process", *Journal of international entrepreneurship*, Vol. 1 No., pp. 83-101.

Johanson, J. and Wiedersheim-Paul, F. (1975), "The internationalization of the firm—four Swedish cases", *Journal of management studies*, Vol. 12 No. 3, pp. 305-23.

Katsikeas, C.S., Leonidou, L.C. and Morgan, N.A. (2000), "Firm-level export performance assessment: review, evaluation, and development", *Journal of the Academy of Marketing Science*, Vol. 28 No. 4, pp. 493-511.

Keh, H.T., Nguyen, T.T.M. and Ng, H.P. (2007), "The effects of entrepreneurial orientation and marketing information on the performance of SMEs", *Journal of Business Venturing*, Vol. 22 No. 4, pp. 592-611.

Knight, G. (2000), "Entrepreneurship and marketing strategy: the SME under globalization", *Journal of International Marketing*, Vol. 8 No. 2, pp. 12-32.

Knight, G. (2001), "Entrepreneurship and strategy in the international SME", *Journal of International Management*, Vol. 7 No. 3, pp. 155-71.

Knight, G.A. and Cavusgil, S.T. (2004), "Innovation, organization capabilities, and the born global firm", *Journal of International Business Studies,* Vol. 35 No. 2, pp. 124-41.

Kohli, A.K. and Jaworski, B.J. (1990), "Market orientation: the construct, research propositions, and managerial implications", *Journal of Marketing,* Vol. 54 No. 2, pp. 1-18.

Kor, Y.Y. and Mahoney, J.T. (2004), "Edith Penrose's (1959) contributions to the resource-based view of strategic management", *Journal of Management Studies*, Vol. 41 No. 1, pp.183-91.

Kotabe, M., Srinivasan, S. and Aulakh, P. (2002), "Multinationality and firm performance: the moderating role of R&D and marketing capabilities", *Journal of International Business Studies,* Vol. 33 No. 1, pp. 79-97.

Krasnikov, A. and Jayachandran, S. (2008), "The relative impact of marketing, research-and development, and operations capabilities on firm performance", *Journal of Marketing,* Vol. 72 No. 4, pp. 1-11.

Lefebvre, E., Lefebvre, L.A. and Bourgault, M. (1998), "R&D-related capabilities as determinants of export performance", *Small Business Economics*, Vol. 10 No. 4, pp.365-77.

Lisboa, A., Skarmeas, D. and Lages, C. (2011), "Entrepreneurial orientation, exploitative and explorative capabilities, and performance outcomes in export markets: a resource-based approach", *Industrial Marketing Management*, Vol. 40 No. 8, pp. 1274-84.

Lu, J.W. and Beamish, P.W. (2001), "The internationalization and performance of SMEs", *Strategic Management Journal*, Vol. 22 No. 6-7, pp.565-86.

Lumpkin, G.T. and Dess, G.G. (1996), "Clarifying the entrepreneurial orientation construct and linking it to performance", *Academy of Management Review,* Vol. 21 No. 1, pp. 135-72.

Lumpkin, G.T. and Dess, G.G. (2001), "Linking two dimensions of entrepreneurial orientation to firm performance: the moderating role of environment and industry life cycle", *Journal of Business Venturing*, Vol. 16 No. 5, pp. 429-51.

Martin, S.L. and Javalgi, R.G. (2016), "Entrepreneurial orientation, marketing capabilities and performance: the moderating role of competitive intensity on Latin American international new ventures", *Journal of Business Research*, Vol. 69 No. 6, pp. 2040-51.

Matsuno, K., Mentzer, J.T. and Özsomer, A. (2002), "The effects of entrepreneurial proclivity and market orientation on business performance", *Journal of Marketing*, Vol. 66 No. 3, pp. 18-32.

McKee, D., Jeffery, C. Varadarajan P.R. and Michael, M. (1992), "Success-producer and failure-preventer marketing skills: a social learning theory interpretation", *Journal of the Academy of Marketing Science*, Vol. 20 No. 1, pp. 17–26.

Morgan, N.A., Vorhies, D.W. and Mason, C.H. (2009), "Market orientation, marketing capabilities, and firm performance", *Strategic Management Journal*, Vol. 30 No. 8, pp. 909-20.

Moreno, A.M. and Casillas, J.C. (2008), "Entrepreneurial orientation and growth of SMEs: a causal model", *Entrepreneurship Theory and Practice*, Vol. 32 No. 3, pp. 507-28.

Nakos, G., Brouthers, K.D. and Brouthers, L.E. (1998), "The impact of firm and managerial characteristics on small and medium-sized Greek firms' export performance", *Journal of Global Marketing*, Vol. 11 No. 4 pp.23-47.

Navarro-García, A., Peris-Oritz, M. and Barrera-Barrera, R. (2016), "Market intelligence

effect on perceived psychic distance, strategic behaviours and export performance in industrial SMEs", *Journal of Business & Industrial Marketing*, Vol. 31 No. 3, pp. 365-80.

Ndubisi, N.O. and Agarwal, J. (2014), "Quality performance of SMEs in a developing economy: direct and indirect effects of service innovation and entrepreneurial orientation", *Journal of Business & Industrial Marketing*, Vol. 29 No. 6, pp.454-68.

Nunnally, J.C. and Bernstein, I.H. (1994), *Psychometric Theory*, 3rd ed., McGraw-Hill, New York, NY.

Nummela, N., Saarenketo, S. and Puumalainen, K. (2004). "A global mindset – a prerequisite for successful internationalization?", *Canadian Journal of Administrative Sciences*, Vol. 21 No. 1, pp.51-64.

Organization for Economic Co-operation and Development (2015, October), *"Better Policies" Series Korea*, OCED, Paris.

Oviatt, B.M. & McDougall, P.P. (1994), "Toward a theory of international new ventures", *Journal of International Business Studies*, Vol. 25 No. 1, pp.45-64.

Penrose, E.T. (1959), *The Theory of the Growth of the Firm*, John Wiley, New York, NY.

Porter, M.E. (1990), *The Competitive Advantage of Nations*, The Free Press, New York, NY.

Preacher, K.J. and Hayes, A.F. (2008), "Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models", *Behavior Research Methods*, Vol. 40 No. 3, pp.879-91.

Rhee, J., Park, T. and Lee, D.H. (2010), "Drivers of innovativeness and performance for innovative SMEs in South Korea: mediation of learning orientation", *Technovation*, Vol. 30 No. 1, pp. 65-75.

Rialp, A., Rialp, J. and Knight, G.A. (2005), "The phenomenon of early internationalizing

firms: what do we know after a decade (1993-2003) of scientific inquiry?", *International Business Review*, Vol. 14 No. 2, pp. 147-66.

Rodriguez, J.L. and Rodriguez, R.M.G. (2005), "Technology and export behaviour: a resource-based view approach", *International Business Review*, Vol. 14 No. 5, pp. 539-57.

Schumpeter, J.A. (1934), *The Theory of Economic Development,* Harvard University Press, Cambridge, MA.

Small and Medium Business Corporation (2014), *Status of Korean SMEs*, Available at: http://home.sbc.or.kr/sbc/eng/contents/status.jsp. [Accessed 1 Oct. 2016].

Sundbo, J. (1991), "Strategic paradigms as a frame of explanation of innovations: a theoretical synthesis", *Entrepreneurship & Regional Development,* Vol. 3, pp. 159-173.

Teece, D.J., Pisano G. and Shuen, G. (1997), "Dynamic capabilities and strategic management", *Strategic Management Journal*, Vol. 18 No. 7, pp. 509-33.

Theodosiou, M., Kehagias, J. and Katsikea, E. (2012), "Strategic orientations, marketing capabilities and firm performance: an empirical investigation in the context of frontline managers in service organizations", *Industrial Marketing Management* Vol. 41 No. 7, pp.1058-70.

Weerawardena, J. and O'Cass, A. (2004), "Exploring the characteristics of the market-driven firms and antecedents to sustained competitive advantage", *Industrial Marketing Management*, Vol. 33 No. 5, pp. 419-28.

Wiklund, J. and Shepherd, D.A. (2003), "Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized business", *Strategic Management Journal*, Vol. 24, pp.1307-14.

Wilson, T. (2002), *Strangers to Ourselves: Discovering the Adaptive Unconscious*, Belknap

Press of Harvard University Press, Cambridge, MA.

Woodside, A.G. (2010), "Bridging the chasm between survey and case study research: research methods for achieving generalization, accuracy, and complexity", *Industrial Marketing Management*, Vol. 39 No. 1, pp. 64-75.

Yiu, D.W., Lau, C. and Bruton, G.D. (2007), "International venturing by emerging economy firms: the effects of firm capabilities, home country networks, and corporate entrepreneurship", *Journal of International Business Studies*, Vol. 38 No. 4, pp. 519-40.

Zahra, S., Ireland, R.D. and Hitt, M.A. (2000), "International expansion by new venture firms: international diversity, mode of market entry, technological learning, and performance", *Academy of Management Journal*, Vol. 43 No. 5, pp. 925-50.

Zahra, S., Sapienza, H. and Davidsson, P. (2006), "Entrepreneurship and dynamic capabilities: a review, model and research agenda", *Journal of Management Studies*, Vol. 43 No. 4, pp. 917–55.

Zhou, L., Wu, W.P. and Luo, X. (2007), "Internationalization and the performance of born-global SMEs: the mediating role of social networks", *Journal of International Business Studies*, Vol. 38 No. 4, pp. 673-90.

Zhou, L., Barnes, B.R. and Lu, Y. (2010), "Entrepreneurial proclivity, capability upgrading and performance advantage of newness among international new ventures", *Journal of International Business Studies*, Vol. 41 No. 5, pp. 882-905.

Zou, S., Fang, E. and Zhao, S. (2003), "The effect of export marketing capabilities on export performance: an investigation of Chinese exporters", *Journal of International Marketing*, Vol. 11 No. 4, pp. 32-55.

Figure 1. The proposed research framework with hypotheses

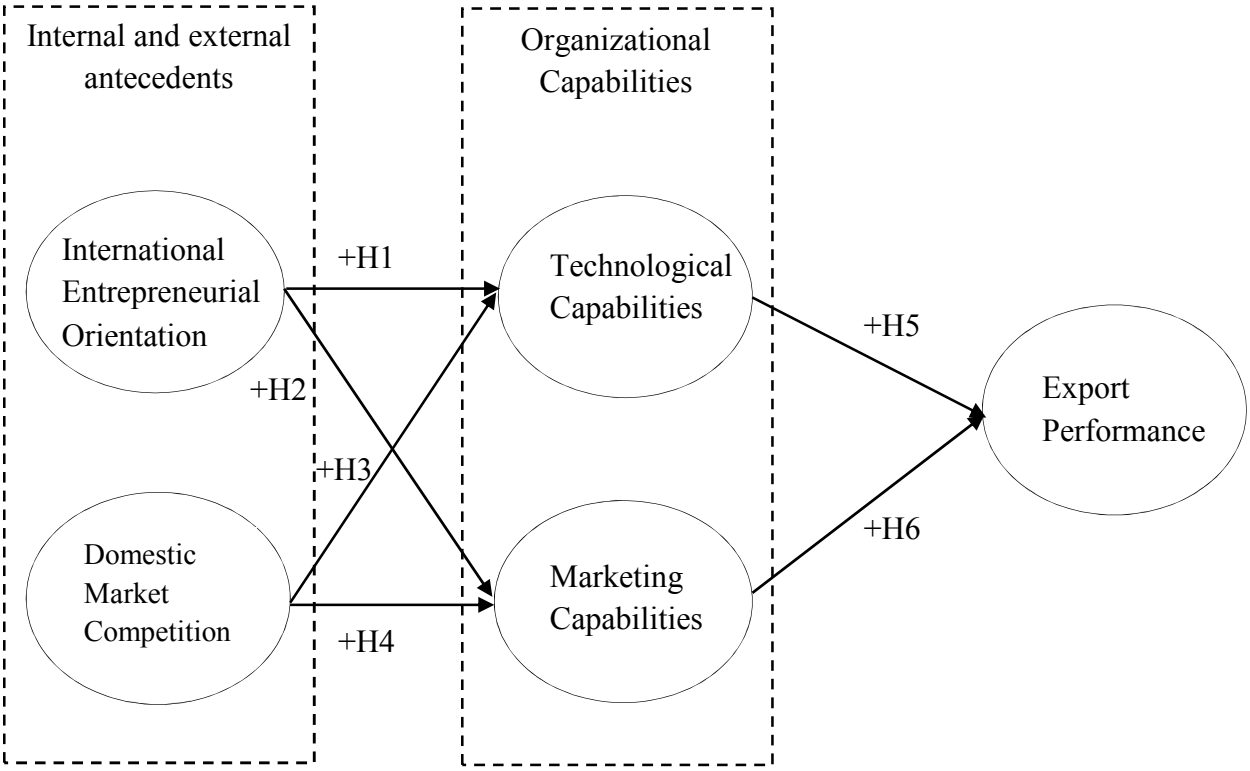
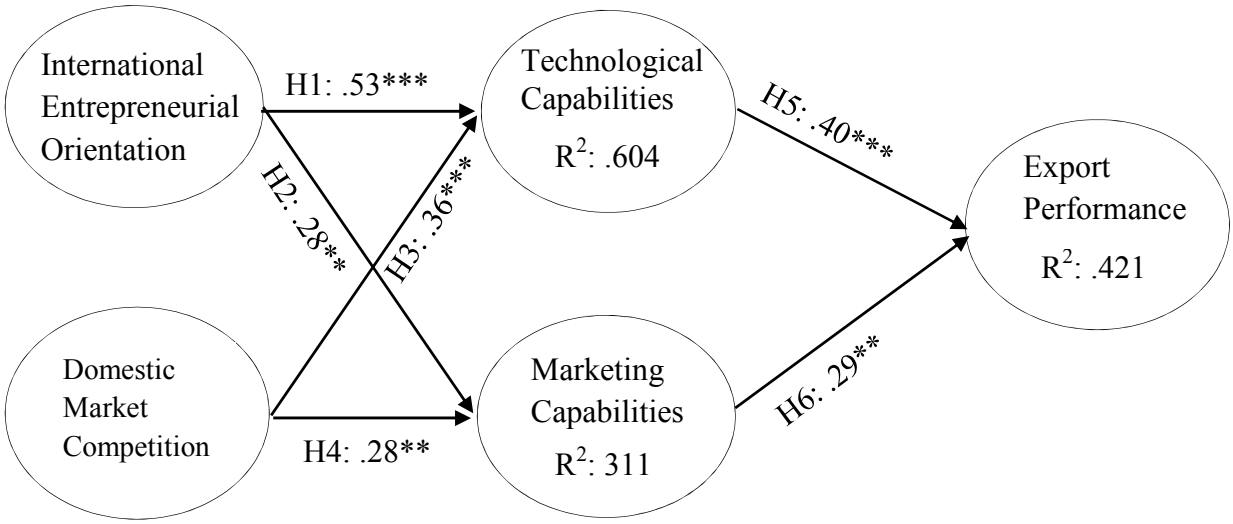


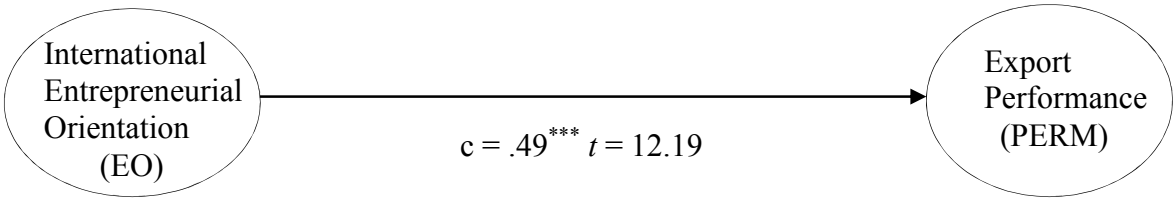
Figure 2. The results of the hypotheses testing



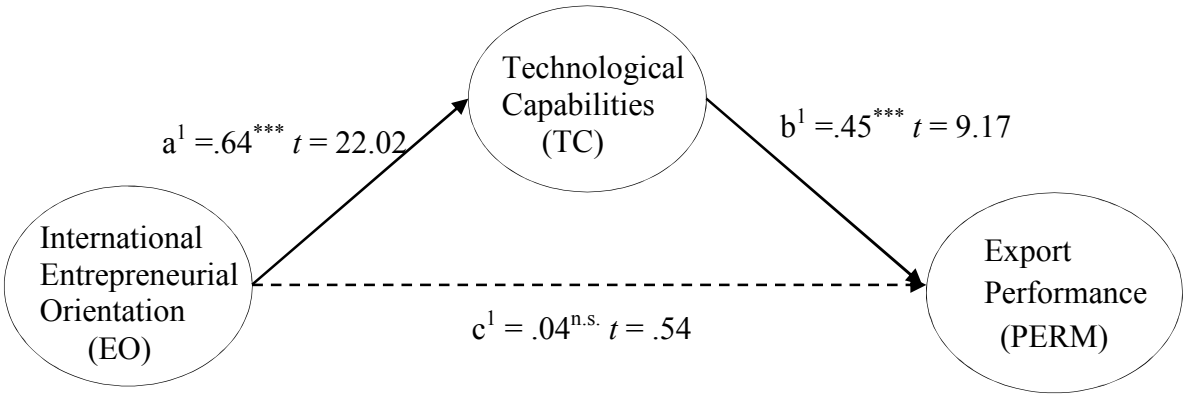
Note: Firm size and firm age are controlled.
**p <.01; ***p <.001

Figure 3. Testing the mediating effects of two capabilities between international entrepreneurial orientation and export performance

Model A. Direct effect of EO on PERM

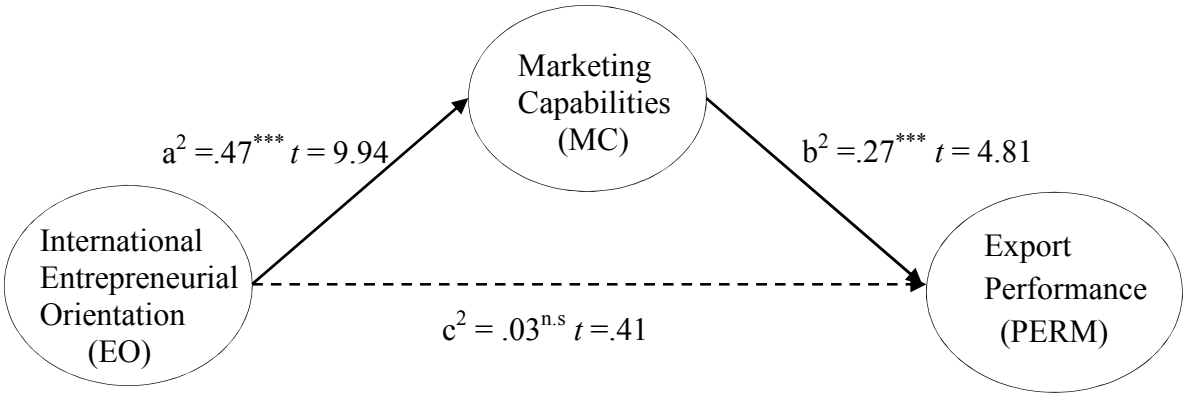


Model B. Technological capabilities as a mediator



Indirect effect: a^1 x b^1 = .64 x .45= .29
Total effect: Direct effect (c^1) + Indirect effect (a^1 x b^1) = .04 + .29 = .33

Model C. Marketing capabilities as a mediator



Indirect effect: a^2 x b^2 = .47 x .27= .13
Total effect: Direct effect (c^2) + Indirect effect (a^2 x b^2) = .03 + .13 = .16

Note: Firm size and firm age are controlled.
**p <.01; ***p <.001

Table 1. Descriptive statistics and assessment of the measurement model

					Correlations						
Construct	M	SD	CR	AVE	1	2	3	4	5	6	7
1. Export performance	4.15	.89	.89	.72	.74						
2. International entrepreneurial orientation	4.76	.92	.90	.76	.32	.83					
3. Domestic market competition	4.82	1.3	.87	.70	.09	.24	.80				
4. Technological capabilities	4.27	.88	.81	.53	.50	.50	.25	.74			
5. Marketing capabilities	4.30	.97	.77	.68	.38	.43	.37	.48	.94		
6. Firm size	73.53	52.4	n/a	n/a	.06	.04	.05	.04	.07	-	
7. Firm age	22.22	9.81	n/a	n/a	.02	.02	.01	.02	.02	.19	-

Note. The elements in the matrix diagonals represent Cronbach alpha values.

Table 2. Indirect effect of international entrepreneurial orientation on export performance

		Bias corrected bootstrap 95% confidence interval	
Mediator	Indirect effect	Lower	Upper
Technological capabilities	0.29	0.03	0.22
Marketing capabilities	0.13	0.02	0.13

Appendix. The Measurement items

International entrepreneurial orientation (Zhou *et al*., 2010)

Please indicate how much you agree or disagree with each of the following statements (1 = strongly disagree, 7 = strongly agree).

A. Proactiveness

- Our top managers have regularly attended local/foreign trade fairs.
- Our top managers have usually spent some time abroad to visit.
- Our top management actively seeks contact with suppliers or clients in international markets.
- Our top management regularly monitors the trend of export markets.
- Our top management actively explores business opportunities abroad.

B. Risk-taking

- Our top management focuses more on opportunities than risks abroad.
- When confronted with decisions about exporting or other international operations, our top management is always tolerant to potential risks.
- Our top managers have shared vision towards the risks of foreign markets.
- Our top management values risk-taking opportunities abroad.

C. Innovativeness

- Our top management always encourages new product ideas for international markets.
- Our top management is very receptive to innovative ways of exploiting international market opportunities.
- Our top management believes the opportunity of international markets is greater than that of the domestic market.
- Our top management continuously searches for new export markets.

Domestic market competition (Yiu *et al*., 2007)

The next section is about the competition in the industry to which your firm belongs in the domestic market. Please indicate how much you agree or disagree with each of the following statements (1 = strongly disagree, 7 = strongly agree).

- This industry is expanding at a rapid pace.
- Competition is very fierce in the industry.
- Multinational enterprises and international joint ventures dominate the industry.

Technological capabilities (Knight and Cavusgil, 2004)

In a major export market, compared to your major competitors, please evaluate your firm in each of the following areas (1 = strongly disagree, 7 = strongly agree).

- Our firm is at the leading technological edge of our industry in this market.
- We invented a lot of the technology imbedded in this product.
- Compared with local competitors, we're often first to introduce product innovations or new operating approaches.
- We are recognized in our main export market for products that are technologically superior.

Marketing capabilities (Knight and Cavusgil, 2004; McKee *et al*.,1992)

In a major export market, compared to your major competitors, please evaluate your firm in each of the following areas (1 = strongly disagree, 7 = strongly agree).

- Our firm has a wide knowledge of customers and competitors.
- Our firm's advertising is effective.

- Our firm's ability to use marketing tools (product design, pricing, advertising, etc.) to differentiate our products is competitive.
- Our firm's pricing strategies are effective.

Export performance (Keh *et al*., 2007)

In a major export market, please evaluate the performance of your firm over the past three years in each of the following (1 = strongly disagree, 7 = strongly agree).

- We have achieved the goal of sales growth.
- We have achieved the goal of market share.
- We have achieved the goal of profitability.