Factors Affecting the Internationalization of Small and Medium-sized Enterprises in South Korea: Entrepreneurial Orientation, Human Capital and Technological Capabilities

Kang-Sik Kim*

School of Business, Korea Aerospace University, Seoul, South Korea. *Email: kskim@kau.ac.kr

ABSTRACT

Internationalization provides small and medium-sized enterprises (SMEs) with many strategic benefits. However, for many SMEs it is not easy to carry out internationalization successfully due to limited resources and capabilities. In order to accomplish an efficient and effective internationalization, it is crucial to grasp the determinants of SME internationalization and their relationship to the firm internationalization. This paper investigates the factors affecting the degree of internationalization of SMEs in South Korea. This study further explores how the international orientation of entrepreneur, the employee human capital, the technological capabilities of a firm, and the external environment might explain the degree of SME internationalization. The findings indicate that entrepreneurial orientation and investment in employee human capital are the critical factors for explaining the internationalization of South Korean SMEs. In addition, we find that technology turbulence and market similarity moderate these relationships, based on the analysis of data collected from 150 South Korean SMEs. The results imply that managers of SMEs should consider these internal and external factors in order to enhance their performance in international markets.

Keywords: Internationalization, Small and Medium-sized Enterprises, Entrepreneur Orientation, Human Capital, Korea
JEL Classifications: F23, M13, O15

1. INTRODUCTION

Small and medium-sized enterprises (SMEs) play an important role as they create significant revenue and export earnings and represent a main source of employment. Also in South Korea, SMEs are a crucial actor in the national economy, accounting for 99.9% of all enterprises, and 86.8% of all employees, and their contribution ratio in production and value added are 45.8% and 45.1%, respectively, in 2015 (IIT, 2016). SMEs have access to new technology and their ability to take risk allows them to utilize their entrepreneurial and human capital, developing their capabilities to get in challenging new business environments.

The internationalization is for SMEs more difficult than large firms because of their limited capabilities and resources. Nevertheless, SMEs are trying to build specific capabilities for effective internationalization or find bypasses to internationalization within

the possible time. Accelerated globalization and easier access to information as a result of information and communication technology (ICT) diffusion have supplied SMEs with more opportunities to enter into international markets. Thus, SMEs require a strategic management of their limited but available resources for firm internationalization.

The purpose of this study is to extend the previous researches addressing the factors affecting the internationalization of SMEs. The key research questions addressed in this study are follows: How does international orientation of entrepreneur affect the degree of internationalization of Korean SMEs? Does employee human capital matter? What are the impacts of technological capabilities on international activities? How does external environment affect the degree of SME internationalization? Addressing these questions is more and more important as small and medium-sized businesses develop competitive strategies for operating in a global environment.

2. LITERATURE REVIEW AND HYPOTHESIS

2.1. Theoretical Perspectives to SME Internationalization

Internationalization has been defined as the process of increasing involvement in international operations (Daniels et al., 2009; Antoldi et al., 2011). For the last decades, the expansion of SME internationalization has brought about interest in theoretical frameworks that can explain and analyze SME internationalization processes.

SME internationalization theories have been developed upon the understanding that SMEs show different internationalization patterns from large firms. Building on different theoretical perspectives, the SME internationalization literature focuses on the factors affecting entry and performance of SME in foreign markets. Four main theories represent the leading thoughts of SME internationalization theories.

The SME internationalization theories can be categorized into two types. One follows an incremental perspective that perceives SME internationalization as a gradual evolution process. The stage model theory and the resource-based view belong to this type. The other follows a proactive perspective that includes the network-based view and the international entrepreneurship theory.

The stage model theory is the traditional perspective among internationalization theories which is rested on an evolutionary process of internationalization that proceeds through distinct stages (Gankema et al., 2000). It describes a gradual process of internationalization according to the accumulation of experiential knowledge on individual firm's activities in international markets (Kamakura et al., 2012). From the spatial perspective, stages of internationalization gradually expand business from short-distance markets to long-distance markets. The most critical assets in this theory are the accumulated experiences and knowledge acquired from international markets. Only these assets decrease uncertainty in foreign markets and stimulate SMEs to prevail over the barriers to international operation (Leonidou and Katsikeas 1996). From this perspective, experiences and knowledge of international markets drive the direction and speed of firm internationalization.

According to the resource-based view, firms are defined as possessing rare and valuable resources that generate a competitive advantage (Stoian et al., 2011) and provide the basis for internationalization strategies (Knight and Cavusgil, 2004; Hwang, 2010). This view suggests that better performance can be achieved by attaining and exploiting the rare and valuable resources inherent within a firm (Sousa and Bradley, 2008). According to the resource-based view, resources refer to the tangible assets, such as physical properties and firm capabilities, and intangible assets, such as knowledge, experience and management characteristics (Ruzzier et al., 2006; Kamakura et al., 2012). This view can be useful for SMEs when they have limited but rare and valuable resources or capabilities to enter into international markets (Leonidou, 2004). The view can provide information about a firm's resources and capabilities, which allows researchers to widen their perspectives

so as to exactly examine the phenomenon of internationalization (Prange and Verdier, 2011).

In the network-based view, internationalization is defined as a process of building business networks in international markets (Ruzzier et al., 2006). Internationalization patterns are significantly influenced by the network structure that firms are apt to build or have already achieved (Antoldi et al., 2011). This view suggests that business networks allow firms tangible and intangible resources to support the process of internationalization (Wright et al., 2007). Hence, this view suggests SMEs with limited experience and resources to develop business networks such as local distributors or agents in their target international markets.

International entrepreneurship theory, a relatively new theory, tries to include the internationalization phenomenon of the so-called 'born-global' since the 1980s. The rapid development of ICT and global logistics has caused a new business environment where young and small firms can enter international markets (Knight and Cavusgil 2004). Those firms overcome barriers to internationalization and enter into foreign markets through a fast adapting internationalization ability, which especially the owner or entrepreneur of the firms possess (Prange and Verdier, 2011).

None of the internationalization theories described above alone can fully explain the character of SME internationalization. Each theory can only partly explain the phenomenon as SME internationalization is a result of the relationship of many significant factors involved in international operations. This understanding guides researchers to the need for a more sophisticated picture of SME internationalization or at least a combination of different theories.

2.2. Hypothesis

2.2.1. International orientation of entrepreneur and the firm Internationalization

The international orientation of entrepreneur, enabling entry into international markets, is characterized by managerial values, attitude and behavior of the firm's executive level (Covin and Slevin, 1989). The international orientation of entrepreneur used most frequently to be characterized by three dimensions: Innovativeness, proactiveness, and risk taking (Wiklund and Shepherd, 2003). Innovativeness deals with supporting creativity, developing new services and products and promoting new processes (Lumpkin and Dess, 1996). Proactiveness relates to opportunity seeking that includes, for instance, introducing new processes, products and services in advance of the competition (Lumpkin and Dess, 1996). The dimension risk taking refers to a tendency to take challenging actions, such as entering into new international markets (Lumpkin and Dess, 1996). These three dimensions have been used by many researchers in the international context to explore the performance of SMEs (Todd and Javalgi, 2007; Wiklund and Shepherd, 2003).

Innovation and risk taking are major dimensions of entrepreneurial orientation (Zahra and Garvis, 2000). The SME's act of seeking an opportunity to enter into a foreign market constitutes entrepreneurship. Every international activity is entrepreneurial

as it represents a combination of the innovation ability and risk acceptance, which are characteristics indispensible to create value in international markets.

Evidence of effects of the entrepreneurial orientation on internationalization is also presented in several studies of SMEs (Kuivalainen et al., 2004; Spence and Crick, 2006). The influence of entrepreneur orientation on firm internationalization is presented in research findings regarding new ventures (Yiu et al., 2007), "born-global" firms (Knight and Cavusgil, 2004), and small to medium-sized firms (Crick and Jones, 2000). Early development of an entrepreneurial culture positively affect a firm's international intent, permitting a firm to be more competent and ready to seek to attain opportunities in foreign markets (Zucchella et al., 2007).

H_1: International orientation of entrepreneur of SMEs in Korea relates positively to the degree of firm internationalization.

2.3. Employee Human Capital and the Firm Internationalization

The internationalization of SMEs can be strongly affected by the personal factors, i.e., human capital, of employees. Human capital relates to the range of valuable knowledge, experiences and skills a person has gathered over time (Burt, 1992). The most critical characteristic of human capital is its embodiment in people (Becker, 1993). Employees pull out their human capital (values, knowledge and skills) to improve the interests of their firms.

Human capital represents an investment in knowledge and experience and is created when an employee's knowledge, skills and capabilities are made improvements. Human capital is a critical factor for organizational performance and growth (Novak and Bojnec, 2005). The gaining of human capital improves the conditions for an individual to act in a new way. When a profitable opportunity for new business activities exist, employees with a higher level of human capital could be better in identifying and developing it. Once engaged in the internationalization process, such individuals should also have a higher ability to take advantage of this opportunity (Davidsson and Honig, 2003).

Manolova et al. (2002) identified human capital as a common theme in their study on the internationalization of small firms, but no studies concentrate on the relative importance of the various dimensions of human capital embodied in the employee as they relate to the internationalization of SMEs. Studies confirm the positive effect of education, foreign language skill and international experience on firm internationalization (Athanassiou and Nigh, 2002; Herrmann and Datta, 2005). An international trade study also provides support that the prior international experience of managers is a driver of SME internationalization by affecting the firm's involvement in international business activities (Ibeh, 2001).

To sum up, human capital is likely to be more critical and several studies provide empirical support for the positive effect of human capital on SMEs internationalization (Patterson and Cicic, 1995; Ruzzier et al., 2006).

H_2: Employee human capital of SMEs in Korea relates positively to the degree of firm internationalization.

2.4. Technological Capabilities and the Internationalization of SMEs

Technological capability is depicted as the base of a firm's sustainable competitive advantage because it generally is made up of technological knowledge, production skills and patents that are invaluable and hard to be imitated by competitors (Lee et al., 2001). Technological capability is indispensable for achieving high internationalization performance (Kang, 2004; Kuivalainen et al., 2010), since it enables a firm to accomplish core business activities as offering products and services, obtaining market acceptance, surviving in competing markets and achieving financial success.

Empirical studies indicate that technological knowledge is a representative resource for SMEs, particularly in high-tech industries, and that technical skills and superior products and services are critical for gaining high international performance (Kuivalainen et al., 2010; Lee et al., 2001).

R&D, as an important element of technical capabilities, is an ability to make changes in existing technology and develop new products to satisfy rapidly changing and high demanding needs of customers in the global market (Lefebvre and Lefebvre, 1999). It is a barometer of product competitiveness and core of superior international performance (Filatotchev et al., 2009).

The results of empirical research conducted on Korean and Canadian SMEs confirm that R&D and product characteristics affect international performance as a significant factor. Especially, the case studies found a positive interaction between R&D intensity and motivation for export activities (Kang, 2004). Esteve-Perez and Rodriguez (2012) also conducted empirical analysis using firm-level data on Spanish SME manufacturers and examined the strong interdependence between R&D and export activities. They strongly suggest that involvement in R&D activities increases a firm's prospects of engaging in export, which in turn increases that firm's chances of success in R&D.

To sum up, technological capabilities are understood as the fundamentals to sustain a firm's competitive advantages by offering competitive products, obtaining market acceptance and retaining customers, thereby achieving enhanced performance in foreign markets. Therefore, the following hypothesis is proposed:

H_3: Technological capabilities of SMEs in Korea relate positively to the degree of firm internationalization.

2.5. External Environment and the Internationalization of SMEs

According to the contingency perspective, the effects of firms' strategies and activities on performance in international markets are dependent on the specific context of the firm. The industry and market conditions are expected to moderate the influence of the organizational cultures, firm strategies, and/or organizational and technological competencies on the performance in international markets (Cavusgil and Zou, 1994). The typical findings in the

literature of firm performance in international markets are based on research that deals with manufacturing firms that operate in relatively stable environments.

Environmental dynamism or turbulence involves continuous and rapid change in technology, competitors, and market demand and is a fundamental environmental condition underlying uncertainty and business risk (Davis et al., 1991). Rapidly changing technology and the resultant short life cycle of product changes and upgrades create continuous flux in the business environment. As new technologies are developed, new business rivals appear, often redefining existing product-market structures (Benkenstein and Bloch, 1993). Turbulence can also be traced to consumer expectations. As consumers become accustomed to frequent changes and upgrades, they often develop an appetite for these changes, which thus puts further pressures on the need for strategic change (Benkenstein and Bloch, 1993). Accordingly, the international firms need more critical resources and capabilities to overcome the environmental changes such as market uncertainty or technology turbulence.

The uncertainty in international market influences a firm's decision on how to differentiate the strategy in each market for meeting specific needs. Especially, when the technological environment is uncertain, the firms have difficulties to understand market trends and to predict introduction of new products and technologies, and these are more complex in international market conditions. In highly technological turbulence, firms have to develop new technology and products continuously. It is more difficult for SMEs, because they lacked resource and capability to face and to deal with uncertain environment, relatively. As the market situation is predictable in terms of changes in technology, however, firms will be in a better position to pursue the international strategy across national markets within limited organizational resources and capabilities.

Moreover, international orientation may have less utility when foreign customer's needs and requirements are stable and predictable. Because international oriented behaviors are more related with foreign market exploitation aggressively and effective applications of foreign market knowledge from diverse environments, when the market similarity between foreign markets is greater, the chances are lesser that there will be a divergence between the firms' offering in international markets and foreign customers' preferences, and it is in this context that international orientation will be less effective. Especially, because SMEs have strengths in opting to tailor their international strategy to the specific needs of each national market and speedy adjustments of their international marketing mix to diverse market conditions, international oriented SMEs can take comparative advantages in less level of market similarity to enhance their performance in international markets. Therefore, the following hypotheses are proposed:

H_{4a}: Technology turbulence in the foreign environment negatively moderates the relationship between the international orientation of entrepreneur and the degree of firm internationalization.

H_{4b}: Technology turbulence in the foreign environment negatively moderates the relationship between employee human capital of SME and the degree of firm internationalization.

H_{4c}: Technology turbulence in the foreign environment negatively moderates the relationship between technological capabilities and the degree of firm internationalization.

H_{5a}: Market similarity in the foreign environment negatively moderates the relationship between the international orientation of entrepreneur and the degree of firm internationalization.

H_{5b}: Market similarity in the foreign environment negatively moderates the relationship between employee human capital of SME and the degree of firm internationalization.

H_{5c}: Market similarity in the foreign environment negatively moderates the relationship between technological capabilities and the degree of firm internationalization.

3. DATA AND METHODS

3.1. Data Collection and Sample

Data in this study consisted of a random cross-sectional industry sample of SMEs located in Korea. To further specify the sample, two selection criteria were used. First, subsidiaries of large firms were excluded because internationalization may not be independent of the parent companies' strategy and behavior. Second, firms that were no private businesses or non-profit organizations were also excluded. Survey respondents were pre-qualified by telephone and e-mail to verify: (1) Employee size <500, (2) international business involvement, and (3) respondents were an owner, CEO, or a key international management executive. The data consisted of 150 responses, representing one for each firm. We checked the non-respondent bias by observing the size, age, and industry distribution of the targeted firms. We found that the non-responding firms were not statistically different in these dimensions from those that responded, suggesting that the sample represented the target population. The majority of SMEs sampled had 25-49 employees (45%), and the remaining was distributed as follows. Nineteen percent reported between 50 and 100 employees, nearly 25% reported between 100 and 250, and the remaining noted 250 and 500 employees. Reported annual sales revenue indicates: 21.5% earn <$100,000, 29.5% earn $100,000 to $499,999, 18.4% earn $500,000 to $999,999, 15.2% earn $1 million to $4.9 million, and 15.4% earn over $5 million.

3.2. Measures

In order to develop constructs for the study, seven-point Likert-type scales were used. Measurement scales had with reliable psychometric properties, validated in previous empirical studies. Reliability for each scale was determined using Cronbach's alpha. The reliability score is a measure of the internal consistency of the construct (Nunnally, 1978), and alpha values over 0.70 indicates sound reliable measures. Construct validity was assessed in using factor analysis described by Deshpande (1982). Principal component factor analysis provided factor loadings in order to assess construct validity. The factor loadings of the operationalized measurement scales provided indication of convergent and discriminant validity of the constructs.

Even though the researcher has discretion to determine the cut-off point for assessment of validity, several studies proposed that convergent validity is attained when factor loadings are

≥0.70 (Bagozzi, 1981; Nunnally, 1967) and the average variance extracted for each factor component is ≥50% (Anderson and Gerbing, 1988).

3.3. Degree of Internationalization
The percentage of international sales to total sales is the most commonly used measure to grasp the effectiveness of international performance (Yeoh, 2004). It is also a feasible proxy for the degree of internationalization (Kumar and Singh, 2008). In this study the degree of internationalization of SME is considered when foreign sales show more than 20% of total sales. Accordingly, the dependent variable takes a value of one if an SMS's foreign sales are >20%; if not, it is zero (Ripolles-Melia et al., 2007).

3.4. International Orientation of Entrepreneur Scale
The notion of international orientation of entrepreneur used is based on the work of Miller (1983) and later used by Covin and Slevin (1989). The international orientation of entrepreneur construct consisted of the three dimensions of innovativeness, risk taking, and proactiveness. In the international orientation of entrepreneur scale, each dimension contains two items; thus, there are in all six items. Many studies have used this construct, resulting in high levels of reliability and validity measures (Covin and Slevin, 1989; Ripolles-Melia et al., 2007; Zhou, 2007). The format used is a Likert-type scale demanding the respondents to select a position among 1-7 range. According to the process of item purification, one item was deleted. Then the five items were subjected, higher entrepreneurial orientation scale to confirmatory factor analysis (CFA). The indices of scale's CFA fit were good (Chi-square/d.f. = 1.76, CFI = 0.95, NFI = 0.91, RMSE = 0.08), and in support of the second order factorial structure. The international orientation of entrepreneur scale reliability estimate of 0.81 for this study falls in the range of 0.77-0.88 in prior research (Matsuno et al., 2002).

3.5. Human Capital Scale
Human capital measured in this study made use of the subjective measurement of the foreign language skill and international experience of employees of the firm (Dimov and Shepherd, 2005). Foreign language skill and international experience have been used as proxy for human capital in previous studies (Dimov and Shepherd, 2005). Foreign language skill was measured using a seven-point ordinal scale. As a measure of international experience respondents were required to reveal the number of years they involved in international business.

3.6. Technological Capabilities
Technological capabilities are a firm's ability to develop technology specific knowledge and innovate existing products, thereby creating sustainable competitive advantages in foreign markets. Thus, technological capabilities are operationalized by three indicators: R&D investment compared to competitors, technological competence able to meet the needs of overseas customers or develop new products (Kuivalainen et al., 2010), and level of product quality compared to competitors (Lee and et al., 2001). These indicators were also measured using a Likert-type seven-point scale.

3.7. External Environment
For environmental dimensions, we asked to evaluate the extent of market condition within the specific context of their respective industry. Each item was measured on a seven-point ordinal scale. We assessed technology turbulence adapted Jaworski and Kohli's (1993) procedures. The items tapped the extent to which technology in an industry was in a state of flux. The technology turbulence concept consisted of three items: Rapidly changed technology in our industry, large number of new product ideas through technological breakthroughs in our industry, and difficult to forecast technology in our industry.

Market similarity was assessed by employing Chung's (2003) scales. Although Chung used several internal and external factors to assess market similarity including legal, political, and cultural environment because of examining in specific dyadic countries, we just adapted items which are related international trade perspectives broadly and can be adjusted in overall countries and industries. The market similarity scale consisted of three items: Consumer behavior, competitive environment, and marketing infrastructure. Technology turbulence and market similarity ware measured using a seven-point ordinal scale.

3.8. Control Variables
As control variables, three variables were used: Firm size, age of the firm, and industry type. Firm size was defined by the number of employees and the firm's age by the number of years since the company was established. Industry type was classified as manufacturing (coded as one) and service types (coded as zero).

Table 1 presents a summary of the measurement scales, sample item used for the constructs, and the reliability of the constructs.

4. RESULTS

The analysis examined the correlations of the variables used in the study. Table 2 shows the correlation matrix of the variables. None of the correlations appeared to be large enough to warrant concern about the issue of multicollinearity (Hair and Black, 1998).

Table 3 shows the estimation results of the predictor for the degree of internationalization. As can be seen from Table 3, the percent of cases classified is 81%, indicating the fact that the independent variable is a good predictor of the degree of internationalization variable. As shown in Table 3, the results provide support for H_1, which confirms that international orientation of entrepreneur is positively related to the degree of internationalization ($\beta = 0.35$; $P < 0.01$). Also both foreign language level ($\beta = 0.69$, $P < 0.01$) and international experience ($\beta = 0.56$, $P < 01$) were significant; thus confirming that employee human capital is positively related to the degree of internationalization, confirming hypotheses H_2. In addition, technological capabilities were also significant ($\beta = 0.32$, $P < 0.05$), confirming hypothesis H_3.

As shown in Table 3, the coefficient of the moderator variables were not significant (technology turbulence: $\beta = 0.03$, $P < 0.30$; market similarity: $\beta = 0.02$, $P < 0.30$); however, the coefficient

Table 1: Sample items, source and reliability of the constructs

Scale (Cronbach)	# of items	Sample items	Prior research
Entrepreneurial Orientation (cronbach alpha = 0.81)	5	Strong orientation for high-risk projects with chances of very high returns	Naman and Slevin (1993)
Employee human capital (number of items = 2)	2	Foreign language skill and international experience	Dimov and Shepherd (2005)
Technological capabilities (cronbach alpha = 0.86)	3	R&D investment compared to competitor	Kuivalainen et al. (2010)
Technology turbulence (cronbach alpha = 0.73)	3	Rapidly changed technology in the industry	Jaworski and Kohli (1993)
Market similarity (cronbach alpha = 0.88)	3	Consumer purchasing habits	Chung (2003)
Degree of internationalization	1	Percentage of foreign sales to total sales	Zahra and Garvis (2000)

Table 2: Correlation matrix

Variables	1	2	3	4	5	6	7	8	9	10
DO. Intern.	1									
Ent.Orient.	0.25^b	1								
Language	0.21^b	0.19^b	1							
Int'1.Exp.	0.19^b	0.15^a	0.46^b	1						
Tech.Cap.	0.16^b	0.28^b	0.09	0.13^a	1					
Tech.Turb.	0.01	0.03	0.04	0.03	0.06	1				
Mkt.Simil.	0.03	0.04	0.03	0.09	0.05	0.02	1			
Age	0.06	0.33	0.05	0.43^a	0.33^a	0.03	0.02	1		
# of Emp.	0.04	0.08	-0.15^a	-0.21^b	0.18^a	0.04	0.05	0.08	1	
Ind.type	0.02	0.03	0.03	0.02	0.06	0.04	0.03	0.12	0.05	1

1: Degree of internationalization, 2: International orientation of entrepreneur, 3: Foreign language level, 4: Employee human capital, 5: Technological capabilities, 6: Foreign language skill, 7: International experience, 8: Age of the firm, 9: Number of the employees, 10: Industry type. $^aP<0.05$, $^bP<0.01$

Table 3: Logistic regression results

Variables	Parameter estimates
EO	0.35^a
Employee HC	
Foreign language level (FL)	0.69^b
IE	0.56^b
TC	0.32^a
TT	0.03
MS	0.02
Moderator	
TT × EO	0.42^b
TT × FL	0.06
TT × IE	0.11
TT × TC	0.48^b
MS × EO	0.38^b
MS × FL	0.08
MS × IE	0.13
MS × TC	0.33^a
Control variables	
Age of the firm	0.46^a
Size	0.16^a
Industry type	0.09

Percent of case: Correctly classified = 81%, Chi-square = 32.88,
−2 log likelihood = 89.42. $^aP<0.05$, $^bP<0.01$. EO: Entrepreneurial orientation,
TC: Technological capabilities, TT: Technology turbulence, MS: Market similarity,
IE: International experience, HC: Human capital

of the multiplicative interaction term was in some interactions significant, confirming hypothesis H_{4a}. Specifically, interactions between the entrepreneurial orientation and the technical turbulence (H_{4a}: β = −0.42, P < 0.01), between the technological capabilities and the technical turbulence (H_{4c}: β = −0.48, P < 0.01), between the entrepreneurial orientation and the market similarity (H_{5a}: β = −0.38, P < 0.01), and between the technological capabilities and the market similarity (H_{5c}: β = −0.33, P < 0.05) were significant, confirming H_{4a}, H_{4c}, H_{5a} and H_{5c}.

This result implies that the moderator variables (technology turbulence, market similarity) modify the relationship between entrepreneurial orientation and the degree of internationalization as well as the relationship between technological capabilities and the degree of internationalization. The interaction terms related to technology turbulence and human capital (e.g., foreign language skill and international experience) were not statistically significant, thus hypothesis H_{4b} was not supported. The same applies to the interaction terms related to market similarity and human capital, thus hypothesis H5b was also not supported.

5. CONCLUSIONS

This study provides several theoretical and managerial implications. From a theoretic standpoint, study results offer an interesting addition to the current knowledge about the strategic importance of international orientation of entrepreneur, employee human capital, and technological capabilities in explaining the internationalization efforts of SMEs in Korea. The hypothesis that human capital is positively related to the degree of internationalization of Korean SMEs is supported by the results of this study. Foreign language skill and international experience were also significant as predictors of the internationalization of the firm. Researchers Johanson and Vahlne (1990), for example, point out that firms that have some experience in international markets will tend engage in more internationalization activities.

The international orientation of entrepreneur is also positively related to the degree of internationalization of SMEs in Korea. Previous studies have suggested that the international orientation of entrepreneur has a significant impact on export performance (Knight, 2001; Kuivalainen et al., 2004). Entrepreneur or

managers of SMEs who implement programs to foster positive attitude towards expanding internationally among employees and demonstrate the importance of thinking outside the domestic market will improve the probability of success and create a competitive advantage of a firm. Furthermore, Korean SMEs have to leverage resources such as human capital for their international business strategy in order to catch opportunities in the international market.

For Korean SMEs, there is a strong link between technological capabilities and the degree of internationalization. Once again, the findings support previous research on relationship between technological capabilities and international expansion (Zucchella et al., 2007). The importance of the significant relationship between technological capabilities and degree of internationalization suggests that top management must foster to develop and to strengthen the technological capabilities of the organization.

The control variables, the size and age of firm found to be significant in explaining the internationalization of Korean SMEs. This seems to suggest that entrepreneurial SMEs that are growing in size and have successfully established themselves in the marketplace over time are able to leverage the experience and knowledge obtained over time as they plan international expansion (Zhou, 2007). Williams (2008) notes as SMEs grow older they will get more knowledge of the way of the operation in international markets. The control variable industry type was not significant, suggesting that without regard for the industry type, Korean SMEs seem to internationalize successfully owing to the international orientation of entrepreneur, the employee human capital, and the technological capabilities.

This study provides some implications. This study discusses current research on SME internationalization by including SMEs in Korea. It complements the current research stream. In addition, this study validates the findings related to SME internationalization, examined in the context of western economies. Moreover, working with the empirical data, this research provides a foundation or framework through the identification of behavioral characteristics (e.g., risk taking) that impact international growth of Korean SMEs positively and gives SMEs a way to develop competitive advantage in a highly dynamic international business environment.

Although this study offers a theoretical framework and empirical support of the complex relationship among the international orientation of entrepreneur, the employee human capital, the technological capabilities, and the degree of internationalization, an ambitious effort such as this is not without its limitations. A limitation of this study is that its conclusions are tentative due to cross-sectional nature of SME research. The relationship between employee human capital and internationalization needs to be measured at different points or in a longitudinal framework. Another limitation relates to the constructs used in this study. For instance, the variable employee human capital used in this study does not involve every aspect of employee human capital. Therefore, different constructs suggested in the literature may be used in understanding the internationalization process of

SMEs in other countries. In addition, the moderator variables tested in this study are based on the literature. However, other moderators (e.g. market turbulence, competitive intensity) may be considered. Finally, the degree of internationalization used in this study is a single construct. In order to test the underlying relationships, a multidimensional construct may be used. Uncovering differences with regard to international orientation of entrepreneur, employee human capital, and technological capabilities between Korean managers and their international counterparts would extend this study. This disclosing leads to a better understanding of the factors that contribute to successful international operations. By collecting longitudinal data, this study could be enriched. As SMEs go on growing internationally, there is obvious opportunity to develop a broad array of models rested on theoretical foundations toward a comprehensive understanding of the effective internationalization strategy and behaviour of SMEs.

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