

Exploring entrepreneurs' human capital components and effects on learning orientation in early internationalizing firms

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Abstract This study aims to enhance our understanding of the role of entrepreneurs' human capital components and the influences on learning orientation in early internationalizing firms. Drawing from the integration of human capital theory, resource-based view theory, learning theory, and on the literature of international entrepreneurship and strategic management, a research model is proposed and consists of five constructs, namely international business skill, international business knowledge, entrepreneurial competence, managerial competence and learning orientation. The empirical analysis was carried out on a sample of 158 early internationalizing firms in a food industry in Thailand. Partial least square technique was conducted to test the structural equation models and hypotheses. This followed by some illustrative case studies as supplementary to the empirical findings. The results confirm our hypotheses and support the proposed research model. This study yielded interesting findings in which an entrepreneur's skill and knowledge in international business enhance entrepreneurial and managerial competencies. These competencies, in turn, play an important role in influencing a firm's strategic learning orientation

Keywords Early internationalization · Human capital · Learning orientation · Skill Knowledge · Competence

Introduction

Over the past years, the emergence of international firms has been a worldwide phenomenon and has become a major part in stimulating countries' economic growth. The numbers of firms involved in international activities early in their organizational

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life cycles are continually increasing worldwide. Knight (2001) stated that exporting and other international business involvements were strong and viable alternatives for firms, particularly small and medium-sized firms. Many studies refer to these firms using several terms such as, a global start-up (Jolly et al. 1992), born-global firm (Knight and Cavusgil 1996), international entrepreneur (Jones 1999) and rapid internationalizer (Hurmerinta-Peltomäki 2004). This study employs the term “early internationalizing firm (EIF)” used by Rialp et al. (2005) and defines these firms as those that internationalize through various entry modes, such as exporting (Madsen and Servais 1997), and begin to receive revenue from international business activities within the 6 years of founding (McDougall et al. 2003; Pla-Barber and Escriba-Esteve 2006).

Although previous research on international entrepreneurship has examined EIFs from various perspectives, there are still many unexplored issues that must be studied. We expand upon the emerging international entrepreneurship literature by investigating the link between an entrepreneur’s human capital components and learning orientation in EIFs. According to the resource-based theory, human capital is a factor that enhances firm performance (Wright et al. 2001). In the current knowledge-based economy, learning is perceived as a critical factor in the growth and survival of every firm, including EIFs. To adapt to such a dynamic context, firms must learn fast and adopt new routines and structures to absorb new knowledge and be flexible (Chetty and Campbell-Hunt 2004). They must acquire and assimilate new knowledge in internationalization consistently to develop new ways of thinking that might challenge old patterns (Autio et al. 2000).

Slater and Narver (1995) suggested that entrepreneurship can promote learning orientation because it is significantly related to the attainment of knowledge and the development of new behaviors to encourage learning. When EIFs enter foreign business environments, they must quickly build the capabilities necessary to obtain a competitive position. Learning enables them to adapt and grow in such an environment. Following Sinkula et al. (1997), this paper views learning orientation as the organizational values that influences a firm’s learning propensity. At the same time, learning orientation is considered to be one of a firm’s strategic orientations that reflect its management philosophy and organizational culture (Deshpandé et al. 1993). Learning orientation influences a firm’s values and behavior and directs the firm’s activities relative to the external environment and organizational development (Wiklund and Shepherd 2005).

Despite the importance of learning and the clear relevance between entrepreneurs’ human capital and learning orientation, a few studies have explicitly addressed the link between these items in the international entrepreneurship context. Thus, there are an insufficient number of empirical studies that can be used to explain this relationship. Even less is known about what composes entrepreneurs’ human capital and what role it plays in facilitating learning orientation in EIFs. This study responds to the call from prior studies to further investigate the integration of entrepreneurship and strategic orientation (Hitt et al. 2001b) and to investigate learning in terms of an entrepreneur’s direct function (Franco and Haase 2009). Furthermore, additional research on international entrepreneurial culture, including learning orientation, was suggested by Zahra (2005) to enrich the understanding of the international new venture’s antecedents and firm performance.

We address the aforementioned by extending the EIF research to the unexplored aspect of entrepreneurs' human capital components and learning orientation. We propose a model that explains the relationship between entrepreneurs' human capital components and learning orientation based on the integration of human capital theory, the resource-based view theory and learning theory, and on the literature of international entrepreneurship and strategic management. The human capital of an entrepreneur is disaggregated into four components that, in this study, are assumed to influence the learning propensity of EIFs. A further step is taken to explore the interrelationship among the components of entrepreneurs' human capital. Most studies on early internationalization have focused on the US and European contexts. Therefore, there is a need to explore this phenomenon in other contexts. Our data collected in Thailand extend the country coverage to cover South-East Asia. This region has contributed significantly to the world economy, particularly its food sector. Moreover, it has been preparing to enter the ASEAN Economic Community (AEC), which will be implemented by 2015. Thailand was chosen for this study because of its well-known reputation as a leader in exporting in the food industry, allowing it to represent this region in our study.

Our research attempts to answer the following questions: what role does an entrepreneur's human capital components play in facilitating learning orientation in EIFs, and how are they related to one another in EIFs? An empirical test was conducted to test the effects of these variables and was followed by some illustrative case studies to complement the quantitative results. We seek to contribute to the current research literature on international entrepreneurship by addressing the relationship between human capital and learning orientation in EIFs. First, we contribute to the understanding of an unexplored aspect of EIFs by proposing a model that hypothesizes the relationship between entrepreneurs' human capital components and learning orientation and then systematically testing it. Second, we contribute to the research methodology by applying both quantitative and qualitative approaches in studying the EIF context. Third, our study contributes to a better understanding of EIFs in developing Asian countries by taking Thailand as our study context. Moreover, our findings hold useful managerial implications of the role played by human capital components and their influences on learning orientation.

This paper is organized as follows. First, we review the relevant literature regarding the human capital of an entrepreneur and how it influences a firm's behaviors and learning orientation. Based on the literature review, a theoretical model and hypotheses are proposed. Next, we describe the research methodology of the sampling frame, data collection and instruments, and the measurement of constructs. The analyses of quantitative data and a qualitative case study are presented. Finally, the findings and implications are discussed.

Literature review

This section first reviews the relevant literature on learning orientation and human capital. It then develops the hypotheses on the relationship between human capital and its different components with a firm's learning orientation.

Learning orientation

Slater and Narver (1995, p.63) stated that “learning facilitates behavioral change that leads to improved performance”. In today’s knowledge-based economy, learning is perceived as an important factor to improve the quality of an individual, group, and organization. The concept of learning orientation is broad, subjective and related to many learning aspects. Rhee et al. (2010, p.67) described learning orientation as the adoption of a basic learning process, while Huber (1991) defined learning orientation as the organizational culture and development of new knowledge and information that influence behavior.

Learning orientation has also been adopted and examined in several fields of study. For instance, marketing literature views learning orientation as an organizational characteristic that changes organizational values and norms, and results in a proactive organizational behavior (Baker and Sinkula 1999; Hult et al. 2004). Sinkula et al. (1997, p. 309) described learning orientation as the set of organizational values that influence the propensity of the organization to create and use knowledge. This view focuses on the context of the knowledge-questioning values, which affects information processing and competitive advantages and leads to the superior performance of an organization (Baker and Sinkula 1999). A learning-oriented firm is regarded as a firm that concentrates on learning and “the propensity to learn and adapt” (Mavondo et al. 2005, p. 1237). Because learning-oriented firms possess a high propensity for learning, they encourage employees to commit to learning and question long-held assumptions or theories-in-use, to share the knowledge among their members, and to be open to new ideas and changes, which helps to stimulate knowledge creation and the firms’ competencies (Argyris 1977; Senge 1990).

The strategic management literature sees learning as one of a firm’s strategic orientations because it reflects top managers’ mentality and beliefs (Hitt et al. 1997) and is implemented by a firm as the strategic direction leading to promote the behaviors that results in superior performance (Gatignon and Xuereb 1997). It also reflects the management’s philosophy and organizational culture (Deshpandé et al. 1993; Noble et al. 2002), which influence a firm’s values and behavior. It also directs a firm’s activities with the external environment and organizational development (Jantunen et al. 2008).

This paper investigates the impact of entrepreneurs’ human capital components on firms’ learning orientations. We view learning orientation both as the organizational values (Sinkula et al. 1997) and as one of a firm’s strategic orientations (Deshpandé et al. 1993; Noble et al. 2002).

A resource-based view theory explains the importance of learning orientation to EIFs. Because the theory defines a firm’s resource as anything that could be a strength or weakness, including both tangible and intangible resources that are semi-permanently tied to the firm (Caves 1980), learning is considered to be a firm’s resource and the only source to sustain its competitive advantage (Hunt and Morgan 1996). Compared with a firm’s other resources, learning is superior because it enables firms to improve their access to market information faster than their competitors, which in turn, assists these firms in maintaining their competitive advantage (Baker and Sinkula 1999). Firms with a higher degree of learning orientation are better able to outperform their competitors, which is one way that organizations survive in a

fiercely competitive environment (Sadler-Smith et al. 2001). Firms that are less learning-oriented compared with their competitors will face difficulties in the market. Therefore, entrepreneurs who attempt to engage in international business early must facilitate learning orientation so that their firms can develop quickly.

In addition, learning orientation occurs both at the foundation stage and during the internationalization phase (Ruokonen and Saarenketo 2009). Small, rapidly internationalizing firms can perform better with a strong orientation towards learning (Kropp et al. 2006). Continuous learning is important because the early failure rate for business start-ups is high (Wang 2008), particularly for EIFs, which face high uncertainty and risk in the dynamic international environment. Thus, EIFs tend to focus strongly on learning and could become learning-oriented firms early.

Human capital components

Originally, the concept of human capital was developed to estimate the future returns through education and training, or investment in HC (Becker 1962). It is also described as the human's activities that influence future monetary and psychic income by increasing the resource in people (Becker 1975, p. 9). Human capital has been studied in many fields, and a wide range of definitions is provided in both the economic and managerial literature. Some researchers define human capital as: the knowledge, skill and abilities that reside within individuals and are utilized by them (Schultz 1961); the knowledge, skills, competencies and experiences related to the task at hand (Dess and Picken 1999); the competencies that people use when working (Sandberg 2000); and knowledge, skills, competency and experience (Dae-Bong 2009). This study conceptualizes the human capital of entrepreneurs in terms of the outcomes of human capital investment, and that capital comprises the skills, knowledge, and competence endowed within and utilized by entrepreneurs.

According to the resource-based view theory, resources are defined as “all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable (it to) improve its efficiency and effectiveness” (Barney 1991, p. 101). These resources are categorized as physical, human and organizational capital resources (Barney 1991). Human capital is acknowledged as one of the critical intangible resources and a significant source of a firm's competitive advantage. EIFs' entrepreneurs must obtain human capital components necessary to operate their international businesses because most of them tend to be small-and medium-sized firms that firms' decision making and activities rely very much on the entrepreneurs. Moreover, these firms involve in international activities early and have to compete in the foreign market, which is considered to be a fast changing environment and contain higher risk compare with domestic market. To achieve and sustain their competitive advantage, entrepreneurs must develop and improve their resources and utilize them to create new resources and capabilities to response quickly to the fast-changing conditions of the market (Wernerfelt 1984).

Entrepreneurs are viewed as a firm's intangible resource, including their knowledge, skills, relationships, experiences, judgment and competence in coordinating resources (Barney et al. 2001). They are also the main driving force of a firm's activity, and their decisions play critical roles in the organization (Bloodgood et al. 1996; Westhead et al. 2001). A firm's strategic leaders influence the venture's success

(Markman 2007). Learning orientation during a firm's foundation phase requires the exploitation of founders' existing knowledge. In addition, a firm that expands into international markets must adjust its strategy to suit the new environment based on the founders' human capital (Ruokonen and Saarenketo 2009). The founders can draw upon human capital to develop their capabilities and knowledge base, which assist them to make strategic choices that allow the firm to perform in any business environment (Hitt et al. 2001a). In addition, firm values can be established through the selection, development and use of human capital (Hitt et al. 2001a). Thus, it is clear that entrepreneurs employ their human capital and utilize this resource to produce positive outcomes, including determining the firms' values, behaviors, actions and strategic directions. This observation leads to our argument that entrepreneurs' human capital may have a positive influence and play a facilitating role in subsequently directing the implementation of firms' learning orientation, which is viewed as an organizational value and strategic orientation.

Development of the hypotheses

In this study, we posit that entrepreneurs employ their human capital components and organizational resources to create positive outcomes for their firms. We analyze entrepreneurs in EIFs who possess an essential set of human capital components related to international business that include international business skill (IBS), international business knowledge (IBKL), entrepreneurial competence (ENTC) and managerial competence (MNGC) and conceptualize these components based on the literature review. Hypotheses on the causal linkage among these components were generated according to the conceptual model. These components are distinct but highly correlated constructs. When entrepreneurs utilize their human capital, they produce positive outcomes for their firms. The section below discusses each human capital component and the relationships among them that lead to the learning orientation of EIFs.

IBS and IBKL

Teixeira (2002) defines the skill of individuals as a range of behavioral attributes, including the ability to perform tasks given by others to manage work without supervision, to manage others using various techniques, and reliability and stability. Skills relevant to the international business of entrepreneurs can be acquired through various sources, including experience working in international firms, networks or personal contacts abroad that are related to the current business, education related to international business (Ruzzzier et al. 2007; Manolova et al. 2002), marketing and expertise in technology and communication expertise (Reuber and Fischer 1997; Manolova et al. 2002).

We posit that IBS is an important component of entrepreneurs' human capital that could lead to knowledge enhancement, as suggested by Kolb (1984), i.e., that information or experience information or experience can be converted into new knowledge. Entrepreneurs build valuable knowledge related to markets, customer contact and suppliers (Shepherd et al. 2000) through experience and use it to develop

new knowledge. This experience, particularly that gained from international organizations that expose them to information relevant to foreign markets, enable them to accumulate knowledge in foreign markets and contacts abroad (Ruzzzier et al. 2007). With such experience, they are likely to gain a deeper understanding of international markets that is broadly applicable. Apart from experience, the knowledge of entrepreneurs can be derived from education (Omerzel and Antoncic 2008). Formal education helps individual to develop the fundamental abilities to learn, which in turn, enhances their knowledge. Moreover, entrepreneurs, who are connected through networks or personal contacts abroad related to the current business, can access to resources and information that enhance their awareness and knowledge of international business. This statement is in line with Fischer and Reuber (2003), who asserted that skills that entrepreneurs obtain from experience, expertise and contacts can be transformed into knowledge through learning, and that with such skills, they are likely to have a greater level of knowledge. Based on the literature review above, we hypothesize that:

- H1 An entrepreneur's international business skill positively influences his/her international business knowledge.

IBKL and competencies

Knowledge is defined as knowing; familiarity gained by experience; a person's range of information; a theoretical or practical understanding of; and the sum of what is known (Rowley 2000, p.8). The knowledge of entrepreneurs/managers has long been identified as one of the important components of human capital in the international business context. Eriksson et al. (1997, 2000) and Blomstermo et al. (2004) asserted that the knowledge relevant to international business includes knowledge gained from doing business abroad or through a firm's international operations or unique knowledge and/or competence (knowledge in internationalization); knowledge that is related to clients and competitive situations in specific markets abroad (business knowledge); knowledge that is related to governance structures, rules, regulations, norms and values in specific countries and foreign language (institutional knowledge).

This study categorizes the competence of an entrepreneur into entrepreneurial competence (ENTC) and managerial competence (MNGC). ENTC is defined as the ability of an entrepreneur to effectively perform the entrepreneurial role, including recognizing and taking advantage of an opportunity and the internal drive to create and see the firm through to fruition (Chandler and Jansen 1992). MNGC is defined as the ability to delegate, manage customer and employee relations and exercise interpersonal skills (Chandler and Hanks 1994).

We argue that entrepreneurs who have obtained IBS are likely to gain knowledge relevant to international business and that this knowledge enhances their competencies. Knowledge is one of the most important antecedents that which generally lead to an individual's competence (Boyatzis 1982). The existing stock of knowledge has an influence on a firm founder's ability to guide employees, apply new information and adapt to new situation (Weick 1996). Generally, entrepreneurs obtain a combination of knowledge of a foreign market and knowledge that is transformed into the ability

to do business in that market (Ruzzzier et al. 2007). The first type of knowledge helps entrepreneurs enhance their ENTC, while the second form of knowledge helps increase their MNGC.

When entrepreneurs engage in internationalization activity, their responsibilities include such tasks as setting goals and objectives, gathering business information, organizing resources and implementing strategies (Ruzzzier et al. 2007). They must use various skills to run the business efficiently. IBKL is perceived to be critical for entrepreneurs in EIFs because they operate in diverse markets and are exposed to different types of customers and competitors. They must utilize IBKL while managing various tasks in the organization. IBKL helps them perform entrepreneurial and managerial roles more effectively and leads to the development of unique competencies (Hayton and Kelley 2006).

Regarding the relationship between IBKL and ENTC, entrepreneurs integrate knowledge from different sources, including contacts, suppliers, access to markets, competitive resources and the availability of products, and apply this knowledge to accomplish entrepreneurial tasks. These entrepreneurial tasks include the discovery of a potential opportunity in the market, the exploitation of such opportunity and the development of products to meet the needs of the market (Shepherd et al. 2000). Simultaneously, IBKL enables entrepreneurs to manage their businesses competently to acquire, allocate and utilize resources according to the firm's interests and activities and to interact with the environment. Knowledge in international business allows entrepreneurs to make better decisions when faced with ambiguity and uncertainty in the markets and allow them to notice changes in the markets faster. Valuable knowledge about customers and reliable suppliers, and contacts with important stakeholders (Baucus and Human 1994), are utilized to efficiently manage firms' resources, thereby increasing entrepreneurs' MNGC. Therefore the following hypotheses are proposed.

- H2a An entrepreneur's International business knowledge positively influences his/her entrepreneurial competence.
- H2b An entrepreneur's international business knowledge positively influences his/her managerial competence.

ENTC and MNGC

To operate a business in a dynamic and fast changing environment, entrepreneurs must perform a variety of tasks and engage in different roles. Two roles that are considered important for entrepreneurs are those of both entrepreneurial and managerial roles (Beaver and Jennings 2005; Chandler and Jansen 1992). ENTC involves activities related to the development of achievable goals to meet customer needs, scan the environment, seize opportunities, form strategies and produce superior products (Chandler and Jansen 1992; Chandler and Hanks 1994). Entrepreneurs/managers of an international firm are recognized as the key decision makers who influence internationalization and act strategically to create value for a firm (Miesenbock 1988) to reach the firms' goals (Masurel et al. 2003).

Each role requires entrepreneurs to obtain competencies to perform effectively in their businesses. In this study, we believe that each role that is performed by an

entrepreneur has an impact on other roles because most firms' activities tend to be related and cannot be completely separated. Boyatzis (1982) found that ENTC is obviously related to MNGC. Other studies have added that, although ENTC and MNGC are considered different behavioral competencies, both variables are fundamentally interrelated and inseparable (Hodgetts and Kuratko 2001; Sadler-Smith et al. 2003). Accordingly, ENTC involves various activities, such as identifying and seizing a business opportunity, producing products and services to meet customer needs and demands, and when entrepreneurs undertake this role, it affects another role, MNGC. For instance, after identifying a product for a new market, entrepreneurs must manage organizational resources appropriately, such as allocating resources, motivating, supervising and leading staff to respond to opportunities or ideas and turn them into profitable outcomes. Thus, we propose the following hypothesis:

H3 An entrepreneur's entrepreneurial competence positively influences his/her managerial competence.

Competencies and learning orientation

The prior literature implies that an entrepreneur's competence plays a direct role in facilitating learning orientation. In EIFs, entrepreneurs must face many challenging tasks that require them to play several roles. Entrepreneurial and managerial roles are regarded as the most important roles (Beaver and Jennings 2005; Chandler and Jansen 1992). Entrepreneurs acquire and demonstrate their ENTC and MNGC in such roles. Competent entrepreneurs can apply what they learn to current situations (Man and Lau 2000). They also use and combine a needed set of resources across national borders to internationalize a firm (Ruzzier et al. 2006). Based on their views, we assert that being competent is the key factor that facilitates the propensity to learn and the implementation of this knowledge in an EIF.

Extending these views, undertaking the entrepreneurial role dictates that entrepreneurs, particularly those in EIFs, be exposed to the uncertainty and fast-changing nature of a foreign market environment. Consequently, they realize the importance of continuous learning in organizations and perceive it as essential for their firms to survive and grow in such an environment. This understanding leads them to emphasize learning and implement learning orientation in their organizations. We also argue that the learning orientation of a firm is a result of an entrepreneur's MNGC because it plays a critical role in creating an organizational system suitable for facilitating continuous learning activities. An entrepreneur is the leader of a firm and must play a fundamental role in determining and forming the behaviors that support the creation of organizational learning (García-Morales et al. 2006). The ability of entrepreneurs to create appropriate systems for organization and supported activities can enhance knowledge and encourage learning, which are critical factors for growth (Sadler-Smith et al. 2001). In addition, with MNGC, entrepreneurs can clearly communicate the organization's goals and motivate members to behave in a synergistic manner (Hofer and Sandberg 1987), which can in turn help facilitate learning orientation. Building on the earlier theoretical perspective, an entrepreneur's MNGC is one of the most important resources of a firm that affects its overall activities and strategy. Therefore, the following hypotheses are proposed:

- H4a An entrepreneur's entrepreneurial competence positively influences learning orientation of EIFs.
- H4b An entrepreneur's managerial competence positively influences learning orientation of EIFs.

Methodology

Our research is conducted based on a sample of export firms in Thailand's food industry that have engaged in cross-border activities. A list of potential respondents was developed by obtaining data from various secondary sources, such as Thailand's Exporters Directory 2009/2010, Thailand's Trade Buyer's Guide 2009 and Thailand's Food Exporter Association. The sample includes firms that are independent (i.e., not subsidiaries) and engaged in international activities and that were established by 2010, following the suggestion by McDougall and Oviatt (2000) that the research should emphasize the international activities of all firms, regardless of their age or size. With these criteria, we identified 1,100 firms in our sampling frame. We used entrepreneur/top manager as key informants because they generally have a better overall understanding regarding learning orientation than any other individuals in a firm (Jashapara 2003). A pre-test was conducted with 30 entrepreneur respondents from export firms who participated in 2 seminar sessions in 2011 that were organized by the International Trade Institute, Department of Export Promotion, Thailand. Cronbach's Alpha was employed to measure the reliability of the instrument and the result showed the acceptable values were above 0.70 for all indicators.

Because our data collection was conducted in Thailand, we needed to develop a questionnaire using the back-translation method. The original questionnaire was developed in English and then translated into Thai by researchers whose mother tongue is Thai. After that, we used a professional translation service to translate it back into English. To ensure measurement reliability, existing scales from the literature were adopted.

A total of 1,100 questionnaires were distributed by post to entrepreneurs/top managers along with cover letters and prepaid return envelopes. We received 301 questionnaires back, and of these returned questionnaires, 40 had invalid addresses, and 46 did not meet the sampling criteria (e.g., firms with no export activity, joint-venture firms, trading firms and respondents who were not entrepreneurs/managers of firms). Therefore, we had a total of 215 usable questionnaires and yielded a satisfactory response rate of 19.55 %. They were divided into 2 groups: 158 firms that became involved in international activities within the first 6 years of founding and 57 firms that became involved in international activities 7 years or more after founding. The first group was identified as EIFs and was used for further analysis.

We conducted a test for non-response bias to ensure that there was no significant difference between respondents and non-respondents. Overall, the results of the chi-square test indicated no statistically significant differences in the characteristics of respondents between the first and second round of mailings with respect to the same variables. Therefore, the samples were found to represent characteristics of the total sample of respondents in the main survey according to our criteria.

This study employed both quantitative and qualitative approaches, following the suggestion by Jick (1979) to compensate for any weaknesses that may occur in a study that relies on only one single research method. This method also increases the validity of the study (Teddlie and Tashakkori 2003), generates an in-depth understanding of the survey data from the quantitative study and enhances the generalizations derived from the qualitative study (Langley 1999). However, we consider this study to be more positivistic and selected the quantitative research for the main study because it was more appropriate. A qualitative study using in-depth semi-structured interviews and observations was conducted to obtain a better understanding and raise some important issues that could complement the quantitative findings.

Measurement

Dependent variable Learning orientation was operationalized as a second-order construct with three dimensions including commitment to learning, shared vision, and open-mindedness (Sinkula et al. 1997; Sinkula and Baker 1999; Keskin 2006). Each respondent was asked to evaluate 12 statements using a five-point Likert scale (ranging from “not at all important” to “very important”).

Independent variable A five-point Likert scale (ranging from “little” to “very much”) was used to measure IBS with respect to skills obtained through international work experience, personal networks and relationships abroad, international business education, marketing expertise, expertise in technology and communication (Manolova et al. 2002; Reuber and Fischer 1997). IBKL measures entrepreneurs’ perception of the relationship between knowledge and foreign assignments (Eriksson et al. 1997, 2000; Blomstermo et al. 2004). For ENTC and MNGC, these two variables were operationalized and adopted from Chandler and Hanks (1994) and Chandler and Jansen (1992). A five-point Likert scale (ranging from “not at all important” to “very important”) was applied to measure the IBKL, ENTC and MNGC constructs.

Control variable A firm’s size and age were treated as control variables that may influence the model’s explanatory factors. De Monchaux (1993) found that the experiences of sharing and learning among organization members are better facilitated in small organizations. However, a firm’s age may influence the effect of learning on its members. As noted by Barker and Kaynak (1992), a firm that has been in business for a longer period of time has a greater opportunity to develop its learning abilities, capabilities and established routines. We thus measured the firm’s size by its number of employees and the firm’s age by the year that it was established.

Results

We found that of the 158 respondents, more than half (56.3 %) of them were established during 1999–2010, and were in business for fewer than 12 years. Most of them (75.9 %) were small-and medium-sized firms located outside Bangkok. There were equal numbers of male and female participants. Of the respondents,

34.2 % were between the ages of 31–40 and 34.8 % were between the ages of 41–50. The majority (94.9 %) of the respondents had attained at least bachelor's degree or higher educational level.

These relationships among the variables in the conceptual model were explored and determined using structural equation modeling (SEM). We applied a Partial least squares (PLS) approach using the software package SmartPLS 2.0 M3 (Ringle et al. 2005). In comparison with covariance-based SEM, PLS has several benefits, including no requirement for normally distributed input data (Chin 1998b); its applicability to relatively small sample sizes (Cassel et al. 1999); the avoidance of inadmissible solutions and factor indeterminacy (Fornell and Bookstein 1982); no requirement for independent observations (Wold 1980) or identical distributions of residuals (Lohmöller 1989; Chin and Newsted 1999); and its particular usefulness for prediction. Therefore, PLS was considered to be an appropriate approach for this research model.

Measurement model

The measurement model must be assessed to investigate the relationship among observed variables and the latent variables that they represent and to check the reliability and validity of the model. Reliability pays close attention to the accuracy of the observed variables in measuring latent variables, whereas validity assessment is concerned with how well the observed variables are used to measure and reflect the specific latent variable (Dibbern and Chin 2005).

First, we tested the individual reflective item's reliability to see how an indicator's variance can be explained by the underlying latent variable. Chin (1998b) recommends the significance level should be 0.05 and loading be greater than 0.70. However, Hair et al. (1992) suggested that only indicators with loading values of 0.50 and above should be retained in the model to obtain construct unidimensionality. Moreover, removing indicators with values between 0.40 and 0.70 depends on whether such a removal leads to an increase in composite reliability (CR) above the suggested threshold value, and its effect on the content validity (Hair et al. 2011, p.147). ENTC1, ENTC2 and IBKL3, which had low loadings, were removed from the model. The final loadings ranged between 0.650 and 0.889, and thus, fulfilled the indicator reliability criteria (see Appendix). The second-order construct was assessed following the repeated indicators approach (Wold 1982). All indicator loadings were above 0.50, and item loadings linked between the first-order and second-order constructs of learning orientation exhibited values above 0.70. Thus, the required criteria were met for these loadings also.

CR is the second reliability criterion and was employed first to test how well the indicators in each construct jointly measured their own construct (Bagozzi and Baumgartner 1994) and to estimate an internal consistency of constructs (Hair et al. 2011). CR is a preferred alternative to Cronbach's alpha because it prioritizes indicators according to their reliabilities during model estimation (Hair et al. 2011, p.145). Table 1 displays sufficient CR values according to the threshold between 0.60 and 0.70 suggested by Nunnally and Bernstein (1994).

Table 1 The assessment of reliability and validity

	Measurement model		Latent variable correlation								
	AVE	CR	1	2	3	4	5	6	7	8	9
ENTC	0.577	0.844	0.760								
MNGC	0.662	0.921	0.633	0.789							
IBKL	0.530	0.849	0.438	0.439	0.728						
IBS	0.587	0.875	0.154	0.096	0.173	0.766					
CM	0.670	0.890	0.480	0.553	0.374	0.026	0.819				
SV	0.719	0.911	0.422	0.548	0.290	0.096	0.551	0.848			
OM	0.598	0.856	0.525	0.585	0.312	0.120	0.588	0.702	0.773		
SIZE	1.000	1.000	0.056	0.049	0.007	−0.007	0.080	0.000	−0.058	1.000	
AGE	1.000	1.000	0.034	0.025	−0.105	−0.010	0.013	0.097	0.112	−0.283	1.000

Note: Square root of AVE is on the diagonal and in bold.

ENTC Entrepreneurial competence; *MNGC* Managerial competence; *IBKL* International business knowledge; *IBS* International business skill; *CM* Commitment to learning; *SV* Shared vision; *OM* Open-mindedness; *LO* learning orientation

Next, we checked the model's validity, Average variance extracted (AVE) was applied to assess its indicators' variance and how well the individual indicator can reflect a construct converge and the degree to which they were linked by theory (Hair et al. 2011). The acceptable threshold of 0.50 (Fornell and Larcker 1981) means that the latent variable can explain more than 50 % of the variance with its assigned indicators. As shown in Table 1, AVE provides evidence of an acceptable convergent validity. Additionally, the model obtains the convergent validity of a second-order construct, as suggested by Chin (1998a) that first-order factors should contain four or more indicators and the strength of the paths connecting the second- and first-order factors should be at least 0.70.

To evaluate discriminant validity, the square root of AVE in each construct was examined and compared with the correlations among the constructs (Fornell and Larcker 1981). Table 1 illustrates the square root of AVE of each construct presented on the diagonal. The square root exhibits a value greater than the cross-correlation, compared with other constructs in the corresponding rows and columns, thereby, it provides evidence of an adequate discriminant validity. In addition, the loadings for all indicators on its assigned construct have the highest values compared with other constructs thus confirms that the measurement model demonstrates a sufficient discriminant validity (Chin 1998b).

Structural model

The structural model represents the causal chain relationship among hypothetical constructs. The quality of the model can be assessed through the coefficient of determination (R^2), the significance of path coefficients (β) and the effect size (f^2). R^2 determines the predictive power of a model and the variance explained for a dependent variable. R^2 values of approximately 0.67, 0.33 and 0.19 are considered

substantial, average and weak, respectively, in terms of the model's predictive power (Chin 1998b). Figure 1 indicates that all the constructs can explain 46.10 % ($R^2 = 0.461$) of the variance in learning orientation, thus, the fit of the overall model is well accepted and considered satisfactory.

The hypotheses were tested by quantifying the structural equation path's significance and indicated which of the proposed causal relationships in the hypotheses were either supported or rejected. Bootstrapping with a 500-iteration re-sampling method was applied. This method resulted in a t-statistic and revealed the statistical significance of individual standardized beta coefficient paths. Figure 1 displays the structural model and R^2 . The path coefficient between IBS and IBKL proposed in H1 is statistically significant ($\beta = 0.173$, $t\text{-value} = 2.077$, $p < 0.05$), while IBKL appears to have positive strong influences on both ENTC and MNGC ($\beta = 0.436$, $t\text{-value} = 6.025$, $p < 0.001$ and $\beta = 0.200$, $t\text{-value} = 2.433$, $p < 0.001$, respectively). Therefore, H1, H2a and H2b are fully supported. ENTC and MNGC also demonstrate a positive significant relationship ($\beta = 0.545$, $t\text{-value} = 7.810$, $p < 0.001$) and thus support H3. In addition, the results confirm the relationships proposed in hypotheses H4a and H4b ($\beta = 0.227$, $t\text{-value} = 2.547$, $p < 0.05$, and $\beta = 0.507$, $t\text{-value} = 5.851$, $p < 0.001$, respectively) and indicate the direct influences of ENTC and MNGC on learning orientation; therefore, both hypotheses are supported.

Furthermore, we examined the effect size (f^2) to see the degree to which the latent exogenous variables can explain a latent endogenous variable in the model (Cohen 1992). Values between 0.020 and 0.150, 0.150–0.350, and exceeding 0.350 determine whether that latent exogenous variable has a small, medium, or large effect on a latent endogenous variable (Chin 1998b; Cohen 1988). Our model reveals a medium impact of MNGC on learning orientation ($f^2 = 0.286$), a smaller impact of ENTC on learning orientation ($f^2 = 0.054$) and a non-existent impact of IBKL and IBS on learning orientation ($f^2 = 0.002$, 0.000, respectively). The control variables in the model include a firm's size and a firm's age; these variables were tested, and none showed any significant effects on learning orientation of EIFs.

Illustrative cases

This study employed the qualitative approach by using three illustrative case studies to raise some important issues and provide in-depth insight that could complement and enrich the understanding of the quantitative findings. The data analysis was based on the comparison of the findings regarding the differences and similarities among the individual cases (Yin 2003).

IBS and IBKL

Although IBS can be acquired through several channels, the interviews suggested that international business experiences and network and marketing expertise played the most important roles in enhancing the respondents' IBKL. For Firms 1 and 3, their experiences in the food industry helped them to gain direct knowledge and obtain cooperative agreements and contacts for their current businesses. In Firm 2's case, the managing director's previous job was in the marketing department of a real estate firm in China, so he had no direct

experience in his current industry. Nevertheless, he used his marketing expertise to gain IBKL, which helped him to identify and manufacture the right products for Chinese customers:

“My past experience tells me to listen very carefully to customers. My current products were developed based on what customers from my previous firm told me. I learned from them, and they were willing to help me out with these products.” (Firm 3)

Having IBS stock also facilitated entrepreneurs' IBKL and enabled them to gain unique knowledge. Firm 1's general manager spent more than 10 years working in the quality control department in her previous firm, so she obtained unique knowledge about the quality control of exported products. Similarly, the managing directors from Firms 2 and 3 had experience in marketing and sales, so their expertise gradually became embedded and was a unique form of knowledge that they could apply to managing foreign customers (Table 2).

Although IBS was perceived as an advantage for entrepreneurs and as something that could enhance their IBKL, the respondents found that it was not necessary to obtain a complete set of IBS to establish or expand their businesses. Some IBS accumulates gradually over time, such as direct experience in the same industry, having a formal education or acquiring information technology skills. Moreover, the respondents had to face fierce competition to rapidly expand their businesses overseas. Entrepreneurs must consider other available options for gaining IBKL quickly instead of relying only on IBS. For instance, in the three cases, entrepreneurs chose to outsourced information technology tasks. In terms of language knowledge, they typically hired interpreters to assist them in dealing with foreign customers.

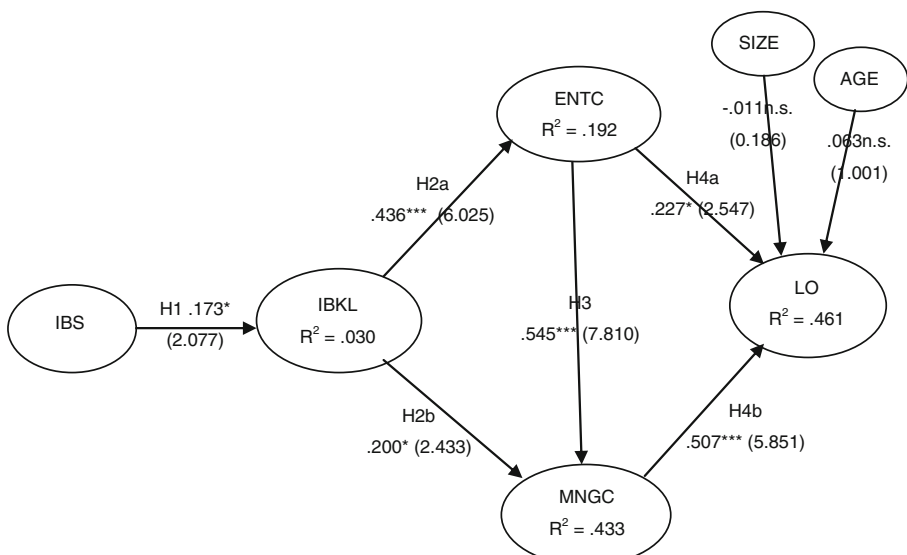


Fig. 1 Structural model. Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, t-value is in parentheses

Table 2 Selected cases characteristics

	Characteristics	Firm 1	Firm 2	Firm 3
Firms	Year of establishment	1990	2004	2010
	First time of export	Within 1–3 years after founding	Within 1–3 years after founding	Within 1–3 years after founding
	% of export sales to total sales	100 %	60 %	50 %
	Products	Canned pineapple, Aloe Vera and pineapple juice	Three in one drinks	Freeze-dried fruit snack
Entrepreneurs	Number of employees	600	50	70
	Gender	Female	Male	Male
	Age	65	35	31
	Education	Bachelor degree in Science	Bachelor degree in business administration	Bachelor degree in Economic
	Work experiences	A laboratory, an international canned pineapple firm	A real estate firm	A shipping firm, government and private consultants, a fruit export firm

IBKL and competencies

The respondents in our case studies agreed on the impact of IBKL in enhancing their competencies in both entrepreneurial and managerial roles. To recognize, identify and seize a potential business opportunity and take advantage of that opportunity, entrepreneurs need to possess basic knowledge regarding the institution, business and internationalization. With such knowledge, entrepreneurs can also gain the confidence necessary to operate the businesses and stimulate their internal drive.

Firm 1 extended the production line to manufacture canned aloe vera after having a business discussion with an agent and became a well-known aloe vera exporter. Firm 3's managing director, developed his products based on information provided by customers from his previous firm. Firm 2's managing director applied his business experience to identify the tastes and needs of consumers of ready-to-drink products in China. Furthermore, the unique knowledge in quality control of Firm 1's general manager influenced her to emphasize manufacturing superior quality products, which became well-known to customers. The managing directors from Firms 2 and 3 utilized their unique knowledge in international marketing to develop products to satisfy the demands of each foreign market. Furthermore, IBKL affects an entrepreneur's ability to manage his/her international businesses. The three cases may obtain different unique knowledge, but this knowledge was utilized in a similar manner to manage resources, work activities and tasks. In Firm 1's case, the general manager's unique knowledge of quality control led to the focus on manufacturing high-quality products and targeting high-end markets. For Firms 2 and 3, the managing directors' unique knowledge of international marketing provided them with information about customer needs and demands, which in turn, assisted them in managing organizational resources efficiently:

“Knowledge is important for me to run this business. I need to know the customers and the countries before I make decisions about what product I should produce or to where I should export my products. Otherwise, I can not produce the right products for them or manage my work and resources.” (Firm 2)

ENTC and MNGC

The interviews reveal that no matter how many business opportunities entrepreneurs could identify and seize and no matter how strong their internal drive for success, they still needed to acquire or develop MNGC to realize such opportunities, particularly if they had limited resources. Firm 2's managing director created a flexible working system in which employees were required to fill in for absent staff to allow the work system to run smoothly and quickly respond to the new product's demand. In Firm 3's case, to exploit the opportunity and manufacture the “healthy snack” product, he had to manage all resources, such as keeping its manufacturing line open 24 h a day, providing additional training for employees and planning to expand the factory in the near future. When Firm 1 expanded the production line and manufactured canned aloe vera, the general manager had to reallocate organizational resources such as employees and revise a work schedule:

“When I have the idea of new products or find new markets I want to expand to, I have to think about how I should manage what I have here and adjust the system to suit what I find.” (Firm 1)

Therefore, we interpreted that when entrepreneurs undertake ENTC, it affects other activities at the firm. Thus, a firm must be managed such that it can adapt and adjust to new circumstances.

Competencies and learning orientation

The interviews supported our hypothesis that ENTC and MNGC positively facilitate learning orientation. Entrepreneurs must apply ENTC to successfully perform an entrepreneurial role, such as seizing high-quality business opportunities, searching for products or services that will meet customer needs, developing goods and services according to customer needs, and then driving the ventures to fruition. This role requires continuous learning and enables entrepreneurs to realize the importance of learning. Nevertheless, firms consist of different functions and people, and they must be managed well to act in accordance with the leader. MNGC assists entrepreneurs in efficiently managing their firms and leading them to become learning-oriented firms.

Entrepreneurs from the case studies facilitated and encouraged learning mainly through the management of human resources. Various training and development programs were employed to stimulate learning orientation. Firm 1's general manager made it a policy for employees to complete a training program to make sure they could work properly and meet the quality requirements. Firm 2's managing director provided different training courses for employees, including inviting outside experts for special training, while Firm 3's managing director motivated employees to commit to learning by emphasizing training as a reward to help them improve themselves:

“When I'm about to expand my business to new markets, I have to look back at the abilities of my staff and make sure they are ready and able to learn any new things. If I want this firm to go far, I have to push my staff that way so that they can adapt to new demands from customers.” (Firm 2)

Furthermore, they utilized their MNGC similarly to facilitate learning orientation in all three dimensions: commitment to learning, shared vision, and open-mindedness. They agreed that the firm's vision and objectives needed to be shared with employees and regularly held meetings to share information, discuss work problems and issue rules and regulations to solve any problems or as a way to improve the work. They also managed their firms to commit to learning and promote open-mindedness in their organizations. For instance, Firm 1's general manager was open to new information and considered it a normal work routine to update customer information and to talk with her employees on a daily basis. Firm 2's managing director, motivated employees to evaluate their working system every month, while Firm 3's managing director always encouraged his employees to question him about what they did not agree with or understand, and in return, they felt comfortable offering their ideas or opinions.

Discussion

Previous research has paid considerable attention to studying the direct effects of learning orientation and human capital on a firm's performance and internationalization (Calantone et al. 2002; Hitt et al. 2001a). Although human capital and learning are always seen as interrelated variables and the most important resources for any organization, the subject of how human capital influences learning orientation is still unexplored. In this regard, we extend prior research by examining the relationship between them in the EIF context. This study can be considered as an initial step toward addressing the importance of human capital and learning orientation. In addition, we took a step further in exploring the relationships among the specific aspects of human capital to explore how they influenced each other in the EIFs.

This study proposed a model that relates different components of entrepreneurs' human capital, particularly IBS, IBKL, ENTC and MNGC, with learning orientation. We investigated the relationships between each human capital component, identifying the effect among them and the components that are more likely to influence learning orientation. Six hypotheses were generated and tested using data collected from EIFs in Thailand. All hypotheses were supported and complemented by results from in-depth interviews with three selected case studies that showed that the human capital components of entrepreneurs have influences on facilitating learning orientation in EIFs.

For the first hypothesis, the result was significant and confirmed the positive influence of entrepreneurs' IBS on enhancing their IBKL. The case studies indicated that entrepreneurs obtain IBS from various channels and that it is transformed into knowledge relevant to international business through the learning process. Work experiences, network/personal contacts abroad and marketing expertise were specified as important sources of IBS that lead to increasing entrepreneurs' IBKL due to their direct relevance to the current businesses, whereas formal education and information technology expertise have less influence on IBKL. Nevertheless, the case studies suggested that it is not easy for entrepreneurs to quickly obtain a complete set of IBS to compete in a foreign market. They compensate for the skills that they lack by using available options, such as recruiting experts or outsourcing services. This finding is in line with a previous study that suggested that if a firm grows and faces changes in the contextual environment, the absent skills can be obtained through recruiting talent and experts or consultants to either overcome the problems or to find ways to better exploit the markets (Kaulio 2003; Hill et al. 2002). This study's results are similar to the finding by Macpherson and Holt (2007), who asserted that successful individuals in small business ventures rely less on their previous business skills than on being more open to growth, change and the delegation of strategic planning.

As for the Hypotheses 2a and H2b, the results confirmed that IBKL is positively related to ENTC and MNGC, respectively. Our findings add strong support to Weick (1996), who argued that the ability of firm founders is influenced by the existing stock of knowledge, which assists them in applying new information and adapting to new situations. Our case studies suggested that IBKL enables entrepreneurs to perform better in entrepreneurial and managerial roles. Knowledge plays a role in helping entrepreneurs to recognize and evaluate valuable opportunities that could

lead to new product development (Ravasi and Turati 2005). Knowledge relevant to international business, which is acquired through various sources, is integrated and applied to help them make better decisions and perform entrepreneurial and managerial tasks in an organization. Such knowledge also impacts their internal drive, and they tend to have more confidence to operate their businesses overseas.

Hypothesis H3, which proposed the positive relationship between ENTC and MNGC, was supported. The result is consistent with several studies, including that of Boyatzis (1982), who found that ENTC is related to MNGC; those of Hodgetts and Kuratko (2001) and Sadler-Smith et al. (2003), who found that ENTC and MNGC need to be blended because each compliments the other. The interviews revealed that ENTC mostly involves outside firm activities and the internal drive of entrepreneurs themselves, whereas MNGC is more related to internal firm management activities. This finding is in accordance with that of Adam and Chell (1993, p. 26), who suggested that the entrepreneur needs “to maintain a critical internal focus on organizational activities and structure whilst also maintaining a critical external focus on the wider business environment.” Entrepreneurs perceived these two competencies as being interrelated, and they normally put seizing the opportunity first and then follow up with managing all resources in the organization to exploit the opportunity and turn it into a positive outcome.

The positive influences of ENTC and MNGC on learning orientation in Hypotheses H4a and H4b were strongly supported by our findings. The qualitative study suggested that entrepreneurs with ENTC must perform their roles (such as seizing and exploiting opportunities and developing and providing products to suit customers’ demands) in the diverse and highly competitive business environment. Thus, they deem learning in an organization as crucial for their firms to compete and survive in such environment. In addition, to seize opportunities, they utilized their MNGC (such as organizing, supervising, allocating, and utilizing resources) to manage and prepare their firms to be ready and direct the firms toward becoming learning-oriented firms. Kakati (2003) stated that the managerial capabilities of entrepreneurs are essential for organizational growth because these capabilities assist them in performing special functions and designing processes to support and exploit entrepreneurial actions.

Conclusion

This study attempted to investigate the relationship between entrepreneurs’ human capital components and learning orientation in EIFs. We identified different human capital components and considered the relationships among them and the links to learning orientation, which is considered important theoretically. This study contributes to the theoretical extension of an unexplored aspect of EIFs by examining how learning orientation is influenced by entrepreneurs’ human capital components. The findings provide rich empirical evidence based on the survey data. The in-depth interviews from case studies provide strong support and confirm the existing relationship between entrepreneurs’ human capital components and learning orientation in EIFs.

Furthermore, the findings suggest that entrepreneurs' human capital components need to be developed and nurtured on a continuous basis. In the current business context, entrepreneurs must realize that it is essential for them to learn fast and adopt new routines and structures to absorb new knowledge and be flexible in adapting to changes (Chetty and Campbell-Hunt 2004). Learning orientation should be considered a tool that can be utilized and implemented to help firms take advantage of the emerging opportunities and prepare for a fast-changing international business environment. To do so, they need to pay close attention to the improvement and development of their human capital components using various channels. They also should consider the fact that human capital components need to be integrated to facilitate a firm's values and activities. Entrepreneurs' IBS can be transformed into knowledge about international business that can be utilized to enhance their competencies, which will in turn help facilitate the implementation of firms' value and strategic orientation. However, entrepreneurs can also consider various channels to rapidly obtain the necessary IBS to increase IBKL and improve their competencies. As suggested by Klatt (2006), firms, particularly SMEs, can overcome the lack of specialized skills for implementing an international strategy by utilizing trade intermediaries, attaining personnel with the necessary skills or using consultant services.

Our findings further suggest that policy makers develop the appropriate practice, training programs and policy to foster the human capital development of entrepreneurs. They also need to account for the formulation and integration of human capital components. Governments should consider providing a better information platform, facilitation and effective support services to cover all regions, not only the large cities, such that entrepreneurs can easily access the services to develop and improve their human capital.

Nevertheless, this study has several limitations. The first limitation concerns the data collection from only one country. Consequently, the generalization of the results to other country contexts may be limited. Thus, a cross-national study is recommended. In addition, a larger sample size is recommended in any future research even though the sample size in this study is considered sufficient for PLS analysis and the results were reasonably acceptable. Because this study included only four components of human capital, it is recommended that future research further investigate other components and their combined effects. It would also be interesting to undertake a multiple-group analysis to compare the results across different business sectors. Finally, combining quantitative and qualitative methods in this study may be a limitation, as mentioned by Hohenthal (2006, p.186), because it is dominated by method discussions rather than by discussions based on theory and results.

In conclusion, the results of this study indicate that the human capital components of entrepreneurs are interrelated and facilitate learning orientation in a firm. IBS can help enhance an entrepreneur's knowledge of international business, which in turn improves both ENTC and MNGC. Furthermore, ENTC was found to be positively linked to MNGC, and the findings specifically identify the role played by ENTC and MNGC as significant predictors of learning orientation and significantly facilitate the implementation of learning orientation in EIFs. This finding suggests that to improve or develop an entrepreneur's human capital components, the relationship among each component must be taken into account, as well as their specific role in such relationships.

Appendix

Table 3 Measurement items, item loadings and t-value

Variables and Measurement Items	Mean	SD	Final Loading	t value
International business skill (IBS)				
International business experiences	2.73	1.037	0.734	3.623
Networks or personal contacts abroad which related to current business	2.87	1.033	0.659	2.957
Education related to international business	2.90	0.946	0.759	3.796
Marketing expertise and specialization	2.89	0.944	0.889	6.253
Information technology and communication expertise and specialization	2.97	0.888	0.769	5.126
International business knowledge (IBKL)				
Knowledge about the laws, norms and standards in foreign markets	3.94	0.929	0.721	11.002
Knowledge about the language	4.49	0.684	0.726	11.705
Having foreign subsidiaries or representative companies abroad	3.75	0.949	-	-
Having cooperative agreements, including agreements with agents and alliance partners	3.96	0.789	0.722	13.343
Having experiences in doing business abroad	4.06	0.857	0.779	13.588
Having the unique knowledge and/or competence	3.85	0.904	0.687	9.681
Entrepreneurial competence (ENTC)				
My ability to accurately perceive unmet consumer needs	3.72	0.799	-	-
My ability to identify goods and services people wants	3.76	0.769	-	-
My ability to seize high-quality business opportunities	3.63	0.772	0.650	10.004
My ability to develop goods and services that are technically superior	3.95	0.727	0.793	15.568
I have an extremely strong internal drive to see this venture through to fruition	3.30	0.717	0.771	17.854
I spend considerable time and energy looking for products or services that will provide real benefits for my customers	4.09	0.744	0.814	27.093
Managerial competence (MNGC)				
My ability to make resource allocation decisions that achieve maximum results	4.15	0.739	0.675	11.729
My ability to achieve results by organizing and motivating people	4.06	0.742	0.774	17.237
My ability to organize resources and coordinating tasks	4.04	0.680	0.857	27.541
My ability to supervise, influence, and lead people	4.07	0.782	0.852	27.386
My ability to delegate effectively	4.08	0.706	0.866	36.331
My ability to keep this organization running smoothly	4.16	0.686	0.840	23.638
Commitment to learning (CM)				
This organization's ability to learn is the key to the organization's competitive advantage	4.33	0.769	0.837	27.341
The basic values of this organization include learning as a key to improvement	4.35	0.713	0.854	29.544
The sense around here is that employee learning is an investment, not an expense	4.16	0.747	0.751	14.523
Learning is seen as a key commodity necessary to guarantee organizational survival	4.11	0.728	0.829	27.631

Table 3 (continued)

Variables and Measurement Items	Mean	SD	Final Loading	t value
Shared vision (SV)				
There is a commonality of purpose in my organization	4.00	0.731	0.814	21.694
There is total agreement on organizational vision across all levels, functions, and divisions	3.68	0.898	0.873	36.996
All employees are committed to the goals of this organization	3.76	0.777	0.871	38.362
Employees view themselves as partners in charting the direction of the organization	3.70	0.885	0.831	25.328
Open-mindedness (OM)				
We are not afraid to reflect critically on the shared assumptions we have made about our customers	3.75	0.886	0.704	11.022
Personnel in this organization realizes that the very way they perceive the marketplace must be continually questioned	3.72	0.813	0.835	37.319
We rarely collectively question our own business about the way we interpret customer information	3.87	0.665	0.748	14.664
We continually judge the quality of our decisions and activities taken over time	4.15	0.706	0.800	25.946
Control				
Firm size			1.000	1.000
Firm age			1.000	1.000

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