


Research article

Human Capital and Degree of Internationalization. An Empirical Study on Costa Rican Companies

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Abstract

This study examines the influence of managers' international orientation, international experience, and export risk perception on the degree of internationalization achieved by their small and medium-sized companies. Based on the existing literature and previous research into International Entrepreneurship, a research model was developed and empirically tested using structural equation modeling techniques on a sample of 132 managers of small and medium-sized companies. The main results indicate that the international experience of managers has only an indirect effect on the degree of internationalization. Managers' risk perception regarding exports seems to be a key factor to explain the variation in the degree of internationalization of small and medium-sized companies.

Keywords: small and medium-sized companies; international orientation; international experience; risk perception; degree of internationalization.

Capital humano y grado de internacionalización. Un estudio empírico sobre empresas costarricenses

Resumen

Este estudio examina la influencia de la orientación internacional, la experiencia internacional y la percepción del riesgo de exportación de los gerentes en el grado de internacionalización alcanzado por sus pequeñas y medianas empresas. Basados en la literatura existente y en investigaciones previas en el campo del Emprendimiento Internacional, se desarrolló un modelo de investigación y se probó empíricamente mediante técnicas de modelado con ecuaciones estructurales en una muestra de 132 gerentes de pequeñas y medianas empresas. Los principales resultados indican que la experiencia internacional de los gerentes solo tiene un efecto indirecto sobre el grado de internacionalización. La percepción del riesgo de exportación de los gerentes parece ser un factor clave para explicar la variación en el grado de internacionalización de las pequeñas y medianas empresas.

Palabras clave: pequeñas y medianas empresas; orientación internacional; experiencia internacional; percepción de riesgo; grado de internacionalización.

Capital humano e grau de internacionalização. Um estudo empírico sobre empresas da Costa Rica

Resumo

Este estudo examina a influência da orientação internacional dos gestores, da experiência internacional e da percepção do risco de exportação dos gestores no grau de internacionalização alcançado pelas suas pequenas e médias empresas. Com base na literatura existente e em pesquisas anteriores na área de Empreendedorismo Internacional, foi desenvolvido um modelo de pesquisa e testado empiricamente utilizando técnicas de modelagem de equações estruturais em uma amostra de 132 gestores de pequenas e médias empresas. Os principais resultados indicam que a experiência internacional dos gestores tem apenas um efeito indireto no grau de internacionalização. A percepção do risco de exportação dos gestores parece ser um fator chave para explicar a variação no grau de internacionalização das pequenas e médias empresas.

Palavras-chave: pequenas e medias empresas; orientação internacional; percepção de risco de experiência internacional; grau de internacionalização.

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1. Introduction

Small and medium-sized companies (SMEs) represent approximately 98% of the existing companies worldwide (Dabić et al., 2020). SMEs substantially impact job creation, foster business innovation (OECD, 2018), and are considered the engines of the economic growth of all nations (Gherghina et al., 2020). The internationalization of SMEs has become a highly relevant research topic as a consequence of their continuous proliferation in international markets (Buzavaite & Korsakiene, 2019). Internationalization refers to a company's participation in international commercial operations (Domínguez, 2018), and to the expansion of its activities to access foreign markets (Child, et al., 2022). It plays a pivotal role in the future of companies, especially those in countries with low expectations of economic growth or low local demand (Mieres & García, 2018).

The increasing number of SMEs venturing into export markets has led scholars to a greater interest to investigate the antecedents that could influence the inter-national performance of SMEs positively, measured it in terms of export intensity (Chalmers et al., 2020), export sales growth (Acikdilli, et al., 2022), export geographical scope (Crick & Crick, 2021), the degree of internationalization of the firm (Sandoval-Álvarez, 2023), among others. Despite this increase in the number of SME export ventures, their participation is still low (Tan et al., 2018), accounting for only 9% of global exports. Furthermore, direct exports by SMEs in developing economies represent only 7.6% of total sales on average, while the share of sales in the services sector is negligible, accounting for less than 1% of total sales in this sector according to the World Trade Organization's most recent macro study on SME internationalization, which analyzed data from more than 24,000 SMEs (World Trade Organization [WTO], 2016). This raises an important question: What factors are conducive to the international performance of SMEs?

Prior research on International Entrepreneurship has argued that some attributes at the firm level are significantly associated with international performance exhibited by the companies (e.g., Steinhäuser, Paula, & de Macedo-Soares, 2021; Tajeddin et al., 2023). For instance, firm size and the availability of resources for international efforts stand out as relevant for international undertakings. However, compared with multinational and larger firms, SMEs often have limited resources. Resource constraints characterize SMEs (Bashir, Alfalih, & Pradhan 2023) and can prevent them from pursuing export projects, thus making it difficult for them to expand their business abroad (Sandoval & Rank, 2022).

For some authors, human capital seems to be of paramount importance for the exploitation and identification of export business opportunities (Buzavaite & Korsakiene, 2019). Managerial traits are of particular research interest, as they are believed to have a crucial influence on the performance of companies in international markets, either

favorably or unfavorably (Onkelinx, Manolova & Edelman, 2016), especially managers risk perception (e.g., Eduardsen & Marinova 2020) and their international experiential knowledge (e.g., Stoian, Dimitratos, & Plakoyiannaki, 2018).

Experiential knowledge refers to knowledge acquired through personal experience with situations or events; as opposed to logical conclusions reached by reasoning, observation, or contemplation of information provided by other sources (Blume, 2017). The international experience of a key manager appears to significantly impact the international results of SMEs; this is supported by several studies (i.e., Battaglia & Neirotti, 2022; Qin, Akhtar, Farooq, & Gillani, 2022; Freixanet & Renart, 2020). Some scholars also argue that experienced entrepreneurs with a global mindset or international orientation hold a particular worldview. This impacts the information they search for and how they interpret it, leading them to seek business opportunities and business models that coincide with their own experiences (Torkkeli, Nummela, & Saarenketo, 2018).

Although the experiential knowledge gained through international experience is probably the most supported antecedent of internationalization according to empirical evidence, its impact is not universally accepted and remains controversial. For instance, several studies have argued that international experience has been overemphasized and is not necessary or critical for successful SME internationalization (Kalinic and Forza, 2012). Similarly, others point out that having a lot of international experience is counterproductive for export business because new and emerging international business opportunities go unnoticed by the managers (Pidduck, Clark, & Busenitz, 2020). Recently, some authors claimed that despite the widespread theoretical acceptance of the significant impact of a key manager's international experiential knowledge on the international performance of a company, existing empirical research on the possible positive impact of key managers' international experience and international orientation on the international performance of their companies still produce inconsistent and contrasting results (Faroque, Mostafiz, Kuivalainen, & Sundqvist, 2020). This inconsistency highlights a gap between theory and practice.

To address this gap, a research model was built to determine the extent to which the level of international experience of top SME managers could influence the export performance of their firms. More specifically, this study examines the extent to which their international export experience and international orientation regarding export could influence the degree of internationalization of their SMEs. To this end, a research model was developed based on the existing literature and previous research on International Entrepreneurship perspective.

International Entrepreneurship (IE) is characterized by its focus on human capital as a determinant factor for firm internationalization (Dimitratos & Li, 2014). From this perspective, the international experience of a

manager, their perception, and global mindset are presumed antecedents of early, rapid, or successful firm internationalization (Paul, 2020).

In addition, the traditional approach to internationalization studies has primarily focused on researching large firms and assumes that strategic choices and firm performance are determined not only by the firm resources but also by the characteristics of top managers. Thus, it highlights the relevance of human capital elements for internationalization (Buzavaite & Korsakiene, 2019). This is especially pertinent for SMEs because internationalization is viewed as an entrepreneurial activity, in which the key manager, the decision maker, plays an active role in the internationalization process (Dar & Mishra, 2021). Therefore, more attention should be paid to managerial characteristics when conducting research on SMEs.

Finally, exporting is the most preferred and cost-effective way for SMEs to expand abroad (Tan, Brewer, & Liesch, 2018). Hence, for the purpose of this research, we limit the understanding of the concept of "internationalization" as the expansion of the firm's business activities through export sales.

This research contributes to the international entrepreneurship literature by providing empirical evidence, in the context of a Latin American country, suggesting that the international performance of SMEs is largely dependent on managerial factors, such as their experiences and perceptions, rather than firm characteristics. The article is structured as follows: first, conceptual definitions and the research model are presented; then, the theoretical foundations that support the hypotheses are discussed; after that, the methodology and the results of the hypotheses are presented, followed by a discussion and conclusion; finally, the limitations of this study are discussed, and potential areas for future research are suggested.

2. Literature Framework and Hypothesis

2.1 Conceptual definitions and research model.

International Entrepreneurship (IE) is a relatively recent area of research (Andersson, 2014). IE concerns "the discovery, enactment, evaluation, and exploitation of opportunities across national borders to create future goods and services" (Oviatt & McDougall, 2005, p. 540).

Its primary focus of research is the human capital of firms, specifically the entrepreneurs responsible for discovering, evaluating, and exporting business opportunities, ultimately accountable for their firm's international performance. From an IE perspective, the personal traits of a manager are crucial to determine the international performance of a firm (e.g., Araújo, 2022; He, 2020; Onkelinx et al., 2016). The above applies especially to SMEs, as managers usually have overall responsibility for the firm, and their individual characteristics affect how they perceive their environment, influence their decision-making, and ultimately impact the company's performance (Franco-Angel and Urbano 2019).

The IE literature highlights that international experiential knowledge (Buzavaite & Korsakiene 2019) and risk perception (Eduardsen & Marinova 2020) are personal traits that many researchers consider as key determinants of a company's international performance. In IE, two types of knowledge gained from international experiences are clearly distinguished: the international experience (e.g., De Cock, 2021) and the international orientation (e.g., Bujac et al 2016; Torkkeli et al., 2018).

International experience is the knowledge gained by working with foreign markets. It refers to market knowledge that cannot be formally taught and is challenging to transfer to others (Tan et al., 2018). According to Stoian et al., (2018), it is considered a crucial factor for SME internationalization. International orientation refers to the competencies acquired in global environments. The IE literature refers to this ability as 'global thinking', 'international orientation', or 'global mindset' (Bujac et al. 2016; Torkkeli et al. 2018). It is not based on market or business experience; alternatively, it could be acquired through language training, extensive travel, or life experiences abroad, which can increase a person's interest in foreign exposure (Acedo & Jones, 2007). International orientation enhances individuals' ability to adjust to diverse environments and cultures while fostering a positive attitude towards international affairs.

While international experiential knowledge (i.e., international experience and orientation) is often considered the primary predictor of individual-level export performance, some scholars have argued that its positive effect on SMEs' exporting performance is inconclusive (Faroque et al., 2020), overemphasized (Ahmed & Brennan, 2019), and even counterproductive, causing companies to overlook emergent or unfamiliar business opportunities (Pidduck, 2020).

In a recent review covering 20 years of research on SME internationalization, Steinhäuser, Paula, & de Macedo-Soares, 2021; Tajeddin et al., 2023 identifies gaps and research opportunities, including the need to further examine SME managerial characteristics. For some IE scholars, the search for international companies cannot be understood without considering the key decision maker's risk assessment capacity (Acedo & Jones, 2007). Exporting is considered a risky activity for SMEs (Krauss et al., 2017). The perceived risk with respect to export is considered an important obstacle for SMEs to do it (Tan et al., 2018). Risk perception in the context of SME is regarded as a "subjective judgment that decision makers make about the characteristics and severity of a risk associated with an internationalization activity" (Bonfim et al, 2018; p.3).

Based on the existing IE literature, a research model was proposed to empirically test hypothetical relationships between manager characteristics (specifically international experience, international orientation, and risk perception, and their possible impact on the degree of internationalization of an SME. Figure 1 illustrates the research model.

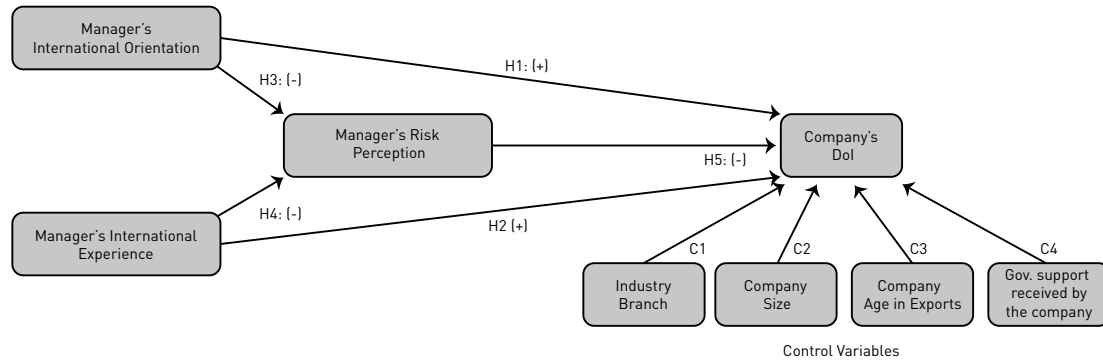


Figure 1. Research Model.
Source: own elaboration.

A company's degree of internationalization (DoI) is the dependent variable in the model. It refers to the performance of a company in foreign markets (López-Morales & Gómez-Casas, 2014). DoI is traditionally assessed as the ratio of international sales to total sales, a concept also known in IE research as export intensity (Sandoval-Álvarez, 2019). However, there is not a unique way to measure DoI. Scholars have developed different theoretical approaches and measures, including single indicators or composite indexes (For an overview of the different approaches, their advantages and disadvantages, see Szymura-Tyc (2013). In our model, DoI is based on a composite measure proposed by Clercq et al. (2015) specifically developed for conducting research on SME internationalization. It includes the ratio of foreign sales to total sales, and the geographic scope of foreign sales (i.e., the number of countries to which the company exports).

To sum up, in Figure 1, a company's DoI is affected by different levels of export experience, international orientation, and risk perception of the key manager. The mediating effect is considered in the research model, that is, we propose that a manager's risk perception regarding export may act as a mediating variable. The following explains the hypothesized relationships depicted in the model and the reason for considering a mediating effect based on the literature and previous research on IE.

2.2 Literature Review and Hypotheses

2.2.1 International experience and degree of internationalization

Due to the resource constraints that SMEs often face, international experience is considered essential for the international expansion of a company (Andersson, 2014), while the lack of such experience is considered an obstacle and a major barrier (Velez-Ocampo, Gonzalez-Perez, & Sin, 2021). International business experience in different geographical locations and contexts fosters the creation of international contact networks (De Cock

et al., 2021). It has been asserted that entrepreneurs dealing with international markets seem to learn from such experiences and accumulate valuable knowledge about doing business in foreign markets, which facilitates the recognition of export opportunities (Sandoval-Álvarez, 2023). Previous international experience and skills developed in serving foreign markets can explain the propensity of managers to develop their businesses internationally (Loué, 2018).

According to IE scholars, international business experience can increase an individual's willingness to seek international ventures (Li & Liu, 2018). The more time spend interacting in foreign markets, the more knowledge is gained about successful international procedures and businesses, making them more efficient and effective (Evangalista & Mac, 2016). Previous research has suggested a positive impact of international experience on the international performance of firms, such as export intensity and propensity (i.e., Rubino, Vitolla, & Garzoni, 2017; van Staden, 2022). Consequently:

H1: The international experience of a SME key manager is positively related to the degree of internationalization of the SME.

2.2.2 International orientation and degree of internationalization

Other types of experience, not exclusively related to international business experience, may be relevant for successful internationalization. In the IE literature, this is referred to as international orientation, global mindset, or international mindset (He, 2020). It can be enhanced by a range of personal experiences, not necessarily related to business experience. Global mindset is rooted in the knowledge gained through vast international travel experience (He, Baranchenko, Lin, Szarucki, & Yukhanaev, 2020), living experience abroad (Andresen, & Bergdolt, 2021), foreign language proficiency (He et al., 2020). It is considered an intangible, idiosyncratic, and difficult-to-trade capability (Kyvik, 2018). Exposure to other cultures

and international contexts through living abroad, and regular international travel leads to a strong international orientation. Managers who have had the experience of living abroad are more likely to respond positively to export opportunities than their counterparts without this experience and are more receptive to the stimuli of doing business abroad (Andresen, & Bergdolt, 2021).

Having a global mindset fosters a generally positive attitude towards international affairs and facilitates the ability to adapt to international environments and cultures (Lazaris, & Freeman, 2018). It has been shown that internationally oriented managers are more likely to succeed in the internationalization process of SMEs (e.g., Torkkeli, Nummela, & Saarenketo, 2018). Previous studies confirm that SME managers with higher levels of international orientation are more prompt to adopt an export strategy faster than firms managed by individuals with low international orientation (Galati et al., 2014). They are better identifying business opportunities in foreign markets (Anschütz, & Mazzucato, 2022). For internationally oriented managers, choosing a strategy for entering new international markets is less difficult than for their counterparts without such orientation (Nielsen & Nielsen, 2011). Having an international orientation also encourages both international networking and knowledge acquisition activities, which in turn affects the development of international opportunities positively (He, et al., 2020). Finally, according to research conducted by Kyvik (2018) on SMEs, the most significant finding of his research is the confirmation of a strong causal effect of the international mindset on SMEs' internationalization (Kyvik, 2018).

Based on the above, it seems plausible that internationally oriented managers are more alert to international opportunities and more likely to take advantage of them once they are identified. Accordingly:

H2: The international orientation of a SME key manager is positively related to the degree of internationalization of the SME.

2.2.3 International experience and risk perception regarding export

Business internationalization processes expose managers to new and unfamiliar contexts or business challenges in various facets (Freixanet & Renart, 2020); for example, limited access to market information, new regulations, trade barriers, etc. Low familiarity with the foreign market increases the perception of risk, which in turn reduces the likelihood of the firm's international expansion (Fornes & Cardoza, 2018). The lack of information and knowledge about the target markets abroad, as well as political instability, increases risk and can negatively affect the manager's decision to expand internationally, which in turn would affect the export performance of the

company (Mathews, Maruyama, Sakurai, Perks, & Sok, 2018). Thoughts and perceptions play a fundamental role in the internationalization of firms, as managers thoughts determine their behavior (Sandoval & Rank, 2022). Risk perception can motivate or prevent an individual from taking certain actions (Handrito et al., 2020) because it is a personal assessment of the likelihood of negative outcomes (Wolff, Larsen, & Øgaard, 2019). It has been argued that managers with more business experience at the international level perceive less risk with respect to exports. The opposite also seems to be the case; that is, managers with little international experience do not often consider exports as a strategy for firm growth (Fornes & Cardoza, 2018).

Previous research on SME firms shows that international experience acquired by a manager increases their sense of controllability of international ventures, which in turn reduces the sense of uncertainty inherent in foreign markets (Eduardsen & Marinova, 2020). Therefore, it seems plausible to assume that:

H3: The level of international experience of a SME key manager is negatively related to their risk perception regarding export.

2.2.4 International orientation and risk perception regarding export

According to He et al. (2020), having an internationally oriented mindset has a profound effect on pursuing international business opportunities. People who have been exposed to foreign markets and diverse cultures for a significant period, whether through extensive travel or living abroad, create a sense of familiarity with countries and their specific markets (Kyvik, 2018).

Some authors also argue that internationally oriented managers perceive less ambiguity and complexity when seeking opportunities in foreign markets (Sandoval-Álvarez, 2019). It was also shown that globally oriented managers positively impact the international opportunity identification in foreign markets (He et al., 2020). A higher level of international orientation among SME managers can reduce the effect of culture shocks and increase knowledge of business practices in other countries (Zhou et al., 2022). Previous experiences from living or working abroad develop an internationally oriented mindset in these individuals, reducing the liability of novelty, that is, the perception of unfamiliarity with foreign countries and business practices (Fornes & Cardoza, 2018), and reducing the perception of "psychological distance" from such markets (Jones & Casulli, 2014). The above leads us to postulate that:

H4: The level of international orientation of a SME key manager is negatively related to their risk perception regarding export.

2.2.5 Risk perception regarding export and degree of internationalization

According to some IE scholars, assessing risks is an integral part of evaluating the inherent threats associated with international business (Milanov & Maissenhalter, 2014). The perceived uncertainty of some foreign markets affects the level of effort required to enter them (Guercini, Milanese, & Runfola, 2020). Studying individual entrepreneurs' perceived risks and barriers in foreign markets may help explain why some firms opt for exporting while others remain focused on domestic markets (van den Berg, 2022). In theory, expanding export activities requires processing numerous opportunities and threats, leading to information overload for managers. They are unable to examine all available information under these circumstances. Instead, they tend to rely on their perceptions to deal with the novelty and complexity that characterize the export business (Jones & Casulli, 2014). The decision to expand into foreign markets is based on the decision-maker's perception of risk and their ability to manage uncertainty (Guercini et al., 2020). Milanov and Maissenhalter (2014) emphasize the importance of understanding how managers deal with risk and uncertainty that arise when exporting in order to comprehend the international entrepreneurial behavior of a firm.

Empirically, some research has demonstrated that risk perception highly correlates with a company's internationalization outcomes as it is considered a significant precursor that shapes the internationalization processes and influences the scope of the export operations (da Silva & Takahashi, 2021). Previous studies indicate that SMEs with managers who perceive lower levels of risk tend to be more involved in export operations (da Silva & Takahashi, 2021). Consequently:

H5: A SME key manager's perception of risk regarding exports is negatively associated with the degree of internationalization of their SME.

2.2.6 Risk perception as mediator

Our model describes the links between the predictor variables and proposes that risk perception may act as a mediating variable. The following theoretical arguments from the IE literature are offered to support this hypothesis.

In their review of EI studies, Keupp and Gassmann (2009) found a lack of research exploring the links between variables that predict the international performance of a firm, referred to as the "black box" of international entrepreneurship research. Faroque et al. (2020) have argued that prior experience may not directly impact internationalization performance due to inconsistent results in previous studies. As mentioned earlier, some

IE academics hold that understanding the search for international companies requires considering risk assessment capacity (Acedo & Jones, 2007).

Sandoval and Rank (2022) contend that managers who perceive themselves as experienced or skilled see the environment as safe, while those who consider themselves less capable perceive more threats. Carpenter et al. (2004) point out that international expansion of SME export activities is a risky endeavor that involves obtaining and processing information on market conditions, which can lead to information overload for managers and further uncertainty and ambiguity. Under such circumstances, managers can only filter a limited portion of available information and interpret it based on their own perceptions.

Managers engage in a cognitive activity where they filter and interpret situations based on their perceptions of familiarity and novelty (Sandoval-Rank, 2022). The perception of a manager is considered to be a cognition element that may play an intervening role. In this vein, Milanov & Maissenhalter (2014) have argued that cognitive factors could "add refinement and layers of complexity to the mechanisms that mediate how the founders' personal internationalization experience informs the firm's subsequent internationalization behavior" (p. 50). According to Jones and Casulli (2014), cognition elements precede international behavior and performance. Similarly, Faroque et al. (2020) argue that knowledge gained in global settings should first be applied to the cognitive thinking of the entrepreneur. From these statements, we could conclude that managerial perceptions play a mediating role in the relationship between managers' international orientation and experience and companies outcomes. Therefore, it is possible to assume that:

H6 a): The relationship between the international experience of a key manager and the degree of internationalization of their SME is mediated by the key manager's perception of risk regarding exports.

H6 b): The relationship between the international orientation of a key manager and the degree of internationalization of their SME is mediated by the key manager's perception of risk regarding exports.

3. Methods and analysis of results

3.1 Variables and measures

To measure the variables represented in the research model, multi-item constructs from previous studies were used. Following Xu et al. (2015), the international experience of a manager was assessed by the total number of years of experience in exporting, including the time prior to joining or founding the firm. This is a commonly used measure in the study of SME internationalization

(e.g., Javalgi & Todd 2011; Sandoval-Álvarez, 2023). To measure international orientation, we adopt the formative constructs proposed by Acedo and Jones (2007), which include three dimensions: propensity to travel, second language proficiency, and previous experience living abroad. Participants were asked to indicate whether they had lived, worked, or studied abroad, the number of languages they spoke fluently, and the average number of days per year spent abroad, including leisure and business travel. Scores were standardized and averaged to create a single measure.¹ Risk perception was measured using a construct validated by Sitkin and Weingart (2017) and adapted by Acedo and Jones (2007) to measure a manager's perception of risk in the context of a firm's export expansion. It consists of four items and a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The Cronbach's alpha value, $\alpha = 0.805$, indicates the internal consistency of the construct.

The degree of internationalization (SMEs DoI) was assessed as proposed by Clercq et al. (2005). Their construct consists of two dimensions: the ratio of foreign sales to total sales, and the geographic scope of foreign sales; that is, the number of countries to which SMEs export. The values of these two dimensions were standardized and averaged to obtain a single score of DoI.¹

The research model also controls the potential influence of firm-level variables on DoI; for instance, company exporting age, company size, industry, and government support to improve export outcomes. The longer a company has been engaged in exporting activities, the higher the DoI is expected to be. According to Blomstermo et al. (2006), a company's exporting age was determined by calculating the total number of years since its first export. According to O'Cass & Weerawardena (2009), larger companies are more likely to export or have a greater international presence due to their greater availability of resources for international ventures. According to Brouthers et al. (2015), company size was defined as the total number of employees in the organization. It is a commonly used measure to estimate the resource availability of a company for international ventures (Sandoval-Álvarez, 2023). IT industries are more global in nature and tend to expand internationally more easily than other industries, especially in the software sector (Jain et al., 2019). Therefore, we control industry as an independent variable. In addition, we control governmental export support and subsidization, as it is likely to be associated with higher export intensity (van den Berg, 2022). Following Abbasi (2019), key managers were asked whether their firms are receiving subsidies to export or are participating in export-promotion programs sponsored by the government.

3.2 Selection criteria for companies

Three basic criteria were used to select the companies to be analyzed: first, only SMEs were included in the sample. There are no universal criteria for defining an SME; for this study, the criteria commonly used in studies on the internationalization of SMEs were adopted, defining them as companies with no more than 250 employees and an annual turnover of no more than 50 USD million or its equivalent in another currency (e.g., Brouthers, Nakos & Dimitratos 2015). Second, only exporting SMEs were eligible, regardless of their export intensity. Third, since our research interest focuses on the possible influence of the characteristics of the SME manager on the degree of internationalization of their firm, it is necessary that the key manager has the ability to make decisions independently of any legal influence or management of another firm. Therefore, all SMEs that are subsidiaries of other larger companies were excluded, as they are administratively dependent on them.

3.3 Data collection

The companies listed in the Costa Rican Chamber of Commerce and Industry and the Chamber of Technology and Communication were used as sample since they cover a large number of companies from all over the country and most of their members are SMEs.

The survey period was four months, from August to November 2019. The data collection was made by sending online questionnaires. The reporting unit was the key manager/owners of the company, who is usually the one who makes strategic decisions about international expansion and its scope (Sandoval & Rank, 2022). To preserve confidentiality of the participants and their answers, they were allowed to answer the questionnaire anonymously. In addition, control questions were included to ensure that the returned questionnaires met the three selection criteria described above.

The questionnaires were made in Spanish. As the constructs and scales used were originally in English, a reverse translation process was carried out by native English and Spanish speakers. Before being sent out, the questionnaires were tested with managers from eight SMEs; this helped to correct semantic problems in the questionnaires before they were released.

In total, 557 questionnaires were sent out and 209 were returned, out of which 71 were discarded due to a significant number of unanswered questions that prevented them from being included in the study. Six questionnaires were rejected due to one of the following three reasons: The company was not an SME; The informant was not to be the key manager of the company; The company was not an exporter. The final response rate was 23.7%. The final sample consists of 132 SMEs that met the thresholds of our selection criteria. The demographics of the companies and key managers are summarized in Appendix 1 at the end of this study.

¹ The score values were standardized by centering them around the mean and scaling them with a unit standard deviation. This was achieved by calculating z-scores for each data point, which involved subtracting the mean from the data point and dividing the difference by the standard deviation. This common statistical procedure allows the data to be converted into a uniform format. For further technical details refer to Fisher & Milfont (2010) and Jajuga & Walesiak (2000).

3.4 Analysis and Results

3.4.1 Reliability and validity of the model and constructs

Covariance-based Structural Equation Modeling (CB-SEM) was used to test the hypotheses. This technique estimates the strength of the hypothesized relationships represented in the model at the same time, making clear the relative significance of each relationship in the model (Hair, Black, Babin, & Anderson, 2010).

To ensure the accuracy of the hypothesized research model using CB-SEM, it is imperative to thoroughly evaluate the reliability and validity of the model's constructs, as recommended by Hair et al. (2010). The validity and reliability of the constructs were verified prior to analyzing the model and confirming the hypotheses. To verify the multi-item internal consistency of the reflective variable (Hair et al., 2010), the composite reliability was evaluated by computing the C.R. coefficient. Values of C.R. greater than 0.7 evidence composite reliability. The risk perception (reflective variable in the model) had a C.R. value of 0.81, which indicates consistent items within this construct.

Convergent validity was checked by analyzing the extent to which items of a variable correlate with each other (Hair et al., 2010; Byrne, 2016). Confirmatory factor analysis (CFA) was conducted using the Amos28 software to test the significance of item loadings that belong to the reflective variable in the model (Hair et al., 2010). All item loadings were statistically significant at $p < .001$. In addition, we calculated the Average Variance Extracted (AVE) to determine if the standardized item estimates were above their acceptable threshold (i.e., $AVE > 0.50$). The AVE value of the Risk Perception variable was calculated to be 0.59. These results indicate that the items included in this construct share a significant amount of variance, demonstrating convergent validity.

Discriminant validity, the degree to which the independent variables in the model are truly different from each other, was also tested (Hair et al., 2010). For this purpose, the Heterotrait-Monotrait Ratio of Correlation (HTMT) coefficients were estimated. According to Henseler et al. (2015), there is evidence of discriminant validity between constructs when the HTMT coefficients are below the threshold of 0.90 for each pair of constructs examined. When assessing the discriminant validity between the three predictor variables, the HTMT coefficient resulted in values of -0.436, -0.352, and 0.290, indicating that the predictor variables of the model are different from each other, thus demonstrating discriminant validity. In addition, the assumption of non-multicollinearity between the independent variables was tested. High intercorrelations above 0.80 between predictor variables would indicate multicollinearity problems and a potential threat to the study results (Hair et al., 2010). However, all correlations between independent variables were well below the threshold, ranging from -0.33, -0.26, and 0.29. To strengthen this test, variance inflation factors (VIFs) were calculated. The VIF values ranged from 1.076

to 1.27. According to Hair et al. (2010), VIF values below the threshold of 5 indicate non-redundancy among the predictor variables.

Finally, the formative constructs in the model were evaluated, specifically the degree of internationalization and international orientation. The formative variables are composite variables formed by the sum of their dimensions (Hair, Ringle, & Sarstedt, 2011). Therefore, evaluating internal consistency, reliability, and convergent validity is not appropriate. For formative variables, the primary concern is the high level of multicollinearity among their dimensions. Multicollinearity was examined to confirm that the two dimensions of Doi, namely international export sales ratio and number of countries, are not highly correlated. It also applies to the aspects of international orientation, such as the number of languages spoken or the likelihood of traveling, living, or working abroad.

To examine multicollinearity, we calculate the VIF factor (Variance Inflation Factor). VIF values greater than 5 generally indicate multicollinearity problems (Hair et al., 2010). The two dimensions of Doi showed VIF values of 1.012, while the two dimensions of a manager's international orientation showed VIF values of 1.076, 1.092, and 1.112. These results suggest that multicollinearity is not a concern. The results of the consistency, reliability, convergent and discriminant validity tests are summarized in Appendix 2.

3.4.2 Reliability of the model and its goodness of fit.

The goodness-of-fit was evaluated by calculating the coefficient of minimum discrepancy ($\chi^2/d.f.$) whose value was 1.076. It is less than the maximum threshold of 3.0 (e.g., Bryne, 2016); this suggests an acceptable model fit. Because chi-square (χ^2) values are susceptible to changes in sample size and model complexity, a series of additional indices were checked to make better judgments about the model goodness-of-fit. Following Weiber and Mülhhaus (2014), five indices were analyzed. Table 1 summarizes these index scores and respective thresholds. Overall, the indices show that the model fits the data quite well.

Table 1. Model goodness-of-fit

Fit Index	Thresholds	Scores
Tucker- Lewis Index (TLI)	≥ 0.95	0.989
Incremental Index of Fit (IFI)	≥ 0.95	0.996
Comparative Fit Index (CFI)	≥ 0.95	0.996
Relative Non-Centrality Index (RNI)	≥ 0.95	0.995
Root Mean Square Error of Approximation (RMSEA)	≤ 0.06	0.024

Notes: Fit indices y thresholds according to Weiber & Mülhhaus (2014). Source: own elaboration.

Lastly, the assumption of multivariate normality in the data was verified. The multivariate non-normality in the data could be detrimental to Covariance-Based Structural Equation Modeling analysis (CB-SEM) because it may lead to biased statistics and attenuated standard errors

(Awang, Afthanorhan & Asri, 2015). Multivariate normality was checked by computing Mardia's normalized coefficient (d_2) as suggested by Byrne [2016]. This coefficient yielded a value of $d_2 = 9.18$. Mardia values less than 5 indicate the presence of multivariate normality [Byrne 2016]. Consequently, the data failed to meet the assumption of multivariate normality in the data.

In order to handle the multivariate non-normal data, we used bootstrap procedures, often used in cases where the assumption of multivariate normality is not met. Specifically, a Bollen-Stine bootstrapping was performed to test the model fit. This is considered as an alternative effective solution to approximate the sampling distribution of a statistic when the population distribution is not normal or unknown [Ferraz, 2020]. Following Byrne [2016], first, a Bollen-Stine bootstrap test was run to check whether the p-value of the chi-square of fit statistic is greater than 0.50. The result, $p = 0.16$, provided evidence of good model fit. Second, once the suitability of our model was confirmed and a second bootstrap procedure with 1,000 interactions was applied to obtain the parameters estimates and the stability of their p-values [Nevitt and Hancock, 2001]. It was demonstrated that 1,000 interactions are enough to obtain high accuracy of the parameters estimates.

3.4.3 Hypothesis test results

The results of the bootstrap procedure indicate that the relationship between international orientation and the degree of internationalization was not significant ($\beta = 0.01$, $p > 0.05$), therefore rejecting hypothesis H1. The relationship between international experience and the level of internationalization was found to be insignificant ($\beta = 0.11$, $p > 0.05$), leading to reject hypothesis H2. Regarding the relationship between international orientation and risk perception towards export expansion, it was found to be significantly negative ($\beta = -0.21$, $p < 0.01$); hence, Hypothesis H3 is supported. As hypothesized, there is a negative and statistically significant relationship between international experience and risk perception towards exports ($\beta = -0.31$, $p < 0.01$); thus, hypothesis H4 is supported. Additionally, the results indicate that risk perception towards expanding exports is negatively correlated with the level of

internationalization ($\beta = -0.43$, $p < 0.00$), supporting hypothesis H5. Figure 2 summarizes the results of the hypotheses tested.

3.4.4 Robustness tests of the results

To check the stability of the p-values and β parameters, a bootstrap procedure was carried out by applying 3,000 interactions. This test allows us to make a more reliable assessment of the statistical significance of the standard errors and the β estimates [Byrne 2016]. The final results are shown in Table 2. The β estimates and p-values remain unchanged and significant, supporting hypotheses H3, H4, H5.

3.4.5. Tests for mediating effects

A bootstrap procedure was conducted in accordance with the recommendation of Hair et al., [2010] to test for mediating effects. First, we set the indirect paths of the model to zero to compute the β -estimates and corresponding p-values of the direct paths. Subsequently, we applied the same bootstrap procedure to the model, but this time without constraining the effect of the indirect paths to zero. A mediating effect is demonstrated when a change in the strength of the statistically significant relationship between the direct path of the model is significantly reduced or even reduced to zero when an indirect path is included, that is, by introducing an intervening variable into the model [Field, 2013]. The results of these tests are summarized in Tables 3 and 4.

In summary, the results confirm that a key manager's risk perception mediates the relationship between a key manager's international experience and degree of internationalization. The strength of the direct path is reduced by non-significant ($\beta = 0.155$, $p > 0.05$) when the indirect effect is not constrained; therefore, hypothesis H6 a) is supported.

Finally, contrary to our expectations, hypothesis H6 b) is not supported. There was no evidence of a direct effect of international orientation and the degree of internationalization of an SME when the indirect effect is not restricted.

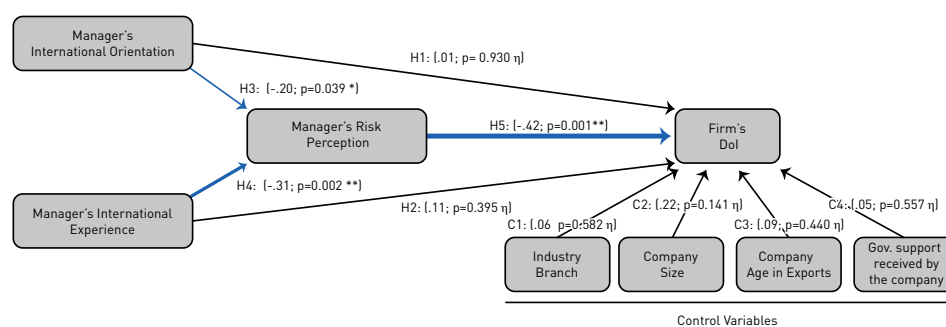


Figure 2. Hypotheses Results.

Notes: Only relationships highlighted in blue color are statistically significant. The thickness of the arrow represents the relative weight of the β value.

**= statistically significant $p < .001$; *= statistically significant $p < .05$; η = not statistically significant

Source: own elaboration.

Table 2. ML method with 3,000 interactions

Hypothesized Relationships				Lower β bound	Upper bound	p b	
International orientation	→	Degree of internationalization	H1	0.016	-0.176	0.177	0.930
International experience	→	Degree of internationalization	H2	0.107	-0.107	0.311	0.395
International orientation	→	Risk perception	H3a	-0.209	-0.397	-0.015	0.039
International experience	→	Risk perception	H4a	-0.307	-0.445	-0.170	0.002
Risk perception	→	Degree of internationalization	H5a	-0.429	-0.602	-0.276	0.001
Industry branch	→	Degree of internationalization	C1	0.065	-0.142	0.240	0.582
Company's size	→	Degree of internationalization	C2	0.230	-0.094	0.489	0.141
Company's exporting age	→	Degree of internationalization	C3	0.092	-0.146	0.324	0.440
Governmental support	→	Degree of internationalization	C4	0.052	-0.130	0.254	0.557

Notes: ^a = supported relationships ^b = p-value.

Source: own elaboration.

Table 3. Results of the test for mediation effect

H6 a): International experience_ Risk perception _ Degree of internationalization

Paths	β -estimates	Confidence intervals		p-values	Significance
		Lower bound	Upper bound		
Direct path: 1)	0.339	0.193	0.460	0.003	supported
Direct Effect:					
Indirect path: 2)					
Direct Effect:	0.155	-0.015	0.294	0.069	not supported
Indirect Effect:	0.149	0.078	0.280	0.001	supported
Total Effect:	0.304	0.152	0.439	0.003	supported

Notes: 1) Results when the indirect path in the model is constrained to zero. 2) Results when indirect path in the model is not constrained to zero

Source: own elaboration.

Table 4. Results of the test for mediation

H6 b): International orientation_ Risk perception _ Degree of internationalization

Paths	β -estimates	Confidence intervals		p-values	Significance
		Lower bound	Upper bound		
Direct path: 1)	0.210	-0.025	0.364	0.070	not supported
Direct Effect:					
Indirect path: 2)					
Direct Effect:	0.020	-0.201	0.187	0.888	not supported
Indirect Effect:	0.101	0.014	0.211	0.025	supported
Total Effect:	0.121	0.101	0.283	0.284	supported

Notes: 1) Results when the indirect path in the model is constrained to zero. 2) Results when the indirect path in the model is not constrained to zero

Source: own elaboration.

4. Discussion and conclusions

The characteristic of the key manager is a widely discussed topic in the field of international entrepreneurship. As a result, the international performance of a small and medium-sized company has been a controversial topic among international entrepreneurship scholars. Also, there are relatively few existing studies that explore the possible interrelationships among the elements that are considered as antecedents of a firm's international performance. This research aims to contribute to filling this research gap by investigating the extent to which accumulated international experience in exporting, international orientation, and risk perception of SME managers influence the level of internationalization

of these firms. To this end, and supported by the EI literature and previous research, a research model was developed and empirically tested using highly rigorous and complex covariance-based structural equation modeling techniques.

First of all, the results of the study provide empirical evidence that the international experience of managers has a significant and negative impact on their perceptions of export risk, which in turn influences the level of internationalization achieved by a firm. Moreover, the results show that a manager's perception of export risk is a mediating factor between experience and the degree of internationalization; that is, although international experience has an impact on the firm's export performance, this impact occurs indirectly, i.e., by modeling

the manager's perception of export risk. These empirical results are consistent with the theoretical arguments of previous research by [Fornes & Cardoza \(2018\)](#), who argue that increasing the manager's perception of risk would reduce the probability of international expansion. Our findings have contributed to enriching our knowledge about EI, especially in relation to small and medium-sized companies, by highlighting the importance of perceived risk levels in the face of internationalization, which is presumably more relevant than international experience.

Second, the degree of international orientation of a manager reduces their perception of risk, but there is no mediation, i.e., no direct and significant relationship is evident between international orientation and the degree of internationalization when the effect of the mediating variable is constrained. A plausible explanation for this result lies in the fact that the international orientation variable used in this study measures the individual's international mindset through exposure to international environments, cultural experiences, and exposure. Although it reflects the manager's predisposition and openness to everything related to international matters, it does not reflect the knowledge acquired in business, specifically in international markets, as is the case with international experience. Therefore, it is possible that a global or international orientation or mentality alone is not enough to influence the export performance of a small and medium-sized company. It is necessary to engage in export business. However, empirical evidence suggests that international orientation reduces the perception of risk.

Third, it should be noted that none of the firm characteristic variables and the control variables seem to be associated with the degree of internationalization achieved by the companies, but the characteristics of the manager, in particular the perception of risk. At least in the case of small and medium-sized companies. Our results contradict the apparently conventional understanding related to this type of companies, which overemphasizes the lack of resources as a major obstacle to internationalization. Rather, it emphasizes that human capital, especially their key manager, is the main source of competitive advantage in coping with successful export processes.

In conclusion, the international experience of managers has only an indirect impact on the degree of internationalization. Their risk perception regarding exports seems to be a key factor that explains the variation in the degree of internationalization of small and medium-sized companies. The presence of internationally oriented managers, i.e., those who are more internally oriented, does not seem to be directly related to the degree of internationalization exhibited by a firm, but they do seem to reduce the perception of risk related to exports.

5. Practical implications and limitations

Our study has practical implications for both key managers and export promotion agencies. Historically, public and private organizations and agencies have supported the internationalization of SME business activities in Latin American economies. Export promotion agencies encourage exports through "how to export" workshops and support, including trade missions, service training, financial assistance, and market intelligence, according to recent studies by [Ribeiro et al. \(2020\)](#). Since risk perception is a significant concern, export promotion agencies can improve their impact by conducting research and designing training programs to reduce export risk perception, specifically for SME managers with limited export experience. One potential solution is to establish mentoring programs where experienced exporters can guide less experienced counterparts in expanding their exports. This could assist in reducing managers' perceived export risk.

It requires considerable time and effort to gain international experience and market knowledge. It may be beneficial for SME key managers who have limited international experience to develop their mindset, such as by visiting foreign markets on a regular basis. This would enable access to first-hand information, acquisition of relevant knowledge, faster identification of business opportunities, and reduced risk perception associated with export operations.

We must acknowledge some limitations of this study. The findings are context-specific and limited to a sample of small-to-medium enterprises in Costa Rica, and a limited number of economic sectors. Conducting studies in a relatively small country allowed us to maintain homogeneous environmental conditions for all enterprises in this research. However, these findings should not be generalized to all small-to-medium enterprises or other countries. Despite this, the study makes an important contribution to existing International Entrepreneurial field of research. It sheds light on the mechanism through which a manager's international experience influences the degree of internationalization of small and medium-sized firms. Further research is necessary to explore other antecedents of risk perception in the context of international expansion. In addition, while most small and medium-sized firms are typically led by a manager, who is usually the owner of the firm, some SMEs may be co-founded and co-managed.

If this is the case, it is advisable to consider the management team when conducting studies. Thus, we urge future research to expand on previous analyses by examining how management team characteristics affect firm internationalization.

Conflict of interest

The authors declare no conflict of interest.

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Annexes

Table A1. Demographic Profile of respondents and their companies

Company characteristics	Mean	Standard deviation	Range
Age (years)	19.8	14.2	6-75
Number of employees	43	54	4-242
Ratio of international sales to total sales	27.7%	28.9%	4-100
Year experience in exports	12	10.5	2-53
Scope of foreign sales (number of countries)	4	4	1-20

Characteristic of key informants	Mean	Standard deviation	Range or %
Age (years)	45.3	9.76	26-71
Year experience in exports	12	10.4	2-45
Number of managers with prior intl. business experience before funding the firm		51	38%

Source: own elaboration

Table A2. Demographic Profile of respondents and their companies

Branches representing in the sample	Total of Companies	%
Software development	49	37%
IT and communications	37	28%
Packing and plastic	21	16%
Food and beverages	13	10%
Metal-Mechanic	5	4%
Chemical	4	3%
Legal services	3	2%

Source: own elaboration

Table A3. Summary of the results of the tests to constructs

Reliability test results:		Standardized loadings	p-values	Cronbach's alpha	C.R.	AVE
Risk perception				0.80	0.81	0.59
(Source: Acedo and Jones, 2007)						
	International activity is a positive thing in my business.	0.739	***			
	Selling products in foreign markets implies high risk.	0.779	***			
	Exports are an important opportunity for my firm.	0.767	***			
	My firm has a high probability of success in foreign markets.	0.789	***			
Thresholds:		Standardized loadings	p-values	Cronbach's alpha	C.R.	AVE
Construct reliability				>0.70	>0.70	
Convergent reliability (loadings)		>0.50	<0.05			>0.50

Notes: ***= p < .001

Discriminant validity test results:		HTMT Scores
IEXP- IO		0.290
IEXP-RP		-0.352
RP-IO		-0.436
Threshold:		< 0.90

Note: IEXP= International experience RP= Risk perception, IO= International orientation

Non multicollinearity test results: (International orientation)			
Dimensions	Likelihood to traveling abroad (time)	Past living experience abroad (time)	Second languages (number of languages)
Likelihood to traveling abroad	--	VIF= 1.112	VIF= 1.076
Past living experience abroad	**	--	VIF= 1.092
Proficiency of second languages	**	**	
Thresholds:		< 5.0	< 5.0

Note: VIF= Variance Inflation Factor

Source: own elaboration

Table A4. DOI: Non multicollinearity test results

Non multicollinearity test results: (Degree of internationalization)	
Dimensions	
Ratio of the foreign sales to total sales) x Geographical scope of export sales	VIF= 1.012
Threshold:	VIF < 5.0

Note: VIF= Variance Inflation Factor

Source: own elaboration



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