



Motivations for International Open Innovation (IOI): the perspective of Quebec SMES in Africa

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Authors' Notes

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Abstract

Objective: This research aims to understand the motivations for SMEs from developed countries to engage in open innovation (OI) projects with partners in developing countries.

Methodology: We adopted a qualitative approach and studied the case of 16 SMEs from Quebec that successfully carried out OI projects within African countries.

Relevance: Despite the growing body of research on OI within SMEs, the international perspective of OI still needs to be explored. In particular, the context of developing countries has received limited attention, especially the motivations for SMEs from developed countries to undertake OI projects in developing countries.

Main results: The results show that OI projects with African partners allow SMEs to integrate into African markets and acquire knowledge different from that of developed economies. These partnerships strengthen the overall organizational capacity of the SME beyond the acquisition of specific knowledge related to the innovation project. They also include social objectives to improve local communities living conditions.

Theoretical contributions: By addressing the calls for research on OI within developing countries, this article expands the scope of OI in this context. It also contributes to the resource-based view theory by identifying integration within foreign networks as the main strategic resource, motivating SMEs from developed countries to initiate OI projects in developing countries.

Managerial contributions: The study provides insights to SMEs from developed countries about the various reasons for implementing OI projects with partners in developing countries. It also offers them tailored advice to carry out such projects successfully.

Keywords: motivations, International Open Innovation (IOI), SMEs, developed countries, developing countries

**Motivações para Inovação Aberta Internacional (IOI): a perspectiva das PMEs de Quebec na
África**

Resumo

Objetivo: Esta pesquisa visa compreender as motivações das PME de países desenvolvidos para se envolverem em projetos de inovação aberta (IA) com parceiros em países em desenvolvimento.

Metodologia: Adotamos uma abordagem qualitativa e estudamos o caso de 16 PME do Quebec que realizaram com sucesso projetos de IA em países africanos.

Relevância: Apesar do crescente número de pesquisas sobre IA em PME, a perspectiva internacional da IA ainda precisa ser explorada. Em particular, o contexto dos países em desenvolvimento tem recebido pouca atenção, especialmente no que diz respeito às motivações das PME de países desenvolvidos para empreender projetos de IA nesses países.

Principais resultados: Os resultados mostram que os projetos de IA com parceiros africanos permitem que as PME se integrem nos mercados africanos e adquiram conhecimentos diferentes dos das economias desenvolvidas. Essas parcerias fortalecem a capacidade organizacional geral da PME além da aquisição de conhecimentos específicos relacionados ao projeto de inovação. Eles também incluem objetivos sociais para melhorar as condições de vida das comunidades locais.

Contribuições teóricas: Ao abordar os apelos por pesquisas sobre IA em países em desenvolvimento, este artigo expande o escopo da IA nesse contexto. Ele também contribui para a teoria baseada em recursos, identificando a integração em redes estrangeiras como o principal recurso estratégico que motiva as PME de países desenvolvidos a iniciar projetos de IA em países em desenvolvimento.

Contribuições gerenciais: O estudo oferece insights às PME de países desenvolvidos sobre os vários motivos para implementar projetos de IA com parceiros em países em desenvolvimento. Também lhes oferece conselhos personalizados para realizar com sucesso tais projetos.

Palavras-chave: motivações, Inovação Aberta Internacional (IAI), PME, países desenvolvidos, países em desenvolvimento

Motivaciones para la Innovación Abierta Internacional (IAI): la perspectiva de las PYMES de Quebec en África

Resumen

Objetivo: Esta investigación tiene como objetivo comprender las motivaciones de las pymes de países desarrollados para involucrarse en proyectos de innovación abierta (IA) con socios en países en desarrollo.

Metodología: Adoptamos un enfoque cualitativo y estudiamos el caso de 16 pymes de Quebec que llevaron a cabo con éxito proyectos de IA en países africanos.

Relevancia: A pesar del creciente cuerpo de investigación sobre IA en pymes, la perspectiva internacional de la IA aún necesita ser explorada. En particular, el contexto de los países en desarrollo ha recibido poca atención, especialmente en cuanto a las motivaciones de las pymes de países desarrollados para emprender proyectos de IA en países en desarrollo.

Principales resultados: Los resultados muestran que los proyectos de IA con socios africanos permiten a las pymes integrarse en los mercados africanos y adquirir conocimientos diferentes a los de las economías desarrolladas. Estas asociaciones fortalecen la capacidad organizacional general de la pyme más allá de la adquisición de conocimientos específicos relacionados con el proyecto de innovación. También incluyen objetivos sociales para mejorar las condiciones de vida de las comunidades locales.

Contribuciones teóricas: Al abordar las llamadas a la investigación sobre IA en países en desarrollo, este artículo amplía el alcance de la IA en este contexto. También contribuye a la teoría basada en recursos al identificar la integración dentro de redes extranjeras como el principal recurso estratégico, motivando a las pymes de países desarrollados a iniciar proyectos de IA en países en desarrollo.

Contribuciones gerenciales: El estudio proporciona ideas a las pymes de países desarrollados sobre las diversas razones para implementar proyectos de IA con socios en países en desarrollo. También les ofrece consejos personalizados para llevar a cabo con éxito dichos proyectos.

Palabras clave: motivaciones, Innovación Abierta Internacional (IAI), PYMES, países desarrollados, países en desarrollo

Introduction

Open innovation (OI) is a distributed innovation process based on the intentional management of knowledge flows across organizational boundaries, using both monetary and non-monetary mechanisms in line with the organization's business model (Chesbrough & Bogers, 2014). One of its main features is the use of knowledge, both within and outside the company, to enhance or develop new products, services, or even business models. OI research has thrived in recent years, and its application has expanded to various subjects and contexts (Ale Ebrahim & Bong, 2017). Studies have shown that OI is particularly well-suited for SMEs and positively contributes to their innovation performance (Crema, Verbano, and Venturini, 2014; Spithoven, Vanhaverbeke and Roijackers, 2013; Parida, West and Frishammar, 2012).

More recently, researchers have focused on studying OI practices among SMEs in an international context (Fu, Li, Li and Chesbrough, 2022; Lopes, Gomes, Oliveira and Oliveira, 2022; Zahoor, Khan, Arslan, Khan and Tarba, 2022; Thompson & Zang, 2020; Jeon & Degraevl, 2019; Romero-Martínez, García-Muiña and Ghauri, 2017; Sekliuckiene, Sedziniauskiene and Viburys, 2016). These studies have emphasized several benefits associated with international open innovation (IOI), including access to a broader pool of advanced knowledge not locally available (Sekliuckiene et al., 2016). IOI improves the competitiveness and performance of companies (Romero-Martinez et al., 2017) and contributes to the success of SMEs in the international market (Zahoor et al., 2022).

However, some gaps persist in this recent literature on IOI. Firstly, despite the previously mentioned advantages, several studies have yielded contradictory results, showing a negative relationship between a vast network of international partners and company performance. Conclusions drawn from case studies demonstrate that beyond a certain level of IOI, management costs outweigh the benefits (Wuyts & Dutta, 2014). Furthermore, IOI demands strong absorptive capacities (Kapetaniou & Lee, 2019) and incurs additional costs as companies communicate across national, cultural, and linguistic boundaries (Tehouwo, Veilleux and Poulin, 2022). In addition to these high costs, SMEs require time, employees, and knowledge to organize and manage these external networks. Thus, significant involvement in IOI can be

counterproductive due to the excessive costs of coordinating and integrating activities. With such warnings, SMEs must carefully consider the feasibility of engaging in such international projects. Therefore, a better understanding of the motivations to engage in IOI is essential.

Secondly, current studies on IOI tend to treat the international context as a homogeneous entity. Given that international contexts vary significantly, it would be interesting to delve deeper into the adoption of OI practices within specific international contexts. In this regard, examining the characteristics of OI in developing or emerging countries represents a research avenue suggested by several authors (Bogers, Burcharth and Chesbrough, 2021; Oduro, 2019; Hossain & Kauranen, 2016; Aloini, Pellegrini, Lazzarotti and Manzini, 2015; Brunswicker & Vanhaverbeke, 2015). While OI has evolved within developed countries, developing nations have remained mainly on the periphery of this movement (Bogers et al., 2021). OI practices have been studied in relatively stable and certain environments. However, the unpredictability of the business environment in developing countries makes it risky for companies to confidently open up their business models (Paulose & Nair, 2015). Thus, building IOI strategies for a company primarily based on assumptions derived from a developed context would not be wise. Studying the context of developing countries is even more crucial, given the growing economic significance of these markets. Indeed, emerging and developing markets contribute to 60% of global GDP and are responsible for more than one-third of its growth (FinDev Canada, 2023). In the latest edition of the report on macroeconomic performance and prospects in Africa, the African Development Bank notes that in 2024, Africa will have eleven of the twenty countries with the most substantial economic growth globally. The continent's real GDP is expected to average 3.8% in 2024 and 4.2% in 2025, figures significantly higher than the global averages estimated at 2.9% and 3.2% (African Development Bank Group, 2024). Moreover, the different conditions of these markets require a new perspective and allow the emergence of often simpler, cheaper, and completely new innovation trajectories, representing opportunities for companies within developed countries (Tidd & Bessant, 2020). Today, developing countries are important laboratories for the development of new concepts, and a

growing number of companies are working closely with actors within these markets to develop innovative, cost-effective solutions applicable to developed countries (Corbett, 2008).

Given the growing innovation potential of developing countries (Kumar & Srivastava, 2020), it is urgent to develop our understanding of OI within these markets. Specifically, we are interested in the motivations for an SME from a developed country to initiate OI projects with partners in developing countries despite the perception of higher risk and unpredictability. Currently, studies on OI within SMEs address the issue of motivations by mainly considering SMEs from developed markets that adopt OI practices with partners within these developed markets (Van de Vrande et al., 2009; De Jong et al., 2007; Duval & Speidel, 2014). The motivations for these SMEs to engage in IOI projects, particularly within developing countries, still need to be addressed in the research. Thus, drawing from the literature on SME motivations for OI, literature on IOI, and the resource-based view theory, we formulate the following research question: How does acquiring strategic resources justify implementing OI projects between SMEs from developed countries and innovation partners in developing countries?

Several contributions emerge from this work: from a theoretical perspective, this study will enhance our understanding of the motivations of SMEs from developed countries to adopt the OI model within developing countries. To our knowledge, this is the first study that adopts this North-South perspective in analyzing international open innovation projects. This work addresses the identified gaps in the literature concerning the limited quantity of research and insufficient knowledge about OI within developing countries. It offers a unique framework that allows a better understanding of the motivations for OI projects set up from a North-South perspective. It thus addresses a subject still little discussed in the literature on OI within SMEs (notably the motivations for IOI) while focusing on a context and a region where this theme is less treated by researchers (notably developing countries). Furthermore, the study will provide SME managers and owners with practical information on implementing OI internationally and within developing countries in particular. It offers SME managers a new way of thinking and designing their innovation practices and encourages them to embrace OI with partners from developing countries more systematically. Finally, the study's findings expose policymakers to new

developments for guiding and considering public policies that promote OI with international partners. They will help policymakers understand the significance of IOI for SMEs, especially with actors within developing countries.

The rest of the document is structured as follows: The first section presents a literature review on the motivations for OI within SMEs. It addresses preliminary research around IOI and introduces the resource-based view theory as the principal conceptual framework for studying the motivations of IOI projects. The second section is devoted to the methodology used to meet the research objective. This section describes the criteria chosen for case selection as well as the decisions made regarding the collection and analysis of empirical data. The third section summarizes the main results obtained following the empirical study, while the fourth section discusses these results, emphasizing the main contributions of the study, its limitations, and interesting future research directions to explore.

Literature Review

Motivations for OI in SMEs

Research on OI has shown that SMEs are capable of adopting OI, although they do so less frequently and in a different manner than large corporations (Harland & Nienaber, 2014; Van de Vrande, De Jong, Vanhaverbeke and De Rochemont, 2009). OI is particularly well-suited for SMEs. Given that these businesses have fewer resources, less R&D, and generally face more uncertainty and obstacles to innovation, an OI approach becomes essential to access a broader range of ideas, knowledge, and external resources (Duval & Speidel, 2014; Basco & Calabro, 2016). SMEs must rely on their interactions with other stakeholders in their environment (e.g., suppliers, customers, competitors, research institutions, and organizations in similar or different industries) to find solutions to their challenges. Thus, one of the primary motivations for OI in SMEs is internal and related to gaining access to a diverse and varied pool of knowledge. The limited R&D capacity of SMEs and their resource constraints are significant incentives, justifying the need to draw on external knowledge (Kim & Park, 2010; Brunswicker & Vanhaverbeke, 2015). To overcome the challenge of insufficient in-house R&D expertise, SMEs explore a wide range of external information sources (Lee, Park, Yoon and Park, 2010) and tap into the expertise of

other firms by forming alliances to access complementary assets. According to Van de Vrande et al. (2009), the desire to address internal skill gaps and gain complementary resources to share risks and costs leads to the search for external partners. Similarly, studies by Spithoven et al. (2013) and Wynarczyk (2013) have revealed that the adoption of OI by SMEs is motivated by the quest for new knowledge, innovative ideas, partners for new product development, or access to new markets. Chesbrough and Crowther (2006) found that the most common reason for acquiring external technologies was a shared belief that growth is essential. According to them, fundamental entrepreneurial values such as growth and revenue thus rank among the primary motivations for adopting OI.

Externally, OI is necessary to enable SMEs to keep pace with market dynamics and stay competitive. According to Van de Vrande et al. (2009), the most critical drivers of SME OI are market-related, particularly the need to monitor market trends and respond to customer demand, resulting in increased growth, improved financial outcomes, and a larger market share. OI also allows SMEs to develop new sales channels and enhance their marketing capabilities (Theyel, 2013). As a result, OI is primarily deployed during the commercialization phase (Van de Vrande et al., 2009) to mitigate SMEs' limited marketing capacity (Narula, 2004).

OI, therefore, emerges as a promising avenue for SMEs to overcome obstacles, boost profitability, gain strategic advantages, and enhance their innovation performance (Gassmann et al., 2010; Colombo, Piva and Rossi-Lamastra, 2014; Hossain & Kauranen, 2016). Other studies show that OI helps companies navigate uncertainties in innovation (Becker & Eube, 2018; Nambisan, Siegel and Kenney, 2018; Cano-Kollmann, Awate, Hannigan and Mudambi, 2018) and access equity-based crowdfunding (Di Pietro, Prencipe and Majchrzak, 2018). Results from Oduro (2019) reveal that SMEs primarily adopt the OI model for marketing, knowledge acquisition, and financial or strategic objectives.

Duval and Speidel (2014) summarize these elements into three major motivations SMEs might opt for OI: structural motivations, transfer of solutions motivations, and situational or economic motivations. According to these authors, structural motivations are associated with gaining access to skilled human resources outside the organization and better risk management (sharing and spreading risk).

Transfer of solutions motivations, on the other hand, pertain to the identification of unexpected solutions, such as solutions that may exist in a different industry, for example. By allowing individuals and companies from various sectors to come together or refer to one another when addressing an innovation challenge, OI systematizes serendipity, the ability to find solutions where one wouldn't naturally seek them. Finally, situational or economic motivations are linked to changes in the context and economic conditions, as well as the increasing digital transformation of companies. In this regard, the companies most capable of mastering and using digital tools in the service of OI initiatives faster and more effectively than their competitors will undoubtedly be tomorrow's winners.

However, these studies on OI motivations in SMEs primarily focus on the context of developed economies. Therefore, it is crucial to undertake new studies that explore the motivations for adopting OI in developing countries.

Table 1

Motivations for Open Innovation in SMEs

Categorizations	Motivations	Authors
Internal Motivations (Structural and transfer of solutions)	<ul style="list-style-type: none"> - Acquire new capabilities, knowledge, and expertise - Foster creativity - Enhance the organization of complex processes - Improve product development - Better leverage proprietary technologies for commercial purposes - Reduce the cost of the innovation process - Integrate new technologies - Enhance the potential and skills of internal resources - Increase profitability and efficiency - Better manage risk - Transfer solutions from one domain to another - Develop flexibility and organizational learning 	Van de vrande et al. (2009); Spithoven et al. (2013); Wynarczyk (2013); van Hemert, Nijkamp and Masurel (2013); Theyel (2013); Brunswicker and Vanhaverbeke (2015); Duval and Speidel (2014)
External or situational Motivations	<ul style="list-style-type: none"> - Keep up with market and contextual changes - Address the diverse and evolving needs of customers - Establish new sales channels - Enhance marketing capabilities 	Van de vrande et al. (2009); Kim and Park (2010); Duval and Speidel (2014)

International Open Innovation and Developing Countries

International open innovation (IOI) is an innovation model that describes how companies innovate by seeking ideas or sharing internal resources with international partners (Chesbrough, Lettl and Ritter, 2018). The emerging literature on IOI is currently underdeveloped. Only a few authors have explored OI in an international context (Fu et al., 2022; Zahoor et al., 2022; Kapetaniou & Lee, 2019; Thompson & Zang, 2020; Romero-Martinez et al., 2017; Sekliuckiene et al., 2016). However, the author's stance on this issue remains to be mixed. Indeed, for some, IOI is beneficial and contributes to SMEs' international performance and innovation performance. In this regard, according to Battisti, Gallego, Rubalcaba and Windrum (2015), a potential key advantage for exporting firms, in addition to larger markets and revenues, is access to a broader set of external knowledge sources, foreign suppliers, foreign customers, foreign universities, or R&D laboratories from which to obtain information and knowledge to enhance their innovation. SMEs that focus on national-level OI may not have access to advanced knowledge unavailable locally, resulting in the maintenance of a limited knowledge base, a lack of novelty, and thus a lack of innovation (Kapetaniou & Lee, 2019). For Sekliuckiene et al. (2016), IOI adoption is interesting when a company engages in activities in new foreign markets where it lacks experience.

IOI is another way to access foreign markets by developing products/services that meet local needs. Romero-Martinez et al. (2017) believe that IOI increases competitiveness and international performance. The authors analyze the relationship between inbound IOI and international performance, and their results confirm that outsourcing through inbound IOI enhances international performance, both strategically and financially. Establishing links with international partners facilitates innovation development, which is vital for success in international markets (Romero-Martinez et al., 2017). Furthermore, IOI increases the likelihood of foreign firms exporting. Thompson and Zang (2020) study how foreign firms' presence influences domestic SMEs' export activities. Their study focuses on a specific mechanism where knowledge spillovers from foreign firms boost productivity, enabling domestic firms to innovate and be competitive in international markets. The authors show that IOI adoption is essential in

today's globalized context. The international division of labor and knowledge has increased the number and geographical diversity of relevant knowledge sites, forcing companies to access external knowledge to support their value chain activities (Battisti et al., 2015). In a globally competitive environment, knowledge production and transfer are essential to sustainable competitive advantage. Additionally, international mobility of human resources, university research quality, financing availability, and intellectual property laws are other factors that encourage IOI adoption (Sekliuckiene et al., 2016). This practice enables companies to access a larger pool of employees, researchers, or funding. These various elements contribute to the growth of IOI.

Despite these advantages, IOI can pose particular challenges to SMEs, and its effective management requires constant attention. IOI involves complexities related to the need to adapt to cultural, social, economic, and regulatory differences, which can limit the potential value creation of external relationships (Elia, Petruzzelli and Piscitello, 2019; Peeters, Dehon and Garcia-Prieto, 2015; Tchouwo et al., 2022). These differences affect how the involved parties interact, exchange knowledge, and learn from each other (López-Duarte, Gonzalez-Loureiro, Vidal-Suárez and González-Díaz, 2016; Tchouwo et al., 2022). IOI also requires strong absorptive capacities (Kapetaniou & Lee, 2019) and, more broadly, additional costs as companies communicate beyond their national, cultural, and linguistic borders using ICT networks and face-to-face interaction. In addition to these high costs, SMEs need time, employees, and knowledge to organize and manage these external networks. Thus, strong involvement in IOI can be counterproductive due to the excessive costs incurred in coordinating and integrating activities. These results suggest that inbound IOI may not be a necessary and sufficient condition to improve international performance.

In particular, the application of IOI in developing countries seems more challenging. These countries are isolated from major international sources of technology and R&D. They operate independently of global centers of science and innovation and have limited expertise in engineering, technical skills, R&D, managerial knowledge, and lack experience in innovation. Furthermore, universities and R&D institutes generally lack technological capabilities, educational and technical

infrastructure, and an intellectual property protection system that respects the rights of innovators (Wang & Zhou, 2012; Thomas, 2018). Moreover, these countries may experience ongoing political, economic, and institutional disruptions that have a negative impact on SMEs' business operations.

Paradoxically, developing countries today represent powerful sources of disruptive innovation. They enable the initiation of simpler, more cost-effective innovations, and the new market conditions in these regions give rise to entirely new innovation trajectories (Tidd & Bessant, 2020). There has been a significant expansion of innovation activity in these developing countries, partly due to the realization that major global market growth will come from these regions. Today, developing countries serve as significant laboratories for developing new concepts, and a growing number of companies collaborate closely with stakeholders in these markets to develop innovative, cost-effective solutions (Corbett, 2008). According to Kumar and Srivastava (2020), the potential for innovation in developing markets has never been more promising. Acquiring knowledge within these markets can help SMEs access knowledge generated from various parts of the world and gain knowledge and expertise significantly different from what is available in the domestic market.

Therefore, it is essential to understand the motivations behind implementing OI projects in developing countries, which are considered both complex and challenging environments but also sources of disruptive innovations. To achieve this, we will draw inspiration from resource-based view theory.

Resource-based view theory and international knowledge

The resource-based view theory finds its roots in the works of Penrose (2009) in her book "The Theory of the Growth of the Firm." According to this theory, resources are tangible and intangible assets a company owns. These resources have a more substantial impact on performance when they are strategic. Specifically, strategic resources (differentiating, distinctive, or fundamental) enable the company to create and maintain a sustainable competitive advantage (Amit & Schoemaker, 1993). In this way, the resource-based view theory explains performance differences among firms by the characteristics of resources. Several works around this theory have sought to identify the characteristics of strategic resources and the notion of competitive advantage. According to Wernerfelt (1984), competitive advantage is obtained by

having a “first-mover advantage” over competitors. For Amit and Schoemaker (1993), strategic resources have specific characteristics: they must be rare, durable, idiosyncratic, difficult to transfer, imitate, and substitute. Summarizing the literature, Grant (1991) identifies four main attributes of strategic resources: sustainability, imperfect transparency, imperfect transferability, and imperfect reproducibility. According to Barney (2001), resources that can create a sustainable competitive advantage must meet four criteria, defining the VRIN model. They must have Value, be Rare, difficult to Imitate, and be Non-Substitutable. When all these attributes are present, the organization can achieve a sustainable competitive advantage. Thus, organizations should seek within their boundaries those strategic resources that will enhance their competitive advantage.

The resource-based view theory has evolved by incorporating the significance of knowledge, considered as the primary strategic resource of a company. According to the knowledge-based view of the firm (Grant, 1996; Nonaka, 1991, 1994; Teece, Pisano and Shuen, 1997), a company's ability to transfer and create knowledge is crucial for innovation and the development of competitive advantage and sustainable business. Therefore, new knowledge that can be shared, aggregated, or appropriated and is difficult for competitors to imitate can be a source of sustainable competitive advantage (Grant, 1996; Teece et al., 1997). Innovation thus appears as a knowledge management process, and innovative companies are seen as knowledge creators (Nonaka & Takeuchi, 1995).

This knowledge-based view is consistent with the OI model because it assumes the organization's need to access strategic knowledge resources, both internal and external, which fuel the company's R&D capability and enable the introduction of new products or processes to the market (Stephan, Bening, Schmidt, Schwarz and Hoffmann, 2019). It also recognizes the importance of external knowledge as a strategic resource and a source of competitive advantage. By integrating international knowledge from developing countries, a company can acquire knowledge and technologies that its competitors do not possess, which differ significantly from what is available in the domestic market. In line with these arguments, Kotabe, Srinivasan and Aulakh (2002) and Hitt, Hoskisson and Kim (1997) emphasize the

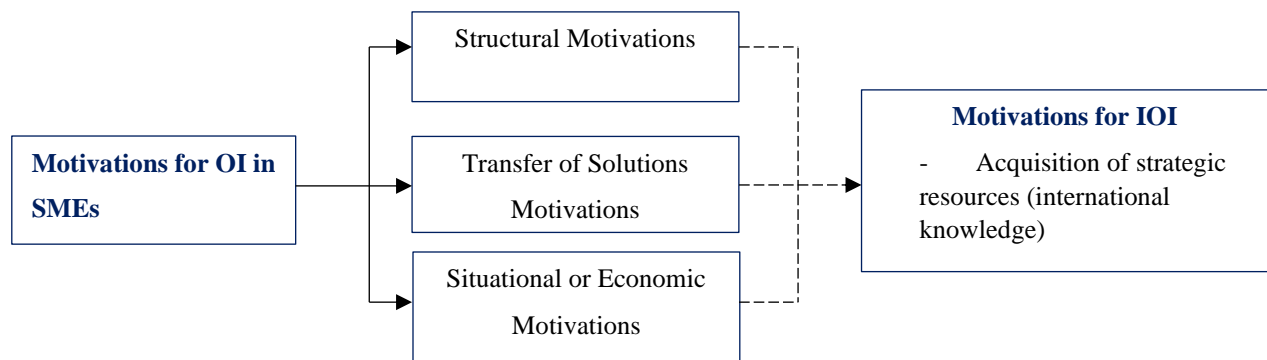
importance of utilizing a wider range of international innovation resources and acquiring knowledge from new and diverse markets and contexts.

Furthermore, the applicability of this theory in the context of SMEs has been developed by several authors (Kim & Kim, 2018; Xiaobao, Wei and Yuzhen, 2013). It is particularly well-suited to this context due to the limited resources of SMEs and the importance of the leader regarding the resources that enable the business to grow (Laghzaoui, 2009). Moreover, SMEs often lack the necessary resources for their survival and competitive advantage and must turn to their environment and alliance relationships to obtain the missing resources and expertise (Xiaobao et al., 2013).

Based on the above, the conceptual framework of our study is represented in Figure 1 below. Indeed, drawing from the literature on the motivations for OI in SMEs, we aim to understand how the search for international strategic resources encourages SMEs from developed countries to initiate OI projects with partners in developing countries. More specifically, by relying on the resource-based view theory and the knowledge-based view, we seek to understand the different strategic resources (mainly related to acquiring international knowledge) SMEs from developed countries seek within developing countries.

Figure 1

Conceptual framework of the study



Methodology

To understand the motivations for SMEs from a developed country to initiate OI projects in a developing country, we conducted a case study of 16 Quebec-based SMEs that have successfully executed OI projects in African countries. Multiple case study methodology was chosen because it provides a detailed description and analysis of a phenomenon (Merriam & Tisdell, 2015). Researchers have stated that there are three primary research objectives: explanatory, descriptive, or exploratory (Robson, 2002). In this context, our research is both descriptive and exploratory as it seeks to provide a descriptive account of the motivations for OI in developing countries, a phenomenon that has been relatively underexplored in the literature.

The selection criteria for our cases were as follows: firstly, the chosen companies had to be Quebec-based SMEs. Quebec-based SMEs were primarily selected due to the researchers' proximity to these businesses. An SME is defined here as any company with a workforce ranging from 1 to 499 employees and an annual turnover not exceeding 50 million dollars (Statistics Canada, 2020). Secondly, these companies needed to have successfully executed OI projects with stakeholders in African countries to provide sufficient information for analysis. In this regard, OI projects that had achieved their primary objectives and established long-term trust with their partners were considered successful (Striukova & Rayna, 2015). OI projects conducted abroad could involve inbound activities (involving clients or end-users, R&D collaboration, external networking), outbound activities (licensing or other intellectual property rights sales), or coupled activities (mergers, acquisitions, or joint ventures). As for the choice of developing countries, the study primarily focused on African countries. Several countries on the continent have experienced sustained growth in recent years and represent highly promising markets for Quebec. SMEs meeting these criteria were identified with government research partnership professionals, government websites, and various SME innovation support organizations' websites. The selected companies were contacted via email between January and June 2020. This email reiterated the above selection criteria and invited companies that did not meet one or more criteria to report it. Two follow-up emails were sent in June and July 2020. In the end, 16 companies that met the various selection criteria

agreed to participate in the study. This number was deemed appropriate as researchers have indicated that a sample size of at least 11 individuals is sufficient to reach saturation in qualitative research (Guest, Bunce and Johnson, 2006; Latham, 2014). The participating companies had a diversified profile, primarily active in the service sectors (IT and software development, wastewater treatment, architects, mining exploration services, education services, energy transition) and manufacturing (food and beverage, agricultural equipment, solar energy solutions, electrical equipment, mining equipment or radar systems). They had an average number of employees of about 34, ranging from very small businesses with only 4 employees to well-established companies with up to 156 employees. The average age of these companies was 23 years, and their average international seniority was about 12 years, suggesting a certain familiarity with foreign markets and an ability to navigate various economic and cultural environments. The OI initiatives had been conducted in various African countries (such as Ethiopia, Benin, Morocco, Burkina Faso, or Mali), with various foreign partners such as NGOs, foreign universities, clients, or foreign distributors (Appendix A). It is important to note that although our sample is diverse in size, sector of activity, or international tenure, our aim is not to generalize the results or draw general conclusions applicable to all SMEs. Indeed, OI activities were practiced in various African countries, each with its own cultural and regulatory contexts. The goal is rather to focus on the particular experiences lived by the leaders of the SMEs in the sample during the implementation of OI projects in Africa and to understand their motivation to engage in such projects.

Data collection occurred in two stages. Firstly, secondary data were gathered from the publications and websites of the selected companies. Archived documents were retrieved from the websites, and the online news about these companies was reviewed. These preliminary data underwent initial analysis to better target the information discussed during the interviews. Based on these analyses, semi-structured interviews were conducted with the leaders of these SMEs to gather more details about their experience in implementing OI projects with African partners. An interview guide was developed, covering the company's presentation, a description of OI projects within African countries, and the motivations associated with these OI projects. The interviews lasted on average 81 minutes (ranging from

41 to 195 minutes) and were recorded and transcribed as verbatim. In some cases, follow-up emails were sent to obtain clarifications or additional information. Some executives also shared documents and various reports to support the information provided during the interviews.

Subsequently, a qualitative data content analysis was carried out following the approach proposed by Miles and Huberman (2003). To systematize the coding procedure and facilitate data processing, we used Nvivo 12 qualitative data analysis software. Firstly, the data presented in the verbatims were grouped into primary codes. Here, coding involved identifying text segments with a specific meaning and creating a code summarizing the idea supported by the text segment. These codes were then grouped into secondary codes, following the different categories of motivations for OI presented in the literature review (external and internal motivations). Finally, the final analysis allowed for articulating the data according to the previously developed theoretical framework, depending on whether they refer to structural motivations, solution transfer, or economic motivations. These three categories of motivations from our conceptual framework thus represented the main themes of our work. Appendix B illustrates the coding process adopted and provides some examples of the retained codes.

Results

When interviewees were asked to elaborate on their motivations for innovating with African partners, several reasons were cited. Following the framework proposed in our literature review, these reasons were categorized as structural, related to solution transfer, and situational or economic. The main African countries where the OI projects were conducted were Ethiopia, Benin, Morocco, Burkina Faso, and Mali, each having two OI projects conducted by SMEs from the sample. The other countries involved were Cameroon, Mali, Djibouti, Lesotho, Ivory Coast, Gabon, Senegal, Congo, South Africa, Tunisia, and Egypt. It is important to mention that some SMEs have implemented OI projects in two or three African countries.

Structural motivations

Structural motivations emerged from the interviews as factors driving SMEs to engage with innovation partners in African countries. Due to market saturation in their local markets, SMEs need to

expand their operations internationally, particularly in these countries, which have experienced significant growth in recent years. However, their small size necessitates collaboration with partners in these markets to gain knowledge, expertise, and market-specific insights, enhance their understanding of local realities and culture, increase credibility and visibility, and mitigate risks associated with these developing countries. Partnering through OI thus allows SMEs to better integrate into African countries and design products/services better suited to these markets' realities.

Acquisition of knowledge and specific expertise: The acquisition of knowledge and specific expertise about the African country emerges as one of the primary reasons cited by SMEs for undertaking OI projects with African partners. OI enables the acquisition of valuable knowledge, allowing the SME to enhance its offerings through products and services tailored to foreign markets.

“For example, for the healthcare aspect of our technology, we partnered with foreign external collaborators who have expertise in Ethiopia. We didn't have a choice because our in-house team specializes in engineering. But for the healthcare side, we looked outside for an Ethiopian NGO that could work with us.” (SME A).

“We excel in our field, but there are others who are excellent in their domain as well. So, we need to find the right actors who can help us improve, and by improving ourselves, we naturally enhance the product and reach more customers. Everything is interconnected.” (SME I).

A better understanding of local reality and familiarity with territorial culture: Furthermore, the desire of SMEs to gain a better understanding of the reality of the country in which they plan to expand and to become familiar with the local culture represents another reason behind the implementation of OI projects with African partners. The innovation partner serves as the SME's gateway into the developing country, acting as a guide and facilitator in the market. Being well-versed in local constraints and regulations, the partner, for instance, streamlines the SME's administrative procedures in the new market, handles logistics, and assists with various operations in the foreign country. Moreover, they expedite the company's business development in the market, the acquisition of new clients, the exploration of opportunities, and grant the company access to local resources and labor. Additionally, the

foreign partner facilitates the acquisition of tacit knowledge, particularly related to the local culture or customs, knowledge that would typically be inaccessible to a foreign company. This enables the SME to better understand the context, needs, and challenges and adapt its products/services accordingly. The leaders of SMEs C, J, and I explained this motivation during their respective experiences in Mali, Congo, and Ethiopia.

“Sure, local partners, just on the linguistic level, speaking the local language, they will understand the real needs that we might not grasp with our Québécois perspective. They can comprehend and explain it to us.” (SME C)

“And then, it comes down to the cultural aspect. Having someone from the same culture, sometimes they can say to us, ‘Listen, you should do things this way because, here, it’s done like this.’ So, it might prevent unnecessary disagreements on certain topics.” (SME J)

“For an international company, working with locals abroad is a necessity. If you really want to get results and understand the reality on the ground, you need someone on-site, someone capable of responding on the field.” (SME I)

Specifically, since regulations vary from region to region, adapting the SME's equipment is often necessary to sell in a particular area. Collaborating with a partner from that region keeps the SME informed about the various regulations and the changes needed for the product or service to be better suited to the regional context. This knowledge of the regulations was important for SME I in Ethiopia, which manufactures equipment for electricity production.

“Modular towers are custom-made products based on the specific requirements of the country we’re prospecting or the power line we have to restore, and, of course, the quality conditions and technical specifications provided by the customer.” (SME I)

Increased visibility and credibility for the SME internationally: For SMEs C, J, and F, engaging in OI projects with African partners (Malian, Congolese, and Malagasy, respectively) has also allowed them to enhance their credibility and visibility in Africa and within African business networks. OI has enabled the leaders of these companies to enter these new markets, in which their expertise was not

always recognized, and where success depended greatly on the legitimacy offered by collaborations with other established actors in these markets. . In this way, the partner boosts the company's credibility and visibility in the new market, ensuring better integration and a higher potential for success. This collaboration paves the way for a network of valuable contacts and future projects for the company.

“Working there positions us as a company capable of operating in challenging environments. This adds significant value; it immediately signals that we can function in a chaotic, entirely different environment and achieve success. When this success starts to become known elsewhere, it enhances our reputation, and that's another kind of profit, a result we highly value.”
 (SME A)

“On the marketing and visibility side, it's incredible because our partners there have contacts and interact with important figures in their country. They engage with other companies they work with, which is excellent marketing for us.” (SME C)

“Collaborative research is a significant part of what has allowed us to evolve as a company and to expand our international network. It has enabled us to develop our business contracts. It's a pretty essential component of who we are.” (SME J)

Risk management: The interviewees also emphasize the importance of undertaking innovation projects with multiple partners within developing countries to mitigate the associated risks. Collaborative work helps to reduce the initial and inherent risks in any innovation project since they are shared among the project's partners. For example, SME F addresses the omnipresent financial risk in projects in Senegal or Madagascar. Therefore, the interviewees highly recommend the presence of multiple partners in such projects.

“When you enter this market and develop a project for the first time, of course, you're terrified. You wonder how it's going to go, whether we're going to lose money, etc. So, one way to reduce our initial risks is through partnerships. [...] And when we establish a partnership, like in

Madagascar, where we have four parties involved - the Quebecois, the French, the Malagasy, and the Germans, it divides the risk by four.” (SME F)

From the above, it appears that within African countries, Quebec SMEs seek knowledge and expertise specific to African markets to enrich their offerings with products and services adapted to the local realities of these developing countries. They thus need complementary and diversified skills that they do not have internally (Van de Vrande et al., 2009; Brunswicker and Vanhaverbeke, 2015). Through these operations, SMEs also seek to increase their visibility and credibility in order to enhance their marketing capabilities towards the target market (Van de Vrande et al., 2009) while minimizing the risks associated with developing markets. OI in these markets also allows for risk mitigation and better risk management (Duval and Speidel, 2014). Specifically, the results highlight the importance of cultural and regulatory understanding of the African context as a key motivation for Quebec SMEs to partner or innovate with African partners. OI partnerships foster a deeper cultural and regulatory immersion necessary to navigate the often complex and diversified African markets.

Solution transfer motivations

Other motivations highlighted by the interviewees are related to solution transfer. For the interviewed SMEs, collaborating with non-traditional partners in entirely different countries from Canada encourages identifying unexpected solutions or transferring solutions from other contexts to Quebec. Such projects promote serendipity, creativity, and employee learning capacity.

Serendipity: OI with African partners fosters serendipity, the ability to find solutions where you wouldn't have initially looked and make an unexpected discovery by chance. This is explained by the interviewee from SME L when recounting regular meetings with their primary client in Morocco, which unexpectedly evolved into one of their crucial innovation partnerships.

“We used to visit our client in Morocco regularly. Then, during a discussion, we heard, for example, 'In our case, we discussed this thing.' That was the beginning of a project we will

implement with him four years later. So, our discussions and meetings fueled our thinking and led us to develop equipment we have since integrated into our current product offerings.” (SME L)

Access to exclusive knowledge in a region: Furthermore, the exclusivity of knowledge and expertise within a specific geographical area compels the SME to seek that knowledge regardless of the market in which it operates. This geographically recognized region, known for its particular expertise, is often considered indispensable for the SME's development. Consequently, it initiates OI projects with partners from that region to access the expertise present in that geographical area. In our sample, SMEs L and M in the mining sector have undertaken OI projects in Africa. This is also the case for the interviewee from SME O, who operates in the solar energy sector and explains that he initiated OI projects in South Africa because the country is advanced in this field. Its OI partner possesses essential expertise to enhance its product.

“For the solar aspect, our distributor in South Africa is much more advanced than us in this area. So, we test our products there, and with their knowledge and experience, they provide feedback that allows us to make certain improvements.” (SME O)

Creativity and organizational learning: The interviewees are also convinced that implementing OI projects in developing countries enhances employees' creativity and promotes organizational learning. Indeed, opening up the innovation process and collaborating with African partners allows SMEs to think outside the box, review, or improve their internal processes or procedures. This fosters organizational learning and the development of new capabilities among employees. Furthermore, it enhances employee creativity, encourages knowledge sharing, boosts confidence and autonomy, and develops new ways of working or thinking.

“In terms of direct knowledge, we learn new things, new ways of working, new approaches, and it allows our resources to gain confidence as well.” (SME C)

Thus, the analyses show that OI with partners in developing countries promotes the transfer of solutions, stimulates the discovery of unexpected solutions, and fosters creativity (Duval and Speidel, 2014). However, the results deepen the arguments of Duval and Speidel (2014) by showing that interactions with partners from developing countries can offer distinct perspectives that are useful for overcoming challenges encountered in these markets and enrich global innovation through the diversity of approaches and ideas. OI with African partners not only helps to develop new capabilities but also to transform organizational processes and to strengthen the trust and autonomy of employees, thus enriching the overall organizational capacity. Leaders and employees draw from these contexts knowledge and skills that are useful for their daily activities, even those conducted within their traditionally developed markets. Furthermore, although the literature on OI generally emphasizes the importance of external resources, the results highlight the importance of accessing specific expertise to explain the recourse to IOI. Specific regional expertise encourages SMEs to overcome barriers and challenges they are likely to encounter internationally (Tchouwo et al., 2022) to access expertise essential for their development.

Situational or economic motivations

Next, situational or economic motivations are primarily related to the external environment. They correspond to the need for SMEs not only to keep up with changes in the business environment and stay informed about market trends but also to address the specific needs of customers in developing countries, particularly the social issues prevalent in this context.

Cope with environmental change: The evolving business environment and constant shifts in consumer needs already prompted companies to collaborate with external partners from various backgrounds to cope with these ongoing changes. In this regard, interviewees C, H, and Q talk about the new complexity that businesses must now contend with, requiring them to think more openly, holistically, take diverse perspectives into account, and better appreciate the added value of collaborative work with partners from entirely different contexts.

“In fact, up to today, innovations were local, linear, and straightforward. We addressed local, linear, and straightforward situations. All the science was based on this, regardless of your field. The entire scientific presentation was in statistics, linearly between factors A and B. And

today, we add factors C, D, E, F, and the entire alphabet. So, everything is much more complex today, and dealing with complexity requires interdependence in the evolution of innovation. If we do not collaborate openly, our challenges will be difficult to resolve.” (SME C)

“I think that the idea, the perspective of thinking about things in a more holistic way, is more than necessary now. For example, we know that a climate issue has social impacts now, whereas before, it was more of a siloed thought. So, I think that to find solutions that consider different realities and perspectives, you need to move away from a unidirectional practice within a single context.” (SME H)

“Today, we are facing a context of exponential and technical change in the world. The world population is exponential, poverty remains extreme, CO2 is exponential, energy is also exponential, and the advancement of computing is exponential as well. So, to respond to this, we, too, need to think exponentially. It means that our company alone cannot make it. So, joining other people is imperative today.” (SME Q)

Response to specific social needs: The answer to social needs within African countries emerged as a significant motivation for justifying implementing an OI project. In these markets, SMEs often seek to address social and community needs, contributing to the improvement of local living conditions. Companies will collaborate on innovation projects that have a significant impact on communities and relate, for example, to sustainable development, health, education, and overall improvement of living conditions for the population. OI thus takes on a social perspective. These social motivations are reflected in the statements of the interviewees from SMEs C, E, and I, when they talk about their projects carried out in Mali, Ivory Coast, and Ethiopia, respectively.

“I think we do this here because there's a business side to it, and we must also make money. But more than that, everyone on the team, deep down, has an idea of contributing a bit to the region's development, of connecting profit and local development, nonetheless.” (SME C)

“I innovate to find local solutions that enable people to produce more, solutions that will last longer and have a socio-economic impact.” (SME E)

“Today, in collaboration, the financial aspect prevails. Yes, financial health is important; you need to be able to cover your expenses and make money to reinvest, etc., but I think the social and humanitarian aspects are equally important.” (SME I)

Collaboration partners in this context are often local communities or organizations responsible for identifying critical local issues and assisting SMEs in addressing them. Projects with a strong social impact of this nature enhance the company's image in the region, helping it build a reputation and thus strengthening its local presence and community trust in the company. Since SMEs may not necessarily have a dedicated CSR department, collaboration with partners in developing countries now serves this role. The interviewees thus encourage OI initiatives that have a social impact on communities and position the company as socially responsible in the eyes of consumers. With changing attitudes and the development of more activist consumption, this social commitment would benefit the community and the company's image among its target audience.

“In Senegal, we often work with mining companies to electrify several schools through corporate social responsibility programs. We secured grants with [partner's name], and currently, we have a pilot project with [partner's name]. We electrified two villages this way. We work a lot with local companies to undertake projects that align with both our CSR programs and the CSR programs of these local mining companies. These are companies that, for the sake of their image, the fight against climate change, and social justice, would promote social initiatives similar to what we propose.” (SME F)

Response to calls for tenders: Another motivation is responding to calls for tenders issued by governments and other international institutions. Indeed, these calls for tenders often require, as a preliminary condition, collaboration with one or more partners from the territory where the project will be carried out. Thus, the need for SMEs to seize a business opportunity, especially by responding to a call for tender, will encourage them to collaborate with an external business partner on their project.

“When you receive a call for tenders, the organization issuing the call sometimes requests a specific type of expert with particular characteristics. So, you must look for a person with these criteria; not all are within the company.” (SME F)

Improvement in international performance: According to the interviewees, collaboration with a foreign partner enhances export performance and the performance of future products. In particular, collaboration partners are valuable to the company because they allow it to reduce costs, increase revenue, profitability, and overall performance. Several interviewees mentioned the opportunity, through OI, to access various resources (knowledge, expertise, experiences, equipment, etc.) at a lower cost, thereby reducing the overall costs associated with project development. For the collaboration to be effective, it must have visible economic benefits for the company.

“Having open innovation partners abroad improves our export performance.” (SME J)

“We understand that our mission is to sell, and collaboration and partnerships with different stakeholders should enable us to sell and reduce our costs.” (SME M)

From the above, OI within developing countries enables SMEs from Quebec to respond agilely to environmental changes (Duval and Speidel, 2014) and improves the international performance of the involved SMEs (Romero-Martinez et al., 2017). However, the OI practices observed in this context have a particularly pronounced social orientation. Indeed, while the literature often focuses on the economic outcomes of OI, the results show that Quebec SMEs engaged in OI with African partners appear to be motivated by a desire to address social issues, such as sustainable development and health, reflecting a more holistic and humanitarian approach to innovation. This highlights the potential role of OI in facilitating socio-economic development, thus extending the scope of OI beyond the direct economic benefits traditionally mentioned in the literature.

Discussion and conclusion

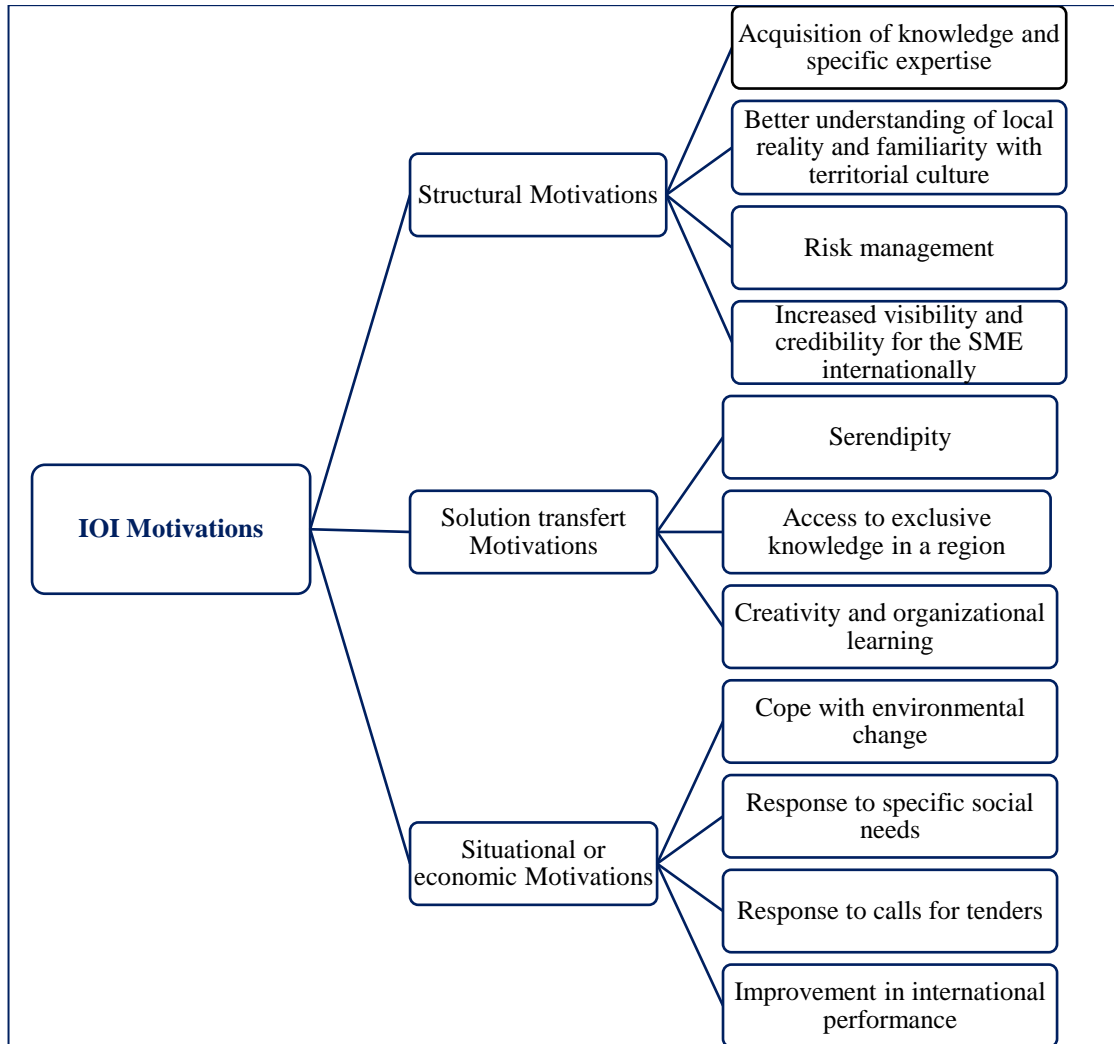
While research on OI within SMEs has seen significant growth in recent years, the study of OI projects, especially those conducted within developing countries, merits further attention. This study aimed to understand and analyze the motivations of SMEs for such OI projects.

The study reveals that several motivations justify the use of OI within developing countries. Most of these motivations stem from the desire of SMEs from developed countries to successfully integrate into the developing country's market by adapting their products and services to the market's conditions, needs, and challenges. Motivations for these projects have been categorized based on their alignment with the SME's structure, the need for transferring new solutions, or the external environmental context. Structure-related motivations include the acquisition of specific knowledge and expertise, a better understanding of the local reality, familiarity with the local culture, increased international visibility and credibility of the SME, as well as enhanced risk management. Motivations related to the transfer of solutions involve increased opportunities for serendipity, access to region-specific knowledge, and the development of creativity and organizational learning. Situational or economic motivations encompass the need to address environmental changes, respond to social needs within the developing country, react to calls for tender, and enhance the international performance of the SME.

Figure 2 illustrates the various motivations highlighted by the interviewed SMEs to justify implementing an OI project with partners within developing countries.

Figure 2

Motivations for International Open Innovation (Perspective of SMEs from Developed countries within Developing countries)



These findings are consistent with prior studies on the motivations of OI within SMEs. Primarily, our results corroborate studies indicating that SMEs adopt OI to overcome the constraints of their small size and remain competitive in both domestic and international markets (Kim & Park, 2010; Lee et al., 2010; Van de Vrande et al., 2009). The quest for new knowledge remains paramount for SMEs. Due to technological and social differences and the development of specific expertise in regions, certain knowledge is often available in a particular location (Almeida & Kogut, 1999). Thus, companies may be

encouraged to embrace IOI to access specific knowledge in a particular geographic area to address their challenges. Moreover, IOI enables SMEs to access knowledge that facilitates their success in the international market. This aligns with the arguments of Brem and Nylund (2021) and Zahoor et al. (2022), suggesting that IOI allows for the development of innovations in line with the local context or culture and overcoming operational barriers, leading to SME success in the international market. The results also support those of Oduro (2019), indicating that SMEs' adoption of IOI is largely driven by marketing or market-related goals, such as accessing the global market, expanding the target customer base, and accelerating foreign market entry.

However, this research is distinct from previous studies as it integrates the effects of the international dimension and developing countries in OI studies. Indeed, our analysis highlights the importance of understanding cultural norms to facilitate integration into a new market. SMEs that wish to internationalize in developing countries thus incorporate partners from these countries who better understand the cultural and regulatory norms within these environments. Such collaborations increase the chances of success for the SME in the foreign context. Moreover, the results emphasize that engagement with international partners, particularly in developing countries, not only helps to develop new capabilities but primarily to transform organizational processes and thus enrich the overall organizational capacity. This perspective embraces a vision of OI that goes beyond merely enhancing R&D capacities; the diversity of interactions strengthens employee autonomy, broadens their perspective, stimulates their creativity, and boosts their confidence. This multifaceted development contributes to organizational efficiency and enriches the work environment by promoting an open and adaptive corporate culture. Furthermore, our results reveal a significant emphasis by SMEs from developed countries on addressing social and environmental challenges within developing countries. Indeed, Quebec SMEs have engaged in OI partnerships with African actors not only to benefit from complementarities in terms of expertise and market access, but also to develop innovative solutions to urgent socio-economic problems such as health, education, and sustainable development. This orientation towards social motivations highlights a more

holistic and responsible perspective on OI, where the outcomes transcend direct economic gains to include positive social impacts on local communities.

Generally, our results highlight network gains as one of the primary drivers of IOI within developing countries. These network gains encompass acquiring contacts and integrating the SME into foreign networks. Indeed, Quebec-based SMEs emphasized the importance of accessing social capital within developing countries. These foreign contacts or networks enable the SME to gain better insights into the local reality and culture, understand local regulations, and enhance visibility and credibility in the Southern market. In other words, SMEs will choose a partner within a developing country only if it offers identifiable advantages in terms of knowledge, skills, visibility, credibility, and resources required for the development of a product, service, as well as a new market (Gerybadze & Reger, 1999).

IOI projects, therefore, allow the SME to integrate into the developing country and gain experience that would normally be inaccessible to a foreign company. Network gains also include the reputation of the SME and the international recognition it acquires. This international reputation and recognition are observed in IOI projects with a social purpose implemented by SMEs in developing countries. In this context, SMEs will collaborate with NGOs, international donors, or financial institutions to address this social concern. Such a practice benefits international SMEs by allowing them to access ideas and offer innovations in exchange for increased social legitimacy, a source of international competitive advantage (Holmes & Smart, 2009).

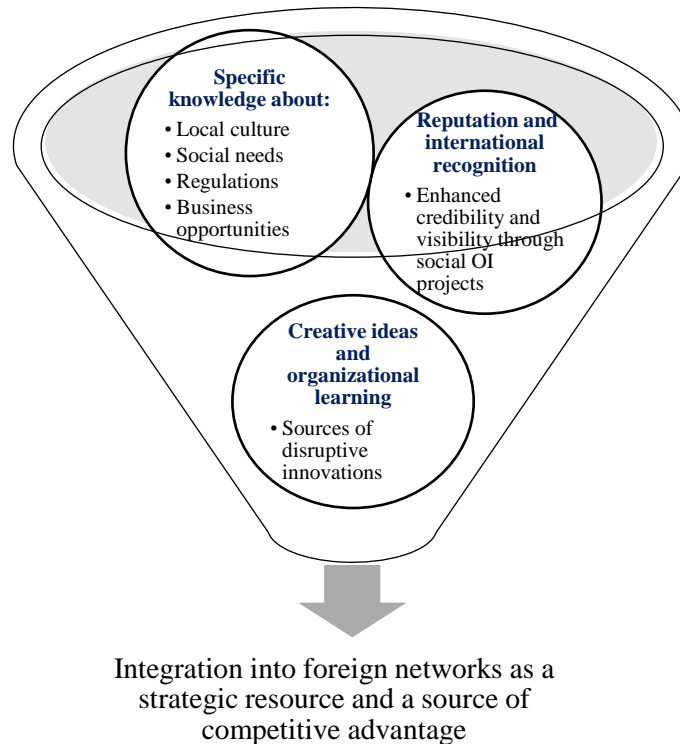
The importance of foreign networks aligns with the resource-based view theory and the knowledge-based view, which suggests that SMEs' access to complementary knowledge resources from external partners is essential for gaining a competitive advantage in foreign markets. Because SMEs lack resources and market knowledge, IOI provides an essential channel to develop their capabilities and enhance their success in the international market (Zahoor et al., 2022).

From the above, the strategic resources SMEs mobilize within developing countries and sources of competitive advantages are primarily intangible and stem from the SME's integration into foreign networks. This foreign network provides the SME with access to specific knowledge, including insights

into the local culture of the developing country, the social needs of the population, local regulations that apply, and business opportunities present there. The network is also valuable for the SME's reputation and international recognition, enabling it to gain credibility and visibility in foreign markets. This network also provides creative ideas and enhances the SME's organizational learning, sources of disruptive innovations (Figure 3).

Figure 3

The importance of foreign networks as a strategic resource in IOI



This study contributes to the theory of OI in two main ways. First, it enhances our understanding of IOI, specifically focusing on projects in developing countries. The research addresses the identified gaps in the literature, which has limited research and insufficient knowledge on such IOI practices. To our knowledge, this is the first study to highlight IOI projects between partners from developed and

developing countries, along with their motivations. The study demonstrates that beyond domestic OI (Leckel, Veilleux and Dana, 2020) and IOI within developed countries (Ferreira, Fernandes, Veiga and Dooley, 2023; Lopes et al., 2022), IOI in developing countries has its own specificities. Indeed, collaboration with culturally different international actors enables the SME to better integrate into these markets and access a varied knowledge set that differs from that available in developed economies. Such partnerships enrich the overall organizational capacity of the SME, beyond merely acquiring specific knowledge associated with the innovation project. IOI practices in developing countries also have social motivations, demonstrating an approach to OI that goes beyond commercial benefits to include significant social impacts on local communities.

Secondly, drawing from the resource and knowledge-based view theory, we argue that SMEs adopt IOI in developing countries to acquire strategic resources within these markets. These strategic resources are primarily represented by the knowledge SMEs gain within foreign networks concerning local culture, social needs of the population, regulations, and business opportunities. These foreign networks also facilitate gains in reputation, access to creative ideas, and the development of organizational learning. This result is particularly significant in the case of IOI projects between partners from developed and developing countries due to the significant social, cultural, institutional, and economic differences between these two contexts. This research demonstrates that integration into these foreign networks helps mitigate the impact of these differences.

Beyond these theoretical aspects, our study also has significant practical implications. Firstly, the study provides information to SMEs from developed countries regarding the various reasons for implementing IOI projects with partners in developing countries. It also offers them tailored advice to execute such projects successfully. Therefore, SME leaders should pay special attention to IOI in developing countries by building international networks and alliances to benefit from the in-depth knowledge available in these markets. The findings suggest that SMEs from developed countries should invest in such IOI initiatives not only due to the specific knowledge available in developing countries but also because of the rapid growth of these markets and the impact of such projects on accelerating internal

innovation and integrating SMEs into developing countries. To achieve this, they would benefit from involving their clients, distributors, or suppliers present in these markets in their innovation process. Similarly, partnerships with NGOs and community organizations can be beneficial for a good understanding of local social realities and for designing products or services that meet the needs of local communities. However, the success of integration within such foreign networks requires continuous awareness of the intercultural issues posed by international collaborations. In particular, personnel exchanges, participation in joint workshops, and the organization of regular seminars with these international partners can help the various parties overcome cultural barriers and strengthen collaboration. Additionally, collaborative technologies and communication platforms can facilitate knowledge sharing beyond organizational and geographical boundaries.

The results also provide food for thought for public stakeholders (in Quebec) to enhance current government programs that promote OI projects with international partners. These programs still need to be expanded, especially concerning innovation with partners in developing countries, often perceived as riskier. The findings also offer vital and useful information to policymakers in developing countries. In particular, they allow policymakers to understand why their countries are attractive to international companies. If these policymakers aim to develop their economies, they must enhance the attractiveness of their territory, for instance, by developing specific expertise only available in their market. They must also provide institutional support and encourage their local companies to integrate into international networks, for example, by participating in international trade fairs.

Like any other research, this study has certain limitations that can serve as avenues for future research. Firstly, the opinions and viewpoints of a single individual (the owner or manager) within the SME were collected. Therefore, the results are subjective and based on the experiences of the SME's owners or managers. Future studies could propose research designs that include data collected from various respondents within the same SME who are in direct contact with foreign partners. This would allow for a more complete and nuanced picture of adopting OI with partners in developing countries. Secondly, we only considered the perspective of SMEs from Quebec due to the geographic proximity of

the researchers to these entrepreneurs. However, it would be important to triangulate the results obtained in future research by mutually analyzing the perspective of innovation partners in developing countries. Incorporating the viewpoints of these partners could provide a more balanced and comprehensive perspective on the dynamics of IOI. Understanding the motivations for which partners in developing countries set up OI projects with SMEs from developed countries and the challenges they face would allow for a more complete picture of the collaboration process, its successes, and its obstacles. This would enable comparing and contrasting OI's expectations, experiences, and perceived outcomes from both sides, thus enriching the understanding of the synergies and tensions in these collaborations. It would also be interesting to pay more attention to the type of knowledge transferred in such IOI projects and how partners (both from developed and developing countries) internalize this knowledge to enhance their international performance. Thirdly, this study only considered Quebec-based SMEs operating in Africa in the sample selection to reduce heterogeneity between companies. As a result, the conclusions cannot be generalized to other geographic regions, such as Asia or South America. Therefore, studies focused on OI projects in these different developing contexts would enable valuable comparisons with the findings of this study. These comparative studies could reveal regional differences in the implementation and impacts of IOI and the use of specific strategies adapted to local conditions. Fourthly, the study primarily focused on understanding motivations for IOI; further research on IOI practices developed in this context, success or failure factors, and the benefits or limitations of such OI projects would further develop this research field. This could also include in-depth case studies and longitudinal analyses to track the development of IOI projects and their long-term impacts. Similarly, research on the impact of specific factors, such as intercultural skills or the international experience of the SME's leader, would provide practical nuances to the discussion. Fifthly, this research emphasizes social capital and the importance of networks; it would be interesting to continue exploring these concepts, such as the role of intermediaries in such a context: how intermediaries facilitate integration into foreign networks and the implementation of IOI projects in developing countries. What is their role in mediating cultural differences and building bridges between partners in OI projects from diverse environments?

Based on the results obtained in this study, new research questions could be addressed to understand better the complex dynamics of OI in a transnational context. For example, considering the impacts of OI on the development of organizational learning and the enrichment of organizational capacity, it would be interesting to understand how SMEs' organizational structures and internal processes concretely evolve to effectively integrate knowledge and learning from OI projects with partners in developing countries. Similarly, analyzing the long-term impact of such IOI projects on SMEs' innovation performance and growth, and examining the potential for sustainable competitive advantages through these collaborations are other interesting research avenues. Additionally, the cultural dimension and the understanding of the cultural specificities of the developing country emerged as major sources of motivation in our results; therefore, it could be relevant to analyze how cultural differences influence the OI processes between SMEs from developed countries and their partners in developing countries. Furthermore, considering the social perspective of IOI projects conducted in developing countries, it would be interesting to understand how SMEs can ensure the sustainability and long-term impact of OI projects in developing countries. Likewise, to what extent do such projects contribute to sustainable development and corporate social responsibility within developed and developing countries?

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APPENDIX

Appendix A

Characteristics of the cases studied

Case	Number of employees	Industry	Age in international markets	International activities	African countries where OI is practiced	International OI activities
A	4	Services	1	Export	Ethiopia	Customer involvement; Collaboration with NGOs
B	14	Services	5	Contractual agreements (calls for tenders, service agreements)	Cameroon	Involvement of customers and end users; Co-development with a foreign company; Collaboration with NGOs
C	20	Services	9	Contractual agreements (calls for tenders); Subsidiaries; Subcontracting	Lesotho, Djibouti, Mali	Involvement of customers and end users; Co-development of services with foreign companies; Distributor involvement
D	10	Manufacturing	3	Contractual agreements (distribution partnership)	Benin	R&D collaboration with a university
E	8	Manufacturing	4	Subsidiary company; Export	Ivory Coast	Involvement of customers and end users
F	15	Manufacturing	5	Subsidiary company	Senegal, Madagascar	R&D collaboration (university and research center); Collaboration with suppliers; Involvement of customers and end users
G	6	Services	3	Contractual agreements (calls for tenders, partnerships)	Maroc	Customer involvement
H	15	Services	15	Subsidiary company	Gabon, Benin, Senegal	Involvement of customers and end users; Collaboration with foreign NGOs; Co-development with foreign companies
I	40	Manufacturing	11	Contractual agreements (calls for tender, distribution collaboration contracts)	Ethiopia	Collaboration with suppliers; Customer involvement; Involvement of distributors; Co-development of services with a foreign company
J	10	Services	25	Contractual agreements (calls for tender); Subcontracting; Subsidiary company	Democratic Republic of Congo	Customer involvement; Co-development of services with foreign companies and experts
K	15	Services	27	Subsidiary company; Contractual agreements (calls for tender); Subcontracting	Burkina Faso, Mali, Morocco	Co-development of services with a foreign company; R&D collaboration (research centers); Customer involvement
L	60	Manufacturing	9	Subsidiary company; Export	South Africa, Morocco	Involvement of customers and end users; Distributor involvement
M	105	Manufacturing	30	Export	Burkina Faso	R&D collaboration (with foreign company); Involvement of customers and end users
N	70	Services	30	Subsidiary company;	Tunisia	Involvement of customers and end users; Co-development of services

Case	Number of employees	Industry	Age in international markets	International activities	African countries where OI is practiced	International OI activities
				Contractual agreements (calls for tenders)		with a foreign company; Collaboration with an international financial institution
O	5	Manufacturing	4	Export	South Africa,	Involvement of customers and end users; Distributor involvement
P	156	Manufacturing	18	Export; Contractual agreements (distribution)	Egypt	Involvement of customers and end users

Appendix B

Coding Process and Examples of Selected Codes

