A Conceptual Model of Knowledge Management Practices and Internationalization of SMEs

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Abstract
This work aim is to study the relationship between the internationalization of SMEs and Knowledge Management practices. In order to better assimilate the behaviour of these companies, we will focus on their main features as well as the different forms of possible entries to foreign markets. Afterwards, interest will be focused on the role of knowledge in the internationalization process. Through the literature review, it turns out that researchers mainly focus on the perception, the implementation and the transfer of knowledge practices, while neglecting other aspects like identifying, sharing and applying knowledge. For this purpose, we will attempt to conceptualize relations that require more attention in future research. The proposed model can form a basis for future researches in International Business and Knowledge literature.

Keywords: Internationalization, Knowledge Management, Exporting SMEs, Knowledge

Introduction:
The international expansion of SMEs can take various forms, depending on available resources and existing constraints (Ragland, Brouthers & Widmier, 2015). In fact, evolution in a globalized world involves a confrontation with new and complex environment, characterized by an abundance of information, this requires not only a management of information flows but also a permanent development of knowledge.

In this work, we are mainly interested in the knowledge management process through the concept of Knowledge Management (Villar, Alegre & Pla-Barber, 2013; Valentim, Lisboa & Franco, 2016).

From the analysis of the literature dealing with this problematic field, it emerges that the international development of smaller companies requires a capitalization of knowledge: whether in terms of acquisition, sharing, storage,
etc. However, some aspects of Knowledge Management remain little discussed in scientific publications, especially when it comes to internationalized SMEs issues. As a result, we will try to articulate the possible conceptual relationships through the development of a conceptual research model. This conceptualization can form a rough sketch for the confrontation of the ideas developed in this paper with an empirical ground.

**SMEs and Internationalization**

The small and medium-sized enterprise, referred to as "SME", is a form of entity that is initially defined by its size (Gibson and Van der Vaart, 2008). Moreover, the use of the concept in a singular way is not scientifically based, given the variety of its representation in different economies. In this sense, the term "SMEs" would be much more appropriate to study this type of enterprise (Torrês, 2003).

The work of Torrès and Julien in (2005) already mentioned that research on SMEs was constantly growing. A decade later, we can note that the development of scientific research output related to SMEs continues to maintain its momentum given the essential place of these companies worldwide (Beck, Demirgûc-Kunt, & Levine, 2005).

A questioning emerges during SME analyzes. It asks whether the lessons learned from big company’s studies, models and theories can be applied to SMEs (Curran and Blackburn 2001, Torres and Julien 2005). To this end, the literature agrees that SMEs have their own specificities (Ates, Garengo, Cocca & Bititici, 2013; Blackburn, Hart & Wainwright, 2013) and that trying to cope with the strategies and management models of large entities would be an error (Brouthers and Nakos 2005).

Throughout the literature dealing with SMEs, the measure used to evaluate these companies is often quantitative and is part of a logic of size, but the size is not necessarily a sufficient criterion to categorize this type of entity (Torrès and Julien, 2005). In fact, the acronym "SME" does not refer specifically to a limit of greater or lesser size (Criscuolo, Gal & Menon, 2014).

In general, SMEs play a significant role in economies in terms of growth and job creation (Beck et al., 2005) and constitute the vast majority of companies in most countries, especially in the emerging ones.

All in all, the importance of SMEs in the economic development of each country and the need for effective management of this type of enterprises require an assimilation of their characteristics and specificities as well as a clear understanding of the constraints they encounter (Ates et al., 2013).

**Specificities of SMEs**

In a comparison of management modes, Filion (1996) studied the difference between SMEs managed by owner-managers and SMEs managed
by committed professional leaders. The results show that entrepreneurial management tends to encourage commitment, search for opportunities and organizational learning.

On the other hand, if the leader favors the reactivity of his company, the level of strategic planning remains rather weak and often not formalized (Hudson-Smith and Smith, 2007). This characterizes the SME by a logic of priority in the short term (Ates et al, 2013). Nevertheless, this lack of strategic structuring allows the SME to respond to the opportunities that arise by tolerating a certain degree of risk taking (Aloulou and Fayolle, 2005).

In general, SMEs adopt less formal systems in terms of management and decision-making compared to large companies. However, the lack of structured management creates difficulties in knowledge transfer (Ates et al., 2013). Which brings us back to another characteristic of small and medium-sized enterprises, namely; tacit knowledge.

In SMEs, knowledge is created primarily through the accumulation of experiences and is absorbed through tacit learning (Ward, 2004), resulting in non-explicit knowledge. Indeed, the transition from tacit knowledge to explicit knowledge is not without difficulties (Darby and Zucker, 2003). However, adopting a knowledge-sharing process to minimize tacit knowledge results in improved competitiveness and cost optimization (Ates et al., 2013).

The adoption of such a process, the engagement in new activities, the management mode of SMEs and the decision-making in general (Domínguez and Mayrhofer, 2016) are elements mainly related to the leader who constitutes the central figure of his company (Jaouen and Lasch, 2015), so that the personal reputation of the SME manager is directly linked to the reputation of his entity while being a source of value (Torrès, 2011).

This leader, who is the cornerstone of his company, is characterized by a set of specificities influencing the management style and strategic direction of his enterprise (Deb and Wiklund, 2017): This is the case of his antecedents or even of his psychological characteristics (Richbell, Watts, & Wardle, 2006, Grandclaude and Nobre, 2013).

Empirical studies (Storey, 1994 ; Blackburn et al., 2013) show that some of the manager's background have a direct impact on the growth and performance of SMEs (Blackburn et al., 2013): Leader's Age (Dobbs and Hamilton, 2007), his experience (Delmar and Wiklund, 2008), his training (Barringer and Jones, 2004), his entrepreneurial history (Barringer et al., 2005), his previous duties (Richbell et al., 2006), the previous industry (Storey, 1994), the size of the previous entity (Richbell et al., 2006), etc.
International development of SMEs

Operating across national borders is seen as a lever for business development, it offers the possibility of having multiple sources of revenue both at the national and international level (WTO\(^1\), 2016).

Through the literature, several researchers have tried to give a precise definition to internationalization. That said, the definition of the concept of internationalization varies depending on the observed phenomenon (Paul et al., 2017). We will retain the definition of Laghzaoui (2009), describing internationalization as the set of steps undertaken by a company to develop beyond the borders, thus grouping the various modes of expansion: Direct Exports, Indirect Exports, FDI, etc.

In this respect, the decision to internationalize represents a strategic choice for the firm, allowing it to acquire new experiences, interact with new partners and expand its activities in various geographical areas (Filatotchev and Piesse, 2009). However, internationalization leads to a confrontation with different environments, different cultures and a multitude of institutional norms, which require more financial and human resources for the SMEs compared to the international confrontation with the big companies and the multinationals (Sui and Baum, 2014).

The internationalization of SMEs is an ongoing field of research that is attracting the interest of many researchers (Paul et al., 2017). Indeed, the early work of Bilkey (1978), Aaby and Slater (1989) demonstrated that regardless of the type of internationalization that an SME can engage, the latter will benefit from it.

In addition, the literature on the field remains fragmented and no theoretical framework alone can define the internationalization of SMEs. This is partly explained by the multitude of entry modes, but also by the heterogeneity of SMEs around the world (WTO, 2016).

The deployment of international activities has led to a panoply of theoretical approaches whose main objective is to capture the momentum of SMEs in foreign markets (Paul et al., 2017). To date, researchers consider that the following two main trends are the most preponderant: the gradual approach developed by the Uppsala School (Johanson and Vahlne, 1977, 1992) and the approach to early and accelerated internationalization, initiated by the work of Rennie (1993).

More recently, authors have called for the need to build a consolidated analysis grid to interpret the international development of SMEs under a single aspect (Laghzaoui, 2009; Sqalli, 2017). On one hand, the construction of a global approach would be able to respond to the need of consolidating all currents of thought on the basis of a single theory (Laghzaoui, 2009). On the

\(^1\) World Trade Organisation
other hand, it should take into account new trends related to the context of international affairs (Sqalli, 2017).

Beyond the multitude of current theories and debates surrounding their unification, it occurs from the literature on these approaches that a common denominator always seems to emerge: we are talking here about the role of knowledge in the process of SMEs internationalization (Pla-Barber and Alegre, 2014). More explicitly, the step-based approach views international development as a phenomenon closely related to the possession of knowledge acquired gradually when cumulating transactions with foreign partners (Johanson and Vahlne, 1990). In the same spirit of idea, early internationalization is often triggered by the leader's knowledge and international experience (Cabrol et Favre-Bonté, 2011). Similarly, authors who posit that the concept of resources and skills provide a favorable framework for the study of internationalization behavior, agree that the knowledge gained during the process of deploying activities beyond Borders can be considered as specific resources to the company, difficult to imitate and thus constituting a competitive advantage (Laghzaoi, 2009).

In summary, it seems that the role of knowledge is not least when it comes to internationalization: whether in a logic of process or trigger (Pla-Barber and Alegre, 2014).

In this respect, researchers are beginning to focus on the articulation of knowledge management practices within internationalized SMEs by mobilizing mainly the concept of Knowledge Management (Villar et al., 2013; Valentim et al., 2016).

**Knowledge Management**

The role of information and knowledge in the internationalization of SMEs literature is an area of focus for many researchers.

Starting from the first works demonstrating the importance of information management in internationalized SMEs (Julien and Ramangalahy, 2003) to recent studies on fields derived from information systems: Business intelligence (Amabile, Laghzaoi, Peignot, Peneranda, & Boudrandi, 2013), competitive intelligence (Sybord, 2015, Tarek and Adel, 2016) and Knowledge Management (Villar et al., 2013, Valentim et al., 2016). It turns out that awareness of the importance of information from the external environment or the knowledge developed internally, is starting to position itself more and more as lines of research integrated into the study of the behavior of SMEs.

In fact, the relationship between the optimization of knowledge management and international success is proving to be a most relevant area of research given the globalized environment in which today's SMEs operate (Costa, Soares & de Sousa, 2016).
At this stage, it is essential to distinguish between information and knowledge: Information is a way to reduce uncertainty, it results from a rational treatment through a human and technical organization (Boersma and Stegwee, 1996). Knowledge, for its part, can be defined as a set of beliefs held about causal relationships between different phenomena (Blondel, Edouard, & El Mabrouki, 2007). It is built on information, past experience, culture and the human mind (Bender and Fish, 2000). In synthesis, information is the support of knowledge. This knowledge takes shape through a human interpretation (Blondel et al., 2007).

From a managerial perspective, the information comes from various sources: company employees, customers, suppliers, public authorities, personal networks of the management team, etc. The capitalization of information from the SME environment (internal and external) must feed into a specific information process that will result in knowledge that is useful for the decision-making process.

Following this logic, the literature has given birth to different practices trying to apprehend the management of information and knowledge, it results generally two families: behaviors related to the internal environment and analyzed by Knowledge Management and organizational learning (Villar et al., 2013, Valentim et al., 2016) and behaviors related to the external environment of the SME and studied by the business intelligence (Amabile et al., 2013) and the competitive intelligence (Tarek et Adel, 2016). In this paper we will focus more specifically on the concept of Knowledge Management (KM).

KM is a "methodology for sharing knowledge, mobilizing useful information for employees, managing it, reusing it and capitalizing on it" or "capturing, maintaining and reusing expertise" (IBM²).

KM is also defined as a set of knowledge management tools that support business activities when they require the capture of information (Blondel et al., 2007). According to these authors, KM act as a gigantic internal memory of the company, serves as a methodological support and reservoir of knowledge. Thus, an innovation will benefit from past experiences (missed or successful) and the knowledge of the actors concerned (identification of experts) thanks to KM.

Other researchers argue that KM has two facets: the first seems to reduce knowledge management to a technological infrastructure and the deployment of software solutions; the second challenges the technological illusion to emphasize the necessarily social and organizational dimension of any knowledge management process (Grimand, 2006).

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² Definition of IBM Global Services in Knowledge Management forum 2002
The definition developed by Dalkir (2013; p.76) seems relevant to describe this concept: "Knowledge management is a surprising mix of strategies, tools, and techniques-some of which is nothing new under the sun. Storytelling, peer-to-peer mentoring, and learning from mistakes, for example, all have precedents in education, training, and artificial intelligence practices".

After defining the concept of Knowledge Management, we will focus on its role in international affairs context in the following chapters.

**Knowledge Management and Internationalization of SMEs**

Knowledge Management is used to support the creation, sharing and application of cumulative knowledge within the entity (Feng, Sun & Zhang, 2010). This knowledge is all the more necessary when it comes to expanding activities across borders (Valentim et al., 2016).

A recent research suggests that Knowledge Management (KM) has become an essential element for international success and competitive advantage acquisition (Villar et al., 2013). Through empirical results, it turns out that KM offers a theoretical framework adapted for export strategies research (Valentim et al., 2016). The work of Villar et al., (2013) leads to the observation that the practices of KM in SMEs have a positive effect on the proportion of turnover exported on the global turnover (The export intensity).

In addition, KM in a logic of internationalization encompasses various categories of knowledge; knowledge of internationalization and networks and technological knowledge (Costa et al., 2016). Also, their sources are multiple: Individual, organizational, supra-organizational (Casillas et al., 2010). Moreover, and taking into account the specificities of SMEs and mainly their constraints; the analysis and processing of information is a necessity when the company decides to involve internationally. In this sense, the more the enterprise evolves in a globalized environment, the more difficult it becomes to obtain the right information, which limits, among other things, the creation and accumulation of knowledge (Hsu et al., 2013).

In the same logic and through a review of the literature based on the latest empirical results on the role of information, knowledge and collaborations in internationally developed SMEs, Costa and his colleagues (2016) lean to find that information and knowledge can be considered as key resources in the process of internationalization of SMEs. For example, researchers find that the organizational learning process is a facilitator for better assimilation of client needs (Feng et al., 2010).

Regarding the internationalization of SMEs, it can take various forms: Exports (direct and indirect), equity participation and foreign direct investment (FDI).
The specificities of SMEs mean that these entities opt more for low-cost commitments, in particular export in its two forms: direct and indirect sales (Lages and Montgomery, 2005). To this end, the literature agrees that exporting is the first step of internationalization for SMEs. Thus, if the first export operations are successful, SMEs become more involved internationally (Brouthers, Nakos, Hadjimarcou & Brouthers, 2009).

Direct export is the sale of the company's products or services in international markets. Indirect export offers the possibility of selling the products via their sale to other companies carrying out international transactions. In addition, some SMEs may choose both forms of export at once (Chuc, Anh, Hai, Mai, 2012). Also, SMEs can internationalize through the establishment of franchise or alliance agreements (case of export groups).

With regard to foreign direct investment (FDI), and taking into account the financial and organizational resources needed to establish such an internationalization mode, it is considered the riskiest option in terms of international commitment for SMEs (Lages and Montgomery, 2005).

In sum, it seems that researchers agree that exporting is the first step when SMEs decide to internationalize. This mode of entry is the one that requires the least financial and human resources to commit. For this purpose, and in the following development, exporting SMEs will be our focus for the proposition of a conceptual model linking Knowledge Management practices on one hand and the flow of knowledge on the other.

Proposal of a conceptual model

Research into knowledge management practices tends to choose large firms and multinationals as an empirical ground. In this spirit of ideas, authors postulate that SMEs do not manage knowledge in the same way as large organizations. Indeed, considering SME knowledge management practices as miniaturized versions of practices applied in large organizations would be incorrect (Desouza and Awazu, 2006).

More recently, publications are emerging on the role of the organization of the knowledge-based approach in SMEs (Durst and Evardsson, 2012). Indeed, and in the absence of abundant resources, these entities must manage at best the knowledge acquired while instituting an approach that takes into account the various constraints of size, time, money and human skills. In sum, successful SMEs are those that can use their knowledge effectively and efficiently (Desouza and Awazu, 2006).

Internationally, the requirement to circumvent resource limitations in view of better knowledge management is a prerequisite for the good performance of SMEs in foreign markets (Pla-Barber and Alegre, 2014). In this line, the distinction of practices to implement for the sequencing of
knowledge can be considered as the first step towards the specification of processes in SMEs.

In this sense, the literature review conducted by Durst and his colleague (2012) notes the following: the practices of implementing knowledge, their perception and their transfer are fairly well-documented concepts. On the other hand, those related to the identification of good knowledge, their sharing and their use remain poorly understood (Durst and Evardsson, 2012).

Following this logic, we attach particular importance to those aspects that still show a lack in terms of the production of empirical truths. Thus, the dimensions proposed by Alegre, Sengupta & Lapiedra (2013) seem to adapt to meet this need.

These authors build Knowledge Management practices on two main pillars: Knowledge Dissemination Practice (KDP) and Knowledge Storage Practice (KSP). According to them, the first category allows the application of knowledge through various channels regardless of their nature (structured or unstructured), afterwards, this knowledge is shared with the internal and external environment of the company. The second category shows that the collection and transformation of relevant information into knowledge is useful for future decisions and operations (Alegre et al., 2013). In this perspective, the storage approach finds all its relevance in the process of knowledge sharing (Villar et al., 2013).

Regarding the aspect of SMEs internationalization, a majority of studies on exporting tend to measure cross-border activities by the intensity dimension of exports (Ganotakis and Love, 2012). In fact, sales made abroad offer a good framework for assimilating the international proportion of the company's activity: Export intensity is the most widely-used variable of internationalization of SMEs (Bianchi and Wickramasekara, 2016).

In summary, the objective of this work is to confront these two constellations of knowledge. In this case Knowledge Management and the export force of SMEs. For that, we propose the following conceptual model of research:

**Figure 1. Conceptual Model: Knowledge Management Practices and Internationalization of SMEs**
Conclusion:

Through this work, we have tried to make a contribution to the knowledge of the SMEs internationalization in a knowledge management perspective. This work can be a support for students and researchers wishing to understand the knowledge management aspect of the internationalized SMEs.

Also, this paper may have some limitations; in terms of conceptual framework for example, we have considered Knowledge Management as a discipline encompassing the management of information and knowledge relating to the internal environment, however, other practices may also find their basis in this logic i.e. absorptive capacity or organizational learning.

Prospects for research can also be presented: An obvious track would be to confront this conceptual model with an empirical ground. In addition, and with a view to optimizing the management of internal knowledge useful for international development among SMEs, we believe that it would be appropriate for future work to focus on the specification of the knowledge to be developed and the choice of sources. The role and direction of the SME manager is also an interesting element in stimulating Knowledge Management practices.

References:


