

# Information management for network transformation in industrial enterprises associations:

## The case of the internationalization process

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### ABSTRACT

*There is no doubt that nowadays internationalization is increasingly attractive for companies that want to become more competitive. However, many small and medium enterprises (SMEs) still are resource-constrained, lacking adequate information and facing problems to establish and manage relationships to operate in a sustainable way in international markets. Despite receiving some support from governments and from other institutional entities, these difficulties faced by SMEs call for a stronger support, which can be played by industrial enterprises associations (IEAs). This chapter brings the perspective of five different companies that are associated with IEAs. The main objective is to have their opinion about the role of IEAs as information managers and promoters of collaborations, mainly for internationalization processes. Another objective is to understand the acceptance by these companies regarding the use of collaborative platforms, managed by IEAs, for supporting their information and collaboration management activities.*

Keywords: Information Management, Collaboration, Internationalization, Industrial Enterprises Associations, Small and Medium Enterprises

### INTRODUCTION

Small and medium enterprises (SMEs) are one of the main driving forces in economic development, representing in many economies all over the world an important pillar of growth and employment (London, 2010; Sommer & Haug, 2011). Globalization of markets and the consequent rise of competitive pressure lead SMEs to look at internationalization as a main priority to sustain their business (Costa, Soares, & Sousa, 2016a). However, only a few number of firms have been succeed in internationalize to foreign markets (Rodriguez, Barcos, & Álvarez, 2010). In comparison to multinational enterprises (MNEs), SMEs are typically regarded as resource-constrained, mainly lacking market power and adequate information and knowledge to operate in a viable way in international markets (Hessels & Terjesen, 2010).

To compensate the lack of information about foreign markets, SMEs can form collaborations and establish network relationships with different types of entities, such as suppliers (Hultman, Johnsen, Johnsen, & Hertz, 2012), customers (Cannone & Ughetto, 2014), competitors (Casillas, Acedo, & Barbero, 2010), foreign firms (Castellacci, 2014), institutional agencies (Santos-Alvarez & García-Merino, 2010), and government bodies (Child & Hsieh, 2014). Collaborations can be established between firms to complement core competencies, providing complementary and attractive products or services to markets and increasing competitive advantages to internationalize (Spence, Manning, & Crick, 2008). Networks are valuable sources of information about market conditions and information sharing is then crucial in collaborations to create trust and synergy to sustain relationships. Therefore, successful collaborations require using a collaboration-based mentality instead of a conflict-based one, with information sharing and not information controlling (Spence et al., 2008).

Despite of this, SMEs still face difficulties in managing both collaborations and information generated in a collaborative network context (Costa et al., 2016a). Due to the imperfect access to information, internationalization can be a risk for SMEs, representing extra costs associated with the collection of foreign market information and seeking and evaluation of partnerships (Hessels & Terjesen, 2010). Internationalization requires large amounts of information but many firms have a lack of suitable tools for managing information and knowledge from partners or from previous experiences (Rodriguez et al., 2010). When moving into new international markets the information processing demand increases and become more complex (Hsu, Chen, & Cheng, 2013), requiring suitable management approaches and information technologies tools to better predict and evaluate problems arising from internationalization strategies. Additionally, among all difficulties in managing internationalization information (Costa, Soares, & Sousa, 2016b), SMEs face significant barriers related to the lack of contacts and lack of adequate institutional support (Djordjevic, Sapic, & Marinkovic, 2012; London, 2010). Moreover, in Portugal, although representing 99% of the total number of enterprises, only 20% of SMEs are performing internationalization processes (Banco de Portugal, 2015).

These difficulties faced by SMEs in managing internationalization processes, with specific emphasis on managing information and on creating collaborations, call for a strong facilitating role that can be played by industrial enterprises associations (IEAs). IEAs can have an important role in fostering more collaborations among their associated companies, by disseminating opportunities and acting as an intermediary for establishing good relationships (Costa, Soares, & Sousa, 2015). Some previous studies have been studying the role of institutional networks in internationalization processes of SMEs, e.g. Oparaocha (2015), Makhmadshoev, Ibeh, and Crone (2015), and Gardó, García, and Descals (2015). However, these studies are not specifically focused on IEAs, i.e. results are concentrated in understanding the institutional network support of governments and other supporting agencies in general.

Internationalization processes require managing large amounts of information (Xie & Amine, 2009). Costa et al. (2016) state that a collaborative platform may allow better information management in collaboration, contributing to the effectiveness of these processes. Accordingly, the authors of the present chapter argue that by using a technological and collaborative platform, IEAs can act in a more active way in processes of internationalization of their associates (both SMEs and MNEs). This by providing advanced brokering, facilitation and coordination services, instead of only mere advices and basic services.

Therefore, the main objective of this chapter is to understand the perspective of five different companies associated with IEAs about two aspects: (i) the role of IEAs as information managers and promoters of collaborations; (ii) the use of a collaborative platform for supporting information and collaboration management activities, with focus on internationalization processes. The research questions are:

- **RQ1:** What is the perspective of companies about IEAs as information managers and promoters of collaborations?
- **RQ2:** What companies think of using collaborative platforms, managed by IEAs, for supporting their internationalization processes?

The motivation is then based on three main pillars:

- **Information:** SMEs need to access, organize and use information from their collaborative networks to achieve better internationalization processes.
- **Tools:** SMEs need to have new tools to convert information into knowledge for making better internationalization decisions.
- **Support:** SMEs need a more active support from institutional networks, mainly from IEAs.

The structure of this chapter is as follows. First, literature on internationalization of SMEs with focus on networks and information management processes is presented, as well as some background on IEAs as institutional network support for SMEs. After that, the research methodology applied for this paper is described and the selected five cases are analyzed according to the research questions. Finally, a discussion and the main conclusions of the chapter are presented.

## BACKGROUND

This section provides a brief literature review about the topics under study in this chapter. First, recent developments on the internationalization process of SMEs are provided. After that, the information management process, as well as the network and collaboration processes in internationalization are discussed. Finally, this section ends with literature on IEAs, with focus on their institutional network support in the internationalization process of their associated companies.

### Internationalization processes of SMEs

The world is becoming increasingly globalized and the international markets more and more open and accessible. Domestic saturation and the need to reduce competitive pressures lead companies to expand their businesses across borders, in order to increase sales and gain visibility in foreign markets (Olejnik, 2014). Internationalization is the process of adapting firms' operations to international environments, increasing awareness in terms of direct and indirect influences of international transactions on their future (Beamish, 1990; Calof & Beamish, 1995). However, internationalization is a complex and hard process dealing with a large variety of decisions and, most of the times, requiring a great amount of resources (Andersson, 2011; Santos-Alvarez & García-Merino, 2010). Particularly in the case of SMEs, standing out in this competitive environment can be quite difficult, with the lack of information and the lack of contacts representing the main hindrances to internationalize (OECD, 2009).

The definition of SMEs differs across countries. E.g. SMEs are defined as firms with fewer than 250 employees in Europe, with fewer than 500 employees in the USA, and with fewer than 900 employees in New Zealand (Jabar, Tajuddin, & Paino, 2016). In the European context, in addition to representing firms that employ fewer than 250 employees, SMEs have an annual turnover not exceeding EUR 50 million and/or a total annual balance sheet not exceeding EUR 43 million (Kushnir, Mirmulstein, & Ramalho, 2010). Compared with MNEs, SMEs have limited managerial, financial, network and information resources (Knight & Liesch, 2016; Olejnik, 2014).

Internationalization processes and activities of MNEs have long been studied by many researchers and strong theory was developed on this. However, SMEs are structurally different and behave differently from MNEs, precluding the possibility of theory transferring (Knight & Liesch, 2016). MNEs have a highly internalized organization form (Liesch, Håkanson, McGaughey, Middleton, & Cretchley, 2011) while SMEs might invest abroad (not to the extent of MNEs) but opting for more basic forms of internationalization, such as exporting and other non-equity modes (Lu & Beamish, 2001).

The internationalization process model of Johanson and Vahlne (1977) is well established in the research area of International Business (IB). This model is incremental, describing that firms start the internationalization process with a low commitment involvement into close markets, progressing (through a learning process) towards higher commitment levels into more distant markets.

Nevertheless, in the last decades external environments where firms operate have changed and consequently more research have been made on cases that display other patterns of internationalization and on updates of the model of Johanson and Vahlne (1977).

Knight and Liesch (2016) present a comprehensive summary of the evolution of research on early internationalization and born global firms. “Born global firms” is a term used in the internationalization literature that is applied to firms (mostly SMEs) aiming for international markets right from their birth or very shortly thereafter (Andersson, 2011; Cannone & Ughetto, 2014; Kaur & Sandhu, 2013). The authors present a conceptual framework that summarizes future research on born global firms. The main conclusion of this study is that the internationalization process is evolving and born global firms are emerging around the world. This because companies of any size, age, experience and resources can participate in an active way and benefit from international business.

Olmos and Díez-Vial (2015) examine the relationship between the internationalization pathways and the performance of SMEs. Empirical findings show that the “export intensity-export performance” relationship can be characterized by a U-shaped curve for SMEs that have a gradual internationalization pathway and by a S-shaped curve for SMEs that have an accelerated internationalization pathway. Based on the configurational theory, Cerrato, Crosato and Depperu (2016) develop an important framework that identifies four archetypes of SME internationalization: (i) marketer; (ii) investor; (iii) networker; and (iv) weak internationalizer. This framework allows to analyze the firm-level internationalization, according to six indicators: internationalization from the demand side, resources located abroad, geographical scope, international orientation, internationalization of the business network, and financial internationalization. Nevertheless, many SMEs still face major challenges and internationalization barriers. In particular, they often do not know how to start an internationalization process, what are the decisions and entry modes involved, and which are the main types and sources of information about foreign markets that enable more confident decision-making (Child & Hsieh, 2014; OECD, 2009; Olejnik, 2014). In other cases, the lack of suitable tools, methods and practices for managing information and knowledge, both from previous international experiences and from partnerships with other firms, represents another problem in their internationalization processes (Nguyen, Barrett, & Fletcher, 2006; Rodriguez et al., 2010; Souchon, Dewsnap, Durden, Axinn, & Holzmüller, 2015).

## **Information management in internationalization of SMEs**

Having value information is crucial for successful internationalization processes. Decision-makers in SMEs need to search and acquire information for identifying appropriate foreign market opportunities and to reduce internationalization uncertainties (Xie & Amine, 2009). In addition, SMEs with value information are able to increase creativity in decision-making and to reduce risk, facilitating the international expansion (Child & Hsieh, 2014; Perks & Hughes, 2008; Saarenketo, Puimalainen, Kyläheiko, & Kuivalainen, 2008).

However, as found by many authors in the literature, SMEs have imperfect access or have difficulties in managing information regarding internationalization processes (Hessels & Terjesen, 2010). The reasons for this to happen can be centered in the poor development of suitable information technology tools (Rodriguez et al., 2010), in the lack of organizational capabilities to process information (Aspelund & Butsko, 2010), or even by not allocating the right efforts to gather this information (Santos-Alvarez & García-Merino, 2010).

Recent studies show the importance of information in internationalization processes. Souchon et al. (2015) examine the key antecedents for generation of export information, concluding that export experience, export complexity, and export specificity are positively related with knowledge of export information sources. They point out that in cases of lack of export experience, companies should contact and recruit entities with experience in internationalization or with knowledge of specific markets. In addition, these authors state that firms exposed to many export markets may face some complexity and challenges regarding information management processes, mainly in what regards the organization and dissemination of knowledge internally. The study of Peschken, Shukla, Lennon and Rate (2016) explores

the decisions of SMEs' decision-makers in internationalization using a cognitive perspective. Based on the structural alignment theory and regulatory focus theory, a conceptual model is developed by these authors. Scenarios are identified and findings show that the structure of the available information to internationalize has a strong influence on decisions regarding cognitive resource requirements.

Decision-makers have characteristics that influence the information management in internationalization, such as this age, tenure, international experience, information processing capability or organizational memory (Chen, 2011; Cui, Li, & Li, 2013; Hsu et al., 2013). In order to learn and develop new knowledge about markets, SMEs can use different internal and external sources of information, which can come from social and business relations, from previous international experiences or experience of others, or from externally available information (Akerman, 2014; Santos-Alvarez & García-Merino, 2010). The main information subjects that SMEs seek within their sources are (Aspelund & Butsko, 2010; Cannone & Ughetto, 2014; Ibeh & Kasem, 2011; Peng, Yang, & Liang, 2011; Xie & Amine, 2009):

- Foreign market conditions.
- Host countries attractiveness.
- Internationalization strategies.
- Internationalization obstacles.
- Support programs.

To gather information from different sources, a possibility is to use formal techniques, such as market research, or informal ones, such as relying on gatekeepers (Rodriguez et al., 2010). Nevertheless, it seems that for gathering and sharing information about foreign markets, SMEs give more priority to their already established networks (Costa et al., 2016a). Information shared in networks allows to increase commitment in foreign markets (Hultman et al., 2012) and to reduce information asymmetry (Child & Hsieh, 2014), which is more important in internationalization due to the individual difficulties of SMEs in searching information (Casillas et al., 2010). Spence et al. (2008) consider that information sharing is crucial for developing trust and synergy to sustain collaboration relationships, requiring a collaboration-based mentality instead of a competition-based one.

## Internationalization networks

Another important development in the literature of internationalization of SMEs is to consider markets as networks of relationships (Johanson & Vahlne, 2009). There is growing evidence that SMEs need to create relationships and establish collaborations to gain competitive advantage in internationalization (Costa et al., 2016a). These collaborations can be (Spence et al., 2008):

- **Vertical alliances:** Alliances with upstream and downstream partners.
- **Horizontal alliances:** Relationships with competitors.
- **Other alliances:** Collaboration forms with firms from different sectors.

Successful collaborations are achieved when value for all the parties is created, which can be obtained by choosing the right partners, by managing the relationship, and by accumulating relational capital (Townsend, 2003). Quite different types of intermediaries can be used in internationalization to form these collaborations, such as distributors, customers, competitors, managers' contacts from previous jobs or experiences, external parties, foreign firms, institutional agencies, government bodies, consultants, personal contacts, and friends (Cannone & Ughetto, 2014; Casillas et al., 2010; Castellacci, 2014; Child & Hsieh, 2014; Hultman et al., 2012; Ibeh & Kasem, 2011; Kaur & Sandhu, 2013). Some of the main reasons for establishing collaborations in internationalization processes are to achieve rapid international expansion and growth, to obtain information about foreign markets, to provide access to new knowledge, and to assist in mitigating the costs and risks of cross-border activities (Andersson, 2011; Child & Hsieh, 2014; Ibeh & Kasem, 2011; Musteen, Francis, & Datta, 2010).

The study of Oparaocha (2015) illustrates the differences and interconnections between the three main perspectives of network research in IB: (i) social networks (individuals, family, friends, colleagues, and employees), which influence the creation and development of social capital and business know-how; (ii) business networks (suppliers, competitors, strategic partners, and customers) that have an effect on the business deal and on supplementing or acquiring resource advantage and business know-how; and (iii) institutional networks (government, incubators, research institutes, agencies for international development, and business associations) that have influence through supporting functions and the institutional-based business environment. Since the work of Coviello and Munro (1997), business networks are those that are more explored in the literature. A recent study shows that, in order to reduce risks, SMEs imitate the internationalization modes of their peers based on formal network relations (Oehme & Bort, 2015). Social networks have been also receiving much attention. Pinho and Pinheiro (2015) highlight the importance of using social network analysis as a different methodological approach to understand the numerous complex interactions that occur in internationalization processes. Xie and Amine (2009) suggest that social networks must be properly recognized as one of the primary sources of information, knowledge, and fast learning. Nonetheless, the institutional network perspective is still in an early stage of research.

The importance of governments and institutional supporting agencies in the internationalization processes of SMEs have been recognized in the literature (Casillas et al., 2010; Child & Hsieh, 2014; Loane & Bell, 2006). However, more studies on the influence of institutional networks in internationalization processes are needed (Oparaocha, 2015). Current studies examine how this kind of networks are interacting with the internationalization activities of SMEs, in the context of international entrepreneurship (Oparaocha, 2015), transition economies (Makhmadshoev et al., 2015), and retail internationalization (Gardó et al., 2015). The focus of this chapter is on IEAs addressed as institutional networks for supporting the internationalization of their associated companies. This is a different contribution to the knowledge of internationalization as tendency of previous research is to consider institutional networks in general, or to give more emphasis to governments and other agencies.

### **Industrial enterprises associations as institutional network support**

The authors of this chapter consider an IEA, also known as business association (Bennett, 1998) or trade association (Lacerda, 2013), as being both an organization that represents different companies of a specific industrial sector (sectoral IA) or an entity that act as an intermediary within a multisector network of companies in a specific area of activity (multi-sectoral IA). In both cases, membership for companies is voluntary (Bennett, 1998).

IEAs act as an intermediary between individual business action and state action (Bennett, 1998), adopting a multilevel strategy of lobbying across different national and international government levels (Grossman & Woll, 2007). Therefore, the potential benefits of IEAs to governments are an enhanced level of compliance with regulations, as well as lower administrative costs of regulation (Bennett, 1998). In addition to establish standards and self-discipline and to promote an effective communication between industrial firms and local governments, one of the main focus of IEAs is to strengthen collaboration among members (Bell, 2006; Wang & Gooderham, 2014). An IEA also promotes activities such as advertising, publishing, and formation (Lacerda, 2013). According to Bell (2006), a capable or well-developed IEA is able to encourage associated companies to collaborate and achieve wider, medium-term collective goals, instead of working only in their narrow short-term interests. Irwin (2014) also considers that to be effective, IEAs must have capacities to represent the interests of their members, must have proper governance arrangements, and must deliver appropriate services and information to their associates. In the specific case of SMEs, it appears that due to their resource constraints, SMEs are more dependent than large firms on the services, information and contacts generated through IEAs (Gashi, Hashi, & Pugh, 2013).

The recent study of Inomata et al. (2016) explores the channels and practices for knowledge sharing in Science and Technology Parks, as well as in IEAs. Knowledge sharing is the process when individuals

mutually exchange tacit and explicit knowledge, creating new knowledge in collaboration (van den Hooff & De Ridder, 2004). In this study, based on empirical data, the authors conclude that companies in an IEA share technological knowledge (such as scientific knowledge, technological solutions, and patents), as well as market knowledge (such as investors and investments, business contacts, and business opportunities) with the other associates. Different channels are used, such as the personal contact, email, phone, cloud, videoconference, and websites. In fact, results of this study show that an effective process of knowledge sharing in IEAs is mainly facilitated by the existence of collaborative physical workspaces and informal and face-to-face interactions. Moreover, regarding the impacts of knowledge sharing in the organizational results, those are more related with continuous improvement, technology development and increased knowledge base of the associated companies.

Although it is common knowledge that IEAs promote activities and initiatives that are important for the internationalization of their associates (such as fairs, missions and market research), literature on the role of IEAs in internationalization processes is still very scarce.

## RESEARCH METHODOLOGY

The research methodology applied for this study was exploratory interviews with five Portuguese companies associated with some IEAs. Therefore, the main goal was to understand the perspective of these companies on the possibility of considering IEAs as information managers and promoters of collaborations. In addition, it was intended to perceive the suitability of using a collaborative platform for supporting activities such as information and collaboration management in their internationalization processes. Table 1 characterizes the different companies interviewed.

*Table 1. Companies interviewed*

ID	Type of organization	Industrial Sector	Position of the interviewees	Duration of the interview (min)
C1	Large enterprise	Textile industry	Chief Commercial Officer (CCO)	42
C2	Large enterprise	Textile industry	Chief Executive Officer (CEO), CCO, Chief Technology Officer (CTO), Chief Marketing Officer (CMO), Advisor	76
C3	Small enterprise	Information technologies	CEO	51
C4	Small enterprise	Information technologies	Business Manager	33
C5	Startup	Medical devices	Chief Operating Officer (COO)	71

Empirical evidence was collected using semi-structured interviews with different kinds of interviewees, such as CEOs, CCOs, and advisors. The open-ended style of the interviews allowed the respondents to describe their experiences and ideas freely, without being limited to standardized categories (Hutchinson, Alexander, Quinn, & Doherty, 2007). These companies were selected to have a sample representing different types of organizations, i.e. the sample is composed by one startup and by two SMEs, and two large enterprises. The startup C5 is not currently a member of an IEA but it was interesting to have a perspective from this different type of organization. All the interviews were carried out personally and were recorded for accuracy purposes. After that, these were transcribed and coded using the qualitative data analysis software MAXQDA.

## FINDINGS

This section describes the main findings of the performed interviews.

### Case 1: Large enterprise 1, textile industry

C1 is a large company with 80 years of experience in the textile and clothing industry. It is a successful company in Portugal that has been focused in the last years in creating textile innovative solutions for the automotive industry. C1 has also many experience in internationalization processes with subsidiaries all over the world.

Regarding its membership with the association from the respective industrial sector, the interviewee considers that this IEA does not have the necessary human structure to deal with their needs to develop new projects. In terms of promoters of collaborations among associates, the technological center of this sector, which works in close collaboration with the IEA, seems to be more adequate for this task.

C1 is mainly interested with information about legislation and customs rules. Due to their growing interest in the automotive sector, another valuable information content is the one regarding patents. Therefore, the IEA can play an important role here, acting as an information manager to share this important information with C1.

The interviewee thinks that a platform for supporting information and collaboration management aspects can be relevant for their activities, since people are very closed in what concerns the process of information sharing. The perspective is that a technological platform can facilitate the task of finding partners and opportunities, creating good synergies among all the stakeholders. However, there must be the ideal of all parts sharing something meaningful to each other.

Despite having experience in internationalization processes, C1 considers that these are most of the times difficult processes. The interviewee knows that many companies have been had bad experiences in internationalization. In the specific case of C1, they had a negative situation in Brazil, where companies were very closed, without sharing information, which made it difficult to perform an international project with success.

## **Case 2: Large enterprise 2, textile industry**

C2 is a large textile company with more than 40 years of experience. The technological level and the know-how acquired throughout four decades of activity have positioned C2 in the forefront of the clothing industry in Europe. Today the company exports almost all its production all over the world. Therefore, C2 has many experience in internationalization.

In this case, five members of the company were interviewed at the same time, allowing to have a broader scope in the thematic being discussed, representing the longest interview performed.

For C2, the internationalization is an adventure, a challenge often inglorious. One of the interviewees gives the example of China, where they made some four or five attempts to enter this market but have never been successful. So, they point out the need to understand the tangibility and how a person values the brand, but also to understand the distribution philosophy of each country. This last aspect because nowadays the logistics and distribution costs are very high. Therefore, it is in this lack of knowledge about markets that collaborations can have an interest for the company.

The interviewees consider that the IEA needs to expand its scope by helping companies to execute specific activities because C2 still has some reluctance in terms of associative schemes. In their opinion, one situation is when a company wants to move to a particular market and knows that it cannot do it alone and needs some support. An example can be the United States of America, which is a hard and large project for one company alone. So, the need here is for the IEA to create over there a physical space or showroom to present and disseminate the activities of a small number of specific companies. This could allow to create more collaborations among associates, mainly in terms of resource and risk sharing.

According to the interviewees, another possible way to improve the importance and the visibility of the IEA could be to promote the sector and not specific brands. The IEA can study a specific market, analyze and collect data, present this data to the Portuguese companies, and invite the press and companies of the market under study to come to Portugal and meet the industry, not specific brands. In Portugal, one of the most successful cases is in the footwear industry, where the IEA acts like this. One of the interviewees thinks that this approach can be more interesting for the sector, by giving a bad example that happened for example in a fair (one of the traditional support provided by IEAs): *“there were situations in the past*



*where I was representing the company in events organized by different IEAs and I remember of a fair that I stayed for six days and did not have a single customer... because it was out of context, we spent a lot of money...*” So the perspective from the interviewees is to have quality, not quantity, i.e. the IEA needs to choose and take the best companies of the sector and present Portugal. After that, naturally, other companies will go after and will gain more visibility.

In the evolution of this, the interviewees see a platform as being interesting to make the positioning and alignment of the companies that have the same philosophy in terms of both resources and strategies. They think that the IEA can moderate meetings between associates with the same philosophy and with the same resources that can be complemented to reach specific markets, promoting here more fruitful collaborations.

These collaborations with other associates of the IEA are seen as a good possibility to create joint strategies and structures for making investments in markets to benefit the specific brands. This by complementing resources, sharing risks and also sharing investments. One of the interviewees reinforces the importance of having in these situations companies with the same strategy: *“in this sense, companies must interact and collaborate according to their dimension... this only results if the companies are aligned at all aspects... if they conjugate companies that sell completely different products... it is a completely different world. Then, despite of wanting to share, there will be no benefit between the parties.”* So, the perspective of C2 is that for creating collaborations, companies should have common interests, since companies with a different economic power will probably have different requirements and objectives, but also different approaches, values and resources.

In terms of information sharing in IEAs, C2 has interest if it is information about experiences in specific markets. The interviewees consider that if an associate is in a specific country, he knows the rules and the particularities of this country. Therefore, through a knowledge sharing process, C2 can learn with him, understand the problems and barriers to face, and consequently avoid making the same errors. So, they approve that the IEA can act as an information manager, by organizing and filtering information according to the needs of the associates. However, the interviewees think that it will be difficult to transpose all this management of information into a platform. They agree with the IEA sharing institutional information and opportunities but they have doubts about the willingness from companies for sharing their information. This mainly due to their lack of time for structuring the information in a pleasant and easy way to read, as well as due to the fact that some information may be confidential. Moreover, they believe that the interactive part, the exchange of experiences, could be easier if performed in a more informal way.

A platform can be interesting for C2 if it is not a generalized platform, i.e. if it has the ability to create groups and create market segments, where information is directed to and created within these segments. Other fundamental aspects are the platform to be the way where companies create synergies to approach markets or where all the funding opportunities for the sector are aggregated.

### **Case 3: Small enterprise 1, information technologies**

C3 is a small software developer and software consulting company with 15 years of experience with the objective of providing IT solutions to organizations, based on the latest technologies. Right from the start, the company has been present in international markets. Nowadays C3 has offices in 10 different countries, exporting to a wide range of foreign markets.

The interviewee considers that the creation of collaborations with other companies of the IEA is important for the development of the company. It is indicated that in terms of software development companies, there is a set of problems that can be solved in collaboration, such as the management of updates and versions. So, the opinion is that the IEA needs to foster these relationships by disseminating and promoting the skills of its associates, in order to increase their visibility for other companies in foreign markets. Therefore, the interviewee points out two important aspects to be improved in the context of IEAs: (i) first, the IEA can identify the innovation vectors and the competences of each associate to allow crossing opportunities with the interests of each company; (ii) after that, using some

collaborative tools, the IEA can perform a matchmaking process to help in the identification of different actors that can collaborate in a specific opportunity. Therefore, the IEA can play here a crucial role for establishing good conditions for the collaboration among associates, by *"finding the opportunities, present these opportunities to those who may have an interest, and have a collaborative tool that allows the matchmaking."*

In terms of information sharing, the interviewee clearly thinks that C3 has not yet felt the impact of the IEA as an adequate information manager. When approached with the question for the value information to also be originated by the associates themselves and transform this information sharing into a knowledge sharing process, the interviewee thinks that this is a viable situation. However, the IEA knows the associates and can be responsible for most of the information, by giving itself more wealth to its content. The interviewee considers that this can work for an example in a platform but only if the information is really useful: *"And how, from my point of view, is it useful? If I receive once a week in my mailbox... a project, its title, its budget... does this and in 30 seconds I'm able to know that is this call, is for this, when, how, where, what time, values... a smart picture... and then have an option to say 'I'm interested' or 'like'."* But this kind of information needs to be related with the activity of each associate, i.e. C3 does not want to receive emails or information about calls or other topics from other areas.

Therefore, a platform managed by the IEA for supporting information and collaboration management can be very useful. For example, a platform may push the information that is on the websites of the European Union, i.e. to get this information and re-organize it for the interests of the associates. So, having a way of performing this matchmaking process between European projects with the research interests of companies, as well as alerting companies to these opportunities in an IT platform may represent relevant factors for the users' acceptance.

Another opinion from the interviewee is that the IEA of the sector has a long way to go because in this technological area there are issues that are useful for all associates and that need to have more focus. The IEA may have the role of knowledge aggregator both in terms of state-of-the-art and in terms of future prospects, such as pointing possible paths and markets of interest.

For the topic of internationalization, C3 has many experience in foreign markets and the first advice is that the internationalization is a multidisciplinary chain where some specific skills are required. The interviewee recommends that a company needs to have a product or service prepared to be internationalized and to have people with proficiency, at least, in English: *"we must be prepared either from the product point of view and from the people (skills) point of view... be prepared for the process of internationalization."* These have been the two main pillars for C3 to achieve successful internationalization processes. But in practice, the interviewee indicates the following key success factors: (i) critical mass in the domestic market, *"In the first place, achieve critical mass in Portugal that was our first concern, i.e. have customers here in Portugal that somehow allow us to have really adjusted tools to real market needs."*; (ii) financial capital, *"Internationalization is indeed a very expensive thing, for example, last year we participated in twelve international fairs... each fair costs 10, 15, 20 thousand Euros, from the stand, logistics, hotels,... therefore we must have financial resources to cope with these things."*; (iii) creativity, *"Another key aspect is not worth going to sell things that are abundant in another country and therefore we have to be creative... have innovative solutions, or that somehow differs from the rest, is crucial"*.

For these processes, C3 collaborates with different institutional entities such as governments and other support agencies to obtain support in terms of financing. In fact, the internationalization strategy of the company, besides this financial support obtained mainly through projects, has also been using human resources of these support agencies. These agencies have offices around the world and in many cases C3 used their offices and contacted some of their human resources to assist the company in getting new contacts. The interviewee has the opinion that this can be an interesting approach to be adopted by IEAs. Despite not having interest and capacity to have human resources in many countries, IEAs can have shared resources (offices, people, etc.) in key markets. The internationalization processes of C3 have been performed in most of the cases without the support of the IEA or of any other member (company) of the IEA. Nevertheless, the interviewee thinks that companies can share information and knowledge about the

markets where they are present, and consequently, share their experiences and the problems faced. This will allow to avoid making the same errors in a specific foreign market. This can be very useful for C3 but they consider that for reaching this situation, the IEAs must have a more close monitoring process to foster these partnerships and exchange of experiences: *“The association may have here technological skills to push companies forward.”*

#### **Case 4: Small enterprise 2, information technologies**

C4 is a small enterprise with 15 years of experience in the area of software consulting. This company aims to design, implement and optimize information systems for management support. Currently, C4 wants to attract international clients with high technological know-how, so the process of internationalization has been one of the main priorities to increase its turnover.

In this case, the IEA is very important for them, mainly to promote companies' complementarity and collaborations. Therefore, C4 has been maintaining close relationships with the IEA of the sector. The interviewee considers that small IT companies need to join efforts to gain competitive advantages and reinforces that C4 needs to promote more collaborations. However, the opinion is that many companies fear to share their know-how, which represents one of the consequences for the low levels of partnerships and collaborations that we still assist nowadays. In addition, the cultural aspect and the lack of promotion of entrepreneurship in Portugal can be other problems.

The interviewee points out to the need for improving the mission of the IEAs, transforming them into more collaborative networks. The IEA of the sector must understand who is really interested in participating in internationalization initiatives (for example) and then promote these successful initiatives for its members. If the IEA is able to present a real added value for companies, its members can really recognize the importance of its services and even pay more to have access to the services of the IEA. Therefore, the interviewee considers that *“the IEA needs to foster this sense of collaboration and inject adrenaline into its associates... this is also essential for the own promotion of the association.”*

Regarding the information sharing process, the interviewee thinks that, currently, the IEA fails to be a good information manager. Having information content with quality is fundamental for the activities of C4. For example, the IEA has no relevant information about the associates themselves, such as the results obtained with specific initiatives. One suggestion from the interviewee is the IEA to have reports about internationalization experiences and share this information with its network of associated companies. Finally, analyzing the possibility of using a platform, the interviewee thinks that C4 must be able to feel a real need to work with this kind of solutions. Moreover, it only makes sense if Universities and research institutes can participate in the development of such platform. This approach of bringing together the business world with the academic world is very important in the interviewee's opinion. Another relevant aspect for this topic is the governance part of the platform. The interviewee refers that a content manager is critical and that the IEA must have this role of information manager. However, companies must have interest and also contribute with content.

#### **Case 5: Startup, medical devices**

C5 is a startup that aims to develop biomedical engineering solutions to aid medical diagnosis. The internationalization process of this company has been a challenge but with successful initiatives in the last years.

C5 is not currently a member of any IEA. Nevertheless, this startup has interest in being associated with one IEA or even with one science and technology park. The board of C5 is now trying to understand what makes sense to decide at this stage for meeting the company's interests. The perspective from the interviewee is that C5 is not associated with the IEA of the sector because of its life stage. This startup made some errors and wrong choices in the past, which made it difficult to reach a good baseline for obtaining successful associative schemes. However, C5 was able to learn with its own errors and now can think in some collaborative and associative arrangements. The interviewee thinks that another good possibility is for C5 to be part of a science and technology park. C5 is a startup that started in a

University, through a spin-off, but it is now integrated in a business center. But the problem is that the other organizations of this business center are mostly medium and large enterprises, which have completely different thinking and functioning strategies. The opinion of the interviewee is that being in a Science and Technology Park can be better for them as a matter that *"it is the same air that we breathe"*. The interaction with other startups can be better in terms of ideas and knowledge sharing. However, this is a difficult decision for the manager of C5 as it maybe represents a step back for the company's path and objectives, as it requires some changes in the management and in the structure of the company.

Regarding collaborations with other companies the interviewee considers that this is very important, even in cases of bigger companies helping smaller ones in specific aspects and vice-versa. An example is when there are two companies, one MNE and one SME, which work in the same area but targeting different customers. The MNE can help the SME in terms of specific consulting services, such as quality norms, through a process of knowledge sharing. The problem is still the lack of willingness to collaborate and to help others. The interviewee thinks that large companies already understand the importance of these collaborations. For the rest, people want this work to be done and it is nowadays gaining more acceptance: *"What is missing is to point out and to know the path to make this type of infrastructures, be it with the use of technology or with other forms, and understand how you can insert this in people's social and professional life"*.

Therefore, the possibility of using platforms can help C5 because, according to the interviewee, in many cases, a textile enterprise does not know where to find technology and the technological enterprise probably has difficulties in making the pinpoint for where interested companies are. So a platform may be useful for this matchmaking process. However the problem stills remain in what concerns the collaboration. The interviewee insists that, although having some successful cases, many companies still face problems in moments when information or knowledge needs to be shared or even to create simple collaborations with others. The reason is that each company only cares about its own business and there is no enthusiasm in *"wasting time to help others"*. The interviewee recognizes that maybe this is a matter of countries' culture because in some countries (at least in some cases) things happen in a different way, where associations work well and companies give priority to collaboration processes.

Another opinion is that SMEs have not the same management model of the MNEs and some business managers and economists do not understand this, i.e. general theory and concepts learned in their courses are difficult to transpose to the reality faced by SMEs. So, the interviewee thinks that *"we need someone who encourages and motivates, someone who creates new dynamics... and electronics and technologies can create this dynamics"*.

From the perspective of the interviewee, a platform for information management can be very useful for sectors such as the food industry, where companies need every day to follow and be aware of updates in legislation. Nevertheless, from other side, a platform like this always needs human resources, someone exclusively dedicated to content, and at a national level, many failures happen at the level of content management.

Lastly, in terms of internationalization, the first approach of C5 was to start with the national market but soon realized that, with the intention to increase sales, it would not be possible to only be limited at a domestic level. Therefore, after deciding to start to internationalize, the next decision was to find a way to commercialize the product, i.e. to decide if it would be better to use a distributor, to contact another company, or to choose a door-to-door approach. The first approach was to have an external commercial team to perform a door-to-door sales, but it did not work. After that, C5 tried distributors but the doubt here was *"Who is going to sell your product? It is the one that sells similar products or the one that will get your product as a differentiator and will leverage other products that already have sales?"* So, in this internationalization process there are always issues and doubts, and today is still a challenge for the company.

According to the interviewee, there are many difficulties for people dedicated to the international markets because it is necessary to understand how it works, how the collected information is filtered, and where this information is primarily collected. In the case of C5, information and contacts are collected in three different ways: (i) by being present in conferences and fairs; (ii) by direct contact, using their website,

where customers and distributors can contact them; (iii) by their own search, for example extensive search in the Internet to find partners. However, there is still many problems and this internationalization process has been lonely for C5. The interviewee considers that *“if there is an IT tool (like a platform), where you can understand, maybe find what is your best market, which has a global list of distributors... but at least direct to a right path... today we would be elsewhere in terms of the company's development”*.

## DISCUSSION

Based on empirical evidence from five companies, one of the objectives of this chapter was to have first impressions on the role of IEAs as information managers and promoters of collaborations, mainly for internationalization processes. Accordingly, it defined the following research question: *What is the perspective of companies about IEAs as information managers and promoters of collaborations?*

The other objective was to understand the acceptance by these companies regarding the use of collaborative platforms managed by IEAs. For this objective, the research question defined was: *What companies think of using collaborative platforms, managed by IEAs, for supporting their internationalization processes?*

Therefore, regarding the first research question, there are mix feelings. C1 sees the technological center as having good resources and being more adequate than the IEA to promote collaborations among companies. In fact, the two interviewed large enterprises (C1 and C2) do not take many advantages from the services provided by the IEA and have some reluctance in terms of associative schemes. According to C2, a new strategy for the IEA could be to promote the sector instead of promoting specific brands. This by studying specific markets of interest for the sector and by disseminating and inviting foreign companies and the press to come to know this specific industrial sector. Nevertheless, creating collaborations with other associates, mediated by the IEA, is considered by C2 as being important to create joint strategies and to share resources and risks. But to promote more fruitful collaborations, C2 thinks that the IEA should join associates with common interests and with similar economic capacities and resources, in order to reach specific foreign markets of interest.

On the other hand, both C1 and C2 agree that the IEA can play an important role as information manager. C1 considers that the IEA can share mainly legal information (legislation and customs rules, patents), which is one of the main interests of the company. In the case of C2, they think that the IEA can organize and filter some information according to the needs of the associates, such as information about the countries in which each associate is present or have sales. Actually, the sharing of experiences among associates about particular markets is clearly one of the key interests from the perspective of all the interviewed companies. This can allow to understand specific features and rules of markets and to avoid making the same mistakes.

For C3, there is no doubt that the IEA has capabilities to establish good collaboration conditions among the associates and these collaborations are of great importance for the development of the company. Again, the IEA needs here to foster these collaborations by disseminating the skills of each associate to increase their visibility within the sector but also for foreign markets. Regarding the perspective about the IEA as an information manager, C3 considers that the IEA must improve this part and be responsible for providing more wealthy information, for example information related with the activity of each associate and not general information.

In the case of C4, the IEA has been clearly a good promoter of collaborations. However, they think that small companies like C4 need to join more efforts to gain competitive advantages. But the problem is that many companies still have some reluctance in sharing information and this is considered by C4 as being a cultural aspect. So, in this case they consider that the IEA must have a different mission by presenting a more real added value for companies, such as understanding the interests of the associates in participating in specific initiatives and, after that, promoting collaborations for these initiatives. Like the previous cases, C4 considers that currently the IEA does not meet the requirements for being a good information manager. Again, they feel a lack of information about internationalization experiences (reports) of other associates, but even a lack of some information about results obtained with specific initiatives.

Regarding the second research question, all the interviewed companies recognize the potential of using a collaborative platform for supporting not only their internationalization processes but also some other activities. For C1, a tool like this can improve information sharing and facilitate the search for partners and opportunities. C2 also points out that, with the support of a platform, the IEA can share funding and research opportunities, as well as some institutional information. In addition, they think that it can also be interesting for the IEA to align companies with same strategies, resources and philosophies, by creating synergies to approach specific markets. This specific matchmaking process is also pointed out by C3 as one of the possible functions of such platform, but also the function of having another matchmaking between European projects with the research interests of companies. In the case of C4, the possibility of using a collaborative platform only makes sense if entities such as Universities or research institutes have some participation in its development. In their opinion, joining the business world with the academic world is crucial for achieving the success.

Although recognizing the value of such solution, for the interviewed companies there are some important aspects to have in consideration. C1 considers that all parts must share something meaningful in this platform. For C2, transposing all the information management into a platform can be very difficult because they think that most of the companies have no desire in sharing their information for confidential reasons but also due to the lack of time for structuring it in a simple and pleasant way to read. Another reason is that people may prefer to exchange experiences in more informal ways, with personal contact. Therefore, for C2, a collaborative platform may result if it has not generalized information, but functionalities to create and direct information within groups and market segments. In the case of C3, an important issue is the platform to allow pushing information from different websites of interest and re-organize it for the associates' interests. Finally, C4 thinks that for using a platform, they must be able to feel there a real need. Moreover, in their opinion, the governance part of such solution can be difficult because both the IEA and the associates have resources problems in terms of time, people and finances. To end this discussion, the case of C5 was interesting to include in this study to understand the perspective of a startup not currently involved in any IEA. Interestingly, C5 is now considering to join an IEA or a Science and Technology Park. In their opinion, they need first to measure all the pros and cons, according to the life stage of the company, to be able to decide. But C5 really believes that collaborations with other companies is fundamental for startups, not only with other startups and SMEs but also with large enterprises. Although remaining the problem in some companies for not wanting to share information, this aspect of collaboration is gaining more importance and acceptance, and C5 thinks that everybody wants this work to be done. Consequently, a platform is considered as a possible good solution, mainly for the matchmaking process of companies finding each other out, as well as for information management activities (e.g. for some sectors, daily follow ups in legislation). However, C5 considers that, to avoid failures, a solution like this needs great human power mostly dedicated to content management.

## **CONCLUSION**

This chapter contributes to the scarce literature of IEAs. Based on empirical evidence from companies associated with IEAs, the contribution is to understand if IEAs can be considered as information managers and promoters of collaborations. Another contribution is to have the perspective from these companies about the possibility of using collaborative platforms, managed by IEAs.

In addition, this chapter also contributes to the scientific knowledge of International Business (IB) by focusing on IEAs as the institutional network support for the internationalization of SMEs. This by discussing the perspective of associated companies and by understanding how this specific institutional context is influencing their internationalization processes.

This chapter shows that IEAs can improve their role in the promotion of more collaborations between their associated companies. This supported by better information management practices. In the specific context of internationalization, SMEs can maximize the success of their internationalization processes and face competitive pressures. With a more active support of IEAs, SMEs can then access and interpret

market information, decide on the best internationalization strategy and join competencies with other companies. A collaborative platform managed by IEAs may foster information sharing and also sharing of experiences between associates. This can be general information about foreign market conditions, but also some more specific subjects, such as attractiveness of specific locations and host countries, internationalization strategies or support programs for helping firms to internationalize. However, there is a lot of work to do in these areas. It seems that many companies still fear to share their information and knowledge with others. The cultural aspect has been indicated as one of the main problems. Therefore, future work must be done in studying different contexts and different countries to understand these cultural problems or other possible problems that are precluding the creation of more collaborations among companies. Regarding the use of collaborative platforms or other types of technologies, companies recognize the impact that these kind of solutions can bring to their activities. Nevertheless, there are important aspects to consider for developing these solutions, such as the informational needs, governance model, information organization, information life-cycle, solution's usability and decision-makers' informational behavior. Finally, future work can also be done in trying to discover new ways for promoting information sharing and collaborations, not only in internationalization but in other contexts such as product development, innovation or research project development. Moreover, networks from different institutional contexts can be explored such as, clusters, incubators, science and technology parks or innovation networks.

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