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The role of a strategic net in international entrepreneurship: overcoming the liabilities of foreignness and outsidership in the context of the Pharma industry

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Abstract
International entrepreneurship is a promising research stream which focusses on how established firms expand internationally. This study aims to understand the role of a strategic net on the internationalisation process of the firms. By viewing internationalisation as a multilateral network development process, this paper focusses on the development of relationships induced by a strategic net and how those relationships can support firms to overcome both the liabilities of outsidership and foreignness as two different, yet interlinked processes. To this end, we perform a longitudinal exploratory case study of a strategic net in the Pharma industry. Our results show the following: First, the social exchange between the members of the strategic net enables the creation and exploration of opportunities for internationalisation. Second, the strategic net can be a mechanism for overcoming the liability of foreignness (a lack of institutional market knowledge) – especially in the context of heavily regulated industries. And, third, with regard to the liability of outsidership, when breaking into foreign networks, firms reflect their idiosyncratic capabilities and differentiated views in the creation and development of opportunities with specific counterparts.

Keywords International entrepreneurship · Liability of foreignness · Liability of outsidership · Network approach · Strategic nets · Market entry barriers

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Introduction

Firms utilise internationalisation as a means of gaining access to new markets for future business. “Internationalisation resembles entrepreneurship” (Johanson and Vahlne 2009: p. 1423), as it deals with how firms identify and develop opportunities across national borders (Baier-Fuentes et al. 2019; Kloepfer and Castrogiovanni 2018; Mainela et al. 2018; Martin and Javalgi 2018; Oviatt and McDougall 2005; Schwens et al. 2018; Zahra et al. 2014). As internationalisation is the process of increasing the involvement of firms in international markets, selecting the way to enter foreign markets may involve high levels of uncertainty.

The Uppsala model (Johanson and Vahlne 1977; Johanson and Wiedersheim-Paul 1975) is widely used among scholars to understand the internationalism process (Baier-Fuentes et al. 2019; Martin and Javalgi 2018; Oviatt and McDougall 2005). According to this model, the strategy to enter a market follows a pattern which entails socio-cultural and geographic distance as well as obtaining knowledge about the foreign market and resource commitment. Accordingly, internationalisation follows four consecutive stages: no regular exports, exporting through local agents, establishing a sales subsidiary, and installing a production subsidiary. Johanson and Wiedersheim-Paul (1975) argue that internationalisation, as opposed to a large and spectacular foreign investment, tends to evolve in a gradual manner. Therefore, the internationalisation process is the result of a series of incremental decisions.

By emphasising a network view of markets, the recently revised Uppsala model stresses the liability of outsidership, that is, possessing a lack of business market knowledge, rather than the liability of foreignness, that is, a lack of institutional market knowledge. In this context, firms identify and develop international opportunities unilaterally, bilaterally, or even multilaterally by interacting with several (national or foreign) partners (Johanson and Vahlne 2009). Forsgren (2016) argues that network insidership constitutes a prerequisite for doing business in general, rather than solely for the internationalisation process of the firm. This author calls for new research on the relation between the liability of foreignness and foreign networks. Johanson and Vahlne (2009) also acknowledge the need for research which can explain when foreignness or outsidership constitutes the main obstacle for the recognition and exploitation of opportunities abroad. Furthermore, when commenting on the revised Uppsala model, Forsgren (2016: p. 1142) argues that “rather than looking upon the business relationship development and the internationalisation process as identical processes, a more fruitful approach would be to assume that they are different, but that they influence one another”.

The empirical context of our study is a small set of parties within an industrial network – a strategic net. Möller et al. (2005) distinguish strategic or business “nets” from more general “networks of firms”. According to these authors, strategic nets are formed intentionally and contain a finite set of parties. The same authors also argue that competing firms can combine efforts to achieve a stronger position in terms of global competition. The aim of this study is to understand how the development of relationships within a strategic net affects firms’ internationalisation process by helping them overcome the liabilities of outsidership (Forsgren 2016; Johanson and Vahlne 2009), and foreignness (Johanson and Vahlne 2009; Zaheer 1995). The strategic net comprises both public agencies and firms in a highly regulated industry. The focus on the developments of relationships and the internationalisation process within a strategic net contributes innovative and valuable insights regarding new ways of entering foreign markets which actively enable firms to pursue opportunities for growth.

Five sections follow this introduction. The next section presents the theoretical background. The following section is our method. The next section presents the results regarding the strategic net. That section is followed by a discussion and then the conclusions of this study.

Theoretical background

Markets as networks and interaction processes

The network approach provides a theoretical perspective on internationalisation processes (e.g., Chandra and Wilkinson 2017; Håkansson et al. 1982; Hohenthal et al. 2014; Sandberg 2014; Wilkinson et al. 2000) in which the process involves the establishment of connections between firms over time in foreign networks. From a markets-as-networks perspective, the firm embeds itself in a network of actors which engage in a wide variety of interdependent relationships that both enable and at the same time constrain a firm's actions (Johanson and Vahlne 2009). The network perspective emphasises interdependencies and the mutual evolution of organisations (Gadde et al. 2003; Öberg 2019). In this context, one business relationship evolves and is conditioned by the actors' relationships with third parties, such as the customer's customers, the supplier's suppliers, consultants, competitors, and public agencies. Accordingly, a web of complex interlinked interdependencies exists among the various actors which has a continuing impact on the operation of the network as a whole and on the firm's ability to create value (Blois 2004; Easton and Araujo 1992; Forsgren and Johanson 1992).

Within this realm, relationships are commonly conceptualised through the interaction processes that occur between the partners, which is typically associated with processes of exchange and adaptation (Easton 1992; Ford and Håkansson 2013; Johanson and Mattsson 1987). In a buyer-seller dyad, each party develops an assortment of attributes which can be exchanged (Wilson 1976) and which are of use to both buyers and sellers. Economic exchange is highly visible evidence of a business relationship (Easton 1992); however, relationships can involve economic exchanges, or not, whereby inter-competitor relationships do not usually involve economic exchanges (Easton and Araujo 1992). Exchange processes can be divided into resource exchanges (e.g., product, service, technology, information, and finance) and social exchanges (e.g., beliefs, attitudes, values, norms, and goals) (Möller and Wilson 1988, 1995).

The exchange of informal and formal information is common to all interfirm relationships (Easton 1992). Through exchanges in its network of interconnected relationships, a firm can gain new knowledge. This process of knowledge creation is not separate from the other activities in a business relationship (Johanson and Vahlne 2009). Indeed, information exchange can lead to better knowledge of the other actor's intentions, activities, and resources.

Personal contacts are at the heart of interactions, allowing other interaction elements, such as adaptations (Cunningham and Turnbull 1982). Firms involved in business relationships with a more intensive exchange process should have stronger reasons for making adaptations (Easton 1992), and the extent of each adaptation significantly affects the exchange processes (Baptista 2013). Firms can adapt product specifications and design, manufacturing processes, planning, delivery procedures, stockholding, administrative procedures, financial procedures (Håkansson et al. 1982), and personnel / human resources (Schmidt et al. 2007).

Firms develop and use mechanisms to facilitate both exchange and adaptation processes (Baptista 2013), such as norms, rules, and procedures to execute, monitor, evaluate results and to resolve conflicts (Möller and Wilson 1988, 1995). Thus, the interaction between partners enables them to develop mutual knowledge. This context-specific knowledge fosters an entrepreneurial alertness or, in other words, opportunities are likely to emerge by being recognised by network insiders (Johanson and Vahlne 2009).

Liabilities of outsidership and foreignness

Several studies emphasise the role of business relationships in the entry to foreign markets (e.g., Ellis 2000; Freeman et al. 2006; Ojala 2009). Internationalisation occurs when a relationship starts with a foreign firm which belongs to the same network (Ojala 2009). A firm can operate abroad grounded on relationships with partners, which can be national or foreign. From a business network perspective, a firm which attempts to enter a foreign market without a network position in this network will suffer from the liabilities of outsidership and foreignness (Johanson and Vahlne 2009). According to these authors:

> "A lack of institutional market knowledge - that is, lack of knowledge about language, laws, and rules - has to do with factors related to psychic distance, and to the liability of foreignness. Lack of business market knowledge is related to a firm's business environment that, according to the business network view, consists of the firms with which it is doing business, or trying to do business, and the relationships between firms in this environment. The lack of such market-specific business knowledge constitutes the liability of outsidership" (Johanson and Vahlne 2009: p. 1416).

Regarding the liability of foreignness, decisions to establish operations in a new country can be related with the psychic distance between the domestic and the host countries. The psychic distance embraces several factors which hamper the flow of information from and to the foreign market, for example, differences in language, education, business practices, culture, and industrial development (Johanson and Vahlne 1977). One of the liabilities of foreignness is the cost of doing business abroad because of the psychic factors (Zaheer 1995). Therefore, firms typically first enter the nearest foreign markets and then gradually internationalise to other markets which are more distant in psychic terms. However, Masango and Marinova (2014) conclude that foreignness is not important for the early rapid internationalising of small firms in South Africa. In this case, their internationalisation is neither related with the geographical or spatial differences between markets, but rather the development of new international business opportunities is related to the availability and accessibility of influential network relationships. These results are consistent with the idea that parts of a country may possess completely different markets with different psychic distances (Johanson and Vahlne 2009).

The revised Uppsala model emphasises the liability of outsidership, particularly regarding the lack of market-specific business knowledge, rather than the liability of foreignness (Forsgren 2016; Johanson and Vahlne 2009). Johanson and Vahlne (2009) assert that, in relation to the relevant network, outsidership, more than psychic distance, can lead to uncertainty due to the fact that knowledge is crucial and is not accessible to everyone and is thus confined to network insiders. Johanson and Vahlne (2011) stress the advantage of being network members in terms of knowledge and its development and their network's position in the focal network. As mentioned above, insidership in the relevant network enables firms to identify and develop opportunities (Forsgren 2016; Johanson and Vahlne 2009).

Vahlne and Johanson (2013) argue that foreignness is reduced by decreasing the degree of outsidership. As knowledge is confined to network insiders, personal connections are consequently established which provide access to a range of broader groups (Welch et al. 1998). These can be crucial for the sharing of information, which is relevant for approaching foreign customers, for the identification of global practices in the industry and/or for investing in relevant technology early on in its development (Freeman et al. 2006). Nevertheless, building new relationships is more difficult when the liability of foreignness hampers a firm's insidership process within the relevant foreign network (Forsgren 2016; Johanson and Vahlne 2009).

In a network perspective, the process of identifying and developing opportunities can be unilateral, bilateral, or even "multilateral - with several firms interacting and increasing their commitment to an idea or opportunity" (Johanson and Vahlne 2009: p. 1419). Firms can deliberately form network arrangements, such as strategic nets, in order to gain access to markets abroad (Möller and Rajala 2007; Möller et al. 2005). Network arrangements can promote exporting through the creation of different kinds of contacts and relationships (Welch et al. 1998). In particular, public-private relationships can influence and accelerate a firm's internationalisation (Finchelstein 2017; Welch et al. 1998; Wilkinson et al. 2000). Relationships with government-based non-profit consulting organisations can be critical for the success of firms with no relationships to facilitate market entry (Ojala 2009).

Firms often work with several institutions, such as export promotion agencies, economic departments at embassies, foreign trade offices, and trade missions to promote exports (Creusen and Lejour 2013). As noted by these authors, such concerted actions are particularly relevant for countries which suffer from substantial market entry barriers (Creusen and Lejour 2013; Nitsch 2007; Rose 2007) by changing regulatory frameworks and institutional arrangements (Hoskisson et al. 2013). Export promotion agencies can promote connections between export groups (and their members) and external parties to increase exports. Trade promotion agencies can possess the legitimacy to be able to promote interactions (e.g., formal meetings, informal gatherings, and trade missions) among various actors. However, and especially in the case when the group includes competitors, a group member can have difficulty in participating in these activities if it has a vested interest (Welch et al. 1998).

Summary

Firms do not operate in isolation, but rather within a network of business relationships with suppliers, customers, competitors, and other organisations (e.g., government agencies and trade organisations). In the context of the internationalisation process and the development of business opportunities, firms can form strategic nets to deal with the liabilities of foreignness and outsidership. The network view of markets highlights the liability of outsidership rather than the liability of foreignness. Firms can thus become "insiders" by accessing business market knowledge which is intimately related with starting to do business with specific counterparts. The relationships' development occurs when the firm interacts bilaterally or multilaterally with private or public organisations at home or abroad. From a network perspective, a strategic net can include important organisational arrangements which are designed to expand the business of its members into foreign markets.

By adopting a network perspective, this study focusses on the structure and dynamics of a domestic strategic net to understand how this network arrangement affects the internationalisation process of the firms involved over time. To understand the development of international opportunities, this study investigates the development of relationships which are induced by a strategic net which is focussed on the processes of exchange and adaptation. It also addresses how the development of relationships among the members of a strategic net can affect the firms' internationalisation process by assisting them in overcoming the liabilities of outsidership and foreignness. Bearing in mind that a network's insidership constitutes a prerequisite for doing business in general, including with foreign firms, this study considers both liabilities to be different but interlinked processes which influence one another (Forsgren 2016).

Methodology

Research on the recognition and development of opportunities across national borders requires an emphasis on longitudinal processes (Welch and Paavilainen-Mäntymäki 2014). Lepistö et al. (2019: p. 278) also stress that longitudinal research is pivotal "to generate new understanding of the opportunity recognition processes in networks". Therefore, our study adopts a longitudinal qualitative research, which involves an in-depth analysis (Graebner et al. 2012) of a revelatory case study (Patton 2002; Yin 2009). Our research builds on a case study to understand the role of a strategic net in the internationalisation process of the member firms.

The case study was purposively selective (cf. Miles et al. 2014). The strategic net in the pharmaceutical industry has several business relationships between competitors as well as relationships between these firms and government agencies. The study comprises 14 semi-structured face-to-face interviews with 12 top managers of 7 firms and also the national regulatory agency (see Table 1).

The interviewees were actively participating in the strategic net. A data saturation technique was adopted, as this consensually ensured that the researcher conducted sufficient interviews (Baker and Edwards 2012). On average, interviews lasted 2 hours and were carried out in the interviewees' offices. Interview notes were taken during and after the interview. The 24-hour rule was adhered to, that is to say, "it is required that detailed interview notes and impressions be completed within one day of the interview" (Bourgeois

Table 1 Detail of interviews

Number of meetings	Duration (total h:min)	Interviewee's position in the firm
1	0:50	CEO
1	1:55	Member of the Board of the National Regulatory Agency
2	5:05	Former Board Member of the National Regulatory Agency
2	2:40	Head of the International Department
1	2:05	Head of the International Department
1	1:25	CEO
1	2:20	Vice-Chairman
1	2:50	International Manager
1	1:30	Head of the International Department
1	3:35	CEO
1	1:20	International Manager
1	0:45	CEO

and Eisenhardt 1988: p. 819). Topics regarding the inter-competitor relationship, the public-private collaboration, and the strategic net as a whole were addressed. Questions were put forward to initiate conversation and to guide data collection. Secondary information was collected such as the firms' reports, brochures, and marketing literature along with local news and other data from Eurostat, public agencies, and industrial associations. This information supplied the researchers with background about the firms which set the stage for the interview. In addition, these data also enabled the setting of common ground to frame and to complement the primary data from the interviews.

Themes, patterns, and relationships emerged from the process of data collection and analysis. The data analysis was started soon after the beginning of the collection process, which permitted adjustments for successive collection when necessary. The analytical challenge was to develop coherent descriptions and explanations from information that consistently included gaps, inconsistencies, and contradictions which are inherent to both personal and social life (Miles et al. 2014). In this study, the data analytical process passed through five phases, as described by Yin (2011): compiling, disassembling, reassembling, interpreting, and concluding. Computer-assisted qualitative data analysis software was used to organise and analyse the empirical data collected from the interviews (which was mainly used in disassembling and reassembling phases). The coding scheme used included: domestic and foreign market characteristics (regulations, relevant actors, market changes, and concentration); change in focal firms' business relationships; and interaction processes of exchange (informational and social) and adaptation (resource information and third-party adaptation).

A strategic net in the Pharma industry

Objective and structure of the strategic net

The strategic net primarily aims at promoting the internationalisation of pharmaceutical firms which produce and export medicines and other health products. In addition, this strategic net seeks to promote the external image of the nationally based Portuguese pharmaceutical industry and to increase cooperation between domestic and foreign firms.

In 2002 and 2003, prior to the formation of the strategic net, the pharmaceutical industry had carried out a roadshow all over the country to publicise its characteristics to public authorities and to the media. With the objective of promoting pharmaceutical exports and internationalisation, the regulatory agency, the trade and investment agency, the industry association (representing 120 pharmaceutical firms), and 15 pharmaceutical firms signed an agreement in 2004 to create this strategic net. Firms see this agreement as a relatively loose contract which confers the necessary formality to partner with each other and with the regulatory agency. Over the years, the members of the strategic net have restructured the agreement to comply with changing regulations; to meet the criteria for public funding; or to accommodate changes in the industry such as ownership transfers, whereby some firms ceased to be nationally owned. The terms of the agreement were "…to promote the exports and internationalisation of the pharmaceutical firms based in Portugal (…) combining efforts to, within the scope of the missions and competences [of the parties], increase the export value from Portugal to develop present and to open new international markets". By 2015, the strategic net was comprised of the government regulatory agency, 11 private pharmaceutical firms, and the national pharmaceutical association (Fig. 1).

The pharmaceutical industry is highly regulated and monitored. The government regulatory agency, which reports to the Health Ministry, operates at both national and European levels. The regulatory agency is the National Competent Authority on medicines and health products and possesses a reference laboratory for the Quality Control of Medicines within the context of the Network of Official Medicines Control Laboratories (OMCL). With about 330 staff members, the prime activities of the government regulatory agency are the regulation and supervision of medicinal and health products right from research through to their use by healthcare professionals and patients. This role includes the research, evaluation, and authorisation of medicines, the licensing and inspection of pharmaceutical activity (manufacturers, wholesalers, and pharmacies), the monitoring of the access to and use of medicines and health products, and also of adverse drug reactions through pharmacovigilance, among others.

At the international level, the government regulatory agency carries out the country's tasks within the framework of the European System of Medicines and participates in the various evaluation and supervision agencies and activities of the European

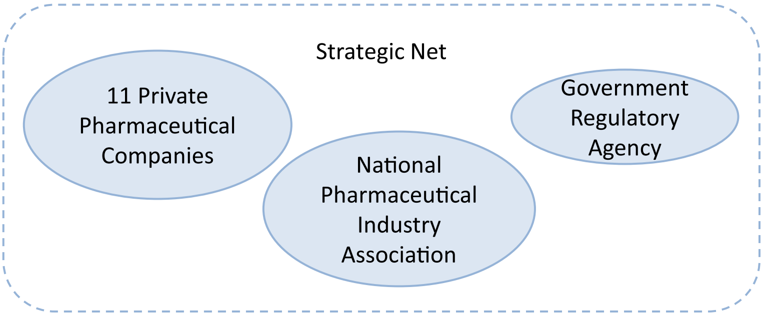

Fig. 1 The strategic net

Medicines Agency (EMA) and the European Commission and the European Network of Medicines and Health Products Authorities. The regulatory agency is also part of the Network of Official Control Laboratories, the European Pharmacopoeia, the United Nations International Narcotics Control Board, and the World Health Organisation's (WHO) medicines monitoring system at the Uppsala Monitoring Centre. The agency is also actively engaged in carrying out regular cooperation activities—particularly with Portuguese-speaking countries, such as Brazil, Cape Verde, Mozambique, Angola, and Macau. It also promotes different bilateral cooperation actions with other EU members, Latin American and Maghreb countries, and also with member states of the Gulf Cooperation Council (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates).

Over the years, the Portuguese exports of pharmaceutical goods (involving all firms) have been rising in both the internal (Intra) and external (Extra) EU28 markets. From 1999 to 2011, exports for the Intra EU28 market were frequently above 70% of the total pharmaceutical exports. From 2012 to 2017, exports for the Intra EU28 and Extra EU28 were approximately 60% and 40% respectively. In particular, in 2015, the 11 firms had, on average, an annual turnover of 60 million Euros and a total of 350 employees. However, in global pharmaceutical terms, these firms are not considered to be "big Pharma" (Garnier 2008).

The strategic net is comprised of several firms which share their intention to develop their presence in foreign countries and increase their exports to decrease their domestic market dependence. Thus, the net jointly address market entry barriers (especially regulatory barriers). Heavy regulation, both in foreign and domestic terms, is central to the international business of pharmaceutical firms. For instance, both the domestic and the foreign (peer) regulatory agencies validate raw-material suppliers, manufacturing processes, marketing authorisations, and export certificates. This regulatory framework requires firms to invest more heavily in resources, to choose their entry mode carefully, and to be willing to start a time-consuming process, which can take a few years until the first sale is made.

Relationships development within the strategic net

Relationships established and developed within the strategic net involve exchanges and adaptation among the members. Exchange among firms is mainly informational and social. Firms mainly exchange information regarding foreign market regulation and their experiences with internationalisation initiatives. As stated by the head of the international department of one member of the strategic net:

> "We talk about foreign markets and our internationalisation experiences. Companies today discuss all themes related with foreign markets, such as foreign and domestic legal requirements, cooperation with domestic and foreign government agents, foreign companies (local agents), payment conditions offer to a local agent, clients and market development... and information is not only exchanged when a problem occurs, as conversations are held regularly."

The social exchange between competitors frequently occurs in parallel with an exchange of information, as referred to by the same interviewee:

> "…companies mainly exchange attitudes, goals, and values. We built an informal code of conduct which establishes the common ground for the relationships (goals included). We all aim to be honest and transparent. Today, the relationship is not only inter-personal [among the heads of the international departments], as all employees know that most companies involved in the partnership have a good relationship and can ask for help or clarification about their area (e.g., maintenance can ask how to overcome a problem)."

Although the decision lies with each of the firms, the selection of a foreign market in the strategic net context results from building a consensus between firms and agencies in order to prioritise which markets to target. This was confirmed by a former board member of the national regulatory agency:

> "…at the beginning of the partnership, before the meeting companies would share an Excel file listing all "OCDE" countries, with three more columns to fill-in, entitled: I'm already there? I want to be there? I don't want to be there? […] During the meetings, after having decided in which markets the companies wanted to work within the scope of the partnership, they then started to exchange information related to those target markets."

Over time, firms start to exchange information which is not only related to their internationalisation process but to the possibilities of developing business relationships among themselves within the domestic market (e.g., by sharing logistics and production resources). The vice-president of one firm mentioned:

> "I recently asked for recommendations regarding suppliers of air-conditioned maintenance services (…) I quickly received help". The exact situation was reported by the international manager of the partner "If necessary we call each other to solve what needs to be solved (...) I was asked for a referral (...) she wasn't happy with her supplier of air conditioning repair and maintenance services, so I immediately sent her the contact of our supplier."

Regarding production, one CEO (and owner) pointed out:

> "Today, we all have similar offerings and we all try to sell our manufacturing services. Ten years ago, the Portuguese pharmaceutical industry was not that similar. Today, companies have similar product lines. When we talk to each other, we learn... today we do similar things (…) we were one of the first two companies to use contract manufacturing in Portugal (…) nowadays we all are trying to do this."

The sharing of information and within the context of both common goals and problems often leads to adaptations. Indeed, the occurrence of firms' adaptations with a third party have become common (e.g., the regulatory agency, trade and investment agency, mutual suppliers, or customers). However, these adaptations occur selectively in response to requests from the regulatory agency or potential foreign buyers. For example, the regulatory agency can provide precise indications regarding the type of packaging for medicines which firms must comply with in order to respect the standards of each region, country, or group of countries.

Firms coordinate their efforts to find complementarities, to make concessions, to schedule foreign missions, and not the least, to find solutions for unexpected problems should they occur. The head of the international department of a firm which participated in the CPHI trade show stated:

> "We carried out institutional and business missions to: Algeria, Tunisia, Angola, Mozambique, Brazil, Cape Verde, Poland, Russia,… this partnership was established to improve our knowledge of foreign markets, to help us overcome barriers to entry to foreign markets, mainly institutional barriers, and also to improve the visibility of the Portuguese pharmaceutical industry. Participation at CPHI is only a small part of our partnership."

Intending to reduce costs, firms pool their resources, for example, by sharing an exhibition stands at international fairs and trade shows. Interviewees found these shows to be important for promoting their manufacturing services abroad. The vice-president of one firm stated:

> "Last year, five companies were present at CPHI (…) this is an expensive event, where some companies take up to ten people to this congress (…) attending CPHI made it possible to get to know individuals from the international department of other companies."

Throughout this long process, the regulatory agency carried out adaptations of various internal processes, mainly in response to suggestions from the firms. The regulatory agency takes into account the joint interests of business more than firms' specific interests. The firms had identified several issues which were making it difficult to internationalise; namely, the duplication of registries and other bureaucratic demands, the short validity period of export certificates, and the lack of up to date knowledge of the national customs authorities. Issuing an export certificate in just a few days enables firms to present their offers and proceed with their exports rapidly. As a board member of the national regulatory agency mentioned:

> "We do not make adaptations for one company but adapt for the whole industry (…) we have made many software changes to accommodate companies' needs (…) nowadays, we have a fast and easy way to issue the necessary export certificates, which takes a maximum of three days - whereas it used to take more than four months some time ago."

The strategic net and the internationalisation process

The relationships between firms and the relationships with government agencies can involve defining target markets or regions for the market entry strategy. Not all firms are actively involved in all the activities and opportunities which are generated by the strategic net. Firms take advantage of internationalisation opportunities based on their goals, competencies, experience, know-how, and previous business relationships.

In the former Portuguese colonies in Africa, the strategic net had little or no effect on Portuguese firms' exports. In these countries, firms were already selling their products prior to the creation of the strategic net. Firms mainly rely on themselves to improve export performance. However, in these African countries, the strategic net can still serve a purpose by promoting the quality of the Portuguese pharmaceutical industry to local authorities. In contrast, the strategic net has a relevant role in the firms' exports to other markets, especially Latin America.

The opportunity to export to a certain Latin American country was promoted by the Portuguese government in 2008. First, six members of the strategic net demonstrated an interest in selling medicines to this country. However, not all the partners were committed to this business opportunity. Shortly after, one of these firms opted not to export to this country because of the high level of investment required to meet the country's regulations. A CEO stated: "…their structure was not ready to make international deals and they do not have the industrial capacity to perform and deliver. We can't afford to fail".

Specifically, the head of the international department of another firm mentioned that the products of the firm that stopped exporting to this country lacked stability testing for storage in that climatic zone (in terms of temperature and humidity).

Regarding this Latin American country, a CEO and owner of one of the five firms outlined:

> "From the beginning, we tried to look for complementarities, and to establish the terms of the deal from day one (...) we have many overlapping products, however, we all tried to reach a consensus with the objective of maintaining that deal (...) some of us sell more than others do, but that's natural, as some companies have more products that match the client's order... The thought behind this relationship is that we have to maintain this deal - half a loaf is better than none (…) Despite having the same goal, differences occur when we try to obtain a bigger share of the sales for an order. More than complementarities, we can also share the supply of one product... as many times it doesn't matter, for what matters is to fulfil the order and act ethically to ensure the continuity of the deal."

Accordingly, the remaining five firms started working together to seize the market entry opportunity. They negotiated the supply contract and made adjustments to accommodate the objectives of these five firms. The firms also exchanged information on payments and deliveries and chose the same foreign agent to deal with the legal requirements imposed by the foreign regulatory agency (for the pharmaceutical market). In 2011, the Latin American country granted marketing authorisations for some of the medicines of the five firms, and their efforts started paying off in terms of the level of exports to this country. As a CEO mentioned:

> "One critical factor of our internationalisation is the choice of the local agent. It's always necessary to approve each medicine locally, and therefore a good agent takes care of everything and knows its way around that particular market".

Further, in 2008, the strategic net tried to increase the presence of Portuguese firms in the Russian market. At that time, the Portuguese regulatory agency established a cooperation agreement with the Russian regulatory agency. Four Portuguese firms demonstrated an interest in this market – with three of these firms being the same as those that were involved in the above-mentioned Latin American country. In this case, although both countries' regulatory agencies had recognised that the respective firms complied with industry requirements, the exports of medicines to Russia did not increase.

The strategic net also organised several roadshows and missions to other countries apart from Russia, such as Algeria, Brazil, Colombia, Guatemala, Panama, Peru, Poland, Saudi Arabia, Tunisia, and the United Arab Emirates. In general, the results of these actions took a long time to reach agreements to "open the door" for firms located in different countries to begin to explore business opportunities between themselves. For example, only recently in 2017 did the regulatory agencies of Portugal and the United Arab Emirates establish a cooperation agreement which among other things, implemented an institutional framework to support the start of business activities between firms located in both countries. All interviewees found that the partnership with the regulatory agency was extremely important for the firms' internationalisation: "We want them [the regulatory agency] to establish contacts with other countries' regulatory agencies. If they cooperate with each other, then we can shorten dossier registration times" (Head of the international department).

In general, all the interviewees recognised the relevant role of the regulatory agency in each of the different markets. As a CEO and owner said:

> "The work carried out by the regulatory agency as a member of the partnership is extremely important (…) it has been very fruitful over the years, (…) it gives us international credibility and certifies our quality standards. (…) Establishing connections between regulatory agencies, between Portuguese and foreign agencies, helps the internationalisation of the companies from both countries. [Regulatory agencies] need to trust each other and to be familiar with the official documentation in use. Thus, this collaboration is fundamental to break regulatory barriers. (…) We are now entering the United Arab Emirates (…), for two years ago we were part of a diplomatic mission to improve companies' internationalisation and we have been visiting the country ever since (...) if another company tries to enter this market, two to three years will now be saved."

As mentioned above, the existence of an agreement between the regulatory agencies enables the firms to begin to explore business opportunities with specific counterparts in the foreign market. However, such actions do not have to involve all members of the partnership, and, in some cases, two or more firms of the strategic net pool their resources to approach specific counterparts, as was the case with the Latin American country referred to above. In other cases, a member of the strategic net may decide to approach potential customers without coordinating with other firms belonging to the strategic net, and sometimes they even compete for the same customer.

> "Often, we first try to involve many parties to carry out a diplomatic mission. Then we try to ensure that the regulatory agencies of both countries come closer to each other. Finally, each company individually tries to export to that country" (CEO and owner).

> " …after the contact of the Portuguese regulatory agency with its foreign counterpart, it can provide us with some useful advice at the outset. The other fundamental thing is to choose a good local representative" (VP and head of the international department).

Regarding another Latin American country, the VP from another company stated: "We, together with four other companies, joined efforts to overcome export barriers in [this Latin American country]. The support provided by our regulatory agency was fundamental, and legislation has already been half-altered in our favour [of the Portuguese companies]".A head of the international department corroborated: "In this [Latin American] country, some regulatory changes are already happening (…) this means that instead of waiting two years for a market authorisation, we can now expect to export in six months".

Cooperation can turn into competition among the member firms after overcoming the regulatory barriers of the target market, as confirmed by the same interviewee:

> "…after removing these barriers, we [Portuguese companies] will start to compete, instead of cooperating (…) Companies are doing their homework, and we are trying to register as many products as possible in order to sell more. In short, after having a cooperative attitude, competition then takes over in the relationship."

The same perception is referred to by another CEO and owner: "after the right environment has been established to enter the market… it becomes 'every man for himself'… of course, all this is dependent on the market".

Regarding competition, one VP stated that: "I believe that competition in our industry is quite different from that in other industries, for we cannot advertise products and we have to register them before selling them".

Discussion

Adopting a network perspective, we proceed to relate the firms' internationalisation process to (1) the strategic net and its objective; (2) the development of relationships, and (3) the network.

Internationalisation and the objective and structure of the strategic net

The strategic net's goal is to promote the internationalisation of national pharmaceutical firms. Because these firms have to comply with the heavy and heterogeneous regulations of foreign markets, the relevance of the strategic net is highly related to the firms' need to overcome their liability of foreignness.

This strategic net is supported by an agreement which confers the necessary legitimacy to involve multiple actors and mobilise their resources in the network. The case study shows that over time, the strategic net favoured not only relationship development between its members, but also a small subset of relationships between the members and other national institutions. The case study also shows that the development of domestic relationships provided firms with both market-specific (e.g., knowledge about each other's intentions and resources) and institutional market knowledge (e.g., foreign regulatory frameworks) which are necessary for overcoming the liability of foreignness. Furthermore, the role of the regulatory agency's close involvement with a broader network of regulatory agencies across several countries and regions is important. In other words, the strategic net, by involving both firms and public agencies, appears to have constituted an organisational context which provides a degree of network insidership for overcoming their liability of foreignness.

Internationalisation and the development of non-economic relationships

In general, both information and social exchange are significant for the development of non-economic relationships. Corroborating Johanson and Vahlne (2009), the case study shows that the availability of information for insiders enabled the creation and exploration of internationalisation opportunities. Developing such relationships is a learning process which is, in turn, essential to the internationalisation process (Johanson and Vahlne 2009). The interaction processes which occur among the members of the strategic net involved exchange and adaptation processes. Economic exchange was absent in both inter-competitor and public-private relationships, while information and social exchanges were of major importance to learn about the intentions and resources (including knowledge) of the parties and also to develop a consensus regarding which activities to prioritise. Social exchange allowed the parties to gradually connect with each other which consequently reduced uncertainties among them and helped develop mutual trust.

Social and information exchange between firms and the public regulatory agency was of a more formal nature in that it followed the agreement established between the parties. In contrast, adaptation was fairly common in public-private relationships. Both the firms and the regulatory agency changed their procedures and priorities. Adaptation processes between competitors were occasional and were perceived by the member to be unnecessary for the development of the strategic net.

A particularly interesting aspect relates to the co-existence between cooperation and competition between firms. In the strategic net, the firms cooperate with each other and with the regulatory agency to overcome the liability of foreignness. However, in some cases, as soon as this barrier is overcome, the firms start to compete with each other for specific customers in the target markets. This decision depends on each firm's intentions and resources. In other cases, a subset of firms moved forward to establish and develop business relationships with specific counterparts in the foreign network.

Internationalisation and the network

As evidenced in the case description, a strategic net emerges from an existing network, and then evolves and affects this same network. A strategic net is not a hermetic structure, neither formally nor informally, but quite the opposite, it is embedded in the business network. On the one hand, the network influences the strategic net from the outset, but on the other hand, the strategic net affects the development of relationships beyond those of just among its members. The development of relationships by members of the strategic net had repercussions on other network relationships, that is to say, beyond the formal boundaries of the strategic net. Consequently, the strategic net stimulated the formation of ties and development both nationally and internationally. However, there is still a degree of selectivity in the connectivity among firms. For instance, as described in the previous subsection, firms may exchange information related to both their internationalisation process and the possibilities of developing business relationships among themselves in the domestic market (for example, by sharing logistics and production resources).

Partaking in the activities of the strategic net influences the development of relationships between firms, and accordingly affects the network as a whole. Over time, firms face opportunities in different foreign markets. As the cooperation agreement is flexible enough to allow a firm to become a member and yet only participate in the activities that interest them, the room for action by each firm can be diverse. Thus, a specific firm can participate in all or none of the activities of the strategic net, or it can even terminate its involvement in the process of evaluating a specific opportunity in a specific foreign market due to insufficient resources. The case study shows that firms have to adhere to the set trajectory for achieving marketing authorisation which involves two or more regulatory agencies. Considering the complexity of the marketing authorisation process, firms do not start the internationalisation process in a specific market by just exporting sporadic products. Early on the internationalisation process, members firms need to develop relationships with local agents with their first sale only materialising three to four years after having established the initial contacts in a specific foreign network.

Conclusion

This study focusses on the internationalisation process of firms involved in a strategic net. By viewing internationalisation as the development process of a multilateral network, this study aimed to 1) investigate the development of relationships induced by a strategic net by focusing on the processes of exchange and adaptation, and to 2) address how the development of relationships among the members of the strategic net can support firms in overcoming both the liability of outsidership and the liability of foreignness.

Regarding the first issue, in the development of relationships induced by a strategic net, information and social exchanges were of major importance for learning about the intentions and resources (including knowledge) of the parties, and also for developing a consensus about which activities to prioritise. Social exchange encouraged the building of mutual trust and commitment among firms and reduced the uncertainty regarding their resources and intentions. The case study also showed that the development of domestic relationships in the context of the strategic net provided firms with not only market-specific knowledge (knowledge about each other's intentions and resources), but also with institutional market knowledge (foreign regulatory frameworks). Accordingly, although each firm can use the knowledge and information gained for its own specific purposes, the social exchange among insiders in the strategic net enabled the creation and exploration of internationalisation opportunities. This finding is consistent with the idea that the development of relationships is a learning process that is essential to the internationalisation of firms (Johanson and Vahlne 2009).

For the second question, the initial purpose of establishing the strategic net for several of the firms was to overcome the liability of foreignness, that is to say, the country-specific, heterogeneous, and heavy regulation of the pharmaceutical sector. The role of the strategic net in overcoming the liability of foreignness is closely related with the involvement of a regulatory agency. In fact, the involvement of the regulatory agency in a broader network of regulatory agencies across several countries and regions seems to have contributed to the creation of an organisational context which provided a degree of network insidership for overcoming the firms' liability of foreignness.

In short, a network approach to the processes of internationalisation highlights the liability of outsidership, whereby the network's insidership constitutes a prerequisite for doing business in general, including with foreign firms (Forsgren 2016; Johanson and Vahlne 2009). From this perspective, firms can become insiders by accessing specific business market knowledge which is not readily available to outsiders. This study goes further by showing that a strategic net can be an organisational network arrangement to connect the business of its members to firms in foreign markets. More specifically, this study contributes to knowledge by showing that the strategic net can be a mechanism to cope with both the liability of outsidership and the liability of foreignness, which are two different, but interlinked processes. In particular, overcoming the lack of institutional market knowledge can be especially relevant in the context of heavily regulated industries which may require the mobilisation of a diverse range of actors to act in a coordinated way to overcome the liability of foreignness.

Finally, although the strategic net helped its members overcome the liability of foreignness, the firms' positioning reflects their specific capabilities to break into foreign networks. In other words, learning through interacting inside and outside the strategic net resulted in a more differentiated view of both foreign markets and the firms' own capabilities and goals. Our case also shows that strategic nets can be ineffective, as illustrated in the case of the Russian market. Further research could adopt an international entrepreneurship perspective to explore why, and how, strategic nets initiatives are not successful in breaking into specific foreign networks.

This study also provides important insights for management practices, in particular those related to the interaction between firms and public agencies in highly regulated industries. In this particular context, breaking into foreign markets could necessarily require the support of regulatory agencies. However, this support is more likely to be obtained by deliberately promoting the emergence of strategic nets which combine a variety of resources and relationships. This research corroborates the results from previous studies (cf., Creusen and Lejour 2013; Nitsch 2007; Rose 2007; Wilkinson et al. 2000) regarding the benefits to internationalisation from public-private collaboration. It also contributes by adding the notion that firms need to be committed to the process of establishing a strategic net and to not expect immediate results. Persistence and continuity of interaction among firms and public agencies are needed to create a stable basis for developing new ventures.

The study has several limitations. Despite analysing several internationalisation initiatives, the research is based mainly on one case study (a strategic net) in a specific industry. The extension of the research to other heavily regulated industries (e.g., aeronautics) might be interesting. This extension could occur on either a national or a regional basis, where a discrete boundary (Forsgren 2016) between domestic and foreign markets acts as a more visible delimitation in a boundary-less network.

Additionally, this study does not research the trajectories or positioning of each of the firms, especially with regard to the potential restrictions and opportunities in both the domestic and foreign networks, which could be overcome by carrying out a longitudinal study which focusses on the post-entry developments in a specific network.

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References

Baier-Fuentes, H., Merigó, J. M., Amorós, J. E., & Gaviria-Marín, M. (2019). International entrepreneurship: a bibliometric overview. *International Entrepreneurship and Management Journal, 15*(2), 385–429.

Baker, S. E., & Edwards, R. (2012). *How many qualitative interviews is enough*. National Centre for Research Methods. http://eprints.ncrm.ac.uk/2273/4/how_many_interviews.pdf

Baptista, C. S. (2013). Interaction processes in long-term relationships in the metal mining industry: longitudinal case studies of capital equipment buying. *Industrial Marketing Management, 42*(6), 969–982.

Blois, K. J. (2004). The "market form" concept in B2B marketing. In H. Håkansson, D. Harrison, & A. Waluszewski (Eds.), *Rethinking marketing: Developing a new understanding of markets* (pp. 33–54). Chichester, UK: John Wiley & Sons.

Bourgeois, L. J., & Eisenhardt, K. M. (1988). Strategic decision processes in high velocity environments: four cases in the microcomputer industry. *Management Science, 34*(7), 816–835.

Chandra, Y., & Wilkinson, I. F. (2017). Firm internationalization from a network-centric complex-systems perspective. *Journal of World Business, 52*(5), 691–701.

Creusen, H., & Lejour, A. (2013). Market entry and economic diplomacy. *Applied Economics Letters, 20*(5), 504–507.

Cunningham, M. T., & Turnbull, P. W. (1982). Inter-organizational personal contact patterns. In H. Håkansson (Ed.), *International marketing and purchasing of industrial goods: An interaction approach* (pp. 304–316). Chichester, UK: Wiley.

Easton, G. (1992). Industrial networks: A review. In B. Axelsson & G. Easton (Eds.), *Industrial networks: A new view of reality* (pp. 3–27). London, UK: Routledge.

Easton, G., & Araujo, L. (1992). Non-economic exchange in industrial networks. In B. Axelsson & G. Easton (Eds.), *Industrial networks: A new view of reality* (pp. 62–84). London, UK: Routledge.

Ellis, P. (2000). Social ties and foreign market entry. *Journal of International Business Studies, 31*(3), 443–469.

Finchelstein, D. (2017). The role of the state in the internationalization of Latin American firms. *Journal of World Business, 52*(4), 578–590.

Ford, D., & Håkansson, H. (2013). Competition in business networks. *Industrial Marketing Management, 42*(7), 1017–1024.

Forsgren, M. (2016). A note on the revisited Uppsala internationalization process model-the implications of business networks and entrepreneurship. *Journal of International Business Studies, 47*(9), 1135–1144.

Forsgren, M., & Johanson, J. (1992). Managing internationalization in business networks. In M. Forsgren & J. Johanson (Eds.), *Managing networks in international business* (pp. 1–16). Philadelphia, PA: Gordon and Breach.

Freeman, S., Edwards, R., & Schroder, B. (2006). How smaller born-global firms use networks and alliances to overcome constraints to rapid internationalization. *Journal of International Marketing, 14*(3), 33–63.

Gadde, L. E., Huemer, L., & Håkansson, H. (2003). Strategizing in industrial networks. *Industrial Marketing Management, 32*(5), 357–364.

Garnier, J. P. (2008). Rebuilding the R&D engine in big pharma. *Harvard Business Review, 86*(5), 68–76.

Graebner, M. E., Martin, J. A., & Roundy, P. T. (2012). Qualitative data: Cooking without a recipe. *Strategic Organization, 10*(3), 276–284.

Håkansson, H., Snehota, I., Ford, D., Cunningham, M. T., & Hallen, L. (1982). *International marketing and purchasing of industrial goods: An interaction approach*. Chichester, UK: Wiley.

Hohenthal, J., Johanson, J., & Johanson, M. (2014). Network knowledge and business-relationship value in the foreign market. *International Business Review, 23*(1), 4–19.

Hoskisson, R. E., Wright, M., Filatotchev, I., & Peng, M. W. (2013). Emerging multinationals from mid-range economies: the influence of institutions and factor markets. *Journal of Management Studies, 50*(7), 1295–1321.

Johanson, J., & Mattsson, L. G. (1987). Interorganizational relations in industrial systems: a network approach compared with the transaction-cost approach. *International Studies of Management & Organization, 17*(1), 34–48.

Johanson, J., & Vahlne, J. E. (1977). The internationalization process of the firm-a model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies, 8*(1), 23–32.

Johanson, J., & Vahlne, J. E. (2009). The Uppsala internationalization process model revisited: from liability of foreignness to liability of outsidership. *Journal of International Business Studies, 40*(9), 1411–1431.

Johanson, J., & Vahlne, J. E. (2011). Markets as networks: implications for strategy-making. *Journal of the Academy of Marketing Science, 39*(4), 484–491.

Johanson, J., & Wiedersheim-Paul, F. (1975). The internationalization of the firm - four swedish cases. *Journal of Management Studies, 12*(3), 305–323.

Kloepfer, K., & Castrogiovanni, G. J. (2018). Entrepreneurship: venture creation subprocesses, subdomains, and interfaces. *International Entrepreneurship and Management Journal, 14*(3), 681–696.

Lepistö, T., Mäkitalo-Keinonen, T., & Valjakka, T. (2019). Opportunity recognition in a hub-governed network-insights from garage services. *International Entrepreneurship and Management Journal, 15*(1), 257–280.

Mainela, T., Puhakka, V., & Sipola, S. (2018). International entrepreneurship beyond individuals and firms: on the systemic nature of international opportunities. *Journal of Business Venturing, 33*(4), 534–550.

Martin, S. L., & Javalgi, R. G. (2018). Epistemological foundations of international entrepreneurship. *International Entrepreneurship and Management Journal, 14*(3), 671–680.

Masango, S., & Marinova, S. (2014). Knowledge-based network ties in early rapidly internationalising small firms: a missing link? *International Entrepreneurship and Management Journal, 10*(3), 471–486.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook.* Thousand Oaks, CA: Sage Publications.

Möller, K., & Rajala, A. (2007). Rise of strategic nets - new modes of value creation. *Industrial Marketing Management, 36*(7), 895–908.

Möller, K., & Wilson, D. T. (1988). Interaction perspective in business marketing: An exploratory contingency framework. *Paper presented at the 4th Annual IMP Conference, Manchester* (pp. 394–443).

Möller, K., & Wilson, D. T. (1995). Business relationships - an interaction perspective. In K. Möller & D. T. Wilson (Eds.), *Business marketing: An interaction and network perspective* (pp. 23–52). Norwell, Mass: Kluwer Academic Publishers.

Möller, K., Rajala, A., & Svahn, S. (2005). Strategic business nets—their type and management. *Journal of Business Research, 58*(9), 1274–1284.

Nitsch, V. (2007). State visits and international trade. *The World Economy, 30*(12), 1797–1816.

Öberg, C. (2019). The role of business networks for innovation. *Journal of Innovation & Knowledge, 4*(2), 124–128.

Ojala, A. (2009). Internationalization of knowledge-intensive SMEs: the role of network relationships in the entry to a psychically distant market. *International Business Review, 18*(1), 50–59.

Oviatt, B. M., & McDougall, P. P. (2005). Defining international entrepreneurship and modeling the speed of internationalization. *Entrepreneurship Theory and Practice, 29*(5), 537–554.

Patton, M. Q. (2002). *Qualitative research and evaluation method* (third ed.). London, UK: Sage Publications, Thousand Oaks.

Rose, A. K. (2007). The foreign service and foreign trade: Embassies as export promotion. *The World Economy, 30*(1), 22–38.

Sandberg, S. (2014). Experiential knowledge antecedents of the SME network node configuration in emerging market business networks. *International Business Review, 23*(1), 20–29.

Schmidt, S. O., Tyler, K., & Brennan, D. R. (2007). Adaptation in inter-firm relationships: classification, motivation, calculation. *Journal of Services Marketing, 21*(7), 530–537.

Schwens, C., Zapkau, F. B., Bierwerth, M., Isidor, R., Knight, G., & Kabst, R. (2018). International entrepreneurship: a meta-analysis on the internationalization and performance relationship. *Entrepreneurship Theory and Practice, 42*(5), 734–768.

Vahlne, J. E., & Johanson, J. (2013). The Uppsala model on evolution of the multinational business enterprise-from internalization to coordination of networks. *International Marketing Review, 30*(3), 189–210.

Welch, C., & Paavilainen-Mäntymäki, E. (2014). Putting process (back) in: research on the internationalization process of the firm. *International Journal of Management Reviews, 16*(1), 2–23.

Welch, D. E., Welch, L. S., Young, L. C., & Wilkinson, I. F. (1998). The importance of networks in export promotion: policy issues. *Journal of International Marketing, 6*(4), 66–82.

Wilkinson, I. F., Mattsson, L. G., & Easton, G. (2000). International competitiveness and trade promotion policy from a network perspective. *Journal of World Business, 35*(3), 275–299.

Wilson, D. T. (1976). Dyadic interaction: An exchange process. In B. B. Anderson (Ed.), *NA - advances in consumer research volume 03* (pp. 394–397). Cincinnati, OH: Association for Consumer Research.

Yin, R. K. (2009). *Case study research: Design and methods*. London, UK: Sage Publications.

Yin, R. K. (2011). *Qualitative research from start to finish*. New York, NY: Guilford Press.

Zaheer, S. (1995). Overcoming the liability of foreignness. *Academy of Management Journal*, 341–363.

Zahra, S. A., Newey, L. R., & Li, Y. (2014). On the frontiers: the implications of social entrepreneurship for international entrepreneurship. *Entrepreneurship Theory and Practice, 38*(1), 137–158.

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