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Pursuing Innovation: An Investigation of the Foreign Business Relationships of Swedish SMEs*

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The aim of this study is to contribute to the international business field and research on the innovativeness of international SMEs, by addressing the following research question: *To what extent and under which circumstances does relationship connectedness affect perceived innovativeness in international SMEs?* To answer this question, the authors create a model that examines the mediating effects of two types of foreign business relationship strategies: relationship differentiation and relationship investments. In order to create this model, the authors draw upon behavioural internationalization process theory, network theory and research into SMEs. The findings reveal that relationship investments mediate the effect relationship connectedness has on perceived innovativeness. This study contributes to research about the innovativeness of international SMEs by showing that being connected to resources in the network is not, in itself, a guarantee of becoming or remaining innovative in foreign markets.

Introduction

Studies in international business have reported significant relationships between a company's innovativeness and its performance. The innovativeness impacts export performance (Boso *et al.*, 2013), international market entry-mode selection (Ratten and Tajeddini, 2017), international diversification (Contractor, Kumar and Kundu, 2007) and performance (Lu and Beamish, 2004). Scholars argue that it is innovativeness which lays

the foundation for small companies: for their ability to identify opportunities and expand abroad (Knight and Cavusgil, 2004; McDougall, Shane and Oviatt, 1994). Qualitative studies of international SMEs typically emphasize the importance of their connections to business networks for enhancing resource access, which can increase their innovativeness (Crick and Jones, 2000; Sharma and Blomstermo, 2003). The relationship between networks and innovativeness, however, has often been discussed in general terms, with little regard for the conditional effects that shape this relationship in an international context. Recent research has, indeed, demonstrated that the effects of connectedness on innovativeness in internationalizing companies are mediated by other constructs and that our knowledge of these mediating constructs is still limited (Nordman and Tolstoy, 2016).

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The aim of this study is to contribute to the international business field and research on the innovativeness of international SMEs, by addressing the following research question: *To what extent and under which circumstances does relationship connectedness affect perceived innovativeness in international SMEs?* To answer this question, we create a model that examines the mediating effects of two types of foreign business relationship strategies by which companies can proactively extract value from networks: that is to say, relationship investment and relationship differentiation.

Network theory describes that innovation is most likely to occur under two conditions: either when relationships are highly embedded or when relationships are disparate from other relationships and contain some type of novelty (Adler and Kwon, 2002; Rost, 2011). These two contrasting conditions are manifested in this study by the concepts of relationship investment and relationship differentiation. Relationship investment is defined here as a strategy by which companies commit resources to a business relationship in order to enhance cooperation and mutual orientation (Dyer and Singh, 1998; Jonsson and Lindbergh, 2010; Verwaal and Donkers, 2002). The concept refers to the embeddedness mechanism that, according to one dimension of network theory, is instrumental in diffusing knowledge for innovative purposes (Noordhoff *et al.*, 2011). Relationship differentiation is defined here as a strategy by which companies reconfigure their business models to match the specific needs and wants of a particular customer or partner (Miller and Friesen, 1982; Nasution *et al.*, 2011; Tolstoy, 2014). Relationship differentiation implies a disparate relationship in the network, which relies upon a distinct resource base. One dimension of network dynamics, which the school subscribing to the structural embeddedness view (e.g. Burt, 1992) has particularly investigated, suggests differentiation as a beneficial condition for innovation since it exposes companies to non-redundant knowledge resources (Odlin and Benson-Rea, 2017).

The premise for this study, therefore, is that innovativeness of internationalizing SMEs is most likely to occur in settings where companies have invested in close relationships or in cases where business relationships are differentiated and characterized by the exploration of new

business solutions. Relationship connectedness has its origin in network theory, which claims that networks can be purposefully used to develop business (Gulati, Nohria and Zaheer, 2000). The term is defined as the degree to which a company relies upon connected foreign business relationships when engaging in international business in a specific foreign market (Nordman and Tolstoy, 2016). The connected business relationships form a network, which can enable companies to access and leverage resources relevant for international business (Johanson and Vahlne, 2009). Perceived innovativeness is defined as the company's perceived innovative capability to produce innovative outcomes within a foreign business relationship (Hurley and Hult, 1998; Knight and Kim, 2009; Wang and Ahmed, 2004). Hence, we focus on organizational innovativeness as being an aspect of organizational culture, which is reflected by the perceptions of employees and managers.

For the purpose of this study, we use data from 188 SMEs in Sweden. Our results intend to contribute to research on the innovativeness of international SMEs. The role of networks in the innovation activities of businesses has been a frequently discussed topic in this literature (e.g. Acosta, Crespo and Agudo, 2018; Coviello, 2006; Knight and Cavusgil, 2004; Knight and Kim, 2009; Montoro-Sanchez, Diez-Vial and Belso-Martinez, 2018; Nordman and Tolstoy, 2016; Nyuur, Brecic and Debrah, 2018; Yli-Renko, Autio and Sapienza, 2001). By investigating this relationship through conceptual modelling, we can make an important contribution to this area of study. While the existing literature tends to discuss the relationship between networks and innovativeness in general terms, we use network theory to investigate the mediating effects that shape this relationship. Drawing on two contrasting network conditions that have been proposed to enhance innovation (that is to say, relationship investments and relationship differentiation), we can generate strategic insight into how internationalizing SMEs can organize foreign business relationships to optimize innovativeness. In summary, our study is able to take the ongoing discussions in this research area one step further: by showing that being connected to resources in the foreign market network is not, in itself, a guarantee of becoming or remaining innovative in foreign markets.

Theoretical background and hypothesis development

Perceived innovativeness and international SMEs

The *British Journal of Management* has long been an outlet for studies that highlight the importance of innovation and innovativeness for performance (e.g. Barrett and Sexton, 2006; Battisti and Stoneman, 2010; Bruni and Verona, 2009; Kyrgidou and Spyropoulou, 2013; Vlaisavljevic, Cabello-Medina and Pérez-Luño, 2016). This study rests upon the view that innovativeness is an aspect of organizational culture that reflects the internal receptivity to new ideas and innovation (Hult, Hurley and Knight, 2004; Hurley and Hult, 1998). Innovativeness can be seen as an organization's inclination to 'engage in innovative behavior' (Auh and Menguc, 2005, p. 250). Hence, innovativeness is a facet of an organization's culture that reflects the extent to which it is open to new ideas, accepts and stimulates novel approaches to satisfy the needs of customers and partners, seeks new ways to do things and is creative in its methods of operation (Augusto and Coelho, 2009; Calantone, Cavusgil and Zhao, 2002).

There has been a tendency within research to not separate the constructs of innovativeness and innovation, which has led to some inconsistency in the understanding of organizational innovativeness (Ruvio *et al.*, 2014). Innovation and innovativeness should, however, be viewed as two different concepts (Jean, Sinkovics and Kim, 2017; Vicente, Abrantes and Teixeira, 2015).

Cavusgil (1980) emphasized the link between innovation and internationalization; however, limited research has continued to develop this line of thinking within behavioural internationalization process theory. Looking at the literature on international SMEs, studies have emphasized that innovativeness is a crucial capability for the small company, which can enhance its performance in foreign markets (Acosta, Crespo and Agudo, 2018; Knight and Kim, 2009; Knight and Liesch, 2016; Nyuur, Brecic and Debrah, 2018). The reason is that innovativeness can help SMEs to overcome the scarcity of traditional resources and enhance performance in foreign markets. In an international market context, a small company's innovativeness can give it a competitive edge (Fillis, 2001; Knight and Kim, 2009), because this

innovativeness enables a continuous reinvention of operations (Cavusgil and Knight, 2015).

Qualitative research on international SMEs reveals that a company's perceptions of its own innovativeness can guide it towards success or failure while expanding abroad. For example, managers' perceptions of innovativeness can influence SMEs to commit considerable amounts of resources to international markets, even before they actually have products ready for these markets (Nordman and Melén, 2008). Even though managerial perception is important for internationalization outcomes, little attention has traditionally been paid to the subjective perceptions of managers and other organizational members (Zueva-Owens, Fotaki and Ghauri, 2012). In this study we adopt a conceptualization of organizational innovativeness that taps into managerial perceptions of the degree to which the organization is receptive and open to new ideas and innovation (Hurley and Hult, 1998). We define perceived innovativeness as the company's perceived innovative capability to produce innovative outcomes within a foreign business relationship (Hurley and Hult, 1998; Knight and Kim, 2009; Wang and Ahmed, 2004). This definition also adheres to the view of recent behavioural models of internationalization, stating that companies' activities in foreign markets take place in business relationships (Johanson and Vahlne, 2009; Vahlne and Johanson, 2017); it is through these activities that a company develops new business opportunities for continued expansion abroad. Consequently, this research focuses on the internal receptiveness to new ideas and innovation in a foreign business relationship setting.

Relationship connectedness

The importance of a company's networks and connectedness to various business relationships for innovativeness is well established (Nordman and Tolstoy, 2016; Sullivan Mort and Weerawardena, 2006). International business studies that concentrate on multinational enterprises (MNEs) have particularly highlighted the importance of networks as a driving force for innovativeness in their local subsidiaries (e.g. Hallin, Holm and Sharma, 2011). In relation to MNEs, SMEs are smaller in size and do not typically command large revenues (Barrett and Sexton, 2006; Knight and Liesch, 2016). Newly started SMEs, however, are often seen as being able to leverage their

innovativeness in order to achieve foreign market success from early on in their evolution, despite limited resources (see Knight and Kim, 2009; Nordman and Melén, 2008). Previous research also reveals that more internationally oriented SMEs have a higher degree of innovativeness (Cavusgil and Knight, 2015; Knight and Cavusgil, 2004; Knight and Kim, 2009). One reason for this may be the fact that they use their connectedness to network actors in foreign markets in order to mitigate their lack of resources and, thus, generate new knowledge that enhances their abilities to innovate (Loane and Bell, 2006; Radulovich, Javalgi and Scherer, 2018; Sharma and Blomstermo, 2003). Small firms that lack the necessary resources can use business partners to create synergies for discovering new opportunities (Cavusgil and Knight, 2015). Behavioural internationalization process theory supports this explanation, by highlighting that a company's foreign business relationships are a critical knowledge resource in its internationalization (Blankenburg Holm, Eriksson and Johanson, 1996; Blomstermo *et al.*, 2004; Vahlne and Johanson, 2017). Johanson and Vahlne (2009) even argue that business networks enable companies to acquire market knowledge, generate new ideas for products, services and delivery channels, and successfully develop foreign business.

From a network perspective, one important argument is that a dyadic business relationship does not exist in isolation (Gulati, Nohria and Zaheer, 2000). Instead, individual business relationships are instrumental in connecting a company to new customers and/or suppliers in a particular business setting (Ghauri, Hadjikhani and Johanson, 2005). Connected relationships can constitute an extended knowledge base when doing business in foreign markets that contextualizes, diversifies and enhances market learning, and provides impetus for new resource combinations (Blankenburg Holm, Johanson and Kao, 2015; Chetty and Blankenburg Holm, 2000), which enables companies to innovate and create new business (Jean, Sinkovics and Kim, 2017; Tolstoy, 2010). Context-specific market knowledge is also critical for discovering relevant opportunities (Blankenburg Holm, Johanson and Kao, 2015), which can spur innovativeness (Nordman, 2012).

The argument can thus be made that, based on behavioural internationalization process theory and the network perspective, resources drawn from networks can provide idiosyncratic and

diversified input for resource combinations (Ghauri, Hadjikhani and Johanson, 2005; Gulati, Nohria and Zaheer, 2000), which make companies more open to new ideas and business opportunities. Similarly, relationship connectedness on the foreign market level can be considered to create avenues for transferring and accessing knowledge (Musteen, Datta and Butts, 2014; Nordman and Melén, 2008; Nyuur, Brecic and Debrah, 2018), which can propel the innovativeness of SMEs in specific business relationships (Acosta, Crespo and Agudo, 2018). The following hypothesis is proposed as a way of testing this argument:

H1: Relationship connectedness has a positive effect on perceived innovativeness in international SMEs.

Relationship differentiation

Recent research suggests that the relationship between relationship connectedness and perceived innovativeness is conditioned by other factors that reflect a company's ability to manage and extract value from the network (Boso *et al.*, 2013; Hayter, 2013; Lindstrand and Melén Hånell, 2017). Nordman and Tolstoy (2016) specifically demonstrate that certain business relationship management procedures can mediate the effect network connectedness has on innovativeness. The particular conditions under which a foreign business relationship can work as a mediator for enhancing innovativeness in the network are still largely unexplored in the context of internationalizing companies. We draw upon the network literature to argue that the effect connectedness has on innovativeness is likely to be enhanced in relationships where the business model is differentiated. In essence, differentiated relationships are distinct from the company's other relationships. Therefore, knowledge in such relationships is non-redundant and can lead to innovation when combined with other connected sources of knowledge (Burt, 1992, 1997). This logic derived from network theory may become accentuated in cases where companies need to adjust their respective businesses to particular foreign market conditions. They will have greater incentives to explore new business opportunities, new business model configurations and new resource input in order to support them in this endeavour (Ratten and Tajeddini, 2017; Tolstoy, 2014). Relationship differentiation thus draws attention to particular customer needs and makes companies responsive

to implementing customized solutions (Nasution *et al.*, 2011). A differentiation strategy thus enables companies to innovate at the local market level (Odlin and Benson-Rea, 2017). Behavioural internationalization process theory does not specifically address relationship differentiation when outlining a trajectory of internationalization. Still, market-related differences may enhance the complexity of foreign business relationships (Johanson and Vahlne, 1977, 2009). By reconfiguring their business models to resonate with specific market peculiarities, relationship differentiation strategies can allow companies to tackle such differences. While the impact of differentiation strategies has been thoroughly addressed in international business studies of large MNEs (e.g. Ghoshal and Bartlett, 1990), differentiation strategies have been relatively sparsely researched in the context of international SMEs. Nonetheless, empirical studies have observed that many small globally oriented companies indeed pursue strategies of product and service differentiation (Chetty and Campbell-Hunt, 2004; Knight, Madsen and Servais, 2004; Tolstoy, 2014). Such differentiation strategies often involve customer orientation, which allows companies to customize products and serve the special needs of buyers (Chetty and Campbell-Hunt, 2004; Elango and Pattnaik, 2007; Zhang *et al.*, 2016). Having the support of networks to provide the necessary resources becomes more pronounced once they differentiate their businesses. Tolstoy (2014) empirically showed that differentiation strategies of smaller companies require the support of network-driven resources. These resources can be recombined and matched with specific customer needs, which leads to innovation. Differentiated relationships may, therefore, function as adhesives for binding dispersed network resources together in the creation of new ideas and innovations. Thus, the following hypothesis is proposed:

H2: Relationship differentiation mediates the effect that relationship connectedness has on perceived innovativeness in foreign business relationships of international SMEs.

Relationship investments

Network theory stipulates that innovativeness not only prospers in situations where business relationships are differentiated and disparate from core activities; this is also true for close relationships. Close relationships in which companies have

invested resources may progressively create mutual orientation and trust, which will facilitate innovative processes (Adler and Kwon, 2002). Relationship investments represent strategic orientations towards long-term relationships (Dyer and Singh, 1998). Investments may make companies increasingly more comfortable with sharing knowledge and business secrets, which can foster an innovative and creative culture in the relationship (Dai *et al.*, 2014). Coleman (1988) proposes that close ties are conducive for knowledge sharing: for example, those that become embedded through investments. Although network theory has underscored that non-redundant and weak relationships are necessary for providing new knowledge input (Burt, 1992; Granovetter, 1973; Musteen, Datta and Butts, 2014), stronger relationships provide solidarity benefits, creating incentives for sharing knowledge (Adler and Kwon, 2002; Freeman *et al.*, 2010). Partners who trust each other and share competencies can more easily recognize knowledge and use it for innovation. They are open and transparent to each other, exchange tacit knowledge and are willing to take risks (Freeman *et al.*, 2010; Nahapiet and Ghoshal, 1998).

Research in behavioural internationalization process theory has revealed that internationalizing companies are dependent upon resources drawn from networks for the business development in business relationships (Blankenburg Holm, Eriksson and Johanson, 1996; Blankenburg Holm, Johanson and Kao, 2015; Vahlne and Johanson, 2017); this is particularly true in relation to innovation (Patel *et al.*, 2014). Frassetto *et al.* (2018) even find that embeddedness and the learning capabilities that underlie innovativeness cannot be separated but develop in tandem. Relationship investments increase embeddedness and enhance transparency between involved parties, thereby reducing the prevalence of information asymmetries. Engaging in international networks can thus provide even small firms with access to critical information that can be used for innovation of new business opportunities in host markets (Acosta, Crespo and Agudo, 2018; Nyuur, Brecic and Debrah, 2018). Over time, the involved parties will be able to tap into the knowledge of each other's networks (Blomstermo *et al.*, 2004; Montoro-Sanchez, Diez-Vial and Belso-Martinez, 2018). In the case study of an international fashion retailer, Chiva, Ghauri and Alegre (2014) showed that investments in a supplier relationship are likely to

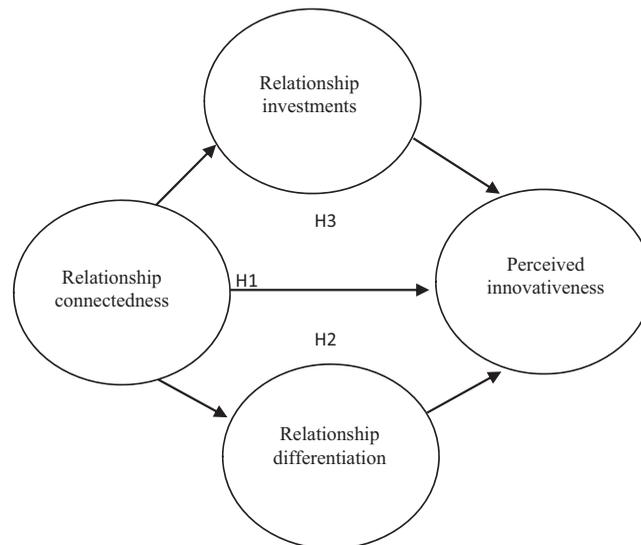


Figure 1. The hypothesized model

affect the activities of other connected relationships, involving manufacturers, distributors and logistics providers. Investments in specific relationships will create resource interdependencies in the network. Therefore, resources need to be coordinated both within and across these relationships in order to effectively orchestrate innovation and business development. Hence, the more closely connected a company becomes to a specific business partner, the more likely it is that both partner-specific knowledge and knowledge derived from the network will need to be acquired. Access to relevant information can enhance the company's innovative capability and be used to outperform competitors in future transactions (Jean, Sinkovics and Kim, 2017; Kang, Mahoney and Tan, 2009; Tolstoy, 2010). Investing in relationships can, therefore, promote collaborations that are geared towards mutual adjustments, knowledge sharing and leveraging resources from a broader resource base, since companies tend to believe in the goodwill of proven partners with whom they have a history of cooperation (McCutchen, Swamidass and Teng, 2004). In the context of SMEs, Boso *et al.* (2013) argue that investments, which are made to increase integration and create stronger connections between exporting companies and their customers, suppliers and distributor, can facilitate the development of new products in export markets. The reason for this is that well-connected companies are more likely to learn about new and evolving opportunities

for innovative new products (Jean, Sinkovics and Kim, 2017; Radulovich, Javalgi and Scherer, 2018; Yli-Renko, Autio and Sapienza, 2001). In other words, investments in foreign business relationships improve coordination and enable companies to make better use of connected resources (Presutti, Boari and Fratocchi, 2016), thereby positively influencing innovativeness (Lorenzoni and Lipparini, 1999); particularly in the case of SMEs (Hånell, Nordman and Tolstoy, 2017; Nordman and Tolstoy, 2011). Hence, internationalization process theory and the network perspective demonstrate that relationship investments improve relationship exchange and facilitate knowledge transfer. This gives companies access not only to resources directly possessed by the business partner; they can also obtain resources that reside in connected relationships. Relationship investments can, therefore, mediate the effect that relationship connectedness has on innovativeness. Thus, the following hypothesis is proposed:

H3: Relationship investments mediate the effect that relationship connectedness has on perceived innovativeness in foreign business relationships of international SMEs.

Figure 1 shows the proposed linkages among the investigated constructs, particularly that the effect of relationship connectedness on perceived innovativeness partly operates through relationship investments and relationship differentiation.

Method

Research design and questionnaire

This study uses survey data to investigate our hypothesized model. The variables in the questionnaire were developed through a four-stage process: (1) literature reviews of network research (especially internationalization-oriented network research); (2) reviews of previous questionnaires developed by marketing researchers linked to the International Marketing and Purchasing projects IMP 1 and IMP 2 (e.g. Anderson, Håkansson and Johanson, 1994; Hallén, Johanson and Seyed-Mohamed, 1991); (3) previous questionnaires that other researchers involved in international marketing and international business research had developed (e.g. Eriksson *et al.*, 1997); and (4) a literature review that identified new research issues and input in measurement scales concerning knowledge acquisition and knowledge use within SME international business networks (e.g. Chetty and Blankenburg Holm, 2000; Coviello and Munro, 1997).

Based on the themes and research questions discussed in the four stages above, a qualitative and longitudinal case study project was conducted (building on face-to-face interviews with managers in 26 innovative and international SMEs in the life-science industry). Coldwell and Herbst (2004) highlight that it is important to ask managers about their perspectives when conducting business research. During our case study project, therefore, we conducted interviews with CEOs and marketing managers in innovative and international life-science SMEs. These respondents are highly educated (holding Master's or PhD degrees) and qualified at providing in-depth information about SME innovation processes. Several respondents also had experience from theory development procedures, which made their input particularly valuable. The respondents were interviewed in depth about the specific challenges and opportunities they faced in their companies' internationalization processes. Based on the stories told, new questions for a questionnaire were created that could better capture real-life business processes. Consequently, the questions in this questionnaire were not formulated in exactly the same way as in previous questionnaires; the measurement scales were adapted to fit the intended study object (that is to say, international SMEs). A strength of the

questionnaire is that its construction integrates input from both theory and practice. To test this questionnaire, six SMEs in Stockholm and Uppsala, Sweden were visited. The feedback received led to further changes in the questionnaire.

Similar to previously mentioned questionnaires (e.g. Eriksson *et al.*, 1997), this questionnaire also builds on perceptive measures. Respondents were instructed to choose a specific and important foreign business relationship, and answer questions about the demand side of the supply chain. The business relationship should be located in a foreign market, be ongoing and have resulted in realized sales transactions. We refer to this relationship as 'the selected business relationship'. The survey questions about this selected business relationship were measured on a seven-point item scale, with ratings ranging from low (1) to high (7).

Sampling and data collection

We chose to include in this study SMEs that met the following two formal criteria: (1) at least 10% of their turnover was generated from export sales; (2) the company did not exceed 250 employees (OECD, 2002). Companies from all kinds of industries were included in the sample. By using these criteria, a stratified random sample of 2000 Sweden-based international SMEs was bought from Statistics Sweden's Business Register. As the questionnaires were collected manually, the study focuses on the Mälardalen region; this area is considered to be fairly representative of the country as a whole. The final sample consisted of 233 SMEs, at which individuals were contacted by phone and asked to participate.

The study used a single key informant approach, which is common in marketing research (Phillips, 1981). Members of the research group (who are trained in both qualitative and quantitative data collection) personally collected the questionnaires in order to ensure high reliability, a high response rate and a low number of missing values. The research group visited each of the companies to ensure that the appropriate key informant (e.g. CEO or marketing manager) was answering each of the questionnaires. The researchers assured confidentiality to increase the likelihood that the respondents would answer questions truthfully.

Each visit to a responding company ranged from 30 minutes to an hour. Research group members

were present solely as observers, in order to avoid investigator-induced bias. A total of 188 questionnaires were collected, resulting in a remarkably high response rate of approximately 80%.

The expectation-maximization (EM) algorithm was applied to handle missing data. This is a suitable technique because the total count of missing values is less than 3% and Little's Missing Completely at Random (MCAR) test shows that the missing data is completely random at the 0.01 level.

Measures

This study is built upon a questionnaire constructed to capture the professional processes and challenges of acting practitioners in innovative SMEs. By using the different sources of information as described in the previous section, we adapted the measurement scales in the questionnaire to fit this study. Statistical values related to the constructs and their indicators are displayed in Table 1.

Relationship connectedness. This is used to measure the degree to which a company relies on connected foreign business relationships when engaging in international business in a specific foreign market (Nordman and Tolstoy, 2016). Thus, relationship connectedness is a network measurement that is delimited to capturing the network relationships connected to a focal business relationship. This delimitation can enhance theoretical stringency and reliability vis-à-vis more general network measures.

Anderson, Håkansson and Johanson (1994) imply that connectedness relates to the way in which business relationships influence their network identity. Nordman and Tolstoy (2016) build upon this idea of relationship interrelatedness by measuring opportunity connectedness in SMEs' foreign business relationships and the extent to which a focal business relationship is dependent on the novelties, original ideas and contributions to new business opportunities that connected business relationships provide; that is to say, with other customers, customers' customers and suppliers. In the present study, this scale is adapted to focus on routines, which have previously been highlighted as important for network connectedness to emerge in specific foreign markets (Blomstermo *et al.*, 2004; Tolstoy, 2010). Routines could serve as both a type of glue and a lubricant to strengthen con-

nections between specific business relationships (Tolstoy, 2010).

Based on these previously developed measures, relationship connectedness is measured as two items that concern the extent to which the selected foreign business relationship relies on experiences of developing routines with various customers in the foreign business network (see Table 1). The last question is based on the idea that the greater a relationship's reliance on cooperation with customers in a market, the more connected its relationship (Nordman and Tolstoy, 2016). Similar to Nordman and Tolstoy (2016), this study captures connectedness by investigating connectedness in the downstream network through the measurement of experiences with both customers and customers' customers in the same market. By including questions about customers' customers, we also follow the recommendation of Hoang and Antoncic (2003) by incorporating indirect ties into the network measure.

Relationship investments. These can be of different kinds. By asking respondents about allocated resources in specific relationships, Jonsson and Lindbergh (2010) measure relationship investments based on similar uses of investment measures from Verwaal and Donkers (2002), among others. In accordance with Jonsson and Lindbergh (2010), relationship investments are measured as the degree to which investments, in the form of capital, have been made in the specific business relationship. Two additional questions about allocated resources are included in order to make the construct more inclusive and robust, by building the construct and measuring the investments made to the specific business partner regarding time and adaptations.

Relationship differentiation. This is operationalized in accordance with previous SME research as alterations made in offerings and operations in a specific foreign business relationship (Tolstoy, 2014). This is in line with measurements originally adapted from the scales of Miller and Friesen (1982). In Tolstoy's study, the relationship differentiation construct is designed to capture the degree to which current operations or products in a business relationship differ from the content of an SME's other business relationships, which reflects the company's aspirations to meet specific demands. In accordance with Tolstoy (2014), relationship differentiation is measured in the present

Table 1. The constructs and their indicators

Construct	Indicator	Factor loading	r ²	Cronbach's α	t Value	CR	AVE
Relationship connectedness (RC)	To what extent is the business relationship dependent on your experience of developing routines with customers in the foreign market?	0.86	0.56		12.50		
	To what extent is the business relationship dependent on your experience of developing routines with customers of the customers in the selected foreign market?	0.76	0.52	0.787	10.74	0.767	0.528
	To what extent is the business relationship dependent on cooperation with customers in the foreign market?	0.63	0.12		8.83		
Relationship investments (INVEST)	We have made investments in the business partner regarding time.	0.71	0.5		10		
	We have made investments in the business partner regarding adaptations.	0.79	0.63	0.788	11.52	0.804	0.578
	We have made investments in the business partner regarding capital.	0.74	0.55		10.62		
Relationship differentiation (DIFF)	To what extent does the business relationship differ from the company's other business relationships regarding the product?	0.76	0.57		11.28		
	To what extent does the business relationship differ from the company's other business relationships regarding the content of service?	0.90	0.8	0.841	13.96	0.847	0.65
	To what extent does the business relationship differ from the company's other business relationships regarding mode of distribution?	0.75	0.57		11.26		
Perceived innovativeness (INNOV)	The relationship with the business partner is characterized by innovative knowledge development.	0.89	0.8		13.78		
	The relationship with the business partner is characterized by innovative product development.	0.77	0.6	0.817	11.52	0.823	0.611
	The relationship with the business partner is characterized by mutual problem solving.	0.67	0.42		9.28		

study as the degree to which the investigated business relationship differs from the company's other business relationships, in terms of product and service content. To more specifically focus the construct on the market-specific offering of the relationship differentiation approach, a question about the mode of distribution is included. We argue that measurement scales of the degree to which the investigated business relationships differ from other business relationships in terms of product, service content and mode of distribution can capture different coordination processes between a company and its customers. This makes these individual relationships relatively unique.

Perceived innovativeness. Organizational innovativeness has been measured in a variety of ways

in previous research, as Cepeda-Carrion, Cegarra-Navarro and Jimenez-Jimenez (2012) underline. In this study we attempt to move beyond the commonly used operationalization of innovativeness; that is to say, the number of implemented innovations (Ruvio *et al.*, 2014). Perceived innovativeness was accordingly measured using a condensed and adapted version of the scale developed by Hurley and Hult (1998) to tap into managerial perceptions of the degree to which the company is receptive and open to new ideas and innovation. We have made adaptations to the measures based on feedback from the respondents in the case study project and the questionnaire testing process in order to capture internal receptiveness to new ideas and innovation in a foreign business relationships setting. We measure innovativeness on a scale of three items that capture the degree to which

the responding companies consider their relationship with the business partner to be characterized: (1) innovative knowledge development; (2) innovative product development; and (3) mutual problem solving.

Control variables

We tested a number of variables in order to check for external effects on the structural model. Age may provide experience that, in turn, enables companies to leverage knowledge and create new business. The age variable measures the number of years since inception. We also checked for effects related to the duration of the business relationship. This variable was measured by the number of years elapsed since the business relationship's inception. Furthermore, we tested for differences between small and medium-sized companies, in terms of relationship connectedness. More resources may give companies more leverage to develop new business solutions. The variable was measured with a binary dummy, where '0' was set for companies with a maximum of 49 employees and '1' was set for companies with 50 to 249 employees. Cultural proximity to the market may affect business operations (Johanson and Vahlne, 1977). This construct was captured with a binary dummy variable where, because of their cultural proximity to Sweden, relationships with actors in Nordic countries were set as '1' and relationships with partners in other countries were set as '0'. Lastly, the selected business relationships' percentage of total sales was measured by self-reported information from respondents.

Data analysis

We use structural equation modelling (SEM) as the method of analysis in this study (using LISREL 8.7 as statistical package). The reason for this is that SEM techniques enable the examination of both direct and indirect relationships between one or more independent variables and one or more dependent variables (Bollen, 1989). We followed the established two-stage procedure of data analysis (Anderson and Gerbing, 1988): the first stage comprises a confirmatory factor analysis in a measurement model; the second stage involves devising a structural model to estimate the path coefficients and to test for relationships between constructs.

Table 2. Statistics of three models in LISREL

Statistics	Harman	Structural model	Measurement model
Chi-square	569.85	78.51	75.32
df	54	50	48
RMSEA	0.226	0.055	0.055
GFI	0.66	0.93	0.94
CFI	0.62	0.97	0.98

Notes: CFI = comparative fit index; df = degrees of freedom; GFI = goodness-of-fit index; LISREL = linear structural relations; RMSEA = root mean square error of approximation.

Model testing

The three frequently used measures for model validity include: the goodness-of-fit index (GFI), which should be above 0.90 and checks for sample size effects; the root mean square error of approximation (RMSEA), which should be below 0.08 and measures population discrepancy per degree of freedom; and the comparative fit index (CFI), which should be above 0.90 and checks for non-normal distributions (Jöreskog and Sörbom, 1993). The model's key statistical measures support the validity of the model because the chi-square value was measured as 75.32 with 48 degrees of freedom (df) (see Table 2). The RMSEA equalled 0.055, the GFI was 0.94 and the CFI amounted to 0.98 (see Table 2).

The convergent validity of the constructs was evaluated by analysing the t values (significance), r^2 values (proportion of variance explained) and factor loadings (correlations) (see Table 1). Checking for construct reliability (CR) and average variance extracted (AVE) further supports convergent validity, as Hair *et al.* (1995) recommended. Fornell and Larcker (1981) present a method for assessing the discriminant validity of two or more factors. Here, the researcher compares the AVE of each construct with the shared variance between constructs. Discriminant validity is supported if the AVE for each construct is greater than its shared variance with any other construct.

Overall, the constructs appear to be statistically acceptable because all the CR values were above the 0.7 level and all the AVE values were above 0.5. All the t values were high, equal to or exceeding 8.83. In addition to these tests, we also performed a principal component analysis test to check for systematic measurement errors. When conducting this test, four components emerged with an eigenvalue over 1; together, they represented

Table 3. Relationships in the structural model

Model 1: Direct effects (factor loading)	Model 2: Hypothesized model (factor loading)	Model 3: Final model (factor loading)
RC→INNOV (0.08 insignificant)	RC→INNOV (0.09 insignificant)	RC→INVEST (0.45 sign)
DIFF→INNOV (0.18 sign)	RC→INVEST (0.44 sign)	INVEST→INNOV (0.51 sign)
INVEST→INNOV (0.47 sign)	RC→DIFF (0.06 insignificant)	DIFF→INNOV (0.21 sign)
	INVEST→INNOV (0.46 sign)	
	DIFF→INNOV (0.21 sign)	

Notes: INNOV = perceived innovativeness; DIFF = relationship differentiation; RC = relationship connectedness; INVEST = relationship investments; effects of control variables (age, cultural distance to the business relationship, duration of relationship, percentage of total sales and size) were tested on the dependent variable (perceived innovativeness) and were all found insignificant.

67.35% of the total variance. The largest component did not explain the majority of the total variance (18.47%), which would have been a sign of a systematic measurement error. Second, a Harman’s single-factor and a marker variable test were applied (see Table 2). The Harman test revealed that the measures showed insufficient fit. The marker variable test – based on a theoretically unrelated item: ‘we are dependent on competitors’ – was also satisfactory because the marker variable had a negative and insignificant effect on the dependent variable (factor loading = -0.12; $t = -1.63$). These results indicate that common method variance and conceptual overlaps do not pose a serious threat to the validity of the results.

Results

Our analysis followed an iterative design where we first tested the direct effects of all the independent and mediating variables on perceived innovativeness. We can see that the direct effect of relationship connectedness on perceived innovativeness is insignificant, thus foreshadowing an even stronger mediation effect than we anticipated (Model 1). Model 2 is completely aligned with our hypothesized structural model (see Table 3).

The direct effect of relationship connectedness on perceived innovativeness is also disconfirmed, thereby not supporting H1. Both relationship differentiation and relationship investments, however, are positively related to perceived innovativeness. Interestingly, however, the direct effect of relationship connectedness on relationship

differentiation is found to be insignificant, thereby denouncing its potential role as a mediator according to Baron and Kenny’s (1986) criterion that the mediator and the independent variable need to be significantly related (see details of the test in the following subsection). Relationship connectedness is positively related to relationship investments that, in turn, are positively related to perceived innovativeness. Model 2 (as well as the final Model 3, which is stripped of insignificant relationships) supports this casual path; therefore, we proceed to validate the potential mediation effect in further analyses.

The control analyses showed no evidence of statistically significant effects of age, duration of relationship, size, cultural distance or percentage of total sales in the business relationship.

Mediation analysis

According to Baron and Kenny’s (1986) criteria, the following circumstances are necessary to validate mediation effects: (1) relationship connectedness needs to predict relationship investments and relationship differentiation; (2) relationship investments and relationship differentiation need to predict perceived innovativeness; and (3) the direct effect of relationship connectedness on perceived innovativeness is weaker when the effects of relationship investments and relationship differentiation are justified. Thus, the test validates relationship investments as a mediator, yet not relationship differentiation. We used the PROCESS regression-based macro developed by Hayes (2013) to test the magnitude of the

Table 4. Mediation analysis

Mediator	B (indirect)	Bootstrapped confidence intervals		Significant?
		Lower	Upper	
Relationship differentiation	-0.002	-0.028	0.025	No
Relationship Investments	0.145	0.078	0.243	Yes Sobel Z = 3.74

Note: Bootstrapped confidence intervals obtained using 5,000 samples.

Table 5. Summary of the results

Hypothesis	Result
H1: Relationship connectedness has a positive effect on perceived innovativeness in international SMEs.	Insignificant
H2: Relationship differentiation mediates the effect that relationship connectedness has on perceived innovativeness in foreign business relationships of international SMEs.	Insignificant
H3: Relationship investments mediate the effect that relationship connectedness has on perceived innovativeness in foreign business relationships of international SMEs.	Significant

mediation effect of relationship investments. Here, perceived innovativeness served as the dependent variable, relationship connectedness as the independent variable and relationship investments together with relationship differentiation as the mediators (mediating the relationship between the independent variable and the dependent variable). The mediation results reported in this study follow Hayes' (2013) recommendation by using 5,000 bootstrapping samples with 95% bias-corrected confidence intervals. Table 4 lists these results.

As foreshadowed by the initial tests, relationship differentiation has no significant mediating effect in the realm of our model. Hypothesis 2 is, thereby, not supported. Hypothesis 3, however, is confirmed, since relationship investments mediated the effect of relationship connectedness on perceived innovativeness. The effect is further substantiated by a Sobel test ($Z = 3.74$ at the 0.001 level).

Concluding discussion

This study has addressed the following research question: *To what extent and under which circumstances does relationship connectedness affect perceived innovativeness in international SMEs?* We created a model to answer this question that examined the mediating effects of two types of foreign business relationship strategies by which companies can proactively extract value from networks. The findings of this study confirm that

the ability of SMEs to extract value from their foreign business networks is situationally conditioned. This study specifically shows that merely being connected to a diverse set of resources in a network is not, in itself, a prerequisite for SMEs' innovative behaviour in foreign business relationships. Companies must proactively allocate resources to certain relationships where there is a potential for innovative behaviour and outcomes. In line with this notion, our results highlight that the effect of relationship connectedness on perceived innovativeness is significantly mediated by relationship investments (see Table 5).

Network theory and the innovativeness of international SMEs: Theoretical implications

Our findings imply that relationship investments enable companies to tap into the extended resource base that the network provides to enhance the innovative behaviour in individual customer relationships. This implication supports recent research suggesting that active engagement in specific business relationships can help international SMEs to anticipate the future needs of business partners and, thereby, exploit new business opportunities (Acosta, Crespo and Agudo, 2018). From a network theory point of view, the results speak in favour of the relational embeddedness perspective (Noordhoff *et al.*, 2011), which is also prevalent in international business studies (Frasquet *et al.*, 2018; Presutti, Boari and Fracocchi, 2016). In short, the notion implies that opportunities

generated in sparse networks have little value for internationalizing SMEs unless the companies have strong relationships in which these opportunities can be exploited. In line with the findings of Frasquet *et al.* (2018), our study shows that embeddedness and the learning capabilities that underpin innovativeness seem to be integrated. Through investments in key international business relationships, companies can translate opportunities and use them in new market settings, thus increasing their international operations. The results also show that, while relationship differentiation is found to have a discrete direct effect on perceived innovativeness, it does not significantly mediate the effect of relationship connectedness. These findings imply that connectedness to various business relationships is of lower importance for innovativeness in a situation where a company's market offering is distinct from its other market offerings. While the variation that is provided by unrelated bases of knowledge could be a vehicle for innovation (e.g. Burt, 1992; Nordman and Tolstoy, 2016), international SMEs seem unable to tap into this potential. An explanation for this could be that differentiated relationships of SMEs that are located in a foreign market stand alone, to a considerable degree: that is to say, they are not connected to an elaborate country-spanning international organization and require resources of high specificity within that market (Odlin and Benson-Rea, 2017). Such resources may have to be developed dynamically within the differentiated relationships, making them self-contained to a relatively greater extent. By this token, resources developed in connected relationships will appear non-applicable and will not significantly enhance the innovative capability in these differentiated relationships.

Internationalization process theory and the innovativeness of international SMEs: Theoretical implications

Behavioural models of internationalization have assumed that strategies in relationships will have low impact on various facets of performance because of their complexity (Johanson and Vahlne, 2009). Conversely, this study implies that active management in business relationships can, in fact, have an impact on innovativeness. In this way, our research also extends the line of thinking presented in Cavusgil (1980), thus emphasizing the

link between innovation and internationalization. In particular, the result tempers the view that relationship connectedness is always a prerequisite for innovativeness among SMEs by creating an inflow of resources (e.g. Loane and Bell, 2006; Sharma and Blomstermo, 2003). Even though Vahlne and Johanson (2017) recently emphasized that an implicit feature of their internationalization model was the possibility of novelty or innovation, we explicitly highlight innovativeness as a feature in behavioural models of internationalization. This study, however, suggests that in some relationships – namely those that deviate from standard practices – resources or knowledge developed in connected relationships will not affect a company's innovative capability to produce innovative outcomes to any discernible extent. Strong relationships, rather than idiosyncratic relationships in niche segments, are needed to leverage the connected resources for innovation. This condition may be particularly salient in the case of internationalizing companies where the transfer of knowledge and business opportunities may be inhibited by geographical, institutional and cultural distances. Due to the challenges of distance, SMEs that lack country-spanning internal organizations need to transfer knowledge through reliable partnerships. Strong business relationships, in which companies have made investments, appear to facilitate such a transfer of knowledge, rather than more weakly related differentiated relationships.

In their 2009 article, Johanson and Vahlne claim that outsidership related to foreign business relationships is a greater threat to organizations than the liability of foreignness. Building on this view, Blankenburg, Johanson and Kao (2015) find that foreign business opportunities are often a consequence of knowledge related to a specific network setting, and are discovered and developed in interplay with other organizations. Prior empirical studies on SMEs also allude to such a relationship approach, by suggesting that the knowledge generated in the networks can be used to enhance innovativeness (Acosta, Crespo and Agudo, 2018; Nordman and Tolstoy, 2011; Sullivan Mort and Weerawardena, 2006). In some contrast to these theoretical arguments, our findings show that relationship connectedness – that is to say, being part of a network – is not enough to enhance the capability to produce innovative outcomes in foreign business relationships. Hence, the connection to a network

cannot in itself assist companies to perceive that their relationships are innovative. The effects of networks on innovativeness have often been discussed in terms of a direct effect (e.g. Loane and Bell, 2006; Sharma and Blomstermo, 2003); however, little attention has been directed towards the mediating variables which shape this relationship. While the study of Nordman and Tolstoy (2016) demonstrates that certain business relationships can mediate the exploitation of business opportunities discovered in networks, our results specifically show in which circumstances the network connections of SMEs spur their perceived innovativeness, and the situations in which they do not. What we find is that knowledge and resources drawn from networks alone cannot promote innovativeness when companies are venturing into new areas of business. Connectedness, however, can be a powerful engine of innovative outcomes in situations where they enable, through investments, the transfer of resources and knowledge from the network to the foreign market relationship. Resources in networks are not easily exploited. This is a result of the tacit nature of valuable knowledge, which makes it difficult to codify and transfer.

By providing a detailed understanding of how foreign business relationships can realize the perceived innovativeness of SMEs, our results contribute to research on the innovativeness of international SMEs. Since we investigate international SMEs that have already taken their first step abroad, our findings provide insight into how SMEs are able to remain innovative and stay competitive throughout their subsequent expansion abroad. Our results highlight that a crucial consideration for SMEs is adopting a strategic inclination, which involves investments in business relationships (Presutti, Boari and Fratocchi, 2016). In support of prior studies, we find that such investments can create avenues for external resources that enable companies to see new opportunities and leverage those for innovation (Hånell, Nordman and Tolstoy, 2017). Efforts made (e.g. through investments) in individual business relationships are thus crucial to unleash the potential for innovation that resides in networks.

In summary, our findings imply that the prevalence of innovative foreign market ventures may ultimately be a strategic issue that lies in the hands of managers. In this sense, our findings provide additional insight into ongoing discussions about the ability of small companies to take advantage

of the knowledge provided by networks (Acosta, Crespo and Agudo, 2018; Freeman *et al.*, 2010; Hayter, 2013, 2016; Montoro-Sanchez, Diez-Vial and Belso-Martinez, 2018; Musteen, Datta and Butts, 2014; Nyuur, Brecic and Debrah, 2018; Radulovich, Javalgi and Scherer, 2018; Yli-Renko, Autio and Sapienza, 2001).

Contributions to practice

International SMEs play an important role in generating innovativeness for society. Their innovativeness obviously varies depending on industry, size, resources and the business environment in which they are active. Successful international SMEs, however, always need to consider the local conditions of foreign markets and adapt technology, products/ranges and distribution systems to foreign relationships.

The findings of this study emphasize how important it is for managers to see and realize that local conditions can open up opportunities to develop new innovative business solutions that resonate with markets. Becoming insiders in specific foreign business networks is not enough to reap the benefits of innovation; companies also need to establish key business relationships to harness the resources they acquire in networks.

To accomplish this, they must carefully evaluate the potential of foreign customers to contribute to the innovation and business development processes. Which relationships are worth investing in, and which are not? Certain customer relationships can evolve into strategic partnerships, which propel a company's development and innovation. Such partnerships can enable companies to stay relevant in the business in the long term by pushing them to upgrade their products and services. Actors, such as venture capital investors, governmental institutes, business incubators and trade organizations, need to support innovativeness in international SMEs by mapping key actors in relevant sectors, as well as facilitating the matching of new companies with compatible collaborators. SME managers who recognize the potential of developing business in foreign business relationships may progressively reinforce their foreign marketing abilities.

Limitations

There are two major limitations to our study. Firstly, the study builds upon cross-sectional data,

thereby restraining us from investigating the dynamic effects of the model; that is to say, possible feedback loops from the independent variable that could reinforce relationship connectedness. Secondly, while this study investigates business relationship dyads, the data is gathered from individual companies. Since these views cannot be weighed against other information sources, there is a risk that the respondent is biased. Therefore, we welcome in-depth case studies of SME operations in foreign business relationships in order to verify the reliability of our findings.

Future research directions

The overall findings of this study imply that business relationships are heterogeneous entities and that a large degree of variation, in terms of innovativeness in business relationships, can be expected, depending on their characteristics. This condition makes it even more important for research on international SMEs to examine the company-specific factors, relationship-specific factors and market factors that either promote or constrain innovativeness in foreign business relationships. Given the cross-sectional design of our study, future research could complement our attempt by adopting longitudinal designs and using panel data.

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